UNIVERSAL REGISTRATION DOCUMENT **2019**

including the annual financial report and CSR information

SAINT-GOBAIN

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The elements of the annual financial report are identified in the table of contents by the AFR icon AFR

The Non-Financial Performance Declaration is identified by the EFPD icon EFPD

SAINT-GOBAIN

UNIVERSAL REGISTRATION DOCUMENT **2019**

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Saint-Gobain designs, produces and distributes materials and solutions intended for the well-being of each of us and the future of all.

www.saint-gobain.com

On March 23, 2020, this Universal Registration Document was filed with the AMF, the competent authority pursuant to (EU) Regulation No. 2017/1129, without prior approval, in accordance with Article 9 of said regulation.
The Universal Registration Document may be used for the purposes of a public offer of marketable securities or the admission of marketable securities to trading on a regulated market if it is supplemented with a securities note and, if required, a summary note, as well as all amendments made to the Universal Registration Document. The set of documents is approved by the AMF in accordance with (EU) Regulation No. 2017/1129.

A Message from
Pierre-André de Chalendar
Chairman & CEO

«
WE HAVE THE CAPACITY AND RESPONSIBILITY TO CONTRIBUTE TO THE IN-DEPTH TRANSFORMATION OF OUR BUSINESSES
»

In 2019, Saint-Gobain had a very rich year, another one of growth with good results in line with our objectives, marked by the successful execution of our Transform & Grow initiative, which improves our growth and profitability profile. Our good results also stem from a strong commercial performance in all of our regions and market segments, and from operational excellence in our plants, distribution centers and logistics bases.

Saint-Gobain is positioned as a key player at the crossroads of major societal trends. With our solutions, we respond to challenges involving climate and the transition to a low-carbon, circular economy. We also offer productivity and performance to all of our customers. And we bring comfort and well-being to everyone in their daily lives.

The major issues we face today are immense challenges that need to be met. They include urbanization, demographic transition, climate change and resource scarcity. But I firmly believe in the opportunity they represent for companies to reinvent their business models and express their full potential for innovation. More than ever, companies are, much more than the problem, part of the solution.

This is illustrated by the significant progress made by Saint-Gobain in the development of a circular approach that takes into account the entire lifecycle of products and solutions and all players in the value chain, through anticipation of end-of-life, support for new uses and development of services in all our industrial and distribution businesses. For their part, new construction methods and techniques such as offsite manufacturing, 3D printing, BIM and robotics make it possible to take full advantage of digital technology and have a virtuous effect at various stages of a worksite or project. And, just as interesting, they are accompanied by a transformation in the way we work and collaborate with all of our partners, which is more efficient and effective.

Digital technology, which affects all aspects of our activity, therefore offers promising prospects for the improvement of comfort in daily life, creation of smooth customer experiences and an innovative and intuitive range of services, and invention of ever more sustainable and environmentally friendly solutions. Digital rhymes with mass customization, with the possibility of offering unique experiences to as many people as possible. This is a key trend for our businesses, where interactions with customers, both direct and indirect, are so numerous and varied!

In addition, Saint-Gobain designs, produces and distributes materials that form the core of many applications in construction and industry. With all of the innovations that our solutions make possible, we also have the capacity – and even the responsibility – to contribute to the in-depth transformation of our businesses. Our teams work daily towards this goal, in all of the countries where we operate, with our customers, suppliers and partners.

In an organization that has been thoroughly overhauled to be ever closer to our customers wherever they are, each country, or each market manager for global customers, enjoys the autonomy it needs to go seize growth opportunities, using in-depth knowledge of each territory and its specific features.

But for a large group like ours, richness comes from our ability to reconcile decentralization and customer proximity with shared values and a common culture. The responsibility of a group like Saint-Gobain is to make operational excellence a standard and ensure compliance and ethical practices that respect the health and safety of our employees and of everyone working on our sites. It is also the pioneering spirit that inspires such advances as «CARE by Saint-Gobain», a one-of-a-kind social protection program for all Group employees and their families. Being a large international group is also about that.

Beyond our responsibility, it is about our positive contribution, our ability to have an impact and make a difference. If I have made the commitment, on behalf of Saint-Gobain, to achieve net zero carbon emissions by 2050, it is to work even harder today to minimize our impact, and far beyond that, to bring a profound message of transformation to our entire value chain.

I firmly believe in the ability of industry players to reconcile a business approach with a responsible approach and make sustainable development a lever for value creation and transformation of business models. Today, the possibilities are endless. It's up to us to seize these new opportunities, build clearer and more unified offers, capitalize on the power of Saint-Gobain and its brand, integrate our product lines for use by applications and be as close as possible to the needs of our customers by making customized products standard.

In 2020, we will of course continue to roll out Transform & Grow, develop our growth initiatives and strengthen our strategy of innovation and differentiation. This is also the year in which we will firmly state our company's purpose. This is a collaborative process that will be completed by mid-year in which I wanted to involve as many of our employees as possible. 2020 will be a year of acceleration on the front line of our climate commitments, with the definition of our roadmap towards carbon neutrality by 2050.

The Saint-Gobain of tomorrow will be a group that is ever more connected to its customers to enable them to be ever more efficient, as well as to its suppliers, partners and employees. It will be a group that makes data collection and analysis the heart of each of its activities and constantly strives for growth that respects the environment and benefits as many people as possible. Finally, it will be a group that offers materials and solutions that are smart and sustainable and help all of us live well together. ■

1

Saint-Gobain Today

1. Group profile

1.1 A global group

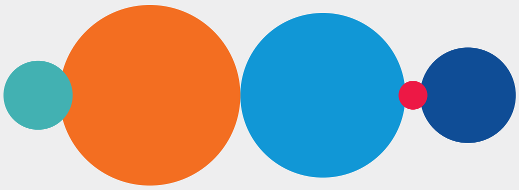
€42,573 M
2019 sales

€3,390 M
Operating income

€1,915 M
Recurring net income

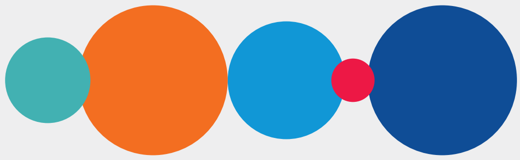
€1,857 M
Free Cash Flow

Breakdown of sales



Americas	Northern Europe	Southern Europe – Middle East & Africa	Asia-Pacific	HPS **
13% (+2.9% vs 2018*)	**34%** (+1.7% vs 2018*)	**31%** (+3.3% vs 2018*)	**4%** (+4.1% vs 2018*)	**18%** (+0.4% vs 2018*)

Breakdown of operating income



Americas	Northern Europe	Southern Europe – Middle East & Africa	Asia-Pacific	HPS **
16%	**28%**	**22%**	**6%**	**28%**

Breakdown of number of employees

Americas	Northern Europe	Southern Europe – Middle East & Africa	Asia-Pacific	HPS **
19,869	**47,298**	**47,739**	**8,637**	**45,510**

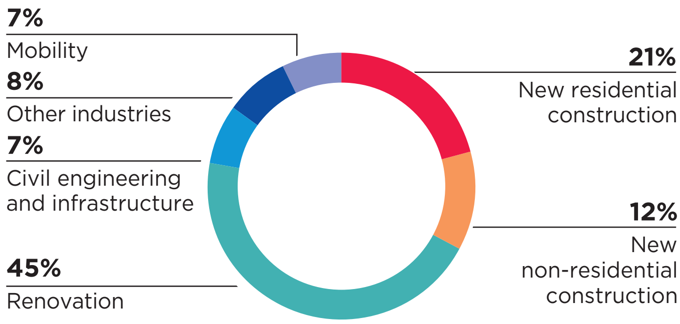
(Holding: 1,586)

* *Like-for-like*
** *High Performance Solutions*

170,639* employees

Over **100** nationalities represented

The Group's end markets



As a % of sales - 2019 estimations

Industrial presence in 68 countries

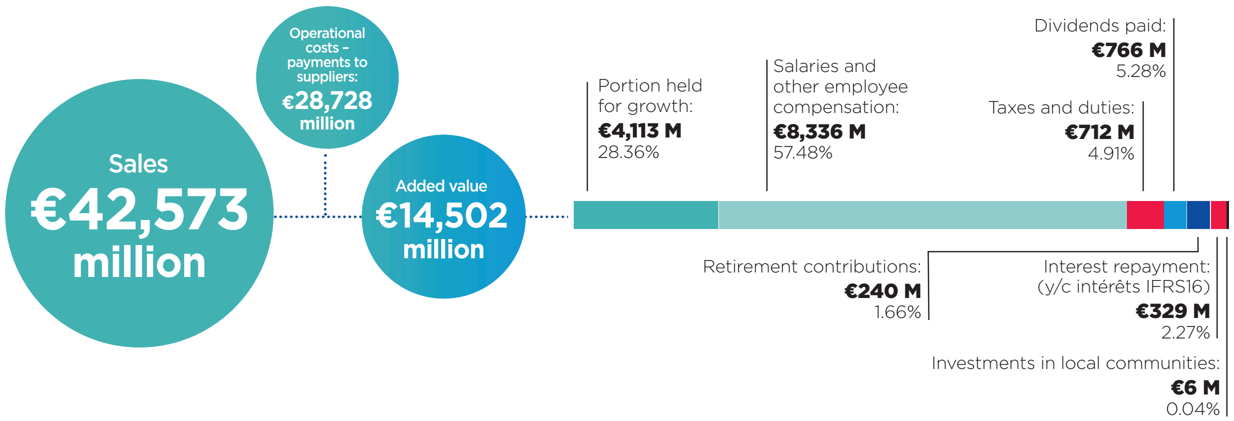
Albania
Algeria
Angola
Argentina
Australia
Austria
Belgium
Bhutan
Botswana
Brazil
Bulgaria
Canada
Chile
China
Colombia
Czech Republic
Denmark
Egypt
Estonia
Finland
France
Germany
Ghana
Greece
Hungary
India
Indonesia
Italy
Japan
Jordan
Kuwait
Latvia
Lebanon
Lithuania
Luxembourg
Malaysia
Morocco
Mexico
Norway
New Zealand
Netherlands
Oman
Peru
Poland
Portugal
Qatar
Republic Of Ireland
Romania
Russia
Saudi Arabia
Serbia
Singapour
Slovakia
Slovenia
South Africa
South Korea
Spain
Sweden
Switzerland
Tanzania
Thailand
Turkey
United Arab Emirates
United Kingdom
United States
Venezuela
Vietnam
Zimbabwe

*Indicators of **organic growth and like-for-like changes in sales/operating income** reflect the Group's underlying performance excluding the impact of: changes in Group structure, by calculating indicators for the year under review based on the scope of consolidation of the previous year (Group structure impact); changes in foreign exchange rates, by calculating the indicators for the year under review and those for the previous year based on identical foreign exchange rates for the previous year (currency impact);changes in applicable accounting policies.*

** Source : social reporting*

CSR

Breakdown of net sales and value added by stakeholder



CSR indicators and significant events

CO_2

Saint-Gobain has taken the commitment to reach **net zero carbon** emissions **by 2050**

-14.5%: reduction of CO_2 emissions between 2010 and 2019 (2025 target: -20%)

89%

of non-trade purchases are covered by the **Suppliers Charter**

For the second consecutive year, Saint-Gobain is included on the ***Bloomberg Gender Equality Index***

Saint-Gobain's actions in favor of the **circular economy** have helped avoid the extraction of **8,461,903 tons** of virgin raw materials (sand, gypsum)

2.2

Accident frequency rate with and without more than 24 hours of lost time (employees, temporary staff and permanent subcontractors)

Launch in 2020 of the ***"CARE by Saint-Gobain"*** social protection program

Digital

+14%

increase in the **number of followers** on the Group's social media accounts between 2018 and 2019

A rich **digital community** of over **1,700 experts**

Innovation

Over 400

patents filed in 2019

3,700

R&D employees

2,200

Marketing employees

Saint-Gobain, Top Global Innovator[(1)] for the past 9 years

Governance

14

Directors

45% women

73% Independent Directors, Committee Chairmen all independent

96% attendance rate

1 lead Independent Director

2 employee Directors + **1** Director representing employee shareholders

(1) Clarivate Analytics ranking.

1

1.2 A solid financial base

1.2.1 Sharp rise in financial results

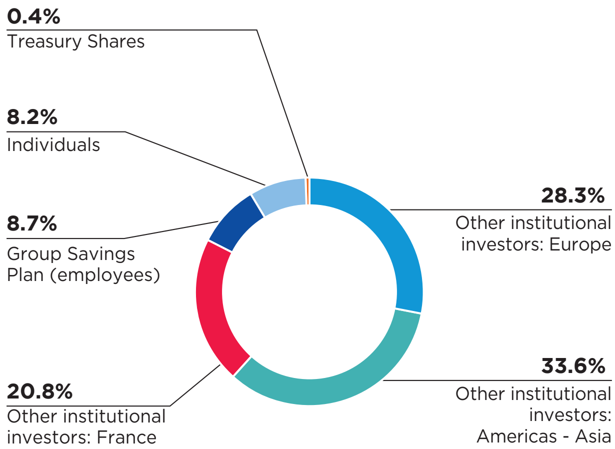
€3.53
Recurring earnings per share

€10,491M
Net debt

€19,416M
Shareholders' equity

€1,656M
Capital expenditure

1.2.2 A stable shareholder base



1.2.3 Performance acknowledged by the financial and non-financial rating agencies

Saint-Gobain responds to a number of assessments of its non-financial performance. Since 2019, the Group has concentrated on rating agencies recognized by its stakeholders and in particular its investors, its customers and the relevant Non-Governmental Organizations (NGOs). Saint-Gobain favors rating agencies that are open to dialogue, using transparent methodologies and with a focus on its relevant issues. As such, the assessments play a key role in the process of continuous improvement in terms of non-financial performance, without generating specific reports with no relation to the environmental, employment and societal issues to which the Group contributes. In 2019, Saint-Gobain did not respond to the assessment carried out by RobecoSAM for the Dow Jones Sustainability Index.

Saint-Gobain is referenced by the MSCI World ESG Leaders, STOXX® Global ESG Leaders, Ethibel ESI Excellence Global, Ethibel ESI Excellence Europe, FTSE4Good and Dow Jones Sustainability Index Europe indices.

1.3 Strong values embodied by the Principles of Conduct and Action

Saint-Gobain's development is founded on nine Principles of Conduct and Action which form the basis of a true code of ethical conduct. These Principles were formalized in 2003 and have been translated into 33 languages and rolled out to all employees. Application of the Principles is a condition for being a part of the Group.

5 PRINCIPLES OF CONDUCT

- **Professional commitment**
- **Respect for others**
- **Integrity**
- **Loyalty**
- **Solidarity**

are the fundamental values uniting management and employees.

4 PRINCIPLES OF ACTION

- **Respect for the law**
- **Caring for the environment**
- **Worker health and safety**
- **Employee rights**

guide the actions of all management and employees in the performance of their duties.

The Principles of Conduct and Action refer explicitly to the applicable conventions of the International Labor Organization, the International Charter on Human Rights and the OECD Guidelines on Multinational Enterprises with regard to the fight against corruption.

Saint-Gobain has been signed up to the United Nations Global Compact since 2003. This demonstrates the Group's drive for Corporate Social Responsibility (CSR), which includes regular communication of its progress in areas covered by the Global Compact.

The implementation of the Group's strategy involves policies and commitments applied by all businesses and countries.

At the top of these, the "reference policies". These are directly derived from the Principles of Conduct and Action and define the management principles applicable to all Saint-Gobain entities and employees, as well as to subcontractors in their work for the Group, and suppliers under the Responsible Purchasing policy (see Section 1.2 of Chapter 3).

This desire to establish the Principles of Conduct and Action as a sign of belonging is illustrated by the objective set by the Group's Board of Directors, of training all managers in the Principles in their first year with the Group. Furthermore, the Principles of Conduct and Action are included in the welcome booklets of all Group employees and in the majority of employment contracts (see Section 1.1.1 of Chapter 3).

1.4 Major milestones in the construction of the Group

- Saint-Gobain was founded **in 1665** under the name of *Manufacture royale des glaces*, in order to challenge Venice's supremacy in mirror making. From the 19th century onwards, Saint-Gobain diversified its activities, moving into chemicals, all types of glass products, the automotive industry, etc., and began its international expansion.
- **In 1970**, Saint-Gobain divests its chemicals business and merges with cast iron pipe company Pont-à-Mousson.
- **In 1990**, *via* the acquisition of Norton, Saint-Gobain doubles its presence in the United States, opening up new markets and enabling the Group to develop its expertise in the fields of abrasives, plastics and ceramics.
- The acquisition of Poliet **in 1996** provides the basis for developing the distribution businesses. The Group then goes on to make acquisitions in Building Distribution.
- In parallel, Saint-Gobain intensifies its research efforts and accelerates its geographic expansion, taking the number of countries where it has a presence from 18 **in 1986** to 64 **in 2010**.
- The acquisition **in 2005** of British Plaster Board, the global leader in plasterboard, is Saint-Gobain's largest ever. In combination with ISOVER glass wool, it makes Saint-Gobain the world number one in interior solutions.
- Saint-Gobain focuses its strategy on sustainable habitat, as well as continuing to serve a number of industrial markets. With its extensive network of assets, the Group is growing steadily in emerging countries.
- **In 2019**, Saint-Gobain implements an ambitious transformation plan, entitled "Transform & Grow", aimed at fully leveraging its strength to bolster its competitiveness and fully unleash its growth potential, with a mission to design, produce and distribute materials and solutions for different markets (construction, mobility, health, industry…), developed with the well-being of each of us and the future of all in mind.

2. Highlights of 2019

2.1 Timeline of significant events

January

- Partnership between Vidrio Andino and Tecnoglass, leader in the manufacture of glass windows and façades in Colombia, with a view to constructing a new flat glass factory.
- Saint-Gobain is awarded the Top Employer Global label for the fourth year in a row.
- Work begins on the construction of a 3,600 m^2 extension at the Charny factory (France) to support the development of the life sciences market.
- At the Consumer Electronics Show (CES) in Las Vegas, presentation of a smart windshield co-developed by Saint-Gobain Sekurit and US company Nuance Automotive, an expert in automotive artificial intelligence.
- Official opening of a fifth flat glass manufacturing plant in Spriperumbudur, near Chennai in India, representing an investment of €115 million. This factory is equipped with a high-tech furnace which uses 15% less energy and emits 13% less CO_2 compared with the last-generation facilities.
- Disposal of the glass processing and distribution businesses in Norway and Sweden.
- For the eighth consecutive year, Saint-Gobain is named one of the Derwent Top 100 Global Innovators, a prestigious list of the world's one hundred most innovative companies.
- Saint-Gobain is one of the 127 companies worldwide to appear on the "Climate Change A List" published by global organization CDP.
- Launch of exclusive negotiations regarding the sale of the silicon carbide business.

February

- Official opening of a new coater in Mexico for the production of laminated glass.
- Acquisition of American Seal and Engineering Co., a world leader in technical seals for the transport and energy industries.
- Launch by CertainTeed Roofing of a project to construct an asphalt treatment plant in Avery, Ohio.
- Publication of 2018 annual results.

March

- Subscription campaign for the Group Savings Plan in which 44,000 employees in 47 countries participated.
- Official opening in Hải Phòng (Vietnam) of the country's second plasterboard plant.

April

- Saint-Gobain announces that it offers its expertise in restoration and construction materials following the fire at Notre-Dame Cathedral in Paris, notably to help restore the stained-glass windows.
- Acquisition of Plaka Mexico which marks the entry of Saint-Gobain to the plasterboard market in Mexico.
- The saint-gobain.fr website, launched in 2018 to support individual customers in their home improvement and renovation works, becomes lamaisonsaintgobain.fr.
- Official opening in Chang Xing (China) of the fourth Saint-Gobain plasterboard plant in the country.
- In France, launch by Placo® of two new exclusive services: BIM by Placo®, which facilitates access to digital modeling (BIM, Building Information Modeling) for dry liners, and LEAN by Placo®, which delivers pre-cut plasterboard to sites.

May

- Acquisition of Pritex, British supplier of acoustic and thermal insulation solutions made from polymer-based composite materials for the mobility market.
- Saint-Gobain brings together 15 start-ups and SMEs for "Innovation Day" held near Paris, on the theme of high performance materials and technologies. This event is jointly organized with the European Innovation Council (EIC) and with the support of NOVA, Saint-Gobain's corporate venture team.
- Conclusion of an agreement to sell Saint-Gobain Building Distribution Deutschland (SGBDD).
- Launch of the Mental Wellbeing program, designed to help the Group's managers optimize the mental well-being of their teams.
- Finalization of the acquisition of the Novoplack plasterboard plant in Argentina, in the province of San Juan.
- Publication of the Group's Corporate Social Responsibility (CSR) roadmap.

June

- June 6: Annual General Meeting in Paris.
- In Milan (Italy), Saint-Gobain holds the international final of its Multi Comfort Student Contest for students in architecture, and selects three teams coming from Poland, Côte d'Ivoire and Belarus as winners.
- Mobility BU presents its cutting-edge solutions for the aviation industry at the Paris Air Show.

- Conclusion of an agreement to sell the Optimera building materials distribution business in Denmark.
- Saint-Gobain, long-standing partner of the Château de Versailles, participates in the restoration of the Palace's Royal Chapel. The Group oversees the restoration of the Chapel's stained-glass windows. Work is due to be completed in 2020.
- Adfors invests in boosting its capacity to produce rolled fabric and insulation at its Hodonice plant (Czech Republic).

July

- Merger of ISOVER and Placo®, Saint-Gobain subsidiaries, to offer customers an enhanced range of products and generate more growth.
- Publication of the results for the first half of 2019, marking strong performance: sales growth of 3.5% and operating income up 8.3% on a like-for-like basis.
- Opening of the first Saint-Gobain plant in Angola, specializing in the manufacture of mortar-based products.
- Official opening of a fifth mortar plant in Indonesia, on the island of Java.
- Conclusion of an agreement to sell the civil engineering materials distribution business in France (DMTP).

September

- Conclusion of an agreement to sell the building glass business in South Korea (Hankuk Glass Industries). Saint-Gobain achieves its target of €3 billion of disposals set for the end of 2019.
- Saint-Gobain announces, at the United Nations' Climate Action Summit, its commitment to reach net zero carbon emissions by 2050.
- Inauguration of the first mirror manufacturing line at the Ain Alsoukhna plant (Egypt).

October

- Acquisition in Peru of the Mortar Division of the Celima Group, leader in tile adhesives.
- Disposal of K par K, specialist brand in the door-to-door sale of carpentry services and tailor-made windows on the French market.
- Final of the InNOVAte Challenge, launched in the United States by CertainTeed and NOVA in partnership with incubator Greentown Labs.
- Saint-Gobain invests in the modernization of its float in Calarasi (Romania), to improve its industrial efficiency and reduce its energy consumption by 20%.
- Official opening of a second mortar plant in Ghana.

November

- Conclusion of an agreement to sell the expanded polystyrene (EPS) business in France.
- Sale of the Glassolutions glass processing business in the Netherlands.
- Announcement of the signing of an agreement pertaining to the acquisition, for €1.3 billion, of US company Continental Building Products, a key player in the plasterboard industry in North America. This acquisition was finalized on February 3, 2020 following approval from the Continental Building Products shareholders and the American anti-trust authorities.
- Inauguration of a new glass blowing wool production line in Chemillé (France) to support the growth in the insulation market.
- Work begins on the construction of a new plasterboard plant in Yangzhou (China).
- Launch of a new public advertising campaign in France and worldwide, Mission to Earth.
- Publication of the results of the me@saint-gobain survey, the first global commitment campaign for Group employees.
- Inauguration of a new non-woven abrasives line at the Reynosa site (Mexico).

2.2 The roll-out of Transform & Grow

The year 2019 was marked for Saint-Gobain by the roll-out of the Transform & Grow plan. Since January 1, the plan has been implemented in line with the Group's commitment to strengthen its competitiveness and fully unleash its growth potential. The plan rests on two pillars:

- a new market-based organization, closer to customers to capture all opportunities, simpler and more agile to accelerate decision-making;
- agile and value-creating portfolio management.

The new organization has been set up and has begun to bear fruit, in particular by allowing for greater commercial synergies and integrated offers (see Chapter 2, Sections 5.1 and 5.4). Accelerated portfolio turnover was achieved through 18 small and medium-sized acquisitions and the announcement of a major acquisition, Continental Building Products (see Chapter 2, Section 5.5), as well as asset disposals (see Section 2.1 of this Chapter 1) for an amount of €3.3 billion, exceeding, ahead of schedule, the announced target of €3 billion. For more details on the 2019 achievements and the 2020 outlook, refer to Chapter 4, Section 1.

3. The Group's activities

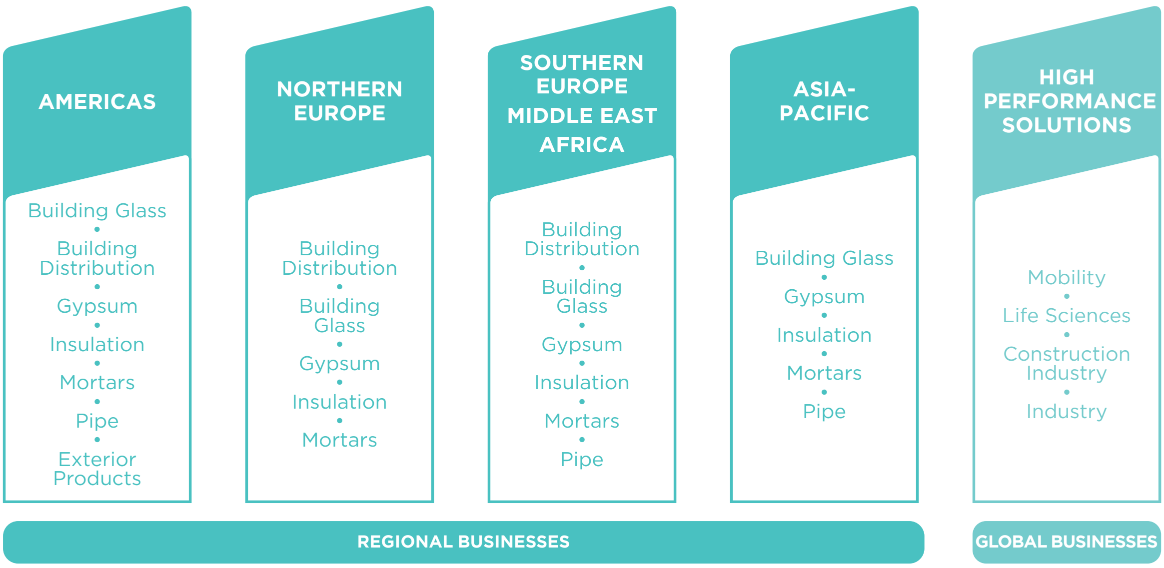
Saint-Gobain designs, produces and distributes materials and solutions that are key ingredients for the well-being of each of us and the future of all. These materials are found everywhere in living places and in daily life: buildings, transport, infrastructure, as well as in many industrial applications. They provide comfort, performance and safety, while meeting the challenges of sustainable construction, efficient resource management and climate change.

Saint-Gobain aims to meet today's individual expectations and tomorrow's collective challenges by offering its customers well-being through sustainable solutions that respect the environment and health; and its professional customers in particular, a guarantee of productivity, performance and innovation.

Since January 1, 2019, the structure of Saint-Gobain has been divided into regional businesses and global businesses, with a view to improving agility and remaining as close as possible to its customers.

3.1 An organization close to customers

Main businesses by segment



Americas

United States, Canada

Brazil, Argentina, Chile, Peru, Mexico, Central America, Venezuela, Colombia

Northern Europe

United Kingdom, Ireland, Norway, Sweden, Denmark, Finland, Baltic States, Russia and the CEI, Switzerland, Germany, Austria, Poland, Czech Republic, Eastern Adriatic, Hungary, Slovakia, Bulgaria, Romania

Southern Europe, Middle East, Africa

France, Benelux, Spain, Portugal, Italy, Greece, Morocco, Middle East, Turkey, Egypt, Saudi Arabia, United Arab Emirates, the Near East, Sub-Saharan Africa

Asia-Pacific

India, China, Japan, South Korea, Vietnam, Thailand, Philippines, Laos, Cambodia, Myanmar, Malaysia, Singapore, Indonesia, Australia, New Zealand

3.2 Business lines for regional customers

3.2.1 Expertise and businesses

Saint-Gobain designs, develops and distributes innovative solutions that improve the quality of living places, reduce the environmental impact of buildings and makes life easier for its professional customers – architects, craftsmen, installers, etc. The Group offers a unique range of products and services for all areas of the construction industry. Its geographical organization allows it to offer solutions that are tailored to the specific needs of its local markets, whether in terms of construction methods or styles, building systems, distinctive climate features, for the renovation of existing buildings or the undertaking of large-scale new constructions in areas undergoing major development.

Distribution of products, solutions and services for construction and housing

Saint-Gobain serves nearly seven million customers each year on the building, renovation and home improvement markets. The Group has a network of strong and complementary brands, both generalist and specialist. Primarily oriented towards trade customers, the Saint-Gobain trading brands also serve small and medium-sized businesses and large companies. They also support individuals in the completion of their projects with craftsmen. In this way, the trading brands seek to establish a balance within their customer portfolios, to ensure robustness and profitability. Other major asset: the regional network. Firmly anchored within their local communities, the sales outlets are positioned in the most dynamic economic areas and receive regular investment. An essential element of the distribution sector, logistics is the subject of regular investment, for instance in the automation and robotization of processes. The trading brands deploy an increasingly efficient system of centralized logistics bases and adapted delivery centers. They ensure that they meet demanding e-commerce standards (delivery times), particularly for low-volume and low-weight products. Robust information systems support this logistic. Digital technology is now incorporated within the tools used by the trading brands to offer customers a unique multi-channel experience: e-commerce, enriched product content (characteristics, descriptions, images, technical and regulatory documentation, etc.), digital services that help save time. The teams also benefit from productivity tools (Robotic Process Automation and machine learning) and the facilitated use of data thanks to the implementation of algorithms with, for instance, the optimization of targeted products and customers for the sales teams.

Building Glass

To address the challenges associated with protecting the environment, aesthetics, comfort, ergonomics and safety, Saint-Gobain develops, produces and sells solutions intended for the façade, window and interior decoration markets and to protect assets and people. The Group's offerings range from the production and processing of flat glass to the distribution of glass solutions for the building market. Saint-Gobain aspires to be the partner of choice for its customers: installers, processors, manufacturers, distributors and architects. Saint-Gobain's glass solutions help to improve building energy efficiency and user comfort: thermal insulation, solar control, light transmission, interior solutions and decoration and bulletproof and fireproof glass. These properties are obtained as a result of thin film technologies: using physical and chemical methods, stacks of increasingly complex films transform the glass into functional glazing. The most complex glazing can consist of up to twenty successive layers. Saint-Gobain also offers a wide range of active glazing products such as PRIVA-LITE®, which turns opaque at the click of a switch, and the SageGlass® solutions, with variable tint lenses, which are mainly used for façade projects.

Gypsum

Plaster-based solutions intended for use in partitions and wall coverings, ceilings and floors offer thermal and acoustic comfort and meet growing demands in terms of visually-pleasing home environments, as well as being easy to install. These products also meet high technical specifications in terms of fire and damp resistance. To develop this offering, Saint-Gobain extracts and processes gypsum into a wide array of plaster products for construction and decoration. These solutions comply with the highest technological standards and Saint-Gobain promotes their widespread adoption, and remain a step ahead of new regulations concerning, for example, the elimination of formaldehyde to improve interior air quality (Activ'Air®). The new Habito range of plasterboard offers excellent impact resistance while allowing for all types of decorative features to be easily applied.

Ceilings

Through a large portfolio of brands, materials and technologies, Saint-Gobain offers ceiling and wall solutions to meet all types of acoustic, technical and aesthetic requirements. Through its principal brand, Ecophon, Saint-Gobain develops acoustic systems primarily aimed at non-residential markets (offices, schools, health centers) to improve the performance and well-being of the end-user.

Isolation

In residential and non-residential buildings, Saint-Gobain's Insulation offering meets the challenges of reducing energy consumption and improving thermal and acoustic comfort. The Group designs, develops and markets products and systems that also meet the specific requirements of industrial applications. Its line of products includes mineral wool (glass wool and stone wool), polystyrene foam, polyurethane and, most recently, wood fiber, and can cater to the insulation needs of all types of building envelopes (roofs, walls and floors). Its products also meet professional expectations in terms of comfort and installation. Saint-Gobain has considerably increased its production of glass blowing wool (mechanized and rapid solution) to support the buoyancy of the renovation market. Other needs are also covered, such as heating and air conditioning system insulation (CLIMAVER®). Finally, some products also afford technical solutions for industrial facilities, the transport sector and various niche industries.

Mortars and building chemicals

Protecting, insulating and decorating all types of buildings are among the key functions of the façade offering of Saint-Gobain, a world leader in the field of mortar-based and building chemicals. Saint-Gobain's special tiling solutions ensure safety and ease of use. In flooring, its solutions cover various fields of application: new and renovated subfloors, leveling and finishing prior to laying a floor, decoration with the use of self-colored mortars, technical solutions for areas of high footfall, and underfloor heating. A range of technical mortars is available, covering all areas of construction, to help in structural work or rework. A line of admixtures caters to the growing demand for improved technical properties in concrete for use in construction. Lastly, to improve the productivity and comfort of installers, a pump truck service is also available.

Pipe systems

Saint-Gobain offers complete solutions drawing on more than 160 years of experience in the water supply market to meet the highest expectations. It produces and markets ductile cast iron pipe systems for drinking water and sewage systems, steel products for highways and roadways, and wastewater and rainwater drainage systems for buildings. It is also active in the mining, hydroelectric and manufacturing markets.

Exterior products

Saint-Gobain is present in the North American construction market with a complete range of products specifically for the North American construction market. For roofs, it offers premium asphalt and composite shingles in a wide range of styles and colors. For exterior walls, it provides solutions covering vinyl, polymer shake and insulated siding products in a multitude of materials (PVC, polypropylene, etc.). Easy to maintain, these products are known for combining visual appeal and weather tolerance. Saint-Gobain also offers complete exterior solutions for single-family and multi-family dwellings, with fencing, decking and railing products in PVC and composite materials.

3.2.2 Main brands and competitive environment

Main Brands	Positioning
SAINT-GOBAIN	Provider of effective, aesthetic solutions for more comfortable, safer living places
GLASSOLUTIONS	Processor and distributor of effective glass solutions for residential and non-residential sector construction
vetrotech	Expert in fire-resistant and high-security glazed solutions for building and marine applications
SageGlass	Smart tintable glass
SWISSPACER	Warm edge spacers for insulating glazing
Placo, Gyproc, British Gypsum, Rigips, Formula	Gypsum-based products and systems for interior solutions
Ecophon, eurocoustic	Acoustic panel systems, walls and ceilings
ISOVER	Thermal, acoustic and fire-retardant insulation products and services for lasting comfort and optimum energy efficiency within residential, non-residential (educational, health, administrative) and industrial buildings
weber	Construction products specifically for North American buildings
PAM	Full pipe system solutions for water supply, sewage and industrial systems
CertainTeed	Wide range of mortar-based and building chemicals solutions for new buildings and renovation projects. Solutions for façades and external thermal insulation, tile adhesive solutions, floor preparation and flooring solutions, sealing solutions.
France	
POINT.P	Building materials and construction products distributor
CEDEO	Specialist in plumbing, heating, sanitaryware
LA PLATAFORMA DE LA CONSTRUCCION	Distribution network exclusively reserved for building professionals
LAPEYRE	Distributor-manufacturer of sustainable home improvement products for interior/exterior joinery, kitchens, bathrooms and flooring
United Kingdom	
JEWSON	Supplier of building materials & equipment, tools & timber
Graham	Specialist in plumbing-heating-sanitaryware
MINSTER	National insulation and dry lining distributor, offering customers a comprehensive range of specialist insulation, plaster board, roofing and ceiling materials
Netherlands	
raab karcher	Building materials distributor
Nordic countries (Denmark, Finland, Norway, Sweden)	
DAHL	Specialist in PHS & ventilation, civil engineering, industry, property management and cooling
OPTIMERA	Building materials distributor for professionals and private individuals
BEVEGO	Specialist in steel, technical insulation and ventilation
Switzerland	
SANITAS TROESCH	Specialist in bathrooms and kitchens for professionals and individuals
Spain	
Distriplac	Insulation and interior solutions specialist
dp materiales	Building materials and construction products distributor
LA PLATAFORMA DE LA CONSTRUCCION	Distribution network exclusively reserved for building professionals
Brazil	
telhanorte	Sale to professionals and private individuals of home improvement products and services

Main Brands	Positioning
	Europe
Altech	International distribution private label. Plumbing, heating and ventilation
	Brazil and Europe
Alterna	International distribution private label. Sanitary and kitchen
	Europe
NOVIPRO	International distribution private label. Hand tools, PPEs, building chemicals, building hardware
	Europe (excluding France)
ULTIPRO	International distribution private label. Heavy building materials, roofing, interior solutions

Competitive positions[(1)]

- Flat Glass

No. 1 in Europe, No. 2 worldwide *(excl. China)*

- Plaster and plasterboard

No. 2 worldwide (*excl. China*)

- Insulation (all types of insulation products)

No. 2 worldwi

No. 4 in the United States

- Exterior Products
- Mortars and floor coatings (Flooring):

No. 2 worldwide

- Tiling:

No. 2 worldwide

- Façades + ETICS:

No. 1 worldwide

No. 2 in Europe

- A world leader in ductile cast iron pipe systems
- No. 1 in Europe in Building Distribution
- A major player in the plumbing-heating-sanitaryware market

Main competitors:

- NSG (Japan)
- AGC Corporation (Japan)
- Guardian (United States)
- Sisecam (Turkey)
- Various Chinese glass manufacturers
- Armstrong (worldwide)
- BNBM (China)
- Boral (Asia)
- Johns Manville (United States)
- Kingspan (worldwide)
- Knauf (worldwide)
- Owens Corning (worldwide)
- Rockwool (worldwide)
- Siniat (Europe, Latin America)
- Technonicol (Europe)
- Ardex (worldwide)
- BASF (worldwide)
- Duktus-VonRoll (Germany)
- Electrosteel (India)
- GAF (United States)
- Jindal (India)
- Mapei (worldwide)
- Parex (worldwide)
- Ply Gem (United States)
- STO (worldwide)
- XinXing (China)
- Ferguson (United Kingdom)
- Travis Perkins (United Kingdom)
- SIG (United Kingdom, France)
- Grafton (United Kingdom, Belgium, Netherlands)
- Ahlsell (Scandinavia)
- Chausson, Herige, Samse (France)
- Stark/Lone Star (Scandinavia)
- Cordes & Graefe (France, Poland, Netherlands, Norway)

(1) *Internal sources.*

3.3 Businesses for global customers

3.3.1 High Performance Solutions

Saint-Gobain's High Performance Solutions (HPS) are value-added solutions for varied and comprehensive applications in mobility, health, construction and industry. The Group is developing thorough expertise in a range of technologies, giving it the ability to design solutions tailored to its customers' specific needs. Saint-Gobain relies on substantial expertise in materials science, formulation, and design in automotive glass applications, ceramics, performance polymers and glass fiber. It has expertise in multiple state-of-the-art applications that make use of the specific properties of its materials (high temperature resistance, abrasion, chemical stability, surface properties, etc.). Many HPS products are developed jointly with customers to cater to their specific needs, particularly in plastic products, highly sophisticated refractory products for the metalworking and glass manufacturing industries, and crystals for radiation detection systems.

Mobility

Saint-Gobain manufactures windshields, side windows, rear windows, glass sunroofs and assembled modules for major global automotive manufacturers. These solutions ensure everyday comfort for drivers and passengers and responds to the changes in mobility in terms of practices and regulations, particularly in the area of the environment. The Group is also present in the distribution segment for replacement automobile glazing on the independent market and has a European network of repair and replacement facilities.

The Group is active in the transportation market, producing glazing for the aerospace and railroad sectors, shipping, industrial and armored vehicles.

Saint-Gobain also designs and supplies bearings and tolerance rings designed to reduce weight, noise and vibrations, and improve vehicle performance. For aircraft and the aerospace industry, the Group provides high-performance technological solutions (high performance plastics, composite mold-release films, seals and low-pressure conduits, etc.). It also manufactures air and ground radomes providing maximum radio frequency protection, while ensuring uninterrupted communication with optimal reliability.

Life sciences

The Group also markets a number of tailor-made, single-use plastic solutions (tubes, connectors, pockets, filters, etc.), used in handling fluids. Saint-Gobain develops and designs high-purity plastic components intended to control fluid circulation during intravenous and ophthalmic treatment and non-invasive surgical intervention. Its technical expertise, worldwide manufacturing capacities and market knowledge, combined with its research and development resources, enable it to meet the ever-changing needs of laboratories and medical and pharmaceutical sectors throughout the world.

Construction Industry

Saint-Gobain manufactures technical glass fiber fabrics for customers in the construction and industry markets. With a range of innovative solutions combined with strong customer commitment, it can cater for every kind of market need: grid systems for wall and floors; glass fiber mat solutions to improve product technical performance; ranges of wall coverings, joint tapes and insect screens; geogrids for the reinforcement of asphalt surfaces, as well as technical fabric solutions for thermal insulation and protection against fire.

Abrasives and Composite Systems

Saint-Gobain offers comprehensive solutions for each stage of the abrasion, cutting and polishing process. It serves a wide range of markets: construction and habitat (from rough cutting of concrete walls and floors to sanding of wooden floors and decorative finishes), heavy industry (steelworks, paper mills, and mineral extraction), and manufacturing and high-tech industries (automotive, aerospace, and electronics). The Group leverages its expertise in ceramic grains and its in-depth knowledge of materials to design abrasives systems that are optimized for its customers' applications, as well as being safe and comfortable to use. The BU is organized by distribution channels in order to best serve each market.

Lastly, Saint-Gobain produces composite materials for construction and industry: specialty films, foams, tapes, specialty adhesives and coated fabrics.

Ceramics

Leveraging its first expertise in refractory materials for the glass industry, the Ceramics BU consists today of businesses involved in the synthesis and transformation of ceramic raw materials used in a wide variety of markets: abrasives, aerospace, defense, paper, etc., as well as refractory products for metallurgy and all glass-related technologies. The Group also manufactures crystals and scintillators used in medical scanners or in luggage scanners and radiation detection systems.

3.3.2 Main brands and competitive environment

Main Brands	Positioning
SEKURIT	Innovative security glazing to make the automobile into a comfortable living space
SAINT-GOBAIN	SAINT-GOBAIN SEKURIT TRANSPORT Specialist glazing for the railroad industry, trucks, buses and coaches, and tractor and machine operator's cabs
SAINT-GOBAIN	SAINT-GOBAIN AUTOVER Distribution of replacement glazing and related products for businesses in the automotive after-sales market
GLASSDRIVE	European network of fixed and mobile assembly stations for automotive glazing repair, fitting and replacement
FRANCE PARE-BRISE	French network of specialist automotive glazing repair, fitting and replacement franchise operators
NORTON SAINT-GOBAIN	A complete range of abrasives solutions for all industrial application in all markets
NORTON WINTER	Precision milling tools for high-tech sectors such as the automotive, glazing and aerospace industries
NORTON SAINT-GOBAIN clipper	Cutting tools, ultra-performance machinery and abrasives to meet the most demanding requirements of construction and building professionals
flexovit	A comprehensive portfolio of high-performance abrasives for DIY and industrial applications in the metals processing and maintenance markets
CARBORUNDUM	A full range of abrasives for all applications in the automotive after-market and industrial applications
OmniSeal	Essential parts for sealing control under extreme conditions for applications in the aerospace, energy, biology and manufacturing industries
NORGLIDE Bearings	Bearings for the automotive market in particular, designed to reduce weight, noise and vibrations and improve vehicle performance
NORBOND	Double-sided adhesive tapes with outstanding viscoelastic properties, for industrial use
RENCOL Tolerance Rings	Tolerance rings for the automotive market in particular, designed to reduce weight, noise and vibrations and improve vehicle performance
C-FLEX THERMOPLASTIC ELASTOMER	Patented thermoplastic elastomers for use in the medical and pharmaceutical industry, research, and biotechnology
TYGON Excellence By Design	Precision tubes providing maximum performance and ensuring compliance with regulations, for a whole array of applications in specialty fluid transport
FURON Pure Performance	Pumps, valves, connectors and manifolds for safe, accurate distribution of ultrapure fluids
Solar Gard SAINT-GOBAIN	High-tech glazing films and protective coatings for the automotive and architecture industries
SHEERFILL	A pioneer in architectural membranes for sports facilities, transport terminals and other buildings with an eye-catching design
SHEERGARD	High-performance technology solution for airplanes and land-based radomes, offering maximum protection and unrivaled radiofrequency performance, and ensuring the highest operational reliability in ongoing communication
ADFORS SAINT-GOBAIN	Reinforcement and covering solutions comprising a broad range of technical fabrics for construction (insect screens, reinforcement grids and mesh, joint tapes, wall coverings) for industry (glass fiber mat and mesh fabrics) and infrastructure (geogrids for the reinforcement of asphalt surfaces)
Vetrotex	Glass fiber reinforcement solutions for use in various industrial and construction applications
HKO	Technical fabric solutions for high-temperature thermal insulation and protection against fire and heat for the industry and automotive markets
TEK BOND SAINT-GOBAIN	Large portfolio of adhesive solutions: glues, sealants, sprays and strips

Competitive positions [1]

- Leader in zirconium-based abrasive grains, ceramic balls and refractories for the glass industry
- Leader for automotive glazing
- No. 1 worldwide for bearings for automotive applications
- Leader for single-use tubes for the pharmaceutical industry
- No. 1 worldwide for aircraft radomes for communications satellites
- No. 1 worldwide for glass fiber wall coverings

Main competitors

- Imerys (France)
- 3M (United States)
- Noritake (Japan)
- Tyrolit (Austria)
- Trelleborg (Sweden)
- NSG (Japan)
- AGC Corporation (Japan)
- Valmiera (Latvia)
- Fuyao (China)

(1) Internal estimation.

4. Governance

4.1 Board of Directors

At January 1, 2020

Pierre-André de CHALENDAR
Chairman and Chief Executive Officer of Compagnie de Saint-Gobain

Lydie CORTES
Employee Director

Iêda GOMES YELL
Research fellow and Director of companies

Anne-Marie IDRAC
Director of companies

Pamela KNAPP
Director of companies

Agnès LEMARCHAND
Director of companies

Frédéric LEMOINE
Chairman of Allegro Cantabile

Dominique LEROY
Senior Advisor at Bain & Company (Belgium)

Jacques PESTRE
Senior Vice-President of SGDB France in charge of Corporate Social Responsibility and Director representing employee shareholders

Denis RANQUE
Chairman of the Board of Directors of Airbus

Gilles SCHNEPP
Chairman of the Board of Directors of Legrand

Jean-Dominique SENARD
Chairman of the Board of Directors of Renault

Philippe THIBAUDET
Employee Director

Philippe VARIN
Chairman of the Board of Directors of Orano

Board of Directors' Secretary:

Antoine VIGNIAL
General Secretary of Compagnie de Saint-Gobain

4.2 The Executive Committee

At January 1, 2020, the Executive Committee comprised the following members:

Pierre-André de CHALENDAR
Chairman and Chief Executive Officer

Benoit BAZIN
Chief Operating Officer

Javier GIMENO
Senior Vice-President, CEO Asia-Pacific Region

Laurent GUILLOT
Senior Vice-President, CEO High Performance Solutions

Laurence PERNOT
Vice-President, Communications

Mark RAYFIELD*
Senior Vice-President, CEO North America Region

** Member since January 1, 2020*

The Executive Committee meets once a month.

Armand AJDARI
Vice-President, Research and Development

Patrick DUPIN
Senior Vice-President, CEO Northern Europe Region

Thierry FOURNIER*
Senior Vice-President, CEO Latin America Region

Cordula GUDDUSCHAT*
Vice-President, Marketing and Development

Benoit d'IRIBARNE
Senior Vice-President, Technology and Industrial Performance

Thomas KINISKY
Senior Vice-President, Innovation and Chairman North America

Claire PEDINI
Senior Vice-President, Human Resources and Digital Transformation

SREEDHAR N.
Chief Financial Officer

Guillaume TEXIER
Senior Vice-President, CEO Southern Europe, Middle East, Africa Region

Maud THUAUDET
Vice-President, Strategy

Antoine VIGNIAL
General Secretary in charge of Corporate Social Responsibility

5. Value creation model

In a changing world and faced with the challenges of climate change, urbanization and digitalization, the Group's new, simpler and more agile organization relies on internal and external resources to accelerate transformation, with the objective of making a positive contribution and creating shared value with stakeholders.

OUR CHALLENGES

Population growth and urban development

BASED ON OUR RESOURCES

Strong employee commitment

- **170,639** employees in 68 countries
- **over 100** nationalities
- **24.2%** of managers are women
- **74%** of employees responded to our satisfaction survey

Global presence and local proximity

- Over **800** industrial sites and nearly **4,000** sales outlets
- Complementary portfolios of products and services

A strong Saint-Gobain brand and expert business brands

- Expertise and a brand portfolio in the construction businesses
- Expertise and a brand portfolio in industry businesses

Key skills for transformation

- R&D: **8** research centers
- Innovation: **3,700** researchers and **2,200** people in the marketing sector
- Digital: **1,700** tech experts

A solid financial base

- Sales: **€42,573 million**
- Operating income: **€3,390 million** and Recurring net income: **€1,915 million**

Energy and raw materials

- Recycled materials incorporated into products to replace natural resources (sand, gypsum)
- Energy consumption (renewable and non-renewable)

WE CREATE VALUE

Mission

DESIGN, PRODUCE AND DISTRIBUTE
MATERIALS AND SOLUTIONS THAT ARE KEY INGREDIENTS IN THE WELL-BEING OF EACH OF US AND THE FUTURE OF ALL

SHARED VALUES around through 9 Principles of

Simple, local organization for our customers

LOCAL CUSTOMERS	GLOBAL CUSTOMERS
Northern Europe	Mobility
Americas	Industry
Southern Europe, Middle East and Africa	Construction Industry
Asia-Pacific	Life Sciences

OUR ADDED VALUE: sustainable well-being and performance

TO ACHIEVE SUSTAINABLE GROWTH

Proximity to customers

CUSTOMER EXPERIENCE
INVOLVEMENT UP TO THE END-USER

our code of ethics Conduct and Action

Agile portfolio management

Value-creating **acquisitions**

Disposals to refocus on our strengths

Performance drivers

- Innovation
- Digital transformation
- Technology and industrial efficiency
- Regional, international and market synergies

solutions that reconcile for our customers

Fostering growth and increasing competitiveness

Overall improvement of more than **100 points** in the operating margin by 2021.

Contributing to responsible development

(CSR Roadmap see Section 2.1 of Chapter 4)

ADDRESSING THE CLIMATE EMERGENCY

- Commitment to carbon neutrality
- Accelerated emergence of a low-carbon economy
- Development of the circular economy

CONTRIBUTING TO FAIR AND HUMANE ECONOMIC DEVELOPMENT

- Preservation of health and safety of employees and stakeholders
- Diversity and inclusion
- Commitment to local communities

Creating shared value with our stakeholders

ECONOMIC

- Sales: **€42,573 million**
- Added value: **€14,502 million**
- Portion held for growth: **€4,113 million**
- Interest repayment: **€329 million**
- Dividends paid: **€766 million**

EMPLOYMENT AND SOCIETAL

- Salaries and other personnel compensation: **€8,336 million**
- Taxes and duties: **€712 million**
- Retirement contributions: **€240 million**
- Suppliers and operational costs: **€28,728 million**
- Investments in local communities: **€6.1 million**

2

Strategy

1. The Group's main markets

1.1 Construction markets

Saint-Gobain's largest market, construction, offers growth prospects worldwide, with very specific challenges and requirements depending on the geographic region. The worldwide construction market is expected to increase by an average volume of 2.6% annually between 2018 and 2023 [(1)].

For developed countries, the issue of building renovation and energy efficiency is an essential one. The construction industry is expected to grow by 0.9% per year on average in North America between 2018 and 2023 and by more than 1.3% in Western Europe. In these mature markets, the renovation sector plays an increasingly important role. In France, for example, the residential renovation market is estimated to be worth around €62 billion per year and is expected to grow by 1.2% per year in 2020 and 2021 [(2)].

Today, improving building energy efficiency is considered essential to achieve carbon neutrality by 2050 in Europe, since residential and tertiary buildings account for 40% of energy consumption. However, the majority of European buildings of 2050 have already been built [(3)]. Renovation will therefore be increasingly stimulated by growing energy efficiency requirements, which are appearing in regulatory changes currently being made, and by energy renovation programs supported by public authorities. In France, for example, the Denormandie plan approved as part of the 2019 Finance Law provides a framework favorable to the acceleration of energy renovation efforts. The solutions developed by Saint-Gobain meet the ambitions stated in the European plan for a climate-neutral economy by 2050 [(3)] and enable the use of new low-energy-intensity materials. The construction market is therefore driven by end-consumer demand for ever more sustainable and environmentally friendly solutions, encouraging the development of the circular economy and bringing ever more comfort into the home.

Emerging countries, in which the Group is increasingly present, will remain the key driver of growth. The strongest growth is expected in particular the Asia-Pacific region during this period, with an average annual growth rate of 4.1%. Some markets will continue to grow by more than 5% annually, particularly India, the Philippines, and Vietnam. Africa-Middle East and Eastern Europe will also contribute to the momentum of the construction industry, as an average annual growth rate of 3.3% has been observed in each of these regions over the period.

1.2 Mobility market

Faced with regulatory developments and ever-increasing consumer demands, the automotive industry is changing. Comfort, connectivity and respect for the environment are aspects that today's automotive manufacturers have to give more attention to. Sales of autonomous and electric vehicles, data management components and services, connectivity and on-demand mobility will account for 40% of total industry profits in the European Union (EU) and the United States in 2035, compared to only 1% in 2017. This means that the current difficulties in the automotive market, in Europe and China especially, mainly reflect the profound changes that the industry is experiencing. A recent BCG study predicts a decline in vehicle sales in the EU and the United States by 2021 but suggests that they should become positive again in 2022-2023, because strong trends in electric, autonomous, shared and connected vehicles represent medium- and long-term market growth opportunities [(4)].

At a time when automotive manufacturers are especially emphasizing lower energy consumption and CO_2 emissions (reduced vehicle weight, better thermal insulation, aerodynamics), comfort (acoustic, visual, UV protection), safety and connectivity, to notably support the development of electric vehicles, the Group offers products that meet these new requirements, both in the primary market and in the replacement market.

(1) IHS Global Construction Outlook Executive Overview, November 2019.
(2) 88 th Euroconstruct summary report; November 2019.
(3) "A planet for all, a long-term strategic European vision for a prosperous, modern, competitive and climate-neutral economy" in Communication from the Commission to the European Parliament, the European Council, the Council, the Committee of the Regions, the European Economic and Social Committee and the European Investment Bank, November 28, 2018.
(4) An automotive downturn is coming – it's time to prepare, BCG, 2019.

With the global growth in passenger traffic, the aerospace market offers strong growth potential. According to Airbus [1], global passenger traffic is expected to increase by 4.3% per year until 2038. Some 70% of the world's population is expected to live in an urban environment by 2050, which would favor the creation of airports around major cities; traffic growth could also be boosted by the increase in the world's middle-class population over the next 20 years (+50% between 2019 and 2038). Further, heightened competition between airlines has led to pressure on operating costs. This context is reviving the demand for weight reduction, particularly by replacing metal parts with composite materials, which are lighter, to reduce jet fuel consumption. The aerospace sector's very high equipment safety and reliability standards are a significant challenge for Saint-Gobain, which is recognized for its experience, high-quality performance and reliability.

The Group's aerospace solutions include high-performance plastics capable of withstanding extreme temperatures, ceramics used in aircraft engines and cockpit glazing. Saint-Gobain's cockpit glazing, both glass and acrylic, are thus fitted in civil and military aircraft.

1.3 Healthcare market

The healthcare market, and notably the pharmaceutical, medical and biotechnology sectors, offers promising prospects. The aging population and increased medical care represent a key challenge: between 2019 and 2030, the proportion of people over 65 years of age in the population of Europe and North America will rise from 18% to 22.1% [2]. At the same time, new technologies such as biotechnologies are developing and medical techniques, such as liquid management, are evolving. These two phenomena translate into a new need for the development of solutions and materials with unique properties in laboratories or hospitals.

Like the mobility market, the healthcare market is a sector in which the reliability of solutions and their classification and compliance with standards are crucial. The Group thus markets tailor-made, single-use plastic solutions (tubes, connectors, pockets, filters, etc.) used in fluid management, as well as painting cloths with sanitary characteristics that are particularly suited for healthcare environments. The Group also designs products for use in the medical imaging market (crystals and scintillators) and the cell therapy market.

1.4 Industrial markets

The industrial markets comprise a number of different markets (energy, metallurgy, non-metal raw materials, mineral extraction, chemicals, petrochemicals and semi-conductors) that find applications in defense and security, industrial equipment and household appliances. The vast majority of these markets are B-to-B, with varying degrees of growth depending on the market and the region of the world. Differentiation is achieved through increased research into new technologies and co-development with partner customers. These markets are also marked by the growing influence of automation and Industry 4.0 and are subject to profound transformations. In addition, the energy sector's model is currently in doubt, and the sector is turning towards greener and decarbonized energies.

The Group is developing technical solutions specifically tailored to the various markets, mindful of current needs and emerging trends. Saint-Gobain also designs numerous high-performance products aimed at the wind energy sector: seals for marine-based wind farms, and glass fiber textiles to improve the surface condition of turbine blades. The Group develops high-tech products, from oil exploration (scintillators used to identify geological layers), to waste recycling (refractory furnace linings), and including operations and storage (seals, flexible caps and insulators for drill pump wires and cables, etc.).

The Group offers chemical and petrochemical market solutions that improve chemical reactions due to the action of specifically designed catalyst substrates. Saint-Gobain offers a wide variety of solutions for other markets: polymer strips and films that have chemical and thermal properties with multiple industrial applications, highly sophisticated refractory products for steel-making and metalworking, high-tech abrasive ceramic or diamond grain-based milling solutions, high-value materials cutting and finishing as well as machine components or high-precision equipment for transport or motorization.

(1) Global Market Forecast 2019-2038, Cities, Airports & Aircrafts 2019.
(2) World Population Prospects 2019 highlights – United Nations.

2. The Group and its environment

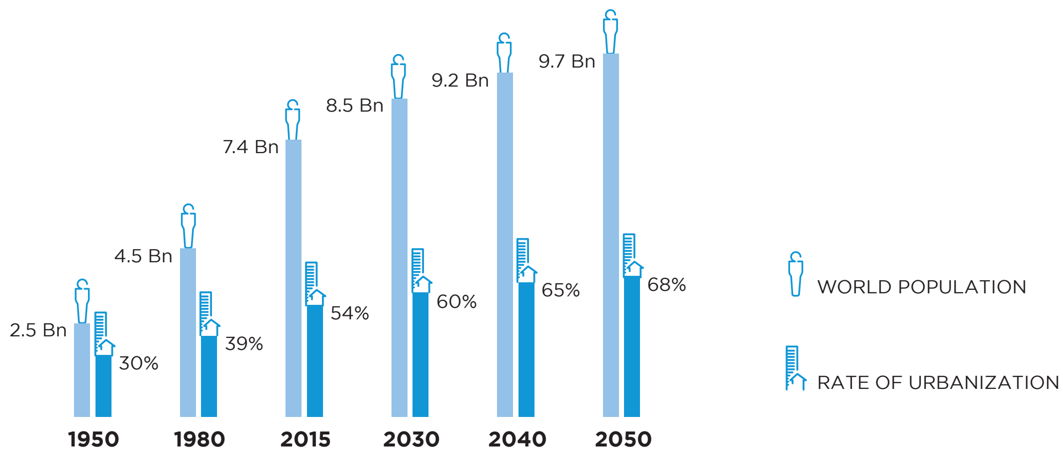
2.1 Major challenges and opportunities

2.1.1 Sustainability issues

a) The challenge of population growth and urban development

In mid-2019, the world population was estimated at 7.7 billion: it is expected to reach 9.7 billion in 2050 [(1)]. This demographic growth is accompanied by rapid urbanization. In 2015, 53.9% of the world population lived in cities; this percentage will reach 68.4% by 2050, representing 2.7 billion additional urban dwellers. Africa and Asia will represent 90% of this growth, resulting in an increased need for housing and infrastructure, particularly in currently mid-sized cities, which will become megacities [(2)].

Population growth and urban development



In emerging countries dealing with the persistence of slums, access to housing is a major socio-economic issue, especially since a growing proportion of the population is settling in large cities and megacities. Cities with more than 10 million inhabitants are growing in number and absorbing a growing share of the world's population. In 2018, there were 33 megacities and that number will increase to 43 by 2030 [(3)]. At the same time, a large middle class with high purchasing power is developing, in Asia especially, with ever-increasing demands for comfort, which require appropriate solutions [(4)].

These challenges are the focus of the Group's concerns, which are expressed in a comprehensive offer of solutions to meet the growing demand for housing and infrastructure and in adapted responses at the local level to design sustainable solutions. These aspects contribute to the construction of resilient cities that guarantee the well-being of individuals against a backdrop of resource scarcity and climate change.

(1) *World Population Prospects 2019 – United Nations.*
(2) *World Urbanization Prospects - 2018 Revision - United Nations.*
(3) *The World Cities in 2018 - United Nations*
(4) *Oxford Economics – Global Outlook Conference – November 2019.*

b) The challenge of climate change

Twenty-five years after the first report from the Intergovernmental Panel on Climate Change (IPCC), the extent of the problem of global warming has now been fully assessed; the Stern report [1], which provides a benchmark, showed that the cost of doing nothing outweighs the cost of a coordinated plan to reduce climate change.

After more than twenty years of negotiations and as a matter of urgency, governments have therefore decided to commit to quantified targets for greenhouse gas reduction. The Paris Agreement, which came into force on November 4, 2015, sets the stringent goal of keeping the increase in temperature to below 2°C above pre-industrial levels, which implies a reduction of emissions by 2.7% per year from 2020 to 2030. To limit the increase to 1.5 °C, beyond which the environmental and economic consequences would be major, they would have to be reduced by 7.6% per year over the same period [2]. In November 2018, the European Union affirmed its ambition to achieve net zero greenhouse gas emissions by 2050 [3]. Similarly, beyond the signatory countries, the positive engagement by many players, including towns, cities and businesses, brings hope for the implementation of ambitious action plans and compliance with the objectives set by the Paris Agreement.

As part of the Climate Action Summit organized by the United Nations Secretary General on September 23, 2019, Saint-Gobain formalized its support for the Global Compact's "Business Ambition for 1.5 °C". This means that the Group is committed to achieving the target of "net zero emissions" by 2050 in accordance with the +1.5 °C warming scenarios and in line with the recommendations of the latest climate studies to limit the worst impacts of climate change. Saint-Gobain responded to a call for action issued by business leaders, civil society representatives and UN officials to contribute to limiting the rise in global temperatures to a maximum of 1.5 °C above pre-industrial levels.

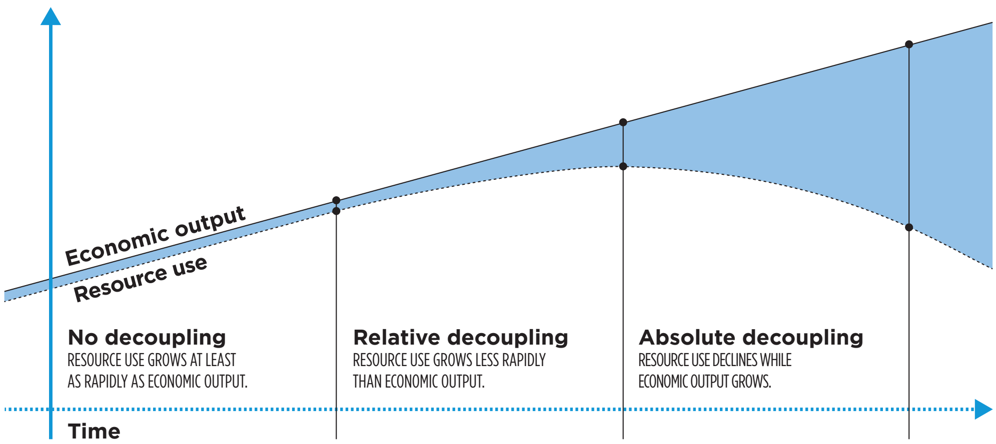
Saint-Gobain has already committed to reducing its CO_2 emissions by 20% between 2010 and 2025. Several programs and tools have been implemented to support this objective, such as internal carbon pricing, one for investment projects and one for R&D projects, to guide company decisions and encourage low-carbon solutions.

Saint-Gobain is also one of the companies on the "Climate Change A List" created by the global non-profit CDP for the second consecutive year in 2019. Its environmental targets for 2025 have been approved by the Science-Based Targets initiative.

Saint-Gobain's efforts focus on its entire value chain, both upstream and downstream, including suppliers, to create virtuous dynamics.

In the private sector, there are many levers for action to reduce environmental footprints. Furthermore, in the construction sector, room for maneuvering is especially important. In 2017, the building industry accounted for 36% of global energy consumption, 39% of energy-related CO_2 emissions. To limit warming to 1.5°C, energy consumption for buildings cannot increase by more than 20% by 2050, as compared to 2010 at a global level. [3]

The highest potential for energy gains lies in the reduction of heating and air conditioning consumption made possible by improvements in building insulation and equipment performance. Building energy efficiency therefore presents numerous opportunities for fighting climate change. Today, however, the primary trigger for renovation work is to improve the comfort of the home. Under these conditions, combining residential comfort and energy efficiency is a major lever for action to combat climate change.



Source: Europe an Environment Agency [4].

(1) *Stern Review on the Economics of Climate Change, 2006.*
(2) *Emissions gap report 2019 – United Nations Environment Program.*
(3) *Global Warming of 1.5 °C, Intergovernmental Panel on climate change, October 2018.*
(4) *The European Environment: State and outlook 2015 – Synthesis report, European Environment Agency.*

Decoupling is necessary at a time when economic growth could be held back by a lack of resources. Debates are currently emerging, with some claiming that the only credible carbon-neutral scenario is degrowth. On the contrary, Saint-Gobain believes that carbon neutrality is compatible with growth and that a low-carbon economy offers growth prospects for economies.

The Group has fully integrated climate change within its strategic vision through its commitments (see Chapter 3, Section 4), its active role in exerting a virtuous influence on the entire value chain, and by bringing to market increasingly sustainable solutions that respect the environment.

c) Resource scarcity, recyclability, transition to a circular economy

Furthermore, public policies are increasingly adopting a life cycle approach, which considers the environmental impact of the building as a whole, from the extraction of raw materials to demolition and recycling, especially in France, as part of the 'anti-waste for a circular economy' bill adopted in late 2019. At the European level, the 54 actions of the plan for the circular economy launched in 2015 have now been implemented or are in the process of being implemented. In 2016, activities related to the circular economy, such as recycling or repairs, generated almost €147 billion in value added [(1)]. The recovery of materials thus makes it possible to limit the use of resources and emissions while generating additional economic growth, especially because it stimulates the search for technological innovations [(2)].

In the construction sector in particular, which is responsible for 40% of global waste production and 40% of resource consumption, the transition to the circular economy is the source of profound renewal at different levels of the value chain: production processes, product formulation, product end-of-life management, recycling, reuse, development of the economy of functionality, etc. The rise of prefabrication (see Section 4.4.3 of Chapter 2) and the development of lightweight construction solutions (see Section 4.2 of Chapter 3) are among the responses to these major challenges.

2.1.2 Digital transformation

Digital technology is opening new trade opportunities, with a very high annual growth rate for e-commerce throughout the world since the early 2000s. This growth is no longer the preserve of developed countries: in fast-growing countries, 3 billion users should have internet access by 2022, compared to 2.1 billion in 2017 [(3)]. The low cost of investment to launch an online commerce platform has reduced barriers to entry, while asymmetry of information between sellers and customers is falling. Companies must now be closer to their end customers to avoid new intermediations. To meet this challenge, the Group has, for example, provided a marketplace for its distributors in Brazil (Toca Obra) and launched Autover Shop, an e-commerce site for the windshield repair market. In addition, for differentiation, it is no longer just a company's product that matters, but the services that go along with it. Digital technology is reshaping the competitive balance and the way that businesses interact with their stakeholders (customers, employees and suppliers).

Digital technology is also revolutionizing the way that factories are organized and is producing a major, gradual change in production methods, by providing real-time access to a wealth of information on industrial facilities that are now interconnected and enabling extensive analysis of these data. Industry 4.0 is an integral part of the Group through intelligent data analysis, automation and enhanced operators. Progress can thus be seen on two fronts: on the one hand, in the increase in productivity that results from reductions in inventories, breakdowns, lost time and scrap material; and, on the other, in improved flexibility of production processes. Industry 4.0 also opens up the prospect of mass customization, which relies in particular on locating assets as close as possible to end customers.

With digital technology, a profound rethinking of buildings and habitat is also under way. The digital integration of buildings is leading to technical changes in construction, particularly the increasing use of Building Information Modeling (BIM), which provides an integrated view of a building throughout all the stages of its life cycle. Domotics helps to reduce energy consumption in buildings and improves security. It also allows the increasingly comprehensive integration of smart equipment into daily life, in construction, automobiles, and transportation.

Saint-Gobain is continuing its digital transformation through its solutions offering, changes in its work methods, interactions with its customers and suppliers, and the manufacture and distribution of its products. The "Transform & Grow" plan is set to accelerate this transformation.

(1) "Closing the circle: the Commission implements the Action Plan for the Circular Economy" – European Commission – Press release, March 2019.
(2) 6th Global Environment Outlook, 2019 – United Nations.
(3) Boston Consulting Group, Digital Consumers, Emerging Markets and the $4 trillion future, September 2018.

2.2 A Group attentive to its ecosystem

Within each of their respective perimeters, the Group's teams listen to their stakeholders and, above all, to their customers. The Group's organization, size, international dimension and diverse business portfolio imply decentralized management of the dialogue with stakeholders, allowing the operating entities broad autonomy in conducting their businesses. Dialogue must be constructive, transparent and based on mutual trust.

To better organize this dialogue, priority stakeholders have been grouped according to challenge *(see chart below)*. This provides a formal structure for feedback on internal and external stakeholders' expectations, with a Group function being mandated, for each stakeholder, to compile the expectations expressed at the local, national and international levels.

This ensures that stakeholders' key expectations are factored into the Group's long-term strategy.

Stakeholder categories	Key stakeholders	Point of contact	Communication methods
Market	■ Customers ■ End-user ■ Specifiers ■ Suppliers	Marketing	■ Continuous meetings ■ Publications and magazines; company websites; forums and trade fairs ■ Publication of training manuals on energy efficiency and the environment; charter of recommendations promoting the insulation of existing buildings; participation in associations or groups ■ Training for customers and end-users ■ Suppliers' Charter; action plans to follow-up on the Responsible Purchasing policy
Civil Society	■ NGOs ■ Foundations ■ Associations ■ Universities ■ Secondary and professional education ■ Online media (social networks, blogs, etc.)	CSR	■ Group publications ■ Meetings ■ Participation in university training courses ■ Forums in schools ■ Support for youth development
Local communities	■ Local governments (elected officials, administrations, etc.) ■ Opinion leaders ■ Neighbors of Group sites (private or public companies, individuals, etc.) ■ Traditional media	Country organization	■ Meetings held at the initiative of sites or country organizations ■ Solidarity initiatives ■ Regular meetings with elected officials and representatives from local administrations ■ Experimental work in the regions in partnership with the public entities and elected officials
Employees	■ Employees ■ Temporary staff/temporary workers ■ Employee representatives ■ Work/study students ■ Interns	Human Resources	■ Internal communication materials ■ Meetings with Group managers ■ Bodies representing employees ■ Intranet ■ Website ■ Global or subject-specific surveys
Investors	■ Shareholders including employees ■ Institutional investors ■ Individuals ■ ISRs ■ Rating and ranking agencies	Financial communications	■ Group publications (brochures, etc.) ■ Website ■ Letters to the shareholders ■ Shareholder Guide ■ Public declarations ■ Meetings with investors ■ Meetings with individual shareholders
Regulatory Authorities and public affairs partners	■ Governments ■ Regulators ■ Inter-governmental entities ■ International (UN, ILO, etc.) ■ Inter-professional associations ■ Green Building Councils	Sustainable development	■ Public affairs ■ Participation in working groups, in most cases led by inter-professional associations, on various construction method-related technical issues, such as the evaluation of building performance. ■ Green Building Councils

2.3 Integration of the stakeholders' vision

In 2015, Saint-Gobain conducted a three-stage materiality analysis:

- identification of the key challenges based on a review of the available documentation on the Group, its activities and its environment;
- sharing these challenges with key stakeholders;
- ranking the challenges by comparing stakeholder expectations against the vision of Group management.

The resulting materiality matrix was developed on the basis of looking for consensus between external and internal stakeholders. A methodology note is available on the website.

These points of interest identified in the matrix have been grouped into six priority issues for the Group and its stakeholders: ethical business practices, climate change, circular economy, health and safety in the value chain, diversity and inclusion, local and inclusive value creation. As a result, in 2019, a Corporate Social Responsibility (CSR) roadmap was published. For each of these issues, the Group's vision, its policies and action plans, its commitments and monitoring indicators, along with a summary of stakeholder expectations, are presented (see Section 2 of Chapter 4).

In accordance with Articles L.225-102-1, R.225-105 and R.225-105-1 of the French Commercial Code, Saint-Gobain conducted a study of the risks and opportunities associated with CSR. The materiality analysis contributed to the identification of the main CSR risks and opportunities for the Group. Details on the methodology used are provided in the Non-Financial Performance Declaration (see Section 3.3 of Chapter 9).

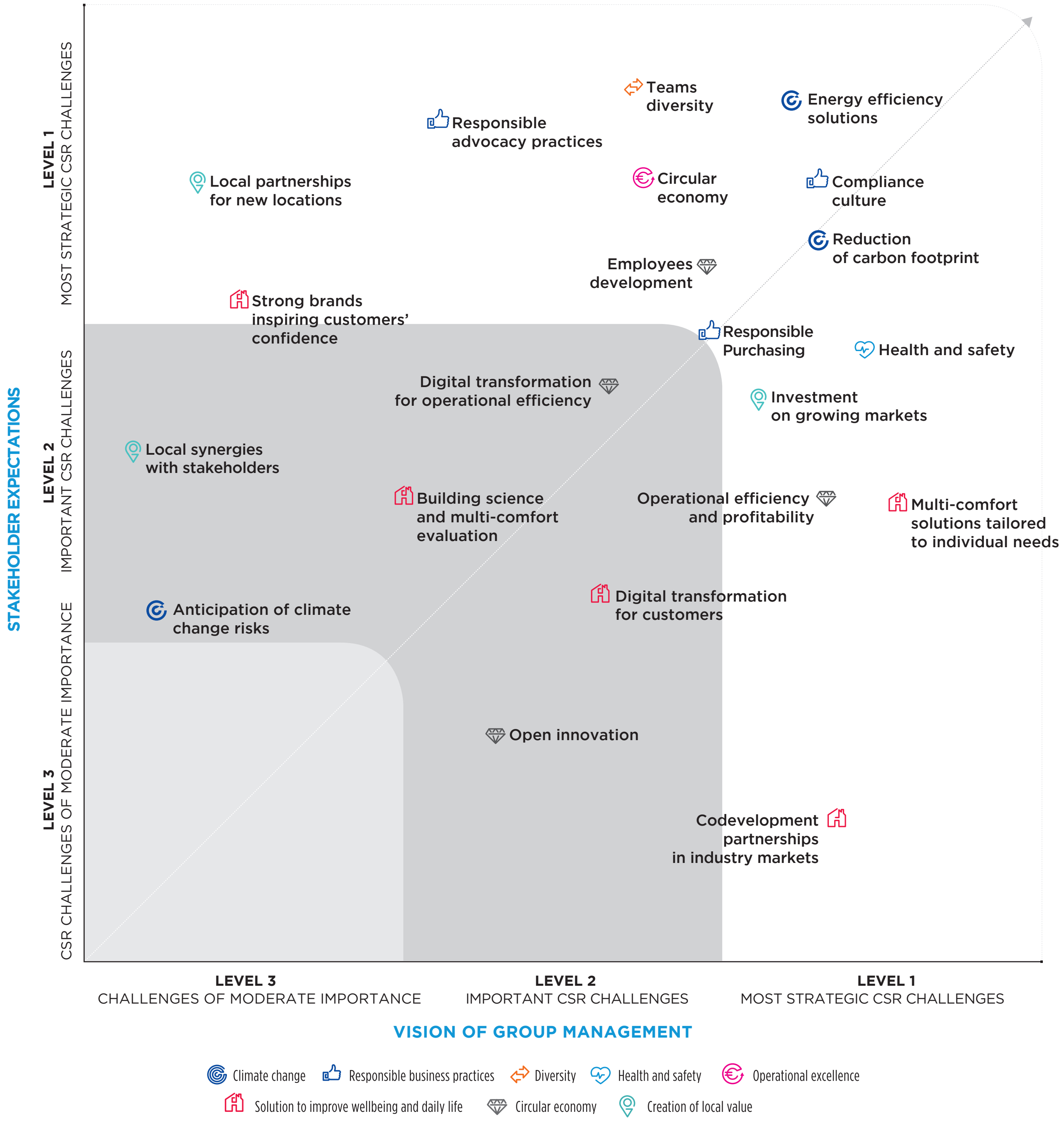
Accordingly, nine specific risks and opportunities [(1)] have been identified at the core of these key challenges:

- business ethics as part of the responsible business practices challenge;
- diversity and inclusion within the organization as part of the diversity challenge;
- energy and carbon efficiency of products and services as part of the climate change challenge;
- energy efficiency and carbon usage intensity in operations as part of the climate change challenge;
- health and safety at work as part of the health and safety challenge;
- incorporation of recycled materials in products as part of the circular economy challenge;
- responsible management of the value chain as part of the responsible business practices challenge;
- safety of products as part of the operational excellence challenge;
- skills and talent management as part of the operational excellence challenge.

(1) Risks and opportunities are published in alphabetical order in English without prejudging their relative importance for the Group or its stakeholders.

2

Materiality matrix



3. The Group's positioning

Saint-Gobain has a unique portfolio of products and solutions that enables it to operate as a manufacturer and distributor, in the most demanding industrial markets as well as in construction markets. It has complementary brands and trade names to meet all of the needs of construction professionals, craftsmen, contractors, architects, design offices, specifiers, major builders and other professionals.

With an industrial presence in 68 countries, Saint-Gobain is able to offer complete, innovative and high value-added solutions to its customers by adopting its approach and response to local and global markets, mature economies and emerging regions.

3.1 Corporate social responsibility at the core of Saint-Gobain's approach

As part of its transformation program, Saint-Gobain maintains the highest CSR standards, emphasizing its strong culture and values, so that it can constantly set an example for compliance, respect for the environment and the health and safety of everyone. The Group is constantly strengthening its safety and diversity requirements and supporting the training of its employees. It relies on their strong commitment in all aspects of the company's life.

Saint-Gobain has long been committed to a model of profitable, sustainable and responsible growth that benefits all of its stakeholders. To achieve this, the Group relies on increasingly open innovation driven by the search for low-carbon and low-resource solutions. It is a member of organizations, consortiums and think tanks and launches initiatives that enable it to develop a collaborative approach with its partners and participate in the transformation of its markets, both globally and locally.

3.2 Opportunities and challenges

Saint-Gobain's positioning is based on major societal and environmental trends, which represent opportunities and challenges for the construction of the world of the future:

- the search for well-being and comfort in living spaces for individuals (occupants of residential and tertiary buildings, vehicle and transportation users). It is receiving ever more attention from the professional customers to whom Saint-Gobain sells its products and solutions, in a environment in which the end user is moving up the value chain as a result of the digital revolution;
- the search for performance and innovation. Professional customers are searching for performance and innovation for critical applications, for which reliability and customization are essential, and for construction businesses driven by profound changes created by the need to build more, faster, better, with fewer resources and less manpower;
- climate change, resource scarcity, population growth and urbanization. These major trends make it necessary to go ever further in the search for sustainable, environmentally friendly, accessible solutions adapted to each region. The demands of sustainable development and the transition to a low-carbon economy are accelerating the transformation of business models and creating many opportunities for the Group, some of which have already materialized, in terms of new products, new services and new ways of working with customers and partners.

Saint-Gobain has integrated strong convictions into its value proposition and brand promise. The search for well-being and performance and the immediate benefits of its solutions for customers and end-users are part of the same movement as the search for sustainable, low-carbon, environmentally sound solutions that avoid greenhouse gas emissions and will be part of the answer to the major challenges that the world will have to face in the coming decades.

This conviction guides the innovation efforts and search for performance at work at all levels of the Group, through research and development (R&D) focused on end users and close to customer needs, close collaboration between the R&D and Marketing teams, expansion of the culture of innovation throughout the company, and an open approach to innovation.

3.3 A presence throughout the value chain

Saint-Gobain is exposed to a very wide variety of direct and indirect customers and has a strong presence across the entire value chain in the construction business, which is the bulk of its portfolio, with increasingly important access to end-users and very close relationships with its craftsmen and specifiers. This is an asset in businesses that are undergoing profound transformations, first and foremost among them digital transformation, which is breaking down barriers and disrupting traditional value chains. Saint-Gobain strongly believes in the opportunities offered by digital technology to improve customer experience. The Group is banking on phygital, an approach that combines digital services and human interaction at points of sale, and, in countries where it has a strong presence as a distributor, on the territorial coverage of its brands and direct proximity to customers. Its aim is to offer customers the most complete and complementary experiences possible.

Because wherever the Group operates, it has access to the entire value chain, from end users (see Section 4.4.3 of Chapter 2) to major industrial customers, Saint-Gobain has in-depth knowledge of markets and customer needs. This gives the Group visibility and a certain amount of influence with individuals, who benefit from its solutions and can also play a role as specifiers.

3.4 Transformation for customers

With Transform & Grow, the Group has chosen, for its regional businesses, to strengthen the influence of the local level in day-to-day decisions and operations and, to serve its major industrial customers, to rely on a global organizational structure (represented by the High Performance Solutions entity) to encourage agility and customer proximity. Thanks to an approach by market rather than by product line, the Group's new structure simplifies and accelerates decision-making and makes it possible to provide customers with comprehensive offers based on the entire product portfolio in a given market or country. Country or BU Chief Executive Officers are fully responsible for their portfolios and income statements. This structure therefore allows greater attention to the vision of each end market and to the customer experience.

The in-depth transformation of the Group is enhanced by an accelerated rotation of the portfolio, with the divestment of some activities to free up resources for growth, both organic and external. The Group's acquisition policy is based on three pillars: strengthening local leadership positions, new territories and technological niches. With a renewed organization and changing scope, Saint-Gobain continues to build on its fundamentals and strong expertise: a common materials culture that unites all of its businesses, R&D with a strong global and cross-functional dimension, business-minded support teams, operational excellence programs, major investments in logistics, manufacturing 4.0 and the digitization of customer processes.

The customer-focused approach, wherever customers are, wherever the decision-making levers are, is a guarantee of success for the future to capture opportunities in all regions of the world and unleash the Group's growth potential. This focus on customers is further strengthened by the exploration of new business models, new forms of collaboration and an ever-increasing emphasis on partnership models, co-development and co-innovation with the Group's customers and partners.

3.5 Synergies at all levels of the Group

First and foremost, Saint-Gobain emphasizes synergies at all levels of the company so that countries can pool their experiences and entities and brands serving the same types of customers can work together to offer the full power of the Group's solutions portfolio (see Section 5.4 of Chapter 2). To accomplish this, the organizational structure has been designed to encourage the sharing of best practices and expertise across the Group and to take full advantage of the expertise within the Group. For example, Saint-Gobain can draw on cross-functional expertise in various businesses in both the construction and industrial sectors to launch research programs based on themes such as acoustics or fire resistance, for example, rather than product lines. Between the distribution brands and industrial brands in the construction markets, between the industrial and construction markets, and between the distribution and industrial markets, synergies and transfers of expertise are an undeniable asset for Saint-Gobain.

4. Responses adapted to each customer

4.1 Preserving the future for everyone: making sustainable development the focus of strategy

Saint-Gobain aspires to play a major role in the transformation of its markets by responding to the growing demand from all of its stakeholders for ever more sustainable and responsible development.

4.1.1 Offering sustainable solutions

Saint-Gobain designs, produces and distributes increasingly sustainable solutions for construction markets and the industry. It does so as part of a product innovation effort guided by the anticipation of market trends, the taking into account of customer needs and compliance with the strictest transparency and security standards (see Chapter 3, Section 2.1.2). These innovation efforts are underpinned, in the construction market, by a holistic approach to what makes a building sustainable. This original vision combines the environmental footprint of the building throughout its life cycle with the well-being and health of its occupants. This occupant-centered approach to sustainable buildings is based on constant attention to the user experience and is proof of the strong customer focus of the Group's innovation approach.

The solutions proposed by Saint-Gobain reduce resource usage intensity, limit the energy consumption of the buildings, vehicles or facilities they equip and have a low carbon footprint. Recent innovations include:

- the new ISOVER glass wool: an infinitely recyclable product made up of 40% recycled raw materials and a fully biosourced binder;
- the ECLAZ® glazing range launched in 2017, a new generation of reinforced insulated glass for building glazing, which provides improved visual and thermal comfort while reducing energy needs for air conditioning and lighting;
- lightweight glazingsss developed for automobiles by Sekurit, reducing the weight of a car by up to 6 kg;
- the Gyproc Ergolite plasterboard with a 25% weight reduction for a reduced carbon content without any change in efficiency;
- the Sefpro cruciforms installed in glass furnaces to maximize air exchange and thus heat recovery.

These eco-designed solutions are adapted to each type of customer, market, and territory, and particularly to the climate types.

In Norway, the alliance between the Optimera brand and Hunton, a manufacturer of wood-fiber-based products, has led to the creation of "Green Panels". Installed in service or residential buildings, these panels or walls are made from wood fiber from Norwegian forests. They are a response to a growing demand for environmentally friendly insulation solutions, and they regulate hydrometry and improve acoustics. Together, the two players have invested in R&D and developed this solution, which offsets the CO_2 emissions emitted during its production.

In the construction market, the Group is positioned in new construction and renovation, both residential and non-residential, with a variety of construction methods, climates, cultures and disparities between emerging and mature countries. In these markets, the Group is particularly well positioned with its comprehensive range of solutions for energy efficiency in buildings and its lighter, less resource-intensive construction with a lower carbon footprint.

Similarly, in the mobility market, it is the user experience (passenger or driver) and the environmental footprint that guide product innovation policy. They lead to the design of solutions that allow both a reduced impact and a positive contribution. Therefore, Saint-Gobain uses its expertise for the benefit of its industrial customers (such as car manufacturers) while taking into account the benefits for end users (vehicle drivers, transportation users, etc.).

In addition to products, the Group is developing a range of services adapted to changes in these markets largely to support the development of the circular economy.

In France, La Plateforme du Bâtiment launched a service called "Les Ripeurs" in 2017. It offers craftsmen a solution for collecting and recovering waste directly from their worksites in the Paris region. Using a mobile app, customers specify the type of waste, provide a time slot, the address of their worksite and their preferred waste removal method. Depending on the requirements, rubble bags or loose waste can be removed by "les Ripeurs" in three hours if they are on the floor or the sidewalk. They can also collect waste left in a dumpster or flexible container provided to the customer in 24 hours. At the end of 2019, two years after the launch, 1,500 customers had used this service and 7,000 tons of waste had been collected; 40% of it was recovered.

4.1.2 Transforming markets

In collaboration with many private and public entities, Saint-Gobain is committed to increasing its positive contribution and to creating ethical dynamics in relation to climate change, demographic growth and urbanization, and the increased scarcity of resources (see Chapter 3, Section 4). The Group is making the circular economy a necessity to help combine growth and carbon neutrality, in line with its own commitments for 2050 and as part of a broader societal commitment.

This pioneering role is illustrated by Saint-Gobain's efforts to exert a positive influence on its entire value chain, particularly in terms of the circular economy where the Group can leverage its unique positioning (manufacturer and distributor in the glass, plaster, and insulation businesses, among others).

Saint-Gobain is helping to change the regulatory context in the construction sector, particularly in Europe where the renovation of existing buildings is an unavoidable challenge. The Group is involving itself in initiatives and voluntary programs, particularly in energy renovation.

Saint-Gobain in Finland is coordinating the WOOL2LOOP circular economy project, the first innovation project supported by the European Union *via* its Horizon 2020 financing program. WOOL2LOOP aims to recover mineral wool waste from the construction and demolition sectors to convert it into new concrete-replacement materials, using geopolymer technology. The project also involves demolition, sorting, analysis and processing of mineral wool waste. WOOL2LOOP acts across the entire value chain and involves the world's largest construction materials producers, innovative companies in the circular economy field and research institutes.

The Saint-Gobain Group is also expanding its waste collection business (see Section 4.4.2 of Chapter 2). The Saint-Gobain Group is making every effort to design circular solutions such as a zero-waste external thermal insulation system. Some 25% of the world's non-industrial solid waste comes from construction sites and 40% of all extracted raw materials are used in construction. The circular reuse of materials therefore constitutes a real challenge for the Group so that it can meet its sustainable development commitments and establish well-being for each individual for the benefit of all.

The Group is striving to anticipate standards in extremely regulated sectors such as transportation and health. Accordingly, in 2018, Sekurit equipped a new fully electric vehicle with lighter laminated glazing. By reducing the total mass of the vehicle, this glazing will help to reduce energy consumption. The glazing incorporates new electric lead-free welding technology developed by Saint-Gobain in anticipation of the application of the European Directive for the removal of lead from welding in automotive glazing beginning in 2020.

The SGR Provence research center is a partner of the EAGLE project, a European program launched in 2017 with the objective of developing more efficient gasoline engines by 2020. EAGLE is working to increase the energy yield of gasoline engines. In reducing energy loss, automotive manufacturers will be able to comply with the European standard calling for a reduction in CO_2 emissions to 50 grams per kilometer in 2020, as well as with legislation on particulate and nitrogen oxide emissions for hybrid vehicles. This project has eight other industrial and university partners.

In January 2018, the Ceramics BU initiated the OxiGEN project with several partners. This project is supported by the European Union and aims to develop the next generation of solid oxide fuel cells (SOFC) for residential construction and small commercial premises. The Group is thus positioning itself as a purveyor of clean energy.

In France, the Saint-Gobain Sully site signed an important four-year cooperation agreement with the European Commission as part of the European Clean Sky research program. This initiative aims to develop state-of-the-art technology to reduce CO_2 and gas emissions, as well as aircraft noise pollution. Saint-Gobain Sully will contribute its expertise on aerospace windshields to the Optiwind project led by Dassault Aviation. This will be done with a view to supplying the next generation of aircraft windshields and lighter structures promoting reduced electric and fuel consumption.

At the local level, Group subsidiaries are becoming involved in partnerships, e.g. with the Green Building Councils (GBC). These partnerships formed with over 35 GBCs worldwide since 2013 are taking shape through numerous initiatives. In Spain, Placo® and ISOVER have, for example, worked with the local GBC to develop their platform and supply information on the sustainability of its materials, and on their contribution to obtaining building labels such as LEED, BREEAM or VERDE.

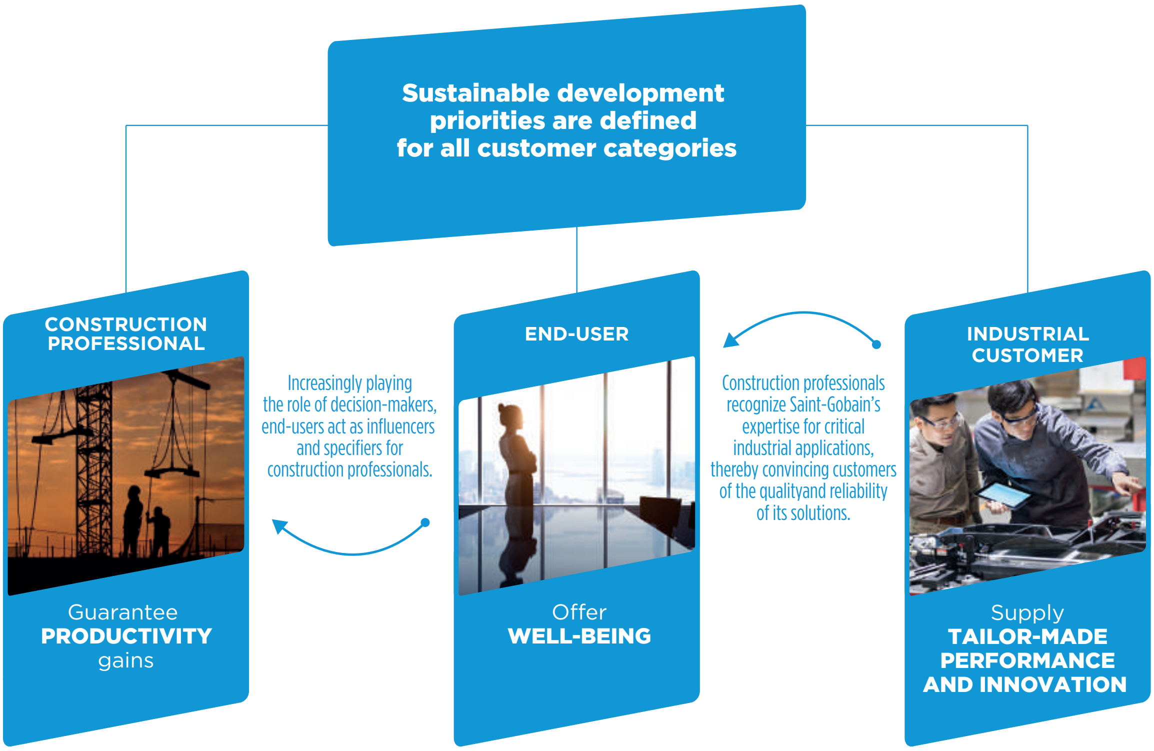
To support the efforts of its entire value chain on sustainable construction and to raise the level of the entire market, Saint-Gobain also relies on its own platform, Green Buildings, to support architects, consultancy firms, consultants, and entrepreneurs in the building certification process. This website was launched in 2018 and presents the criteria for obtaining labels and provides evidence as to how Saint-Gobain solutions can help achieve this goal. In addition, it provides the necessary documentation for project certification, such as environmental product declarations (EPD) and acoustics reports, in order to help professionals do their work and save time. It provides a competitive advantage to building professionals and positions Saint-Gobain as their partner of choice.

Through partnerships and within communication platforms, Saint-Gobain is positioning itself as a key player and participates in prospective studies on habitat, mobility, and the city of future.

In 2019, Saint-Gobain organized in Milan its 15th Multi Comfort Student Contest for architecture students. The participants had to develop a project for the rehabilitation and urban reconnection of the Crescenzago metro station area that was in line with the vision developed by the City of Milan in the #milano2030 program. This task was chosen in close cooperation with the Municipality of Milan, with a vision of the future and sustainable development for the region in mind. Among the evaluation criteria, the projects had to be innovative, sustainable, energy-efficient.

4.2 A comprehensive offering

4.2.1 Three main customer categories



4.2.2 A strong Saint-Gobain and expert business brands

The diversity of its areas of activity, products and solutions enables Saint-Gobain to serve a very large number of markets and customers. The customers who deal directly with the Group (most often assemblers, manufacturers and trade professionals) are not always those who recommend its solutions (architects and consultancy firms) or who have experience of using them (housing owners or tenants, automobile drivers, and consumers in the broadest sense).

By embedding end customer expectations in its value proposition, and factoring in the change in the ways that information is provided and decisions are made, Saint-Gobain chose to position itself firmly as a B-to-C-to-B (Business to Customer to Business) brand.

Saint-Gobain relies on its decentralized organizational structure, its brand recognition and the strength of its activities in every region of the world to drive its development. These attributes provide it with a detailed insight into its customers' needs in all markets. For the Group to be directly relevant to the general public, though, it needs to have a strong brand to rely on. In the digital age, where potential end customers can find information on and compare ranges and products, branding is a key factor for sustainable differentiation.

The Group measures the impact of the Saint-Gobain brand with its target audiences regularly. In 2017, awareness of the brand among all construction players had significantly improved once again compared with the previous survey in 2014 (an improvement of eight percentage points); today, the Saint-Gobain brand, or one of the Group's brands, are amongst the top three brands mentioned spontaneously in France, India, the USA, Germany and the United Kingdom.

The 2017 evaluation also shows that the Group's image has improved significantly: 51% of respondents have a positive image of Saint-Gobain (versus 38% in 2014), and 60% recognize the Group as a leader in sustainable construction (versus 44%).

Finally, after a survey conducted for the first time among the general public in 2017 in four countries (France, Germany, the United Kingdom, Sweden), the Group has launched a new brand awareness study in France, whose results show a significant improvement in the rate of spontaneous awareness. Saint-Gobain is increasingly associated with a modern and innovative company, and qualified awareness (in particular, Saint-Gobain's association with its businesses) has risen sharply compared with the previous study.

One illustration of the Group's ambition to speak directly to the general public at a time when environmental concerns and the issue of climate change in particular are mobilizing public opinion was the 2019 launch of a new advertising campaign in France, “Mission to Earth”. Its purpose is to emphasize the positive impact of its solutions to help preserve the planet while improving the quality of life and well-being of everyone in many areas of daily life such as housing, mobility or health. With this new communication campaign, Saint-Gobain is making a strong commitment, through its materials, to solving the major challenges facing the world: housing, transporting and caring for nearly 10 billion people in 2050 while preserving the planet.

Saint-Gobain's originality in its markets lies in its ability to capitalize on a powerful corporate brand with a portfolio of industrial brands and a brands network that are well-known in all market segments and in all the regions where the Group operates (see Section 3 of Chapter 1).

4.3 For end-users: offering well-being

4.3.1 The increasing power of end-users

Better informed and more involved in purchasing decisions, end customers are becoming increasingly important. They can have a decisive influence, especially in the choice of materials. The boundary between professionals and private individuals is becoming blurred, with private individuals now becoming significant stakeholders, particularly in the construction and renovation market.

The influence exerted by end-users has several dimensions:

- they are co-productive. 67% of customers say they are willing to provide personal data for customized services;
- they are well-informed. 81% of customers do online research prior to making a purchase;
- they are determined. 56% of customers have ended a relationship with a company after a bad customer experience;
- they are connected. 52% of customers feel more loyal to brands with which they interact on social media.

These major trends have an influence on the manner in which Saint-Gobain designs and positions its products and services. Today, the Group is building closer relations with the users of its products (building occupants, automobile drivers, public transport users, etc.) in order to inspire them and draw benefits from their role as specifiers, particularly in the context of construction or renovation work. It constantly strives to cultivate a reputation for reliability, quality and performance for the entire Group.

Consumers demonstrate a strong need for information about prices, quality and confidence in the company whose products they buy. According to a study conducted in France for Saint-Gobain by the OpinionWay institute and presented in March 2018, nearly 50% of the French population had done work on its housing over the past five years and over 50% of them planned to do work in the coming 12 months. Property owners are becoming aware that solutions exist to render their habitat comfortable. This same study showed that for 90% of the French population, habitat comfort cannot be dissociated from general well-being and that for 80% of those surveyed, the quality of materials is the most crucial criterion in decision-making.

It was in this context that Saint-Gobain launched the saint-gobain.fr website in 2018, which in April 2019 became lamaisonsaintgobain.fr. Constantly enriched with a wealth of information, its aim is to help individual customers design and carry out home improvements and renovations for comfortable and sustainable housing. It also offers a financial and tax aid simulator. Maison Saint-Gobain also connects professionals through the Homly You platform.

In its products and services offerings and its actions aimed at the general public, Saint-Gobain considers the following:

- a growing need for comfort and well-being in all areas of life;
- increasing attention to criteria of sustainability and respect for the environment.

The Group's original approach combines both dimensions.

4.3.2 An occupant-centered approach to construction

The Multi Comfort approach developed by Saint-Gobain is the realization of the vision of a sustainable building. It encompasses all aspects of the concept of comfort – acoustic, thermal, visual and air quality – and takes into account the environmental footprint of the building with regard to climate change, the circular economy and resource management, biodiversity and other areas.

In any location (a room, a vehicle, etc.), the well-being of the occupant depends on a certain number of factors: temperature, humidity, sound level, air quality, etc. When developing solutions and the products that comprise or delimit this location (ceilings, floors, walls, windows, etc.), the first step is to understand the required comfort levels, in terms of temperature ranges, noise levels in decibels, percentage humidity, etc.

This original approach to the design process, underpinned by intensive needs analysis, places the user at the center of all innovation processes. Several parameters determine the well-being, and therefore the health, efficiency and productivity of end customers.

While comfort is a subjective concept, it is often still difficult to quantify or grasp. Most of the time, a person is capable of giving a qualitative description of what makes their environment uncomfortable. Whatever the environment (residential, professional, transportation, etc.), the sources of discomfort most often cited are:

- too high a level of noise;
- too low or too high a temperature;
- polluted air: smells, too much or not enough humidity, dust;
- a light source that is too bright or not bright enough, too occasional, or too colorful;
- vibrations, in transportation.

This approach, which centers occupant experiences and associates sustainability with well-being and health, is inseparable from the consideration of environmental impact. It allows Saint-Gobain to prescribe products and solutions by addressing both dimensions together for the design of high-performance buildings that take into account the use value of the solutions adopted.

The Group is leveraging the breadth of its portfolio of activities combining new products and solutions to develop new systems that reinforce building performance and the experience of occupants.

The innovation centers enable the design and development – in close partnership with customers and other influencers – of long-term innovations that will shape surroundings and improve quality of life.

In addition to its centers, “demo buildings” are constructed to illustrate the Multi Comfort program and prove that the recommended solutions have a real-life application and function as real buildings. This gives indispensable support to the program.

The data from the 30 operational projects refine the understanding of Multi Comfort and thus the credibility of the approach. These projects cover 19 countries in Europe, North and South America, and Asia, and are representative of the diversity of users’ expectations in response to their culture and perception of comfort. At the end of 2018, the Group opened a sensory laboratory in its Singapore offices which serves as a showcase for further developing and enhancing its relationships with architects, contractors, government agencies, environmental associations and relevant stakeholders.

The Multi Comfort offer and label are an asset for Saint-Gobain, as they demonstrate the central place given to users of the solutions and help to convince investors, promoters, architects, developers and builders of single-family dwellings to use Saint-Gobain solutions. The Group has the ability to distinguish itself with a comprehensive offer and value proposition.

4.4 For construction professionals: improving productivity

Productivity is the core concern in construction businesses. Thanks to its dual positioning as a manufacturer and a distributor, and to the diversity of its businesses, Saint-Gobain has multiple ways of supporting its customers, helping them choose the most appropriate solutions, and purchasing and implementing them. It can also train them with increasing efficiency while taking their constraints into account.

4.4.1 Developing a comprehensive suite of services

For trade customers, saving time and being well-supported are essential. In-store services and digital services are becoming increasingly important. Here are a few examples:

- following a survey of its customers’ needs, Raab Karcher, in the Netherlands, opened a new type of sales outlet: the Bouwshop+. Its objective is to increase sales volume while offering a more comprehensive range and several value-added services. Customers can therefore use a workspace reserved for their use to organize professional meetings, print documents or order their products online. Tips and demonstrations on digital tools are offered as well as a drive service;
- in France, SOLU+, a tool to help in the completion of worksites, expanded its offering and is now available from other trading brands of Saint-Gobain Distribution Bâtiment France. Initially intended for members of the POINT.P Générations Artisans program, the configurator assists professionals in creating their estimates, in pricing worksites and providing customer advice. SOLU+ is now accessible to POINT.P, SFIC and Décoceram sellers with 60 channels for new and renovation worksites. It will expand to other trading brands in 2019;
- in the United Kingdom, Saint-Gobain developed Build Aviator, a services package to help manufacturers save time and gain efficiency. From design to planning and from sourcing to the final delivery, the Build Aviator app guides and assists customers with ecological building solutions. Professionals can thus assess a building’s energy and carbon efficiency and obtain the necessary calculations and reports to comply with construction standards;
- thanks to intermediation platforms such as Homly You in France or those offered by Weber in Brazil, or the 3S application developed by Saint-Gobain Gyproc in Vietnam, trade customers can increase their visibility and grow their customer base;
- various initiatives have been launched to provide construction waste recovery and management services to trade customers.

4.4.2 Enabling customers to save time

An essential result is the time savings provided by optimal logistics. Accordingly, the distribution trading brands provide high value-added logistics services to ensure the smooth, efficient and eco-friendly conveyance of materials to increasingly busy and demanding customers. For example, the Click & Collect system allows customers to collect materials from the nearest sales outlet at short notice. Raab Karcher, a distributor of building materials in the Netherlands, now offers professional customers the opportunity to pre-order products online in the morning and pick them up directly without going to sales outlets. This means that orders can be prepared in the afternoon, thus optimizing employee working hours, and customers load their vehicles directly the next day. This service is available at all Raab Karcher sales outlets, by telephone, on the brand’s app or online.

By pooling their logistics centers, the brands can optimize their inventory management and carefully control supply to the different sales outlets, for continuous improvement in terms of product availability. Automation of the centers also means that thousands of order lines can be processed every day, reducing delivery times to 24 hours, and even just 1 hour in certain major conurbations. The brands are also developing integrated logistics solutions, offering customers end-to-end logistics for a construction or renovation site, from delivery of materials to waste collection. In terms of e-commerce activities, in addition to the wealth of information available online, real-time inventory checks by customers, the organization of logistics networks and speed of product delivery are key factors in the success of retail sites. Saint-Gobain Distribution Bâtiment France has invested €10 million in its logistics base in Île-de-France to add a new stage to the mechanized order preparation chain. The goal is to triple the number of products managed (now 40,000) and speed up order preparation for the 2,000 sales outlets of all brands combined.

The time savings offered to construction professionals are based on geographical proximity and a particularly dense network of trading brands. Saint-Gobain is also developing reduced-format trading brands in the center of large urban areas to facilitate closer contact with worksites in downtown areas. Accordingly, in 2018, while awaiting other openings in the coming years, La Plataforma de la Construcción in Spain, introduced its City format in central Barcelona, providing an easily accessible sales outlet and the trading brand's many services to professionals. In May 2019, the POINT.P brand inaugurated a sales outlet in Paris on the banks of the Seine, which is in line with the development of new formats in city centers that meet customer needs and use the environment and resources that cities already have.

In areas where developed countries are experiencing a scarcity or even shortage of skilled labor, many solutions are being developed to improve productivity on construction sites. Saint-Gobain is designing solutions that are quick to set up, such as glass wool in bulk or the Webercol Flex Confort adhesive by Weber, which are adapted to the most stringent requirements.

4.4.3 Innovations for productivity

The Group is innovating in emergent aspects of construction:

a) Prefabrication and "off-site" construction

Prefabrication is a major trend that lies at the crossroads of two phenomena: a need to build more housing more quickly and a shortage of skilled labor in the building professions. Prefabrication refers to all methods and processes that make it possible to construct all or part of a building outside the construction site. To support this development, Saint-Gobain has launched a "Prefabrication Hub", a platform for discussion and training that supports pilot projects and helps countries define their action plans and adapt their organization. This Hub brings together nearly 200 members from 30 countries and supported several countries in 2019 through training workshops.

Prefabrication also contributes to the development of lightweight construction and alternatives to traditional cement- and brick-based construction, making construction more efficient and sustainable (see Section 4 of Chapter 3 on the Group's contribution to environmental, social and societal challenges).

Several initiatives illustrate the emergence of these new construction techniques and the efforts undertaken by the Group to develop them.

In 2018, Saint-Gobain acquired SIG RoofSpace Solutions (RoofSpace) in the United Kingdom to accelerate its development on the prefabrication market, where it already has a presence with Pasquill roof trusses, Scotframe timber-frame homes and Saint-Gobain metal framing.

In Norway, Optimera, a building materials distributor for building professionals signed a five-year contract with Norgeshus, a company specializing in the fabrication and installation of prefabricated timber-frame houses throughout Europe. Norgeshus has 118 dealers covering all Norway and intends to build between 1,100 and 1,200 dwellings per year.

In the United States, CertainTeed also recently signed a co-development agreement with Unity Homes, a prefabricated home builder based in New Hampshire. These two partners are joining forces to revolutionize US residential construction methods and open a new innovation channel on the high-performance habitat market.

In Slovenia, Weber supplied a complete system for the external insulation of the façades of a 150 m^2 house assembled in the factory before it is delivered to the site. More than 1,300 m^2 of Isover glass wool and 900 m^2 of Rigips plasterboard for the partitions were also installed upstream. This fully prefabricated house is the first Multi Comfort building in Slovenia. In response to the strong growth of the country's prefabrication market, Saint-Gobain has created a sales force dedicated to prefabricated solutions in the country.

Saint-Gobain Weber in Thailand and SCG Cement-Building Materials signed a memorandum of understanding in May 2019 to jointly develop a modular bathroom solution that incorporates Saint-Gobain Weber tiling and waterproofing solutions.

In terms of distribution activities, other Group specialist brands have invested in numerous aspects of the prefabricated market, such as bathrooms, roofing and structural components.

b) 3D printing

The Group is already using 3D printing technologies, especially for the creation of samples and prototyping. These technologies offer particularly interesting prospects for reducing environmental impact (lower waste production) and facilitating the creation of complex shapes for a wide variety of applications.

In the Netherlands, Weber is involved in the first housing program in the world based on 3D printing in concrete. Baptized Plan Milestone, this project involves the completion of five houses that will meet occupants' comfort requirements. The mortar developed by Weber in collaboration with six partners, including the Eindhoven University of Technology, will permit the creation of varied and complex shapes and will limit waste production.

In Singapore, Hamilton Holdings, a 3D construction printing company, has partnered with Saint-Gobain and Ang Cheng Guan Construction (ACG) to create Hamilton Labs Additive Manufacturing & Robotics Hub to oversee 3D concrete printing. As part of this collaboration, Saint-Gobain will be the exclusive supplier of materials and R&D. Ang Cheng Guan Construction will contribute a wide range of experience in buildings and construction. This collaboration also aims to promote university research and thus encourage technological innovations in buildings and construction and in 3D printing in particular.

c) Digital construction

Digital design and construction represent a major trend in building industry. Driven by the legislative framework in many countries, building professionals are making arrangements to reduce their costs, improve quality and shorten timelines, working collaboratively with a unique digital model that not only embeds the building plans, but also all the information on each of the components, including their properties and performance. This enables previews and forecasts that were not previously available: building efficiency, durability, the detection of design errors, etc. The challenge is to significantly reduce the total cost of the building throughout the life cycle. To achieve this, building designers, architects, general contractors, etc., have to download virtual "objects" containing Saint-Gobain products, to incorporate them into their Building Information Model (BIM). Saint-Gobain has developed a project with strategic impact to create a comprehensive object library and offer a variety of services to building professionals who need them.

The WCM industrial performance program (see Section 2.2 of Chapter 3) fully integrates this digital dimension.

4.4.4 Providing training to professionals

The Group's brands and countries have implemented training adapted to local businesses and markets. The Saint-Gobain teams can thus train students, building companies, trade customers or even a distribution network. Training structures such as Spazi Academy, in Italy, facilitate in-person training and e-learning solutions.

The brands and trading brands offer training services that are tailor-made for their areas of operation. Accordingly, Weber inaugurated Weber Academy in Casablanca, Morocco, a school providing free training on the brand's solutions and new construction methods to young graduates and trade customers to promote professionalism among local actors. In Indonesia, Weber, in partnership with INSEAD Singapore, created the Distributor Development Program, a training course for Indonesian building materials distributors, providing the opportunity to improve their knowledge of innovation, digital platforms, strategy and sales growth. In the Czech Republic, training centers and dedicated events provide training on Saint-Gobain brand solutions to 10,000 installers per year.

Besides technical training in products and solutions, the Saint-Gobain teams offer training in specific subjects such as renovation, modern conveniences, air quality or energy efficiency. The distribution networks have developed specific counters for energy efficiency in certain branches and sales outlets in France or Northern Europe (see Chapter 3, Section 4.1.3.

In France, the seformeravecsaint-gobain.com site offers training to professionals such as craftsmen, team leaders, project managers and foremen, online or face-to-face. This training and information platform is designed to promote the energy efficiency of buildings and enhance the value of the Group's solutions. BIM, building systems, HVAC engineering, regulations and technical solutions are some of the topics covered by the training offered. Professionals are given access to the additional know-how of 24 Group companies. In addition, since 2013, Saint-Gobain has been offering a support service for businesses, “Devenir Pro RGE”, which has already attracted more than 6,000 companies; with the RGE (*Reconnus garants de l'environnement*) label, their individual customers can receive financial aid from the French State for their energy renovation work.

As part of the Group's transformation plan, synergies between brands and trading brands are increasing within each country, thereby providing greater opportunities for customer training using a uniform approach.

4.5 For industrial customers: supplying tailor-made performance and innovation

The Saint-Gobain Group, given its international dimension and its well-known expertise in each of its businesses, is able to support its industrial customers and to improve their performance thanks to services and solutions that closely match their needs.

In manufacturing businesses, a vast portion of the solutions offered by Saint-Gobain are co-developed with customers and address a growing need for customization and bespoke innovation. This is made possible by new working methods and new modes of production, and by digital manufacturing, which incorporates customers needs from the earliest stages and allows the production of customized short series thanks to flexible and automated units and system interconnection (see Chapter 3, Section 2.2 on WCM program).

On the mobility market, Saint-Gobain glazing is constantly being adapted to the needs of automobile manufacturers, particularly with regard to lightweight glass, heads-up display glass and anti-heat glass, not to mention glass in complex shapes, for which the Group's expertise is well known. All these solutions promote an optimal driving experience, with increased comfort and safety for both driver and passengers. Similarly, high-performance, polymer-based bearings, seals and foams are custom-designed to meet the needs of automobile manufacturers, in terms of extending useful life and reducing noise and weight. Saint-Gobain's mobility solutions also affect the production phase using, for example, a wide range of abrasive products (adhesives, agglomerates and superabrasives) for finishing and polishing automotive parts. These abrasive solutions are suitable for both mature and emerging markets.

In this market, Saint-Gobain is working with partners to explore solutions that will equip the autonomous vehicles of the future. In January 2020, Saint-Gobain Sekurit, in partnership with Cerence, a specialist in automotive artificial intelligence, presented a new intelligent windshield at the Las Vegas Consumer Electronics Show (CES), a technological innovations showcase. Innovations such as transparent screens, eye-tracking and voice recognition were integrated into a vehicle without control buttons, with driving information displayed on the flat glass. The windshield improves the comfort and safety of vehicle occupants and is part of the future of mobility.

Saint-Gobain also explores future development opportunities through partnerships with manufacturers. In South Korea, the Life Sciences Business Unit and Samsung BioLogics, the biopharmaceutical unit of the Samsung Group, signed a strategic partnership for the supply of single-use systems. Saint-Gobain will invest nearly €16 million to build a state-of-the-art industrial facility for the manufacture of bioprocesses in 2020. It will be located in the Songdo biocluster in Incheon, in the outskirts of Seoul, and bring together research centers and companies working in biotechnology. This investment enables the BU to strengthen its customer focus and supply chain to better serve Korean biopharmaceutical industries.

Another example of this approach to innovation tailored to industrial customers, has been designed by the Life Sciences BU in joint development with Dexcom, in the form of a special seal for a new wearable glucose monitoring system to simplify the daily lives of people with diabetes.

Lastly, this co-development model is accompanied by an evolution of business models into more comprehensive products and services with a higher level of service. Accordingly, the Ceramics BU offers diagnostic and maintenance services to manufacturers who use its refractories, thereby linking a connected product to an associated service.

Throughout the life cycle of its products, Saint-Gobain can offer engineering, repair and recycling services. In a market such as aerospace, this expanded service offering alters the classic business model, e.g. from the sale of cockpit glazing to the sale of flight hours. This truly highlights Saint-Gobain's ability to provide reliable, high-performance and cutting-edge solutions.

5. Operational priorities

5.1 Continue to improve the customer experience

5.1.1 Closer relationships with customers

One of the most important aspects of the Transform & Grow plan, which has been in place since January 2019, is closer relations with customers and solutions tailored to each individual.

a) Customer experiences transformed by digital technology

Saint-Gobain's interactions with its customers in the broadest sense (direct or indirect, actual or potential) through the Group's different Activities number in the millions each year. This number is increasing by 10% a year as a result of the development of the whole area of communication *via* the Internet and social media. This provides a challenge for the Group: in many cases, "contact" no longer takes the form of a scheduled, physical meeting, but is made *via* the Group's websites or *via* social networking, at the customer's instigation.

Thus, beyond in-person meetings with direct customers, there is a need to develop a digital strategy that allows the Group to capitalize on all the individual contact requests. Updating the Group's websites is crucial, to provide visitors using fixed or mobile devices with a high-quality experience that they find useful and encourages them to extend their visit to the site. The purpose of the approach, for non-commercial sites, is to convert as many visits as possible into commercial contact. This is the approach adopted throughout the Group. Distribution brands have, on their side, created better-designed, simpler websites to extend e-commerce offer in the majority of its countries of operation. In both cases, data analysis is fundamental in developing the sites in the direction that visitors wish to see. This background work improves customer proximity and helps the sector to develop services, particularly digital services, which support the customer in their journey.

The more channels involved in interacting with the customer – websites, social networking pages, emails, forums, online chat, etc. – the more complex the customer's experience. Techniques for targeting and fostering loyalty among a client base are becoming more diverse. Saint-Gobain's omnichannel approach therefore aims to ensure a seamless and consistent customer experience across physical and digital touch points, along the entire customer experience. All brands and trading brands have rolled out digital strategies to differentiate their products and ensure brand visibility. Saint-Gobain is adopting an omnichannel approach to developing e-commerce services, supported by state-of-the-art logistics. The wealth of information available online, real-time inventory checks by customers, the organization of logistics networks, and speed of product delivery are key factors in the success of retail sites. Some of the Group's activities are developing innovative devices providing an immersive experience thanks to virtual reality or 3D projections. The aim of all the digital tools developed by the Group is to foster better knowledge of the customer, as well as making the process easier for them and meet for their needs more easily and directly.

These digital-induced transformations complement the Group's efforts to guarantee the best customer experience in physical meeting situations: supporting and advising customers at sales outlets, sales visits, deliveries, as well as experiential venues or showrooms.

b) Personalized experiences

Customer activity online or in-store generates significant amounts of data. The statistical analysis of these data forms the basis for predictive models that enable a better response to end customer expectations. Once analyzed, the mountain of data – or Big Data – becomes Smart Data, a useful, intelligent data set for both the brand and the customer (compiled in strict compliance with the General Data Protection Regulation (GDPR) – see Section 1.1.4 of Chapter 3). Tailored services and communication are key to this. The first challenge in the Smart Data approach is to strengthen relations with customers, getting to know them better to provide them with a better service. Consequently, the brands' main e-commerce sites in France and Scandinavia now make systematic use of suggestion-based selling: when a visitor is interested in a product, they are provided with a list of recommendations based on the product combinations seen in shopping baskets. This automatically increases basket values. In recent years, more highly developed approaches emerged; these are likely to become more widespread. Accordingly, the data scientists at the Saint-Gobain Research Paris R&D center's datalab have developed a method for systematic study of the semantics of customer reviews on TripAdvisor. Using this method, hotels and restaurants with poor acoustics can now be identified, allowing the Habitat specification teams to target these establishments and offer them appropriate solutions.

The fluid, comprehensive and increasingly personalized experiences offered by Saint-Gobain are part of a commercial excellence approach that aims for the greatest possible customer satisfaction. The Group has put in place concrete operational tools and ad hoc organizational structures to achieve this (see Section 2.1 of Chapter 3).

5.1.2 New offers and new business models

a) An expanded offer

Saint-Gobain is constantly expanding its products and solutions portfolio to provide an expanded offering. In March 2018, Saint-Gobain acquired Logli Massimo, a company specializing in systems and accessories for the fastening and assembly of glass partitions, particularly parapets, shower doors, partitions and internal or external doors. The Group is therefore in a position to offer comprehensive solutions to architects and building trade customers and to expand its product offering downstream to strong value-added systems. The added value offered to customers includes innovative systems, such as the patented Aquaroc® system, a high strength cement-based lining board lightened by polystyrene beads, for use in humid rooms and developed by Placo. Another development area is the expansion of the offering thanks to purchasing/reselling. Initiatives are underway to offer complementary products in a more widespread manner, e.g. adhesives, glues, foams and putty to customers purchasing their mortars from Saint-Gobain.

b) New business models

Saint-Gobain is also focusing on the development of new business models. The Group has developed a structured approach and country and BU teams are provided with toolkits and encouraged to determine their value proposition, target customer segments, sales channels, types of interaction, activities, key partners and resources, and costs and revenue sources.

From complementary services to direct customers, the development of service offers to end customers or influencers, and "concept" sales, numerous examples of new business models have already been developed within the Group, including:

- in Brazil, with the "product as a service" scheme, an offer of furnace refractories with guaranteed performance and predictable pricing during the product's useful life;
- at Weber, the use of a pump truck to deliver a layer of already mixed product directly to construction sites, guaranteeing the highest productivity for the customer;
- launched in 2018 in France, Kandu services for professionals who want to improve the quality of their work or restaurant spaces that combine Saint-Gobain's expertise in building sciences and its original approach to comfort in a one-stop shop, through customized support and technical solutions;
- marketplaces such as Toca Obra in Brazil or Autovershop, which offer a broader customer base and allow synergies in purchasing and the supply chain;
- intermediation platforms, through La Maison Saint-Gobain in France, NejRemeslnici in the Czech Republic or Get Ninjas in Brazil;
- licensed technologies;
- waste take-back and recycling services, particularly in the gypsum business, where they exist in a dozen countries and enable market differentiation and have a reputation for exemplary performance, but also allow for greater control over the quality of the materials collected and, in the long term, the availability of natural resources.

5.2 Innovate for sustainable differentiation

Saint-Gobain's innovation process is underpinned by constant attention to customer expectations and needs. Creating value for customers is a prerequisite for profitable growth for the Group. Innovation goes far beyond products to include services and business models. Beyond the R&D and Marketing functions, it brings together the entire Group around a common culture.

5.2.1 A shared culture of innovation

Saint-Gobain's history is part of a long tradition of innovation. There is continued recognition for Saint-Gobain's approach to innovation. For the ninth year running, Clarivate Analytics ranked Saint-Gobain among its Top 100 Global Innovators.

The Group's ambition is to accelerate innovation in an increasingly fast-paced world by building an open, company-wide innovation culture and capabilities to create value for customers, turn challenges into opportunities, create the Saint-Gobain of the future and contribute to everyone's well-being in a larger, more sustainable ecosystem.

Supporting this ambition is a culture of innovation spread throughout the organization. Innovation is one of the five "Attitudes", the pillars of the Group's managerial culture (see Section 3.2 of Chapter 3). Being open-minded and thinking outside the box, taking original paths, questioning practices inherited from the past to suggest and experiment with new ones: these are some of the skills valued by all of the Group's employees. Saint-Gobain aspires to strengthen the spirit of innovation within the company by involving not only the R&D and marketing teams but also the entire organization, to foster every employee's own creativity.

The Group gives employees the resources to act and bring out their talents, work in a collaborative, networked, multidisciplinary and cross-disciplinary manner, experiment with agile methods or design thinking, seek skills outside their usual scope and interact and work with different generations, with the key purpose of being able to develop tailor-made products and services, with a constant concern for the customer.

New challenges are emerging, such as bringing products to market quickly, adapting to new communication methods, digitizing operations and making solutions ever more sustainable and environmentally friendly. To meet these challenges, customer proximity and agility (which are also the core of Saint-Gobain's "Attitudes") are the key concepts. Saint-Gobain emphasizes the responsiveness and adaptability of its employees to change: light reporting, rapid execution, delegation, etc.

To develop synergies and the transmission of innovative and creative methods, the Group promotes and encourages interaction and the sharing of best practices. Beyond interactions within the Group, openness to the external environment is crucial, so that changes in markets, customers and technologies can be more quickly anticipated, and to increase the field of innovation, from conception to development. Careful monitoring of market trends is an essential first step. It may involve the implementation of structured monitoring of trends and competition, regular visits to customers to learn more about their daily lives, or the organization of learning expeditions to innovative companies in other sectors.

Finally, innovation is accompanied by appropriate tools and methodologies, which are essential for rethinking a business strategy, identifying unmet customer needs, developing creative ideas, building value propositions or exploring new business models. These tools are particularly useful in adjacent and disruptive projects where traditional working methods are reaching their limits.

For Saint-Gobain, innovation is the combination of a mindset shared by everyone, on the one hand, and the right tools and structures, on the other.

5.2.2 Strategic pillars of innovation

The Group's innovation efforts in terms of products, services and manufacturing processes are guided by a number of strategic focuses. These efforts are mostly directed toward:

- smart and dynamic building materials;
- mobility: in-vehicle comfort (noise, vibrations, aerodynamics, thermal comfort…), weight reduction, new features and usages in terms of safety, information and entertainment;
- construction technologies: prefabrication, 3D printing, robotization, etc.;
- life Sciences: development of personalized medicine, new diagnoses, etc.;
- eco-innovation and the design of solutions for the circular economy;
- process innovations to reduce environmental footprint: electrification, CO_2 sequestration, heat recovery…

5.2.3 Customer-oriented R&D

Investments in R&D enable the Group to maintain and expand its leading positions in its markets and maintain a high level of performance and operational excellence. In 2019, the Group invested €464 million in research and development, and 3,700 employees worked on nearly 900 research projects, resulting in applications for more than 400 new patents.

Saint-Gobain has a framework of eight cross-functional R&D centers around the world, as well as numerous R&D units dedicated to specific businesses or technologies. These eight centers – three in France (Compiègne, Paris and Cavaillon) and five others in Germany, the United States, China, India and Brazil respectively – all offer a broad spectrum of expertise in materials and process sciences to all of the Group's businesses.

This structure, in which R&D teams are divided between cross-functional centers and centers dedicated to each business, makes it possible to combine a materials culture and expertise in processes common to all of the Group's businesses with specific business cultures.

Projects are selected and managed as closely as possible to the businesses and countries to respond adequately to their needs. The R&D teams provide active and proactive support to the Group's BUs through targeted research projects, thus fostering developments and innovations in processes, products and systems. New projects are initiated each year, while others lead to industrialization or a commercial launch in the Group's various markets.

Beyond the specific aspects of each business line and the essential maintenance of key technology skills, special attention is paid to three priorities: attention to customer value, digital transformation, and the response to the challenges of sustainable development.

Improving and deepening customer relations is essential to more rapidly identify opportunities for the Group to bring value and ensure the relevance of innovations for all of its customers. Various tools and initiatives support this approach: deployment of training and methodologies, investment in test benches, development of prototyping resources, real or virtual, to speed up customer approval, and creation of specific facilities such as the Application Lab inaugurated in 2019 at Saint-Gobain Research Compiègne and the new Saint-Gobain Research Shanghai laboratory dedicated to the testing of materials used in the manufacturing of batteries for electric vehicles. Designed as an alternative approach to innovation, they enable design thinking and user experience approaches to be deployed within the various R&D centers for the development of new products, systems and services as close as possible to customer needs. As a result, the R&D teams are able to run scenarios for the use of different prototypes and to evaluate, modify and propose solutions that meet the expectations of customers in the mobility or construction markets.

Priority is also given to digital transformation in all of its dimensions: customer service and relations, operational performance, internal processes, and changes in work culture and practices. It requires the development of new skills within R&D teams and in data science, robotics, electronics or virtual reality.

This digital transformation accelerates innovation in all markets, increasing the power of the end consumer and enabling the emergence of new services and new uses. In the construction markets, innovation is traditionally slow due to the very long life cycle of products, but digital transformation, combined with underlying trends in environmental performance and accelerated urbanization, is leading to the continuous emergence of new services, enabling players to deliver new or renovated buildings and living spaces that are more efficient and more pleasant, at a better cost and within shorter timeframes.

The use of artificial intelligence algorithms, such as in the Saint-Gobain Research Paris Datalab, also enables the creation of new services driven by data and improving the performance of existing businesses, for distribution and industrial production, such as e-commerce development, automated pricing, logistic optimization, responsiveness of production lines and reduction of energy consumption. This expertise is developed by central R&D in direct collaboration with the Group's businesses and the IT teams.

Finally, increasing attention is being paid to product design and process enhancement possibilities to improve environmental footprints, in line with the Group's strategy.

The first area of focus is based on work to analyze the life cycle of products:

- to work internally and with suppliers, and generally speaking with the Group's entire ecosystem to design and technically validate resource- and energy-efficient products, that remain performing, by incorporating recycled materials for instance;
- to think about recycling and disassembly during the product design phase;
- to use the numerous Saint-Gobain technologies to design functional systems with lower environmental impacts, such as for example reduced-weight façade solutions.

The second area of focus consists of ongoing work to improve processes, reduce energy consumption, increase yields and operating turnaround times, and the recovery and reuse of heat and fluids. In addition to these ongoing improvements, research is being carried out into more disruptive innovations to help increase the use of low-carbon energy sources and recycled materials.

To support these priorities, cross-functional Group-wide R&D programs organize shared skills and enhance Saint-Gobain's ability to develop key technologies by anticipating major changes in techniques and markets.

Saint-Gobain's cross-functional R&D programs

TRANSVERSAL PROGRAMS

CONTROL OF MATERIAL SCIENCE AND PROCESSES

- Physics and chemistry of mineral binders
- Organic and inorganic foams
- Adhesives and adhesion
- Wet coatings
- Non-destructive testing for the improvement of industrial performance and product quality

VALUE FOR CUSTOMERS

- Building Science
- Sensors and IoT for enhanced products and services

DIGITAL TRANSFORMATION

- Additive manufacturing and 3D printing
- Robotics and automation
- Data science and artificial intelligence

STRATEGIC PROGRAM

SUSTAINABLE DEVELOPMENT

- Reduction of CO_2 footprint

5.2.4 An open innovation approach

In addition to its internal strengths, Saint-Gobain openly deploys its innovative approach, through exchanges and partnerships around the world with its customers and suppliers, with the ecosystem of start-ups and as part of scientific collaborations and partnerships with the academic world.

■ Scientific and academic cooperations

The SUN international network of universities is the framework for long-term academic collaborations that provide access to the most recent scientific progress in the fields of interest to the Group and to a breeding ground of young talent.

This leads to the establishment of Data Science and Artificial Intelligence partnerships with various institutions, through the exploration of tools and methods specific to that community. For example, a challenge involving 150 researchers that was won by two doctoral students at G-SCOP in Grenoble (France) was co-organized as part of the ROADEF initiative, which enabled the international community to work on one of the Group's industrial issues (the optimization of flat glass cutting).

■ Cooperation with start-ups

Through NOVA, a unique structure created in 2006, Saint-Gobain plays an active role within the global start-up ecosystem. NOVA's aim is to identify opportunities for long-term partnerships and to turn these into a reality, as well as to develop new ideas and business models.

NOVA concentrates its efforts in the field of advanced materials but also works cross-functionally on major topics of interest for the entire Group, such as the customer experience, including the optimization of the supply chain and intermediation between business and end-users, new construction methods such as prefabrication and robotics, smart devices… Lastly, the team offers targeted support for certain businesses such as mobility, with the advent of autonomous vehicles, and life sciences.

The goal is to enter into strategic co-development, distribution and marketing agreement and licensing partnerships… Since the end of 2016, NOVA has extended its field of expertise by acquiring equity stakes in start-ups. Examples include Sweeten, an intermediation company in the United States, and InDeco (2019), a company based in China that specializes in the optimization of office spaces.

Since 2019, NOVA has had its own budget and accelerated the acquisition of minority stakes in innovative companies. As such, in 2019, six investments were concluded in Europe, North America, Latin America and Asia, as well as eleven trade and co-development agreements in a number of fields such as 3D printing, prefabrication and last-mile delivery.

To support its approach, Saint-Gobain is a partner, through NOVA, of several incubators, including:

- Greentown Labs in the United States, specializing in green technologies, with which the collaboration has intensified over recent years. Saint-Gobain showcases its solutions and has supplied many materials for the recent extension of the building;
- Impulse Labs in France, which specializes in construction businesses;
- Cubo in Brazil, a specialist in digitization.

More recently, a partnership agreement was entered into with RWTH Aechen University in Germany, Bloxhub in Denmark, and Taspark incubator of Tsinghua University in China.

Lastly, NOVA is also a limited partner in three targeted investment funds for the Group's businesses and geographical areas: Navitas for construction, PVP for material sciences, both in the United States, and ETF in Europe.

To intensify the partnerships between start-ups and the businesses, Saint-Gobain has launched targeted acceleration programs, such as the InNOVAte challenge, in partnership with Greentown Labs, which recognized four young companies in the construction technologies industry, and Building Blocks in Brazil, a program that has led to strategic agreements with the participating start-ups.

Whatever form these collaborations with start-ups may take, the Saint-Gobain philosophy is firmly based on a win-win approach, mutually beneficial for all stakeholders. NOVA also plays the role of a window to the external world, helping to introduce internal teams to outside innovation and different working methods.

■ An internal venturing approach

Saint-Gobain encourages an entrepreneurial dynamic within its teams. The goal is to promote the development and sharing of ideas, to create new business opportunities and initiatives, by combining the Group's strengths with a state of mind and methodologies more closely resembling those of a start-up.

In Brazil, the internal venturing approach is structured around the Inpulse program. The most promising ideas put forward by employees benefit from Group support and give rise to acceleration and financing initiatives. Elsewhere in the Group, calls for ideas and collaborative innovation platforms have also come to exist.

In France, the launch of Homly You and Kandu are two examples of new business models incubated internally. In September 2019, in the same vein, Toca Obra was launched in Brazil (see Chapter 2, Section 5.1.2 b).

Beyond these concrete examples, the idea is also to systematically promote within the teams constant adaptation to fast-moving changes, to develop the ability to experiment, to adjust, and to apply resilience and tenacity.

5.3 Continue Saint-Gobain's digital transformation

Digital technologies multiply opportunities to intensify relations with customers and prospects, to provide them with tailor-made services that enable them to increase efficiency and to develop their business (see Section 5.1 of Chapter 2). However, this digital transformation more broadly encompasses the Group as a whole and has a strong impact on working methods as well as talent acquisition and training issues.

5.3.1 Managerial culture and skills

First of all, digital technology is transforming the company's culture, especially its managerial culture. Management methods are changing to give more importance to the culture of continuous feedback. The Group has thus developed a 360 evaluation tool (see Sections 3.2 and 3.3 of Chapter 3), and this type of evaluation is a mandatory part of management school training.

Digital technology is transforming the content of missions. It allows increasing automation in certain areas, which allows the Group's employees, on industrial sites as well as sales outlets and headquarters, to devote less time to certain repetitive tasks with low added value. These developments make it essential for employees to be able to train independently and continuously *via* an e-learning platform. Training is available in up to 30 languages on a dedicated platform, accessible to all employees, including *via* a personal mobile phone. Generally speaking, the Group attaches great importance to the training and support of its teams to enhance their digital skills so that they can keep pace with market and business developments. For the past three years, Saint-Gobain has been organizing a whole week devoted to the subject of the learning company for all its teams around the world: the Learning Week.

Saint-Gobain has also joined forces with the online coaching start-up MoovOne to intensify the cultural, managerial and digital transformation initiated several years ago. MoovOne and Saint-Gobain developed the new role of managers in three successful pilot projects. Today, the offer, which encompasses individual and group coaching, is available on an international scale. The MoovOne platform is based on a community of over a hundred certified coaches who speak a total of 23 languages, thus ensuring the support of each manager in his or her native language.

In a context where the profiles of recruits and future recruits are evolving, Saint-Gobain emphasizes the development of soft skills, the ability to work in hybrid environments or to innovate as a team. With digital and refined data processing, career paths can be more easily individualized and the HR support policy personalized (see Section 3.2 of Chapter 3).

In industry 4.0, digital marketing and cybersecurity, the growth of digital has significantly increased recruitment needs. These are also new professions that have become very important. These include data scientists, data analysts, UX designers and SEO specialists. In a context of competition with many companies not necessarily operating in the same fields of activity, these new talents are precious resources that Saint-Gobain must succeed in attracting and retaining.

5.3.2 Digital and industrial efficiency

a) Industry 4.0

The Group is investing in Industry 4.0 as part of its operational excellence goals to maintain its industrial tool at the cutting edge of the sector. The way that factories are organized is being transformed by digital technology. Machines are connected in real time and data analysis allows for better control of production processes, more rapid resolution of any technical issues and, more generally, an increase in operational efficiency. Digital technology makes it possible to customize customer solutions further along the value chain and opens up further opportunities for co-development.

The future of industry will also be built on automation and the use of advanced robots for industrial tasks. Collaborative robots and automated trollies safely perform repetitive tasks. Operators are also assisted by the use of augmented reality, which is particularly effective for maintenance and troubleshooting. The number of robots deployed across the Group's sites was over 3,000 at the end of 2019, 10% more than in 2018.

With production units where software and machine-tools interact directly with each other, a number of applications have been made possible, such as the real-time monitoring of production, automated alert systems, predictive maintenance and the optimization of product quality by reducing both costs and the quantity of resources and energy employed. The Construction Industry BU uses software based on artificial intelligence to optimize the operation of its fiberglass furnaces.

Generally speaking, Saint-Gobain rolls out its technology step by step, firm in the belief that initial, low-cost advances can quickly lead to progress. Today, accessible and efficient solutions are used by 7,000 operators in 100 Group factories worldwide.

For example, an application has been developed to monitor performance in real time by anticipating deviations. Initially launched at the Eggborough factory in the United Kingdom, this has been rolled out to 25 flat glass factories throughout the world.

Reducing the cost of data storage and the price of sensors has contributed to the introduction of tools to assess and monitor production in real time, such as "edge computing" solutions, based on a nano computer with open source artificial intelligence software for key equipment. This approach, launched for example in the abrasives manufacturing plants in India, constitutes a first step towards the development of multi-factory global artificial intelligence solutions, thanks to the storage and enhancement of data.

In 2019, Saint-Gobain launched a program to help plants develop a data-driven culture called the Data and Analytics Academy (DnA). The DnA program develops and implements training to create not only data scientists, data engineers, data analysts and "Translators" (who act as a link between data analysis and operations), but also an initial base of skills among Group employees through a practice-based approach. Developed with the active participation of several industry executives, data scientists and WCM and IT managers, this program is being tested in plants of various businesses in three European countries: Poland, France and Spain.

The training program consists of three components: an information day for top managers to explain opportunities, challenges and conditions for successful data analysis; five days of training in data collection, cleansing, structuring, visualization and modeling; and finally, a team project lasting two to four months identified by the plant based on the expected added value, to immerse participants in real-life conditions. The plant team is supported by the core team of the DnA Academy through masterclasses and periodic support sessions.

After the pilot phase, a deployment plan will be launched to support all businesses and countries.

b) Using digital technology for better supplier interaction

Digital technology is also changing the way we interact with suppliers. Digitizing supplier processes means centralizing and automating the Purchasing Department. Standard tasks have been automated by means of electronic auctions, with the use of online tools. Campaigns to monitor suppliers' e-reputation have also been undertaken, with significant outcomes, to identify potential problems and promote a policy of responsible purchasing.

5.4 Develop synergies

With the Transform & Grow transformation plan (see Section 2.2 of Chapter 1), the Group is developing and capitalizing on its synergies. As a result, Saint-Gobain customers benefit from the Group's strengths, with a strict principle of commercial independence between the manufacturing and distribution businesses. This offer is strengthened considerably by better logistical and digital services, a better offer and better visibility. The synergies operate on all levels.

5.4.1 Regional synergies

The Group can take advantage of its unparalleled comprehensive local network and extensive portfolio to seize growth opportunities, offering an integrated customer experience. For example:

- the Group offers increasing numbers of systems that combine solutions from several businesses (gypsum and insulation, for example), as can be seen in the organizational structure of many of the Group's countries in the combining or even merging of the sales organizations of the various brands. For instance, in the United States, the Roofing and Siding sales teams have merged, increasing regional coverage and freeing up resources to create a specialist non-residential market team. In France, the Placo® and ISOVER brands have also been combined within an integrated structure, complemented by a new entity dedicated to the global prescription systems offering;
- the Saint-Gobain Façade BU in Brazil combines Placo®, ISOVER, Weber, Brasilit and Adfors solutions in a single offering. Saint-Gobain supplied all of the materials needed to build the 17,000 m² façade of a residential building on a turnkey basis. Using these synergies, the Façade BU facilitates the customer experience by offering complete building systems along with exclusive services. The customer only has to place a single order to receive all of the products at the construction site. A Saint-Gobain team also ensures the smooth running of works on-site;
- the Group unified its offer for prefabrication in the United Kingdom within a single dedicated BU;
- with unique customer services, shared online stores and common logistics, sales forces can work more efficiently and devote more time to cross-selling and upselling;
- drawing on its knowledge of building materials and distribution, the Group can offer a unique platform (e.g. lamaisonsaintgobain.fr in France) to support end customers with their renovation plans.

5.4.2 Market synergies

Given the Group's international scale, cross-selling is expanding and supports customers worldwide.

On the automotive market, Sekurit's glass products, as well as bearings and seals, are complementary products for Group customers. On the aerospace market, cockpit glass and radomes can be offered to the same customers as a result of these synergies. In 2019, the Mobility BU, which unites all of these solutions under a common leadership, has already made promising progress.

For industrial markets, adhesives, abrasives and tapes are complementary products sold *via* the same distribution channels.

In late 2018, Saint-Gobain finalized the acquisition of the British company Farécla, which manufactures surface finishing products and solutions for individuals and industrial customers in the automotive aftermarket and other markets. With this acquisition, Saint-Gobain is expanding its product range in this segment and is using technical expertise to design new solutions. Farécla represents a major addition to Saint-Gobain's pre-existing offer within the Industry BU for its automotive aftermarket customers.

5.4.3 Global synergies

The Group draws on successful R&D collaborations and transfers between its various businesses to develop and market innovative solutions and improve its services:

- Fire-retardant plasterboard developed thanks to the high-temperature expertise of the Ceramics BU: processes and understanding of fire performance;
- Electrochromic glass initially developed by Sekurit, then adapted for the construction markets;
- External thermal insulation composite system (ETICS) developed in conjunction with different business sectors (Mortars, Gypsum, Insulation, Technical textiles);
- Cross-disciplinary acoustics program (Insulation, Mortars, Ceilings, Sekurit, Building Glass and Bearings);
- Repair solution for furnaces, the result of a transfer of expertise between Weber and Sefpro;
- Artificial intelligence based on transactional data: algorithms developed for the distribution businesses (pricing, sales recommendation, supply chain, etc.) that can be used for other Group businesses.

The centralization of certain key functions (Industrial Efficiency, Marketing & Development, Innovation and R&D, Information Systems, shared HR and Finance service centers) makes goals more achievable: expertise, critical mass, sharing best practices, cost-cutting, generalized deployment of excellence programs, technical flows and collaboration.

The sharing of knowledge and expertise, which is essential to foster synergies, is facilitated by meetings between innovation and marketing professionals. An example of this is "The Hive" community, which met in Budapest in 2019 to discuss the Group's vision on major issues such as data and off-site construction. Another example of this dynamic is the worldwide deployment of UNICAMPUS (see Section 3.4 of Chapter 3), a new training offer that offers concrete courses on the main central functions (Marketing, Industrial Efficiency, R&D, Purchasing, etc.), combining theory, practice and experience sharing. Five sessions were organized in 2019 attended by 200 participants each.

Finally, synergies also have to do with the sharing of cultures:

- as a result, the Group's industrial businesses have been able to benefit for many years from the advances made by distribution brands that were ahead of the game in the digitization of their product and service offerings for customers;
- the regional businesses, in the construction markets, are increasingly developing a co-development approach, a model that is in the DNA of the High Performance Solutions businesses. In this way, they benefit from the experience that already exists within the Group. One example of this is the co-development, with two German manufacturers, of the Actilaz laser technology central to ECLAZ energy-efficient glazing.

5.5 Optimize resource allocation

5.5.1 Implementing an investment policy targeting growth

a) Targeting the most promising market segments

To best seize growth opportunities, Saint-Gobain's investment policy focuses on targeting the most promising market segments, which can be broken down into three types: key areas with strong growth potential, ad-hoc opportunities on our principal markets and products with significant added value.

Investing in key areas of growth

In 2019, the Group invested in key areas of growth, such as the medical sector. To support its development and meet the growing needs of the life sciences market (biopharmaceuticals, vaccines, cell therapy) and the electronics industry, Saint-Gobain invested in the expansion of the Charny site in France and inaugurated a new clean room at the Hangzhou site in China, which aspires to become the epicenter of the Life Sciences BU's R&D in the Asia-Pacific region.

Seizing growth opportunities in key markets

Saint-Gobain is also taking advantage of the opportunities offered in its main markets, targeting the opportunities generated by changes in them.

To meet growing demand in the European insulation market, Saint-Gobain has launched several capacity investments at its plants, such as the commissioning of a blow-molding wool production line in Italy, the launch of a new glass wool production line at its Chemillé plant in France, and the renovation of a glass wool plant in southwestern Germany. These investments will enable the Group to keep pace with the growth of a booming insulation market driven by the demand for more energy-efficient buildings and increasingly stringent regulations.

Furthermore, in Denmark, Glassolutions is now equipped with a tempering line to meet the growing demand for tempered glass, which until now has been imported.

Strengthening the high value added product offering

The Group is continuing its differentiation strategy by using significant R&D resources to constantly develop more innovative, high value added products and solutions. In Italy, for example, the Pisa flat glass plant has just renovated its coater line to offer solutions with higher added value, such as double-silver-coated glass.

b) Investing primarily in fast-growth economies

Although Europe remains Saint-Gobain's primary market, the Group's development strategy aims to ensure its global presence. In 2019, Saint-Gobain therefore invested in several growth projects involving its manufacturing sites outside Western Europe.

The Group undertook several investments in capacity in its regional businesses. In 2019, the Group expanded in Asia to take advantage of the region's growth potential, with, for example, a fifth flat glass manufacturing plant in India, a fourth gypsum plant in China, a second plasterboard plant in Vietnam and a fifth Weber industrial site in Indonesia. In Africa, Saint-Gobain inaugurated its first line of mirrors in Egypt and opened its first industrial site in Luanda, Angola, with a mortar plant. The Group's growth is also driven by its development in the Americas, with, for example, the announcement of a new flat glass plant in Colombia and the expansion of Avery's CertainTeed Roofing plant in the United States.

In High Performance Solutions, Saint-Gobain has invested in the strengthening of its production capacity to meet growing customer demand. As a result, a new line of non-woven abrasives was inaugurated in Mexico. The construction industry invested in a new capacity increase for laminated and insulating fabrics at its Hodonice plant in the Czech Republic and a new GlasGrid reinforcement production line in Bangalore, India.

c) Supporting digital transformation and logistics

Digital technology enables the Group's customers to be more informed and more demanding and enables the Group to increase its productivity. Saint-Gobain is therefore seizing this opportunity to innovate and offer an ever-increasing amount of added value to its customers. A digital and logistical transformation was initiated several years ago to propose a customized offer with ever more efficient service.

Continuing the deployment of new IT systems

Many digital solutions are backed by high-performance IT systems, which various Group entities are developing for greater performance. In distribution in particular, several trading brands continue to deploy IT projects, such as Atlas in France, M3 in the Nordic countries and ICON in the United Kingdom. These systems must result in significant gains in productivity.

The group invests in improving the customer experience. In the United Kingdom, Saint-Gobain Ecophon has launched an online sales platform specializing in acoustic solutions for individuals. Saint-Gobain Abrasifs invested in MyAbrasives, a new e-commerce platform that is already operational in seven countries in Europe and is due to be deployed in the rest of Europe and the United States.

Implementing new logistics centers to improve product availability

The Group's logistical transformation, particularly in distribution, is continuing with the establishment of largely automated logistics centers providing an improvement in the availability of products. In 2019, Saint-Gobain Distribution Bâtiment France invested €10 million in the mechanization of order preparation at its Brie-Comte-Robert logistics base to broaden brand offerings and boost e-commerce. In the Netherlands, specialty tile distributor Tegelgroep announced the construction of a new logistics center to improve its logistics and customer service while reducing CO_2 emissions from daily operations. Finally, in manufacturing activities, Swisspacer, the manufacturer of thermal spacers for insulating glass, opened its first warehouse in France in Vatry, with the aim of reducing delivery times and increasing customer satisfaction.

5.5.2 Ensuring agile and value-creating portfolio management

Saint-Gobain's management strategy for its business portfolio consists in continuing its dynamic policy of value-creating acquisitions and its ambitious disposal program.

a) Continuing the strategy of value-creating acquisitions

In 2019, the Group acquired 18 entities for a total amount of €297 million. The acquisition strategy, which is in line with the Saint-Gobain portfolio optimization strategy, one of the two pillars of the Transform & Grow program, has three complementary components: local acquisitions, in regional businesses in particular; niche technologies, in High Performance Solutions in particular; and acquisitions that enable the Group to enter new territories.

Local acquisitions

The Group has completed several acquisitions to strengthen its position in key markets. On November 12, 2019, the Group announced the signature of an agreement to acquire Continental Building Products, which represents a unique opportunity to become a leading player in plasterboard and building solutions in North America. This acquisition, which was finalized on February 3, 2020 following approval from the Continental Building Products shareholders and the anti-trust authorities, as announced on January 30, 2020, will allow the Group to expand its portfolio of assets, increase its ability to offer innovative solutions to a broader customer base, and increase the presence of Saint-Gobain in high-growth areas within the United States. Cost synergies and improved performance estimated at a minimum of $50 million are expected. These synergies are based on the optimization of logistics, purchasing, operations and general and administrative expenses. Additional sales are also expected thanks to a broader range of products, supported by Saint-Gobain's R&D and product development teams. The Continental Building Products Bison Way industrial excellence program is based on the same principles as Saint-Gobain's World Class Manufacturing (WCM) program. The integration of the two entities will thus be facilitated by the similarity of their corporate cultures and operating models, thus accelerating value creation for Saint-Gobain's customers and shareholders.

Niche technologies

Saint-Gobain has also acquired companies offering solutions with high growth potential, particularly under High Performance Solutions. For example, Saint-Gobain acquired American Seal, a leader in technical sealing solutions used in the transportation, energy and aerospace industries.

The acquisition of Pritex, a key player in acoustic and thermal solutions in composite polymer materials, will also enable the Mobility business to extend its growth model beyond glass and become a provider of solutions for the mobility market, thus targeting comfort, safety and energy savings.

New territories

Finally, the Group's acquisition strategy enables it to seize the opportunity to conquer new territories, particularly in fast-growing countries. In 2019, Saint-Gobain acquired Plaka Mexico, marking the Group's entry into the plasterboard market in Mexico and adding to its current offering of plaster for construction and ceilings. Saint-Gobain also strengthened its position in Peru with the acquisition of the mortars division of the Celima Group and in Argentina with the acquisition of the Novoplack plasterboard plant.

b) Managing an ambitious disposal program to refocus on strong elements

As part of the Transform & Grow transformation plan, Saint-Gobain had over €3.3 billion in sales, exceeding the target of €3 billion in sales by the end of 2019. The following three criteria are determining factors when it comes to analyzing portfolio rotation: the outlook for the business in question; its contribution to creating value for Saint-Gobain, and vice versa; and market conditions.

Distribution entities were sold, including Building distribution in Germany, Optimera in Denmark, and in France *Distribution de Matériaux pour les Travaux Publics* and K par K. Within the regional industrial divisions, glass processing and distribution activities were sold in Norway, Sweden and the Netherlands. Two additional disposals were announced in building glass in South Korea and expanded polystyrene (EPS) in France. Finally, High Performance Solutions divested the Silicon Carbide activity.

3

An efficient and responsible group

1. Ethics and compliance

1.1 The Group's responsible approach

1.1.1 Principles of Conduct and Action and organization

The Principles of Conduct and Action are the ethical code of conduct that forms the foundation of all of Saint-Gobain's policies and commitments (see Chapter 1, Section 1.3).

They define the management principles applicable to all Saint-Gobain entities and employees, across all employment contract types (open-ended contracts, fixed-term contracts and temporary staff) but also to their subcontractor and suppliers.

All policies published by Saint-Gobain refer to and draw upon the Principles of Conduct and Action. In particular, the compliance policy, the human rights policy, the EHS charter, the buyers and suppliers' charters of the Responsible Purchasing program, and the diversity policy.

They also set out the procedures for working with stakeholders, with a particular focus on permanent on-site subcontractors, subcontractors and suppliers. They can be viewed on the Group's website so that they are widely available to stakeholders.

Saint-Gobain has set itself the objective of training each and every new manager in the code of ethical conduct and compliance policies within their first year. This objective is included in the CSR dashboard monitored by the Board of Directors (see Chapter 4, section 2.1).

Code of ethical conduct

Each employee, including those on fixed-term contracts and temporary staff, receives information during their induction about the code of ethical conduct in the local language. This may take various forms, depending on the country:

- a welcome brochure with comments from the Human Resources representative;
- the code of ethical conduct may be appended to the contract of employment.

Group managers must also complete an e-learning module called "Adhere" the year they join the Group.

The Responsible Development Department provides in-person training sessions:

- at all management school sessions. These sessions are tailored according to the seniority of the managers, and involve a discussion of managers' day-to-day management practices, of problems encountered depending on the culture and of how decisions are guided by values;
- at specific sessions within the countries;
- by training employees in each country who can then train the local teams.

Since 2019, the Responsible Development Department has reported to the Compliance Department.

A yearly report of the work carried out is available in Chapter 4, Section 2.4.

Compliance network

The compliance program mainly covers anti-corruption, adherence to antitrust law and embargoes. It is monitored by the Board of Directors of Compagnie de Saint-Gobain. The program is implemented by a compliance network, which is coordinated by the General Secretary and composed of more than 100 functional and operational managers who are members of Compliance Committees within the Group and in the different countries in which the Group operates:

- the **Group Compliance Committee** includes the Chief Operating Officer, General Secretary, Chief Financial Officer, CEO Northern Europe Region, CEO High Performance Solutions, CEO Southern Europe, Middle-East and Africa Region, Internal Control Department and the Head of Compliance. The Committee meets twice a year and monitors the follow-up on completed actions, validates the subjects to reinforce and the action plans to come;
- around thirty **compliance officers** across the Group's countries and activities. They are responsible for disseminating policies, implementing programs, managing operational teams and checking and reporting back on results. In particular, they are trusted to answer operational questions and to advise their teams;
- **local compliance committees** are set up at regional or country level in the same way as the Group Compliance Committee.

At the operational level, the compliance culture is circulated by:

- the Group's Management, which communicates the compliance rules internally and externally, and provides reminders;
- the Compliance Department, within the General Secretariat, which determines and implements programs relating to the specific topics and leads the compliance network;
- business compliance managers, who implement the compliance program locally within the Group entities;
- the managers, who receive regular training and are responsible for endorsing and implementing the compliance policies and programs;
- the Audit and Internal Control Department (see Chapter 6, Section 2.2.3), which verifies that rules and procedures are being applied;
- the Fraud Department, which investigates suspected violations of policies and of the compliance program.

In 2019, all compliance officers attended a two-day seminar.

Professional alert system

Employees can use this system to report violations of applicable regulations or of the Group's internal rules and procedures, particularly those relating to the code of ethical conduct, which they do not wish to share with their line manager or Human Resources manager.

To ensure that its employees are aware of the system, including those on fixed-term contracts and temporary staff, a workplace alert guide has been widely circulated by the compliance network, the Human Resources network and on the Saint-Gobain website. Some branches have also used a poster campaign to publicize this alert system to employees.

The system has been rolled out to external stakeholders, particularly the Group's suppliers.

Finally, and to supplement this system, some countries have introduced systems managed by specialized external suppliers.

All reports received by external systems or the internal system, when admissible, are examined and, if necessary, investigated. When a report identifies a case of non-compliance, suitable measures are taken.

1.1.2 The compliance program

Compliance is an ongoing obligation that applies to all employees. As regularly noted by the Group's General Management, the principle of zero tolerance is observed. At all hierarchical levels, it becomes obvious for committed managers.

A dedicated "Compliance" intranet relays key messages, policies, action plans and the tools available to all Group employees.

The Chairman and Chief Executive Officer and the General Secretary feature in a video that outlines all of these principles and provides a reminder of how important compliance is to Saint-Gobain. All stakeholders can view the video on the website.

Adherence to antitrust law

The Saint-Gobain Group has introduced an antitrust law compliance program which focuses on:

- policies and procedures (notably regarding membership of professional associations);
- training and information initiatives: practical guides are available, specifically the "Thread of Competition" on the Group's website. All managers complete the "Comply" e-learning module for the first time during their induction, and must repeat it every two years. A range of in-person training sessions are provided by the General Secretary, Head of Compliance, Head of Responsible Development and the compliance officers;
- audits conducted by external providers.

Anti-corruption initiative

The Saint-Gobain Group has introduced a corruption prevention and detection mechanism based on the following:

- risk mapping;
- policies and procedures (Group anti-corruption policy, gifts and invitations, conflicts of interest, HR, mergers-acquisitions, validation of intermediaries, etc.);
- training and information initiatives: a best practices guide to preventing corruption (the "Thread of Anti-Corruption") is circulated in the countries and businesses by the compliance network and published on the Group's website for our stakeholders to read. All managers complete the "ACT" e-learning module during their induction. Many in-person training sessions are provided by the General Secretary, Head of Compliance, Head of Responsible Development and the compliance officers;
- audits conducted by external providers.

Economic sanctions and controls on exports

The Saint-Gobain Group has introduced an economic sanctions and export control compliance program based around the following:

- a Group policy;
- a dedicated network of Embargo Managers within the regions and in the businesses;
- a third-party verification tool;
- information training and initiatives: managers affected by these problems complete an e-learning module. Tools are available online to monitor changes to laws and regulations. Many in-person training sessions are provided by the General Secretary, Head of Compliance and members of the dedicated network;
- audits conducted by third parties.

1.1.3 Respect for human rights

Saint-Gobain's values, formalized by the Principles of Conduct and Action, are an essential means of mobilization for human rights due to their reference to international conventions, particularly the International Charter for Human Rights and the applicable conventions of the International Labor Organization.

The Group has been a signatory to the United Nations Global Compact since 2003. The first two principles of the Global Compact invite companies to "support and respect the protection of internationally proclaimed human rights" (principle No. 1) and "make sure that their own companies are not complicit in human rights abuses" (principle No. 2).

In 2019, Saint-Gobain published its human rights policy. The policy has been presented to the Board of Directors. It describes how the Group takes into account human rights impacts and outlines the associated due diligence process. The whole approach is based on the recommendations of the United Nations, particularly the guiding principles on business and human rights.

The human rights program is outlined as part of the Saint-Gobain duty of vigilance plan in Section 1.2 of this chapter.

1.1.4 Other ethics commitments

Taxes

Saint-Gobain acts in compliance with the tax laws of the countries in which it operates and fulfills its tax reporting and payment obligations in time. The Group has therefore not established structures whose purpose is tax evasion. It applies tax laws and regulations with honesty and integrity. Its intragroup transactions comply with the so-called "arm's length"principle.

Therefore, the income tax paid by Saint-Gobain is in correlation with the places where it is based and thus the value created.

In 2019, Saint-Gobain took part in the initiative for a tax partnership for regular, transparent dialogue between the French tax authorities and large proactive companies.

Involvement in public debates

The Group participates in public debates on the strategic challenges for its business activity and environment. Accordingly, the Compagnie de Saint-Gobain and most of the Group's subsidiaries are members of associations representing their industry nationally or supra-nationally.

Furthermore, Compagnie de Saint-Gobain is directly involved in professional associations representing French companies, such as the AFEP or MEDEF.

The Group's subsidiaries also cooperate with various local associations and organizations involved in environmental, regulatory, labor, societal or economic issues in the various countries. The subsidiaries have internal procedures in place to ensure that their participation in associations is recognized and referenced, and that employees who represent them in associations are trained in the rules of antitrust law.

As a way of ensuring that it is closely involved in the ongoing national and international debate on the environment and sustainable development, and that it can share its experience in these areas as a manufacturer, Saint-Gobain has been a member of *Entreprises pour l'Environnement* (Businesses for the Environment, EpE) since the organization was founded. EpE is a grouping of around 40 major French and international companies representing all sectors of the economy, who are keen to address the environment more effectively in their strategic decisions and in the way they do business.

Since 2016, Saint-Gobain has played an active role in the WBCSD, the World Business Council for Sustainable Development. WBCSD is a worldwide grouping of 200 companies that deliberate on and develop solutions for a more sustainable world. Saint-Gobain has been a member of the WBCSD Board since 2017, with responsibility for "climate, energy, the circular economy, towns and cities, and mobility". Since 2018, Saint-Gobain has co-chaired the "Factor10" project on the circular economy in the construction industry: in 2019, the report published in December 2018 on how the industry can accelerate the move toward a circular economy was actively promoted.

Saint-Gobain refrains from financing any political party.

Personal data protection

Saint-Gobain pays particular attention to personal data protection. In accordance with the General Data Protection Regulation (GDPR), the Group's Privacy policy is publicly available on its website on the page "Your data and your rights". It aims to set out data collection, use, communication and confidentiality conditions.

As the Group's activities are highly decentralized, a Data Protection governance system has been set up to answer daily questions locally. This network of employees is led by the central team. It is made up of 90 Privacy Advisors (usually legal experts or auditors) and around 600 Data Officers with more operational profiles.

In 2019, the Group continued to implement a data protection management tool in its European entities. This platform makes it easier to manage GDPR compliance, by mapping data, evaluating the compliance of providers and tools. An impact study method has also been formalized, and the Privacy Advisors have received training in it.

1.1.5 Key partnerships

Saint-Gobain has been a signatory to the United Nations Global Compact since 2003 and reports regularly on its progress at the Advanced level in the areas covered by the Global Compact, based on 21 criteria. Pierre-André de Chalendar is a member of the Board of Directors of Global Compact France.

Saint-Gobain also encourages its partners, particularly its suppliers, to commit to the Global Compact's ten principles. Likewise, Saint-Gobain pays particular attention to the United Nations Sustainable Development Goals (SDGs), so as to make progress in evaluating the real impacts that companies can have in working towards a fairer, more sustainable world. They also enable new multi-stakeholder collaborations in which companies, particularly Saint-Gobain, are heavily involved, either at local level or more generally. This particularly applies to SDG 13 on climate action and SDG 8 to promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all as part of the Global Deal.

Saint-Gobain is a member company of the Transparency International France Forum. Thus, Saint-Gobain supports the association's activities and has committed to rejecting and combatting corruption, in all its forms. Saint-Gobain also undertakes to make its best efforts to implement a solid prevention mechanism, inspired by the current best practices of the business world.

1.2 Duty of vigilance plan

Saint-Gobain's vigilance plan is established with respect to the French law No. 2017-399 of March 27, 2017 on the duty of vigilance of parent and subcontracting companies.

It includes reasonable vigilance measures to identify risks and prevent serious breaches of human rights and fundamental freedoms, personal health and safety and of the environment as a result of its activities and those of its tier 1 subcontractors and suppliers.

In order to evaluate the effectiveness of the measures put in place, an annual report on the results of the actions is published in Chapter 4, Section 2.4.

1.2.1 Principles and organization

Saint-Gobain has policies that relate to the respect for human rights, health and safety and the environment both with regards to its activities and to its relations with subcontractors and suppliers.

Likewise, management teams and Human Resources, Environment – Health and Safety, Compliance, Purchasing and Corporate Social Responsibility (CSR) have introduced action plans for the past several years so that the Group's entities, suppliers and subcontractors can roll out and apply its policies.

In 2019, the Group's human rights policy was published and made accessible to its stakeholders on its website. This policy has been reviewed by the Board of Directors.

The Environment, Health and Safety (EHS) policy was defined by the Saint-Gobain Chairman and Chief Executive Officer. It is an extension of the code of ethical conduct: the Group's Principles of Conduct and Action. It places environment, health and safety at the same requirement level. These objectives are recalled in the Group's EHS Charter, available in 30 languages and displayed on all sites.

1.2.2 Vigilance plan risk mappings

a) For the Group's activities

Human rights

The method selected by Saint-Gobain to identify the risks of actual or potential negative impacts is based on the recommendations of the United Nations, particularly those relating to the Guiding Principles on Business and Human Rights.

The risk mapping covers the nature of the risks linked to activities and risks linked to the countries in which the Group operates. The risks linked to activities were identified jointly between the CSR teams and the local management teams.

The selected salient risks were: forced labor; child labor; freedom of association; the use of recruitment agencies; discrimination.

The method used to identify the risks linked to the countries is based on external sources selected for their relevance. These sources are linked to international institutions such as the United Nations with the Human Development Index, specialist non-governmental organizations such as the Transparency International Corruption Perceptions Index, or foundations such as The Global Slavery Index by the Walk Free Foundation to end forced labor.

Environment, Health and Safety

The EHS Reference Frame is applicable to all of Saint-Gobain's sites. It specifies the Environment, industrial Health and Safety (EHS) management system that needs to be put in place and explains the risk identification and management method for environmental and health and safety risks posed to employees and on-site subcontractors. It is coordinated with the ISO 14001 and ISO 45001 requirements.

Whether it is certified or not, each site of the Group carries out its own mapping of environmental, health and safety risks.

To support the EHS and ISO certification drive, the health and safety risk assessment is subject to a specific standard, that is circulated and updated by the Group's EHS. All sites must comply with this standard. In 2019, it was updated and simplified, to include the assessment of risks as a result of exposure to toxic agents and noise. A standard "environmental risk assessment" was prepared in 2019 and will be introduced as of 2020, to complement the ISO 14001 certification, and ensure a uniform approach across all sites. There is now a digital version of the EHS risk assessment, that includes the analysis, assessment and risk management measures. This tool enables the rollout, reliable implementation and monitoring of action plans across all Group sites.

In addition to its EHS policy, Saint-Gobain has introduced policies on health, water management, energy and air emissions, sustainable management of resources and biodiversity, as well as the seven other safety-related standards (management of subcontractors, work at height, lockout-tagout procedures, machine safety, forklift trucks, vehicles and pedestrians, loading and unloading).

b) For Purchases

The Purchases CSR risk mapping took place in 2016. Risks connected to the country of origin and risks connected to the purchase categories are integrated. Risks linked to human rights, particularly forced labor and child labor, and corruption risks are assessed in conjunction with the countries of origin. Risks linked to purchasing categories include environmental performance, specifically carbon and water footprints and health and safety. This mapping draws upon the same internationally recognized sources as the evaluation of the risks linked to the Group's activities.

Following this approach, purchase categories or suppliers with specific risks were identified, such as purchases of certain natural raw materials, e.g. wood or sand, or certain types of subcontractors directly working on the Group's sites. The Purchases teams implement specific policies and action plans to manage these risks. Thus, the deployment of actions is differentiated between the non-trade Purchasing teams which manage purchases upstream of production and all of the logistical aspects, and the trade Purchasing teams which manage purchases downstream of production.

From 2020 onward, the organization will evolve into a single Responsible Purchasing organization to create synergies and optimize certain risk security tools such as on-site audit standards. However, the steps and action plans will remain tailored to the specific risks of trade and non-trade purchases.

1.2.3 Control and risk assessment measures for the Group's activities

a) In terms of human rights

In 2017, a CSR self-assessment questionnaire to identify risk management programs was sent to the countries concerned. It confirmed that the procedures relating to salient matters for Saint-Gobain in the field of human rights were being applied.

In the countries identified as being high-risk, Group employees are provided with information on the Principles of Conduct and Action in their mother tongue. If employment contracts are redacted in a language that is not understood by all, specific programs are responsible for transmitting their contractual obligations to employees.

Internal audits also checked the countries' knowledge of responsible purchasing and compliance programs, with a very high rate of compliance in the self-assessments. Automated tests take place to subsequently check that the procedures are actually being applied.

b) In terms of the environment, health and safety

The EHS Guidelines include assessment and oversight of the policy implementation. The matrix of EHS risks is also included in the internal control guidelines (see Chapter 6, Section 2.5.1). Audits on compliance of the EHS management system are conducted by the EHS Department and external certification measures complete the control system.

The pilot version of the internal EHS audit (ISA: Integrated System Assessment) has been finalized and focused on certified sites. In addition, a simplified version adapted to non-certified ISO sites has been developed in 2019.

When an acquisition is made, the process of integrating the new entity into the Group includes a specific procedure for EHS policy implementation.

Lastly, the EHS training matrix, which defines the training to be provided based on the job held, is a particularly relevant tool to define employees' EHS training paths.

1.2.4 Control and risk assessment measures for the supply chain

a) Non-trade Purchases

The CSR risk analysis deployed for non-trade Purchases allows for the identification of suppliers "at risk". Depending on the level of risk identified, suppliers answer an evaluation questionnaire based on documentation, that is verified and evaluated by a third party and, depending on the results, an on-site CSR audit takes place. The entire approach forms part of a constant dialogue with the supplier and leads to the establishment of action plans and CSR performance improvement plans. In 2018, the evaluation questionnaire and its related score scale were reviewed to check that they corresponded to the types and levels of risks identified by the mapping.

The Responsible Purchasing policy is applied to non-trade suppliers *via* the R-Net online platform, a private website entirely dedicated to the subject of responsible purchasing. Suppliers have access to R-Net to acknowledge receipt of the Saint-Gobain Suppliers Charter, to send essential supporting documents electronically (wood certificates, quality certificates, ISO standards), to answer self-assessment questionnaires, to obtain all information on Saint-Gobain's responsible purchasing guidelines and to access details of their CSR evaluations or, where appropriate, CSR audits.

For the period 2017-2021, the Group has set itself the objective of assessing the CSR performance of almost all suppliers deemed to pose a CSR risk and which achieve annual consolidated net sales of more than €100,000 with the Group. The objective is to conduct around 40 to 50 CSR audits a year, mainly in emerging countries. These audits may lead to de-listings if critical failings are identified, or if the necessary corrective plans are not implemented within the agreed periods. From 2019 onward, use of the SMETA 4-Pilars standard for on-site audits has been widespread, so that suppliers' auditing efforts can be better shared with all of their customers.

The Responsible Purchasing policy also integrates a continuous training program of purchasing managers on the Principles of Conduct and Action, with a specific attention to anti-bribery, work conditions of suppliers' employees, forced labor or child labor (see Chapter 4, Section 2.4). Constant information on the sustainable development stakes are also communicated.

In January 2018, the Department of Non-Trade Purchasing issued a "Best Practices" brochure for all purchasers, to remind them of the CSR best practices to be built into the whole of the purchasing process. This document incorporates the recommendations of the new ISO 20400 Sustainable Procurement standard.

b) Trade Purchases

The Group's Responsible Purchasing policy applies to trade Purchasing within activities according to the same principle of risk assessment, identification and mitigation. It is initially disseminated to distribution category managers.

The partner suppliers, who are signatories to the Suppliers Charter, commit to scrupulously monitor the requirements of responsible development with regard to the environment, social policy, legality and compliance of the products and manufacturing processes with the national and international standards and rules. They also undertake, within the scope of the "Responsible Together" program, to complete a self-assessment questionnaire every two years and to provide the documents that demonstrate their buy-in for the principles of the Suppliers Charter. The overall risk posed by each strategic supplier is identified *via* a combination of the score from the Saint-Gobain risks matrix (combination of risks: origin, product category, CSR and reputational) and the score from the "Responsible Together" questionnaire, which evaluates the supplier's CSR risk. The result of this combination gives the overall supplier risk and, if necessary, actions will be put in place to attenuate this risk, such as factory audits by third parties.

At the same time, the Building Distribution Purchases marketing teams conduct factory audits on selected suppliers to assess their management systems and the environmental, social and legal aspects of their production activities and to examine their production capacities in terms of volume and quality. These audits also relate to the supply chain upstream. Following an audit, the supplier receives a report as well as recommendations on compliance with an expected effective date or paths for improvement.

As of 2018, trade purchases form part of the Group's supplier audit program, to introduce additional audits on some suppliers identified as a result of the risk mapping.

c) Management of risks related to natural raw materials

Sand

Purchases of sand by Saint-Gobain are intended for glass and glass wool production, the manufacture of mortars, and for distribution activities. Over 90% of these purchases are from open and mechanized quarries.

Suppliers undergo evaluations of their environmental and social practices as part of the Responsible Purchasing policy.

Finally, Saint-Gobain is implementing an action plan to reduce the amount of sand it uses by replacing it with recycled materials as part of the program on the circular economy (Chapter 3, Section 4.2). An indicator to monitor the reduction of withdrawals of virgin raw materials (sand and gypsum) has been in place since 2018 (see Chapter 4, Section 2.4).

Timber purchases

Saint-Gobain has an impact on timber sector either through the supply of packaging (pallets and boxes) or by purchases of timber for construction markets as part of its distribution activities.

Environmental and social risks, and those related to human rights adherence primarily affect trade purchasing. Since the start of the 2000s, the timber purchasing policy has been issued, managed and updated by the distribution teams. Decisions to no longer sell certain species or to exclude regions of origin are taken on the basis of IUCN (the International Union for Conversation of Nature) reports, specifically its Red List of Threatened Species. For other high-risk species or regions, special certifications are required, such as FSC.

Finally, Saint-Gobain engages in regular dialogue with Non-Governmental Organizations (NGOs) and undergoes independent assessments. WWF UK has assessed the Timber purchasing policy in that country at the highest security level (3Trees).

Every year, the Group produces an inventory of its timber purchases. Over 96% of purchases are responsible timber.

1.2.5 The alert system and reporting

The professional alert system is described in Chapter 3, Section 1.1.1.

Furthermore, systems for collecting incidents are set up by the functional networks: HR and EHS specifically. These networks organize the central transferring and processing of incidents.

Since 2014, the Group has increased the amount of information collected; specifically information related to discrimination. The systems for collecting complaints have been improved to favor the expression of employees' concerns directly to their hierarchy or to the Human Resources network. The clarification of internal definitions has made it possible to facilitate the handling and monitoring of information. Companies now declare any incidents of discrimination leading to a complaint or otherwise, in the course of judgment or finally judged and characterized as such. Every incident declared is examined and dealt with in the companies concerned.

In terms of employee safety, when a serious accident occurs, the local management notifies the upper management. Once the victim has been rescued and immediate correction action has been taken, an in-depth analysis of the accident is conducted, with the aim of determining the root causes (technical, human and organizational factors) and developing an action plan. This analysis is undertaken with the local management and an action plan is approved.

The results of the analysis and the key points identified are then shared *via* the worldwide networks of EHS coordinators but also with management. Alerts are circulated and shared with the other sites, to make staff aware of certain risks and encourage them to ask themselves the following questions: could an event like this happen on our site? If yes, what can we do to prevent it? Sharing information in this way helps to strengthen the action already taken, such as risk assessments for all operations, and the introduction of internal standards.

The Group's EHS department reports environmental incidents. Each country reports incidents according to severity using a shared grid explained to the entire EHS network. The annual data is published in the Group's non-financial results (see Chapter 4, Section 2.4).

2. Operational excellence

2.1 The customer at the center of the Marketing & Development strategy

2.1.1 Marketing & Development organization

With the Transform & Grow program, Saint-Gobain has chosen a customer-focused approach, wherever they are and where there is decision-making leverage.

The local or Business Unit marketing teams determine the range of products and services to closely match the requirements of markets and customers.

At central level, the Group Marketing & Development team is responsible for defining an overall marketing strategy and the innovation policy but also for supporting country teams by providing them with technical support and access to expertise on general subjects such as excellence in sales and marketing, sustainable construction and digital. The sharing of practices allows to capitalize on successes.

Almost 150 internal service offerings are now available to local teams to facilitate the implementation of their marketing strategy by optimizing resources.

The positive effects are tangible, for example in digital marketing where the sharing of tools has streamlined costs, boosted technical reliability and accelerated the digital transformation to both enhance the customer experience and deploy BIM or e-commerce.

Building a Marketing and Sales community

In addition to its contribution to the Group's strategy and the operational supports to countries, the Marketing team provides countries with information and tools enabling them to implement a strategy suitable for the Group's market context. A marketing and sales community was set up to share best practices while ensuring alignment on key topics and the Group's priorities, and to facilitate the consolidation of newly-acquired brands.

Cross-functional sharing programs on key topics such as sustainable development are also developed and delivered. For example, in 2019, the first edition of "THE HIVE" took place in Budapest. Over 280 participants from 35 countries built a vision of future markets which will form the basis of the next action plans. This event was an opportunity to discuss topics such as digital, customer experience, brand development and prefabrication offerings.

This culture of knowledge sharing is being facilitated by the organization of training sessions within the Unicampus program (see in this Chapter 3, Section 3.4.1).

Finally, this community makes it possible to identify cross-cutting issues for which Saint-Gobain can provide innovative and competitive solutions, based on local and global synergies. Cross-functional working groups are already working to meet the specific needs of the façades market and launch a prefabrication offering (see Chapter 2, Section 4.3.3).

Developing innovation

In a world where change happens at an ever-increasing pace, it is particularly important to pay close attention to customers, to detect as early as possible changes in behavior, techniques, customer experience or new needs and expectations. Because the Transform & Grow program focuses on customers, it is easier to detect weak signals, with a view to conceiving and developing solutions (products, services, Business Models, etc.). Likewise, the synergies between the central and local teams make it possible to anticipate potential adaptations to innovations according to local specific needs (see Chapter 2, Section 5.2).

Marketing plays an important role in facilitating and accelerating the innovation process from the idea being generated to its market launch. Although innovation relies on R&D (see Chapter 2, Section 5.2), it is important to involve the manufacturing and development teams.

In 2019, a new procedure and associated tools were developed to promote innovation.

Ensuring customer satisfaction

Several practices have been adopted by all the Group's activities to measure customer satisfaction:

- after each interaction, actual and potential, direct and indirect customers are asked to complete a short questionnaire, to detect the main points of satisfaction and dissatisfaction, and to determine the "net promoter score", the only measure common to all; this refined measure will ultimately make it possible to make all of our customers our first specifiers ;
- secondly, a more stringent, responsive measurement of compliance and timeliness (see Chapter 3, Section 2.2.1 on the WCM program), since these two parameters recur in all questionnaires as the most frequent causes of dissatisfaction: customers demand above all else that suppliers keep their promises.

Therefore, all activities regularly measure customer satisfaction.

2.1.2 Designing comfortable, sustainable and efficient solutions

A product innovation process focused on safety and performance

Saint-Gobain has a procedure in place for monitoring product innovation, which was initiated by R&D and marketing. The tool constitutes a sequenced operational roadmap for the development teams, where every step in the innovation process is reviewed by a committee set up for this purpose. This methodology allows for the identification of and prompt attention to potential problems. Close monitoring of the progress achieved and product performance means that the process of innovation is faster and more secure.

The EHS (Environment, Industrial Hygiene and Safety) checklist introduced in 2008 has been incorporated into the “Saint-Gobain stage gate process”. It allows for the qualitative assessment of substances integrated into product formulations and the identification and reduction of EHS impacts associated with product life cycles. With regard to hazardous substances, the aim is to prevent the use of new substances and reduce their use in raw materials while reducing and controlling exposure levels.

The innovation process incorporates normative and regulatory requirements, from the functional marketing specifications stage which sets out customer needs. Compliance of a new product is checked throughout the process development stage, specifically during the stage gate validations.

Local marketing teams ensure that products comply with the legislation and standards applicable in the relevant countries. The process for launching new products, services and systems is specifically checked in the Internal Control Reference Framework (see Chapter 6, Section 2.5.1).

Finally, the World Class Manufacturing (WCM) industrial excellence program (see Chapter 3, Section 2.2.1) applies best practices in terms of quality and product compliance at industrial sites, based on the ISO 9001 standard approach.

With regard to consumer information, the Group’s products comply with current regulations, such as CE marking or the requirement for chemical products to have labels and safety data sheets (SDS).

Saint-Gobain also provides non-mandatory information specific to some of its products, such as:

- voluntary safety data declaration sheets for unclassified articles or substances;
- the declaration in an IMDS (International Material Data System) database for the automotive industry of the composition of the components and materials supplied;
- specific labels such as the Environmental and Health Data Sheet in France for construction products;
- programs to monitor compliance with laws, standards and voluntary codes relating to marketing communication, including advertising, promotion and sponsorship.

Over and above the legal obligations on information for the customer chain (CE marking, DOP, REACH, etc.), Saint-Gobain provides additional instructions, such as how to improve fitting comfort and installation safety through a range of channels such as the packaging on our products.

At European level, Saint-Gobain contributes to the work of the European Committee for Standardization (CEN) to design normative and regulatory systems. In the same way, its active involvement in European inter-professional associations such as EURIMA, Eurogypsum and EMO gives it a full overview of normative developments in Europe, particularly thanks to its discussions with the European Commission or its institutions such as the ECHA (European Chemicals Agency) which is responsible for the REACH regulations.

Product transparency

The Group’s industrial activities linked to the construction markets have completed the life cycle analysis for their products and published environmental product declarations (EPDs) verified by third parties, throughout the world. The first EPDs for insulation in Saudi Arabia, and for Gypsum in Vietnam and the United Arab Emirates were published this year. With over 1,100 verified EPDs published in over 31 countries, the Group is the world’s first supplier, in number, of verified EPDs in the construction sector.

A new market demand is emerging, coming from across the Atlantic in particular (via the development of version 4 of the LEED certification), but also under the impact of the development of the circular economy: transparency around the ingredients contained in construction products and the hazards associated with these ingredients. The Group is keen to provide a proper, comprehensive and considered response to this demand that is consistent with existing regulations and has commenced work on exploring and testing the solutions already on the market.

In January 2019, Saint-Gobain noted that there was no general consensus on the market around a standard methodology for assessing the potential health risks of products. The Group is in favor of greater transparency, and will therefore work to adapt to initiatives on a case-by-case basis and regional basis. The Group has entered into a commitment alongside other industry players to develop a methodology and put it forward as a standard in Europe.

Regardless of the discussions on evaluation methods, Saint-Gobain is committed to a global approach to reducing chemicals in product compositions and has integrated this parameter into its approach for evaluating the sustainable performance of SCORE products.

Evaluation and improvement of the sustainable performance of its products (product stewardship)

To develop increasingly sustainable solutions to provide a better response to new market expectations, the Group introduced an eco-innovation initiative in 2013, with eco-innovation training. A new version of the eco-innovation course was developed in 2018, which incorporates the knowledge acquired from the new tool developed to assess the sustainable performance of construction products: SCORE.

After studying the reference methodologies in various industries and exploring its customers’ expectations in terms of sustainable solutions, Saint-Gobain developed the SCORE tool in 2017. Based on an innovative and rigorous methodology, SCORE enables the assessment of construction products against sustainable performance criteria, taking into account 21 indicators, grouped into five core categories identified by stakeholders as high-priority: energy and climate, health, materials and circular economy, water, and local value creation. SCORE was first introduced in Denmark, Sweden and Norway in 2018, then in France, Spain and Finland the following year.

Among the evaluation criteria, health and product safety are of particular importance in the decision-making process, as they are crucial to the market launch of new products. Precise rules determine the acceptance conditions for a product or system, notably on the use of dangerous substances.

For Saint-Gobain, a sustainable product is defined over its entire life cycle, and product performance is assessed on two dimensions: a product's contribution to reducing impacts on health and the environment, and the lasting benefits it brings to all users and beyond to community. Thus, SCORE is an internal assessment tool whose main objective is to identify ways of improving our products and services.

Eco-innovation is covered in the training provided for new research managers and R&D project leaders. Dedicated eco-innovation training is also provided, primarily for the marketing and R&D teams, through the Saint-Gobain University (see Chapter 3, Section 3.4.1). It is offered as part of the UNICAMPUS initiative. In 2019, 150 marketing and R&D managers were trained. Since 2013, over 850 people have received training in eco-innovation.

In 2019, the process used to develop new products and systems was completely overhauled: any new project must now take account of sustainable development priorities, and the relevance of incorporating all or some of the SCORE indicators into the specifications will be systematically analyzed.

2.2 Industrial excellence

As part of the "Transform & Grow" program, the organization of the Group's industrial teams has evolved to promote cost optimization while continuing to ensure product quality, innovation and service levels that meet customer expectations. Thus, industrial departments by business line ensure the implementation of performance plans and the development of technologies and best practices according to the specificities of industrial processes.

Its ambition is for each of the Group's industrial sites to be exemplary, both through health and safety, attentiveness to customers and customer service, the quality of the products it supplies, and its economic and environmental performance. Because operational excellence can only be obtained with the involvement of all employees and by developing a culture of change, Saint-Gobain has chosen to place people at the heart of this process.

2.2.1 The WCM program at the heart of the industrial excellence strategy

The Saint-Gobain WCM is a program specifically adapted to the Group's culture, combining a standardization of methods, tools and best practices, with a modularity that is indispensable to accommodate a wide variety of industrial processes and sites of different sizes. It is based on pillars which cover performance improvement methods such as Lean, Six Sigma and TPM (Total Productive Maintenance) or 5S. This ongoing improvement program defines the logic, rigor and actions necessary to implement lasting improvements to performance and customer satisfaction.

The WCM program ensures rigorous implementation of Saint-Gobain's internal and external standards, including certification procedures such as ISO 9001 for quality, ISO 14001 and 50001 for the environment, OHSAS 18001 and ILO OSH 2001 and ISO 45000 for health and safety or internal standards such as the OPEN program or Saint-Gobain Attitudes for Human Development and the risk prevention standard.

Governance of the program and its implementation

Its management, the monitoring of its implementation and the improvement of site performance are managed in a transversal and independent manner, in coordination with the industrial departments. In 2019, the program's governance was formalized to ensure intelligent, pragmatic implementation, improving operational efficiency and enhancing customer service.

The introduction of the program by a site depends on its size, its strengths and weaknesses identified by an internal benchmark for each business, and its objectives in terms of economic or environmental performance, or of quality and customer service. Each site defines its own roadmap, in line with international reference frameworks, standards specific to its business required by customers and the improvement objectives that have been set.

Each industrial department and each business is responsible for defining, leading and monitoring the results of the sites within its scope.

A rich network of WCM expertise has been implemented, enabling a better circulation of the program, resource optimization according to country, region or business, formalization and sharing of expertise by pillar.

A central team heads up the WCM network, trains the teams, creates and applies the program standards, circulates the tools and provides site-specific assistance on request.

The Saint-Gobain WCM model and its tools

The Saint-Gobain WCM program is based on eight pillars, each of which representing a center of excellence.

The foundations of the program define the methods and tools:

- analyzing losses to determine a priorization of actions;
- resolving problems with logic, rigor and precision for lasting improvement;
- involving and engaging employees;
- improving standards to make progress easier to deploy and more robust over time.

Achieving industrial excellence is a demanding undertaking which requires gradual implementation with methodology and constancy. The benefits in terms of competitiveness, improvement of customer service and employee commitment can be measured at each stage of the site path.

Requirement levels have been used to determine the principles shared by the whole organization, but also tailored to the diverse range of the Group's industrial sites: sizes, businesses or local context.

In addition to dashboards that measure performance improvement, WCM audits check the robustness of the actions implemented and the durability of the results obtained. In 2019, the WCM audit procedures were optimized in line with the sites' objectives.

It is also the first year that two sites have achieved Gold level. The Iksan and Gunsan Sekurit factories in South Korea achieved this following an audit in May 2019. It is another step toward the Group's industrial excellence; it already has 131 Bronze and 36 Silver. Although this result is exemplary in terms of technical performance, it was only achieved by placing the human element at the heart of processes and by engaging all employees.

Risk management and performance improvement results

The WCM program therefore delivers a substantial reduction in production costs at the same time as a significant reduction in health/safety, environmental and industrial risks. The Quality, Industrial Performance and Environment pillars contribute significantly towards reducing the Group's environmental footprint by reducing waste generated in production and water consumption and by optimizing energy efficiency.

The WCM program and its extension to the supply chain therefore represent a change in culture and management system to provide a high level of customer service, competitiveness and efficiency in a better health and safety environment for the Group's employees and partners. It also promotes employee engagement and mobility. It is an essential prerequisite for the successful digital transformation of plants (see Chapter 2, Section 5.3.2).

Similarly, competency matrices are developed in the "people development" pillar. They make it possible to manage the Group's technical skills by adapting training programs (see Chapter 3, Section 3.4.1), employees' career paths and, if necessary, the search for external skills.

2.2.2 Management of industrial and distribution risks

In a concern to protect the health and safety of people and preserve the environment, Saint-Gobain works to protect its assets and investments from the risk of accidental events and strives to ensure the continuity of operations should such events occur, regardless of their cause.

The aim of the industrial and distribution risk prevention policy is to reduce the likelihood of events occurring, minimize the seriousness of such events if they do materialize and finally protect the continuity of business operations. This policy applies to all Group sites.

Defined and led by the Risk and Insurance Department, the policy is rolled out within the organization to the sites by prevention coordinators.

A risk prevention manual is the Group's reference framework. It is available in around 15 languages. It includes the applicable standards, procedures and technical rules, methods for identifying and reducing risks, the prevention of natural risks, and the drafting of emergency and business continuity plans. This manual may be shared with the relevant stakeholders, such as permanent on-site subcontractors.

A site's risk evaluation tool, called "Risk Grading" is used by all operational sites and provides an objective assessment of the real protection and prevention level. It takes into account both human factors (organization, procedures, communication, training, etc.) and physical facilities. This means that each site is able to identify its areas for improvement, develop action plans including investments, and use the tool to measure progress.

Saint-Gobain is therefore rolling out business continuity plans for each site according to the risk evaluation and the vulnerability of processes to unforeseen interruptions including an anticipation of the impacts of an accident so as to limit its effects. The aim is to fully or partially ensure customer service and recover its operational capacities as quickly as possible. The environment & risk prevention pillar of WCM (see Chapter 3, Section 2.2.1) ensures both the introduction of prevention plans and the ongoing improvement of existing continuity plans. On-site subcontractors are involved and must commit to a prevention plan shared with the prevention team of the relevant site.

Concerning natural disasters, the Group uses mapping that enables it to establish the exposure levels of sites to a risk of natural disaster on a regional and business level. There is a special focus on sites with high exposure to natural disasters. This tool makes it possible to anticipate any necessary measures when setting up a new location.

2.2.3 Environmental protection

The Group wishes to ensure the perservation of the environment, to meet the environmental expectations of its stakeholders and offer its customers the greatest value added for a minimum environmental impact as a result of production and distribution.

The Group has set two long-term objectives: zero environmental accidents and maximum reduction of the impact of its activities on the environment.

These objectives are conveyed by means of short- and medium-term objectives which concern the five main environmental challenges identified by the Group: resources; energy, atmospheric emissions and climate; water; biodiversity and the use of soil; environmental accidents and nuisances.

The methodology of the Environment pillar of the WCM makes it possible to identify environmental aspects and gaps and to reduce and control them (see Chapter 3, Section 2.2.1).

a) Resource management

Developed in 2015, the Sustainable Management of Resources policy aims to reduce the impact of the use of resources and their responsible management to favor the transition to a circular economy. First and foremost, good quality performance by a site is the most effective way of optimizing the resources used. The deployment of the WCM program (see Chapter 3, Section 2.2.1), particularly its "quality and process management" pillar, in the various sites pursues that objective.

The key features of this policy are to: maximize the amount of recycled content in its products, without impacting performance; generate minimum production waste; internally or externally recover the waste generated by its processes.

In line with the Group's Health policy and in compliance with local regulations, the management of hazardous waste is closely monitored to protect the health of employees, residents, customers and users of its products and services.

The action plans specific to promoting the circular economy are outlined in Chapter 3, Section 4.2.

Having a maximum recycled content in its products

Some of the Group's products are indefinitely suitable for closed-loop recycling within their industrial process, such as flat glass, glass-wool and plasterboard.

Industrial processes are adapted to replace natural raw materials with externally-collected recycled materials. Therefore, their inclusion in the products essentially depends on the existence of efficient, long-term collection networks.

Today, 16 countries throughout the world use plaster waste from worksites to manufacture their plasterboard. Almost 230,000 tons of waste plasterboard from the sites were recovered and recycled in this way across the globe in 2019, representing the equivalent of the annual output of two medium-sized factories.

Logistics have been optimized for glass products to promote the recovery of cullet across the entire value chain where the Group is present and especially between glass processing sites (manufacturing of windshields or windows, for example) and glass furnaces.

Other Group products can already tolerate the replacement of virgin raw materials with recycled materials from other consumption circuits, such as, glass wool and cast iron pipe.

For many years, glass wool has included cullet in its composition. In 2019, external cullet accounted for over 48% of all materials loaded into the furnaces (and more than 90% in Japan).

Similarly, the Pipe activity uses a "second fusion" process which is carried out by fusing scrap and recovery cast iron. The annual quantities depend on their availability on the market.

Generating a minimum of production waste and recovering it internally

The priority waste management actions initially relate to a reduction in the quantities of production waste generated. Operational excellence, quality and productivity are the main ways to reduce waste and ensure optimum use of resources. Therefore, the WCM program (see Chapter 3, Section 2.2.1) involves monitoring of improvements to the yield of materials and the reduction of production waste.

Sites are seeking to reuse production waste as a priority in their own industrial process. The ceramics production plant in Zhengzhou (China) has implemented a plan to analyze the nature and composition of its production waste, and has identified solutions to reuse it on the site. This approach also makes it easier to research external recovery networks if no on-site solution has been found.

Likewise, a glass plant in China has initiated a new process to recycle fine dust from processing through the electrofiltration of this smoke. Inspired by the pharmaceutical industry, this process makes it possible to adjust the glass composition according to the amount and chemical analysis of the dust put back into the furnaces. This process brings about a reduction in the amount of waste sent to landfill and optimizes glass compositions.

Finally, a new technology has been tested on a rock wool production site in Romania which has resulted in all of its production waste being recycled in its industrial process.

Externally recovering the waste from its processes

Even for industrial processes favorable to the incorporation of recycled materials, optimizations are possible. The plasterboard manufacturing plant in Vietnam has introduced a process to separate the paper from the plasterboard during a waste reprocessing phase. The plaster is reincorporated into the process when the paper is recycled in the manufacture of cardboard *via* an external recovery network.

The Group is also involved in the creation of recycling networks with the help of external local partners.

Progress in the reduction and recycling of production waste made at certain Group sites shows that "zero non-recovered waste" is an achievable ambition.

b) Energy and atmospheric emissions

The aim of the "Energy, Atmospheric Emissions and Climate Change" policy is to reduce the energy consumption and greenhouse gas emissions of its industrial processes, its infrastructures and its transport, across all of its sites.

To coordinate measures to reduce energy consumption and CO_2 emissions (scopes 1 and 2), energy climate managers have been appointed for the most energy-intensive industrial processes. They are tasked with analyzing performance gaps relative to the best performers for subsequent improvement, as well as with sharing good practices to be replicated across all sites.

Each site must set the progress targets and monitoring procedures for managing energy and atmospheric emissions, taking into account comparisons on processes between the different sites.

The deployment of the World Class Manufacturing (WCM) program (see Chapter 3, Section 2.2.1) in all of the Group's industrial sites is another lever for progress.

Greenhouse gas emissions

The Group's direct CO_2 emissions (scope 1) are mostly connected with its industrial activities. These CO_2 emissions result from the combustion of fossil fuels and chemical reactions used in the manufacturing processes (e.g. the decarbonization of carbonates in the glass fusion processes). The Group's indirect CO_2 emissions (scope 2) are essentially connected with its electricity purchases.

The use of recycled raw materials in processes makes it possible to reduce energy consumption, particularly for glass fusion. In the case of flat glass, energy consumption is reduced by 3% when the percentage of cullet is increased from 20% to 30% of raw materials. This reduction in energy consumption is accompanied by a reduction in CO_2 emissions (scope 1). The efforts made to transition to a circular economy (see Chapter 3, Section 4.2) will therefore have a positive effect on emissions.

Energy efficiency is an essential factor in the environmental and financial performance of Saint-Gobain's sites which also enables the reduction of greenhouse gas emissions. The Group is encouraging energy audits on its sites and is setting up a system for energy management drawing on ISO 50001 certification. At the end of 2019, 91 sites in the relevant scope were certified to ISO 50001. These sites account for 26% of the Group's annual energy consumption. In addition, a raft of energy audits was initiated, with the aim of improving the insulation of the Group's production facilities.

Saint-Gobain places all its sites in a phase of continuous improvement. In this respect, they aim to identify and evaluate the Best Techniques and Practices Available (MTD) and then progressively upgrade them at an economically acceptable cost, in accordance with the Group's environmental vision. An MTD deployment plan is defined, updated annually and included in the three-year strategic plan.

The actions implemented include optimizing energy use in response to needs (usage to power engines, lighting or the use of compressed gas) and the recovery of energy from our manufacturing processes.

The carbon impact of energy

More than three-quarters of the Group's total energy consumption is directly linked to the use of fossil energies. The ability of industrial processes to move from using fossil fuels to low-carbon energy solutions, electricity (when it is low-carbon), biogas, or even hydrogen, is therefore crucial.

The "Improving our CO_2 footprint" R&D cross-cutting program entails shared action plans between the purchasing teams (excluding distribution) in the countries, the industrial departments and the local environment managers to identify regular, reliable sources of renewable energy.

On its sites, Saint-Gobain is also developing projects using new energies (wind power, biomass, biogas, solar power, etc.). These developments may be made in association with external partners.

Limiting non-greenhouse-gas atmospheric emissions

Saint-Gobain takes an active approach to controlling its atmospheric emissions other than greenhouse gases. The Environment managers coordinate this strategy.

When the primary measures are not sufficiently effective, dust emissions are controlled by investments in electrostatic precipitators or bag filters, depending on the type of industrial facility. This equipment also makes it possible to filter the heavy metals resulting from impurities contained in certain raw materials.

Some Saint-Gobain factories, mainly the glass furnaces and the Pipe activity sites, emit substances that participate in the acidification of the environment such as sulfur dioxide (SO_2) or the formation of nitrogen oxides (NO_x).

The primary measures introduced to reduce sulfur dioxide emissions include the reduction in energy consumption and the use of fuels with a low sulfur content.

Primary measures to optimize processes, particularly combustion, make it possible to reduce NO_x emissions at source.

In addition to these primary measures, equipment for the secondary treatment of sulfur dioxide and nitrogen oxides is also installed.

Some industrial sites are affected by Volatile Organic Compound (VOC) emissions as a result of their industrial process. On-site monitoring is based on measurements as needed. The aim is to check that emissions are below the limits set by the environmental operation permit. As such, it is heavily dependent on the local context. Raw materials optimization can reduce VOC emissions, while secondary measurements *via* a decontamination unit may also be foreseen. Reporting of a group does not make it possible to produce a full overview due to the variability of the measurements from one year to another.

c) Water management

The Saint-Gobain Water policy was adopted in 2011. It has confirmed the desire to minimize the impacts of Saint-Gobain's activities on water resources, both in the case of withdrawals and discharges. Its long-term objective is to withdraw as little water as possible and to aim for "zero discharge" of industrial water in liquid form, while avoiding generating new impacts for other natural environments and/or for other parties involved.

Particular attention is paid to limiting the Group's withdrawals in water stress areas and not competing for access to drinking water with the local populations. To this end, the list of priority sites within the framework of the Water policy is not only based on the importance of water withdrawals as it was previously, but also on the concept of water stress. In this regard, Saint-Gobain uses the World Resources Institute's "Aqueduct" atlas of the world, which allows each site to classify its water risk from "low" to "extremely high". This atlas is based not only on qualitative and quantitative physical risks (such as water stress or flood risk), but also on stakeholder risk (like access to water).

In 2019, 60 Group sites withdrawing more than 5,000 m^3 of water each year and representing around 10% of the Group's water withdrawals were located in high-risk or very high-risk areas. Two sites are in very high-risk areas, one in India and the other in South Africa.

To support the application of its Water policy in industrial sites, Saint-Gobain has defined a Water standard that describes the minimum requirements that all sites must observe in future. It structures the improvement of the sites' water management performance. Its application aims to reduce the risks connected with water and the quantities of water withdrawn and of liquid water discharged, to favor the least sensitive sources of withdrawal and discharges, to control the quality of the water and to prevent accidental pollution.

The water standard is applicable to all Group sites, with priority given to those representing the highest water risks. All risk sites represent for 87% of the Group's annual water withdrawals.

The Group's commitment to water preservation has led it to participate in the CDP Water Disclosure since 2012, which aims to encourage businesses to report in detail on the risks and opportunities concerning water management and to report results transparently. In 2019, the Group obtained a B- rating.

d) Biodiversity and land use

Saint-Gobain is particularly committed to high-impact sites or areas of outstanding biodiversity. Based on its experience in quarries, the Group today has a significant internal expertise on the subject. It is now a question of understanding the subject in all its aspects. The Group's goal, translated in its Biodiversity policy of June 2018, is to preserve, restore, boost and enhance biodiversity, and to involve all parties concerned in the process.

A mapping study of all the sites was conducted in 2016 using geographical tools to evaluate their sensitivity to the ecosystems based on their proximity to areas of high biodiversity value. The protected areas considered are areas recognized by the UICN or more locally defined as Natura 2000, RAMSAR areas or other national areas. Out of over 6,000 sites (quarries, plants or sales outlets), 79 had been identified as being in a protected area. In 2019, the study continued, with the addition of criteria such as the environmental impact of the sites, stakeholder expectations and the biodiversity initiatives already underway. This will make it possible in 2020 to complete the list of priority sites to draw up the biodiversity management and best-practice sharing plan.

The vast majority of the Group's 151 underground or open quarries worldwide are for the production of Gypsum (111, *i.e.* 74%). A charter for the environment and biodiversity in the Group's quarries and mines was published in 2019, by capitalizing on the experience of the charter that has been in place for many years for Gypsum. The Group's quarries are operated and then restored with the aim of preserving the environment in accordance with the local rules. During the operating and restoration period, the effects on residents and on the environment are reduced as much as possible: visual impact, dust, noise and vibration, consequences to road traffic and repercussions on the local natural environments. In 2019, 55% of the Group's active quarries already had a biodiversity management plan in place.

Following up the introduction of the Biodiversity policy in 2018, an internal committee was created, bringing together the relevant industrial activities and functions, such as purchasing and R&D. In 2020, it is foreseen that this biodiversity network will be extended, with the biodiversity representatives of the sites identified as high priority. To help these representatives, a training module has been created, which explains the biodiversity priorities and outlines best practices for drawing up biodiversity management plans.

In 2018, Saint-Gobain signed up to Act4nature, a French scheme in which companies commit to protecting biodiversity.

In 2019, like in 2018, British Saint-Gobain employees were invited to spend a few days in nature, as part of the national "30-days Wild" campaign. In 2019, Saint-Gobain's flat glass production site in Chennai, India was awarded an internal "Emeraudes" environment prize in relation to biodiversity for its project to create an urban forest.

2.2.4 Logistics adapted to customer service

Launched in 2014, the World Class Supply Chain program is a means to help Saint-Gobain reach operational excellence by extending the WCM to optimize the value chain of an activity covering several sites in a region or a global business sector. Beyond the economic gains expected from the optimization of inventories, logistics and capital employed, this program is above all a program for improving customer service with the objective of response and delivery times adapted to customer needs.

While the WCM program accelerates the entry of Saint-Gobain sites into the 4.0 industry with the digitization of WCM processes and the availability of digital applications for production and maintenance operators (see Chapter 2, Section 5.3.2), the World Class Supply Chain program enhances Saint-Gobain's ability to offer products and solutions that are increasingly tailored to customer needs, or even fully customized (Tailor Made Solutions). This program also aims to create connections with the digital tools used by customers such as the BIM for construction trades. It is therefore essential to keep Saint-Gobain's promise to improve the productivity of construction professionals (see Chapter 2, Section 4.4) and to be the supplier of tailor-made performance and innovation for industrial customers (see Chapter 2, Section 4.5).

2.3 Purchasing, a challenge for competitiveness

Purchasing is a key factor in the Group's competitiveness and its organization is adapted to the specific features of its activities and countries to ensure its efficiency and manage supply chain risks. Purchasing meets the needs of the Group's manufacturing and distribution activities.

Although the Purchasing functions are based on shared policies and a common base, specifically the implementation of the Responsible Purchasing policy (see Chapter 3, Section 1.2.4), they do not participate at the same level in the Group's value chain:

- non-trade purchases: purchasing upstream of the production stage (raw materials, energy, chemical products, components, etc.), purchasing of equipment necessary for production (machines, civil engineering, etc.), all logistics expenses, as well as purchasing for support functions (IT, Marketing, HR, EHS, Communication, Finances, and Audit expenses, etc.);
- trade purchases: purchasing downstream of the production to ensure the offerings of the Group's distribution brands.

The strategies and objectives can therefore be differentiated.

Beyond the specific features connected with its activities and countries, Saint-Gobain recognizes the major role the Purchasing Department plays in competitiveness, innovation and sustainable performance. The Group takes performance seriously, and, as such, seeks to optimize purchases made by its activities and countries and to improve purchasing synergies to attain its economic objectives to create competitive advantages.

To that end, the Group has endeavored to develop the professionalism of its purchasers through training activities. A training path is open to all Group purchasers within the scope of the Purchasing School. More specific training intended for trade purchasers supplements this program. This training, which is particularly important for newcomers in the Purchasing Department, provides them with tools that enable them, and their teams, to achieve behavioral excellence in their daily activities.

2.3.1 Non-trade purchases

Non-trade purchases rely on a community of over 600 professional buyers, trained in purchasing practices across different purchasing categories and positioned on different levels of the Saint-Gobain organization: Group, country, activities and sites.

Non-trade purchases are divided into five overall families: production purchases, investment purchases, transportation purchases (on sales and on supplies), energy purchases and general purchases (general expenses, non-production services, etc.). Over 250,000 suppliers are involved in this supply chain.

A specific facilitation program has been developed: World Class Purchasing (WCP). This collaborative program aims to strengthen the purchasing division and boost its contribution to the Group's performance. Buyer training is a fundamental pillar in the program. The Saint-Gobain University provides in-person training (see Chapter 3, Section 3.4.1) with a focus on purchasing techniques and the Group's policies. There is also a range of e-learning modules on more specific topics. Unicampus camps are also available (see Chapter 3, Section 3.4.1).

Systematic exchanges of best practice also take place within WCP. The program also promotes the development of digital tools to support buyers throughout the purchasing process: from the definition of needs to contract execution and performance measurement.

2.3.2 Trade purchases

Trade purchases are purchases of products made by trading brands distributing building materials. The trade purchase supplier portfolio has 22,000 suppliers from over 50 countries distributed over 15 markets, reflecting the various markets of the customers of the building dstribution trading brands. Annual purchasing segmentation work identifies suppliers who are “Strategic Partners” and with which a strong international partnership has been built year after year; “National Strategic” suppliers upon which the entities rely nationally; and “Niche” suppliers who provide specific products that are indispensable to a region’s product mix.

This segmentation constitutes stage one of a process of concentrating trade purchases among a certain number of loyal, innovating partners capable of anchoring their activities over time while respecting the environment, offering quality products at a competitive price, supporting brands in sales and advice, providing an effective logistics network and being profitable. This measure results in the approval of the best suppliers selected to provide the best products at the best price with the best service to satisfy customers. Optimizing the supplier portfolio is a priority which involves, once the referencing has been done, providing personalized support to partners *via* a yearly partnership evaluation, known as the Partnership Analysis. Every year, all building distribution brands assess the partners they work with. Feedback to partners takes the form of a report covering seven evaluation criteria: trade, marketing, logistics, purchasing, teams, CSR and Digital. A report is then drawn up, including the data collected from all the countries in which building distribution and the partner have joint activities, allowing the approved supplier to measure and understand its positioning within the markets in which it operates. An action plan is drawn up jointly in order to improve the quality of the partnership.

3. A commitment to and with its employees

3.1 Health and safety at work

Health and safety are central issues in Saint-Gobain's EHS Charter. This approach affects all the Group's businesses and endeavors to place safety at the heart of the corporate culture. Safety is a value held by all management grades and by all employees. The objective is that everyone participates in their own safety and in that of all of their colleagues.

With regards to health, in 2013, Saint-Gobain adopted a Health policy that is in continuity with the actions already undertaken by the Group. It establishes the guidelines of its action for protecting the health of its employees, its customers and users of its products, as well as for residents adjacent to its sites. All the Group's sites throughout the world have to implement it, in accordance with their local regulations and in addition to the health and industrial hygiene standards and tools already in place.

Employees' safety, in the same way as health, is a priority at all times for the Group with a single acceptable objective: zero work-related accidents. Saint-Gobain strives to provide all people on its sites, including temporary staff and subcontractors, with safe conditions and work environments, over and above the requirements imposed by applicable local legislation, by identifying, reducing and managing risks (see Chapter 3, Section 1.2: Duty of vigilance plan). The Group's EHS Department is responsible for monitoring and implementing this policy.

3.1.1 Employee health

Saint-Gobain's ambition is to reduce, as much as possible the risk level for the health of its employees, temporary workers and subcontractors working on its sites throughout the world. It is fundamental to know and draw up an exposure profile for occupational risks. It is a question of ensuring the protection of employees and deploying individual health surveillance adapted to the risk profile.

To ensure the same level of protection and medical monitoring to all Saint-Gobain employees worldwide, the Group has developed mandatory standards and recommendations on industrial health and hygiene (see Chapter 3, Section 1.2: Vigilance plan).

Each site adapts them according to its local specificities and requirements. They are supplemented by specific standards for certain activities and operating kits. The recommendations on the organization of first aid and equipping entities with external automatic defibrillators have been communicated and monitoring takes place at Group level to ensure that these recommendations are followed.

In addition to managing workplace health risks of a chemical, physical, ergonomic or psychological nature, the Health policy also promotes the general health of all Group employees, through actions to prevent sickness linked to individual risk factors such as sedentary lifestyles or smoking and to promote health.

a) Managing chemical risks

For many years, Saint-Gobain has been committed to reducing and controlling the risks associated with chemicals (hazardous substances and products, and dust).

Three complementary tools have been developed to support the sites in managing chemical risks:

- the internal standard and its implementation guide on the assessment and control of the risk linked to toxic agents requires sites to carry out a periodic assessment of exposure to hazardous substances according to precise minimum rules. It is supplemented by risk management guides (ventilation and personal protective equipment);
- the SBASE database provides a list of chemical substances and their classifications. This database is updated on an ongoing basis in response to changes in the classification of the different regulatory frameworks such as REACH in Europe. SBASE is managed by the EHS Department;
- the SAFHEAR management tool allows each site to perform and document its own inventory of the chemical substances and products used but also potentially generated during industrial production processes. This inventory allows sites to make and document the evaluation of exposures. This data is consolidated at Group level.

The inventory of the products and substances used by Group entities is an ongoing process. In 2019, 95% of the sites concerned have an inventory of their products and chemical substances in the dedicated module and 87% have updated it since 2018. At the same time, the rollout of the toxic risk analysis module was continued: 10% of the concerned sites started to perform risk analyses and to input the results into the dedicated module. A new organization has been set up at Saint-Gobain to develop the competence of the EHS managers on site, through training, educational materials and technical assistance.

Saint-Gobain is actively involved in the implementation of the REACH regulation in order to ensure the regulatory compliance of the Group's practices. All the Group's businesses are concerned, whether as manufacturer, importer, user or distributor.

Saint-Gobain met the deadline for registration in 2018, bringing forward certain registrations in partnership with other European declaring parties concerned by the same substances. The Group is also working to take into account safety data sheets drawn up with exposure scenarios both as user and as manufacturer of substances.

The Group communicates its uses of substances to its suppliers so that they are properly taken into account in their registration files. It also systematically incorporates the REACH clause, reviewed in 2017, into all the purchase contracts in order to ensure the regulatory compliance of its suppliers.

Finally, Saint-Gobain actively monitors the updates to the list of substances applying for authorization or subject to authorization or restriction. The Group anticipates the deadlines for substance authorization in Europe, in order to fulfill its obligations of substitution and communication to its customers.

In non-EU countries subject to other regulations on chemicals (PARCHEM in Switzerland, Toxic Substances Control Act in the USA, Canadian Environmental Protection Act and the Chemicals Management Plan in Canada, CHINA REACH in China, etc.), Saint-Gobain applies the regulations in force and monitors any changes.

To complete the system, a multi-disciplinary cross-functional working party (doctors, hygienists, product managers and environment managers) ensures technical, scientific and regulatory monitoring. It aims to identify and establish control over substances in the nanoparticulate state used within the Group, and in particular monitors the implementation of the practices recommended in the Code of Conduct on the handling of nanomaterials in the Research and Development Centers.

This cross-functional control of chemical substances and products also forms part of the product innovation and stakeholder communication initiative, with a particular focus on consumers (see Chapter 3, Section 2.1.2 : Product Transparency).

b) Management of noise and ergonomic factors

The Group has followed a similar approach in terms of assessing and managing noise in the workplace and ergonomic factors:

- a noise assessment standard and a guide for implementing technical and individual protection methods;
- a grid for detecting ergonomic factors. The Group finally has a set of information and precautions as to the use of exoskeletons.

c) A steering indicator for health risks

In parallel with the indicators monitoring safety (total recordable accident rate: TRAR) and the environment, the Group has defined an indicator to control the risk to the health of its employees connected with their activities, in keeping with its health standards and as a priority targeted on toxic agents and noise risks. It constitutes the rate of potential major exposure to a health hazard.

This indicator, known as HICE (Health Indicator for Occupational Exposure) is applied across all sites. It measures potential health risks linked to exposure to noise and chemical substances according to its size and activity. Tested in 2017 for feasibility and its relevance, this indicator is still in the deployment and reliability-improvement phase.

3.1.2 Safety, an absolute priority

This measure affects all the Group's businesses and endeavors to place safety at the heart of the corporate culture. Safety is a value held by all management grades and all employees. The objective is that everyone participates in his own safety and in that of all its colleagues.

At the highest level, the management has demonstrated its involvement in the development of a culture of safety within the Group. The operational management is responsible everywhere and guarantees all aspects of safety: objectives, action plans and performance measurement. To underline this commitment, part of managers' variable compensation is based on actions and results, in terms of security. Safety visits and the application of safety standards are also considered (see Chapter 5, Section 2.4).

Safety inspections are organized on all sites according to the SMAT (Safety MAnagement Tool) standard. These inspections aim to encourage open dialogue with the person visited, on the subject of safety and health, following the observance of work practices by the inspector. The positive points are noted as a priority, as well as any dangerous acts or conditions, which form the subject of an immediate priority action or an action incorporated into an action plan. In 2019, 477,521 SMAT visits took place within the Group, a ratio of 2.34 visits per employee, temporary worker and permanent subcontractor.

a) Safety results that continue to improve

The Group has recorded a constant fall in the number of work-related accidents, with or without lost time, reflected in the TRAR indicator, which fell from 2.4 in 2018 (employees, temporary workers and subcontractors) to 2.2 in 2019. This improvement is the result of reinforcing risk assessments, introducing technical safety standards and sharing a common culture of safety. To build on this result and sustain the overall effort, the TRAR indicator is included in the criteria for the long-term compensation plan as of 2017 (see Chapter 5, Section 2.4).

In 2019, 73% of the entities did not declare any accidents, compared with 72% in 2018.

The "Millionaires' Club" comprises the most exemplary Group sites in terms of safety, with one million hours worked or five years without any accidents involving lost time specifically, including all the individuals present on a site (employees, temporary workers, subcontractors, visitors, etc.). In 2019, a total of 254 sites were in the "Millionaires' Club" (compared to 280 at the end of 2018). It increases the standing of the units that have the best results and that demonstrate to all that the objective of zero work-related accidents is possible. Out of these sites, 84 are "Silver Millionaires" (ten years with no lost-time accidents) and 19 are "Gold Millionaires" (15 years with no lost-time accidents) compared to 84 and 17 on December 31, 2018.

b) Additional efforts required to manage subcontractors and temporary staff

Saint-Gobain's safety commitment applies not only to its employees and temporary staff, but also to subcontractors working on site.

Two safety standards, "Management of external businesses" and "Work permits" are in place to manage risks linked to the on-site presence of subcontractors.

Two categories of subcontractors are distinguished to adapt action plans to risks:

- permanent subcontractors with which actions can be conducted over the long term and for which the results have been included in the Group's overall results since 2017;
- occasional subcontractors (worksite, maintenance, etc.) for which a prevention plan must be drawn up in advance and the introduction, control and supervision procedures improved. Accidents with and without lost time involving occasional subcontractors are recorded and reported.

The "External companies management" standard has been updated and made available in a new format adapted to the purchasing process.

A new version of the External companies management e-learning module has also been made available to the countries and site teams, along with communication tools to raise awareness of the risks linked to the on-site presence of subcontractors.

Furthermore, the entire Purchasing network will have specific tools to closely monitor this process: information and training, best practices, etc.

3.2 Human Resources Policy

3.2.1 The HR policy and managerial practices

Supporting transformation

Building on its history and its rich social dialogue, Saint-Gobain's Human Resources (HR) policy ensures the provision of an environment that is conducive to professional and personal development for every employee and that balances job-related performance with employees' well-being.

This policy is based on compulsory buy-in from all employees for the values that Saint-Gobain expresses in its code of ethical conduct: the Principles of Conduct and Action.

Over the last few years, the Group has experienced profound change, including the shift from a product-oriented rationale to a market-oriented rationale, creating a spirit of openness within Saint-Gobain: outward-looking openness to be attentive to the world around it and provide responses to customers' needs and openness within the business, to foster dialogue, innovation, team- and project-based working and the potential for differentiation.

The OPEN (Our People in an Empowering Network) program has been set up to support this change. It is based on four priorities: mobility, diversity, engagement and talent. Action plans are tailored and regularly updated for each priority.

Saint-Gobain recognizes the individual features of each of its employees and respects them. The Group wishes to incorporate and make use of these differences by creating an environment conducive to fairness and equality, which are crucial to employees' professional growth.

The Group submits its human resources practices to the Top Employers Institute each year. Saint-Gobain is one of 13 companies to have gained global recognition for the fifth year running.

Saint-Gobain also has local Top Employers recognition in 35 countries.

New leadership

In December 2016, Saint-Gobain announced five "Saint-Gobain Attitudes" to all its employees:

- cultivate customer intimacy: take a "solution-oriented" approach to understanding, anticipating and meeting the needs of external and internal customers;
- act like an entrepreneur: focus on performance and results, being open to new ideas and able to adapt to change;
- innovate: demonstrate curiosity, promote and value diversity to foster the generation of fresh ideas;
- be agile: be proactive and anticipate change, including change related to digital technology, while maintaining a focus on results;
- build an open and engaging culture: exercise considerate leadership in today's volatile, uncertain and complex world.

These five Saint-Gobain Attitudes are relevant to all employees and reflect the Group's heritage and its ambition to create great living places and improve everyday life.

The Attitudes are both an approach to management and a state of mind. They reflect a mentality that binds all Group employees: move forward and win in a fast-paced, ever-changing world.

Employees in management roles are also guided by four specific commitments in addition to the Saint-Gobain Attitudes:

- act in accordance with the Group's ethics and values as expressed in the Principles of Conduct and Action;
- look after your team and each of your employees;
- say what you do and do what you say;
- refrain from any complacency.

The Saint-Gobain Attitudes have been gradually embedded in the Group's HR tools and procedures such as the managerial guidelines, annual appraisals and 360° feedback, induction programs for new arrivals, training, especially management training, talent management, etc. In parallel, they have been rolled out at the local level to all employees *via* the countries.

Communication tools have been rolled out to ensure that employees take ownership of the Saint-Gobain Attitudes. These include a series of videos on each of the Attitudes, an e-learning course that is available on the Boost training platform and tools to support managers.

This new leadership is based on trust, empowerment and collaboration. It includes new ways of working together. To develop this new mindset, managers have training programs, tools to introduce new collaborative working methods and inspiring examples to work on with their teams.

3.2.2 A local operational approach

Although the policy, major programs and improvement targets are centralized, the HR teams in each country are responsible for implementing the action plans. Saint-Gobain has opted for decentralized operation to adapt to the culture, meet the specific expectations of employees, and prioritize actions according to the operational needs of the businesses within the country.

Therefore, each country implements the Group's policies and major commitments (health, safety, diversity, etc.) by adapting the action plans, stages of attainment and tools to the specific features and culture of its region without compromising on the expected performance level.

The monthly Human Resources meetings, chaired by the Senior Vice President, Human Resources and Digital Transformation, and attended by the main Heads of Human Resources of the countries, regularly monitor the action plans in place on each of the program pillars.

3.3 A working environment to foster commitment

3.3.1 Social dialogue

To address social issues specifically, dialogues are held and applied to local priorities. The Group's country CEOs periodically meet employee representatives to exchange views on the strategy and local challenges. In France, besides the numerous meetings held within the companies in particular, the Chairman and CEO of Saint-Gobain chairs the Group Committee (the authority representing employees at Group level in France) and hosts central union coordinators at least once a year. At European level, the Chairman and CEO chairs the Convention for European Social Dialogue which brings together 70 union representatives from 27 European countries annually. With the aid of an independent expert, this Convention makes it possible to supplement the national dialogue by dealing with subjects of common interest such as safety or the trend of employment on European industrial sites. These subjects are raised in particular by the members of the Select Committee, which acts as spokesman for the Convention, who benefit from specific training to perform their role.

In an uncertain economic context, Saint-Gobain is committed, as far as possible, to implementing solutions to safeguard employment and only to making job cuts as a last resort. The aim is initially to reorganize to deal with situations on a temporary basis, as in the case of temporary lay-off, or to favor internal mobility agreements which, associated with incentive measures, make it possible to maintain jobs within the Group. When restructuring is inevitable, the employees affected by workforce adjustments benefit from personalized support programs which may result in training associated with retraining, assistance for geographic mobility or support for the execution of a personal project, such as the creation of a business. In France, the *Saint-Gobain Développement* structure plays this supporting role (see Chapter 3, Section 4.3.2).

3.3.2 Wage policy and employee benefits

Wage policies are set by the countries in line with market conditions. In most of the countries in which Saint-Gobain operates, minimum wages are set either within the legal framework or by negotiating a collective bargaining agreement. In 2019, less than 1% of employees were not covered by one or other of these provisions. The Group favors the collective bargaining strategy which is a way of guaranteeing a minimum standard of living for all employees depending on the local situation.

Employees' participation in performance

At the same time, employee share ownership offers employees the option to become shareholders under preferential conditions, either directly as individuals or *via* involvement in a dedicated collective fund. The Group Savings Plan (GSP) enables them to acquire Saint-Gobain shares benefiting from a discount and, in some countries, from an additional amount. In France, to encourage a team spirit and to associate each person with the success of the Group, Saint-Gobain favors the conclusion of collective profit-sharing agreements.

In 2019, employee shareholding programs were available in 47 countries. More than a quarter of employees have signed up to them.

In addition to these programs, Saint-Gobain has introduced long-term compensation plans, including share options, performance shares and performance units (see Chapter 5, Section 2.4).

The CARE by Saint-Gobain program

Saint-Gobain also seeks to offer its employees social guarantees enabling them to protect themselves against the uncertainties of life.

Launched on January 1, 2020, CARE by Saint-Gobain is a social protection program for all Group employees and their families. The cover is defined to meet basic daily healthcare needs but also to support key moments of family life:

- daily medical monitoring of families and access to care *via* minimum cover of family healthcare costs (physician consultation and hospitalization);
- the arrival of a child in their family *via* maternity and paternity leave including for adoption;
- death by providing finance capital to the family.

The program will be implemented on a country by country basis, and the aim is for all countries worldwide to be covered by the end of 2022.

The minimum applicable cover is:

- 80% cover of everyday healthcare costs (physician and hospitalization) for the employee's family;
- 14 weeks of maternity leave with full pay;
- 3 days of paternity leave with full pay;
- capital representing one year's salary of the employee.

For 2020, priority has been placed on parental actions with the aim of all Saint-Gobain employees having minimum leave guarantees by the end of the year.

3.3.3 Well-being at work

Saint-Gobain places fundamental importance on both the physical (see Chapter 3, Section 3.1) and mental health of its employees. In 2019, the Mental WellBeing (MWB) program was rolled out to all Group managers. The program takes the form of an interactive app, and was designed to help managers optimize the psychological well-being of their teams.

Each manager can build a tailored program for his or her team, monitor it and exchange it with other managers or share relevant best practices drawn from their experience. There are six action areas: management practices, change management, interpersonal environment, physical working environment, work-life balance, and personal well-being skills.

This interactive tool proposes best practices, collects the ones identified by teams worldwide, and provides key information so that each team can implement it.

Thus, specific programs can be initiated locally by linking specific issues and proposals for concrete actions to improve well-being at work. This concept was designed on the impetus of the medical and workplace health department and a multicultural working group, with a very diverse range of profiles (HR, EHS, Communication, site managers, etc.) and with the involvement of the social partners.

This approach is linked to the Human Resources pillar of the WCM excellence program (see Chapter 3, Section 2.2.1). This MWB approach was also embedded in the Saint-Gobain HR process: in the training provided by the school of management, the individual annual reviews for managers forms, or in the specific questions in the yearly survey to measure employee engagement.

Generally speaking, Saint-Gobain wishes to create a motivating and engaging work environment, respectful of the work/life balance for all employees. As such, flexible working and telecommuting are encouraged.

3.3.4 Diversity

With the diversification of its teams, the Group is able to adapt to the world around it and to understand its challenges, to benefit from different skills and experiences while developing its ability to innovate. To meet its diversity and inclusion targets, Saint-Gobain is working to create an environment conducive to fairness and equality, which is crucial to employees' professional growth, while fostering training and the cohesion of high-performance operational teams. The main drivers of this strategy are managers leading by example and the policy of equal treatment in the fields of recruitment, vocational training and compensation. Wherever it is present, the Group undertakes to promote inclusion and diversity in all its forms: gender, nationalities, training, career paths, generational diversity, disabilities and ethnic and social origins.

Saint-Gobain embodies a strong commitment to diversity and inclusion; they are key CSR priorities for the Group (see CSR dashboard in Chapter 4, Section 2.1). The requirements to be followed are defined at Group level, while action plans to support this vision are rolled out locally.

An overall diversity indicator which covers diversity in the fields of gender, nationality and professional experience is included in the CSR dashboard (see Chapter 4, Section 2.1). It is also a performance component in the long-term compensation for Group managers (see Chapter 5, Section 2.4). The Group is committed to always retaining a diversity index of over 90%. In 2019, it reached 91.4%.

To promote a wide range of expertise and diverse nationalities, there is a focus on a diverse range of career paths and skills areas (marketing, research and development, etc.), and on equal opportunities for local profiles.

With regard to generation diversity, Saint-Gobain ensures a balance in the age composition of employees, making room for younger and older employees. There is a particular focus on workplace inclusion pathways for young people: in 2019, nearly 1,660 apprentices were employed in the Group, mostly in France and Germany.

Generally, greater diversity requires a more inclusive recruitment process. To encourage these practices, the "Recruter sans discriminer" (Recruit without discrimination) e-learning module has been circulated to human resources teams (mandatory) and Saint-Gobain managers in France since 2018. This training informs about the legal framework and good practices to be applied during the recruitment process. To date, more than 1,400 employees have completed the training.

Disability

The recruitment and retention of people with disabilities are important subjects for Saint-Gobain. First of all, disability awareness and training initiatives are in place in the various countries. Several subsidiaries offer workshops in partnership with specialized bodies. For example, in France, the Isover Management Committee was involved in a lunch in the dark to raise awareness of the difficulties faced by people with visual impairments.

The Group also implements recruitment policies in partnership with various specialist agencies, applying a strict non-discrimination policy. For example, in France, several entities are in contact with ESATs (bodies promoting the inclusion of people with disabilities in society and the workplace) to support them in their efforts.

One of Saint-Gobain's objectives is to make everyday life easier for employees with disabilities by adapting workstations and hours. In the United Kingdom, Ireland and North America, personal support is in place to adapt working environments to individual needs.

Gender diversity

The increase in the gender diversity of teams is based on a voluntarist recruitment policy and on action plans for occupational promotion, equal pay, training and work/life balance.

Gender diversity targets were set in 2016: 25% female managers in 2020 and 25% female senior executives in 2025. They are monitored each quarter by the Senior Management Committee. They have been developed by country and Business Units and are integrated into the performance criteria that determine the annual variable compensation of senior managers. Overall at Group level, a Human Resources committee dedicated to female talents allows to boost career opportunities.

In terms of training, an e-learning document on awareness of gender diversity issues, entitled Gender Balance Awareness, has been drawn up in several languages and circulated to the human resources and management teams. In France, on "La Plateforme du Bâtiment", another educational tool has been developed: a guide on sexism in the workplace. It has been shared and its content explained to all outlet managers so that they can discuss it with their teams. This brand is providing employees with specific tools to question these daily behaviors, prevent them and react to them.

Training and communication programs and awareness-raising events help to anchor gender equality in the Group's strategic vision. In October 2019, 25 senior executives in China met to identify ways to make the Group more attractive to female talent. This is key to improving the Company's performance.

Present in several countries, Saint-Gobain's female networks feed this culture of gender diversity and act as a lever to promote parity. Over 4,700 employees worldwide have now taken part in the work of these networks internally or externally.

The Vision Athenea project was set up in 2018 by a group of female managers at Saint-Gobain in Spain. This women-only mentoring program develops the skills, networks and careers of the women involved. Each year, three projects led by women in key areas of the organization receive awards to highlight female success. In India, the work of the IWN (Indian Women Network) teaches women and develops their careers; highlights health and well-being issues specific to women and raises awareness of sexual harassment in the workplace.

Measures for parents have been introduced in the Mediterranean countries, to promote a better work-life balance and offer more flexible working hours, and provide an option to work from home, etc. In 2020, Saint-Gobain launched the Care by Saint-Gobain social protection program. For the first year, it prioritizes measures for parents so that everyone can benefit from minimum guaranteed periods of leave: 14 weeks' maternity leave and 3 days' paternity leave, both on full pay (see Chapter 3, Section 3.3.2).

A systematic evaluation of the pay gap between men and women in equal positions is carried out. The ratios on the average pay gaps of the Group's employees are measured and published in Chapter 4, Section 2.4.

In 2019, the number of female managers changed from 23.8% to 24.2%. The Executive Committee consists of 23.5% of women (4 women out of 17, compared to 3 out of 14 in 2018).

In 2020, Saint-Gobain was included on the Bloomberg Gender Equality Index for the second consecutive year.

3.4 Employee commitment

3.4.1 Employee development

A learning culture

Throughout their working lives, the training provided by the Group must guarantee the employability and success of all employees. The objective is to facilitate the access to training for all employees through processes and offers that correspond to their needs and expectations.

The training policy revolves around three areas of focus. Firstly, training must anticipate, facilitate and support the Group's transformation, particularly in the digital field. The transformation of Saint-Gobain is also managerial with the development of a new leadership. Second priority for the upcoming years: implementing training measures that will support growth and the development of our activities, thanks to operational excellence and innovation. Third priority: facilitate access to training and make available to every Saint-Gobain employee a unique and customized offer that fulfills his or her expectations, needs and learning process.

To meet these challenges, the Group combined its training programs under the name Saint-Gobain University. In July 2019, this approach received CLIP certification from the EFMD (European Foundation for Management Development), an independent international academic accreditation body. Through this international recognition, Saint-Gobain joins a network of universities, *grandes écoles* and business schools that will enable it to consolidate its practices in the field of training and skills development. For Group employees, it provides assurance of a quality training offer adapted to the need to develop new skills expressed by the various stakeholders.

This new leadership is based on trust, empowerment and collaboration

In 2019, the school of management programs were reviewed to help participants develop trust, empowerment and collaboration in their teams. Digital tools and training programs have been deployed centrally and at country level.

The School of Management supports managers at key stages of their professional life within the Group, through five progressive programs.

Contributing to the growth and development of business operations

Saint-Gobain University is developing dedicated programs for the Group's professional areas (EHS, finance, HR, purchasing, Marketing, etc.) and coordinating technical training or training specific to certain businesses.

The management of technical skills related to the Group's businesses is carried out as part of the industrial performance program. The "People Development" pillar of the WCM program (see Chapter 3, Section 2.2.1) identifies and monitors key competencies.

A specific program, the Data Analytics Academy, was launched to develop and consolidate data processing skills. Focused on the specific needs on each site, it is intended for all functions and all employee categories. It covers all skill levels, from awareness-raising across the organization to training experts. It will be rolled out gradually to eventually cover all Group countries and activities.

Training programs dedicated to each technical trade streams ensure the management and updating of the skills required to offer our customers high-performance, competitive and innovative products and services. These programs are generally developed and implemented by dedicated training teams around production by technical stream: glass, gypsum, insulation, mortars, pipe, etc.

For example, the Glass Technical Academy covers all glass manufacturing training, but also technical glass transformation training for construction and automobile applications. Designed and delivered by around 70 experts, the training sessions provide in-depth technical content, practical exercises and site visits. This constitution of a single center of excellence around the businesses enables the transfer of knowledge, sharing of best practices and the alignment of methods within the businesses.

Similarly, training programs are set up for the specific distribution businesses in countries where the Group has sales outlets.

The UNICAMPUS program was launched to improve the sharing and circulation of knowledge and know-how throughout the organization. This program uses the camps format to provide a diverse range of training opportunities, consisting mostly of sharing experiences and practice, with a minority componant of theoretical conceptualization. This format promotes collaboration, networking and interactive learning methods. It enables the dissemination of a shared culture of operational excellence focused on customer needs and expectations: marketing, innovation, logistics, etc. Therefore, training sessions are mainly focused on marketing (innovation and offers, Sales and Marketing performance, Customer Experience, digital marketing, sustainable construction, etc.) and industrial excellence (WCM, supply chain, R&D innovation, etc.).

In 2019 for its first year, five UNICAMPUS camps were organized: three in Europe, one in South America and one in Asia, bringing together over 1,000 employees over more than 80 sessions.

Offering solutions tailored to individual expectations

Programs are designed and implemented to promote adaptation to individual preferences. Combining classroom training, blended training or e-learning modules, they enable the dissemination of the Group's policies and processes and the sharing of best practices.

Saint-Gobain University also offers individual development programs such as coaching and mentoring.

3.4.2 Talent attraction and retention

The "TALENT" element of the OPEN program is aimed at all employees to anticipate the Group's needs and support its strategy. It is the subject of a specific annual progress update meeting with the members of the Executive Committee.

The "SG Talents" program identifies managers with significant development potential or key skills. Defined locally, at all levels and in all Group businesses, it enables career plans to be drawn up, favoring diversified paths. Personal reviews and succession plans, mentoring and relations with the Group's target schools and universities all feed into and reinforce this measure. A specific program has also been designed to support and develop experts within the Group.

As part of the drive to digitize Human Resources processes, a project using machine learning applied to the "SG Talents" program has been developed. In a first phase, the use of Big Data made it possible to verify that the selection of talents was adapted to the defined criteria and that the paths of the identified talents benefited from additional resources (part of mobility, training…). The second phase is more focused on complementary elements to the program: the search for talent not identified by the traditional process, improving retention or a focus on soft skills research.

Career paths offered to its employees are an asset that Saint-Gobain continues to advertise to students and young graduates to attract the most appropriate talent, particularly through the launch in 2017 of its new Employer Brand, "Invent Yourself. Reshape the World".

Specific programs for young talent coordinated at the local level are being developed in Germany, Brazil, the United States, India, China and the Nordic countries.

In 2019, the implementation of the Transform & Grow program required a large review of management positions at central and local level. Therefore, the principles applied in the "Talents" component of the OPEN program identified managers with the most suitable profiles and organized their mobility, which was particularly active.

Saint-Gobain's ambition is to grow the skills and know-how of its employees while still ensuring excellence in each of its businesses, but also to be an employer of reference, known and recognized for the richness of the career paths offered. It involves taking into account individual wishes and the requirements of the organization, offering adapted developing paths, whether individual or collective, specific or cross-functional.

3.4.3 A diverse range of tailored pathways

Listening to individual employees

More individually, Saint-Gobain has introduced an annual interview procedure which makes it possible to ensure the regularity and quality of dialogue with employees. Individual interviews are held at least once a year for management and take place regularly among all employees.

Finally, with the help of external partners, Saint-Gobain has developed a 360° assessment tool. This tool is available on request for any manager and is compulsory before taking part in any training in the management school.

Mobility

Every Saint-Gobain employee, no matter what their position in the company, should benefit from career enrichment. Their professional path at Saint-Gobain should be a positive marker of their career so they feel they are an ambassador for the Group. Promoting and enriching employees' professional mobility, whether geographic, functional or between the activities, is a priority for the development of market and customer knowledge and accelerating the Group's growth:

- it is an essential lever to bring diversity, innovate, develop the individual and collective skills necessary for the organizational and technological requirements of the Group's activities. This also enables the sharing of market and customer knowledge, exchange of different experiences, development of an open mindset and enrichment of the careers of its employees;
- mobility should reconcile employees' professional development with business requirements. Offering more opportunities for development fosters employee loyalty and it intensifies the crossover between activities, generating new solutions for customers.

The system used by Saint-Gobain to support mobility is based on broad communication of the policy and associated actions, and on a concerted vision of mobility.

This communication is based on a Mobility Charter, common to all Group entities, allowing movement management rules to be disseminated and harmonizing employee review practices. Similarly, all employees are invited to consult the job offers that are made and to apply for them. The online platform OpenJob has been developed and used in the countries to meet this requirement. This platform is accessible on mobile devices for all employees.

In various Group entities, mobility committees bring together human resources managers to share job offers and exchange points of view of employees' development prospects. These mobility committees cover all employees and are reinforced for managers. The management teams also encourage employee mobility and include applications from employees from other activities in their succession plans.

In the event of geographic mobility, the Group offers each employee support for himself and his family. Finally, within the scope of reorganization projects, Saint-Gobain favors the conclusion of mobility agreements.

3.4.4 Measuring employee commitment

Increasing employees' involvement in a context of change, both generational and technological, is an essential challenge for the Group. To meet this challenge, the Group places "managerial attitude and involvement" at the heart of this approach: managers motivate and develop the loyalty of employees by giving more meaning to their everyday work and by favoring a spirit of initiative.

Since 2019, a unique tool to measure employee commitment has been developed. It makes it possible to conduct surveys targeted on particular populations and/or themes, for example, specifically listening to managers during the rollout of Transform & Grow program.

During 2019, Saint-Gobain conducted a first worldwide survey in order to understand and improve the employee experience both as regards their relationship with the Group and at the local level.

Employees were asked questions covering the five main focus areas of the HR policy and the current transformation programs:

- energy: an energizing, collaborative working environment;
- active: an organization that fosters responsibility;
- talent: a HR organization focused on developing talent;
- management: a management style based on influence;
- Inspiration: sharing clear objectives and a factual outlook.

This survey also measures employee commitment: e-nps (net promoter score) based on recommendation rates.

With a participation rate of 74%, and a high level of engagement, the survey results show that employees are on board with the strategy and that they have renewed confidence in the Group's future.

In accordance with the HR organization, each country or BU is able to obtain results for its own scope and is responsible for circulating the results, and starting dialogue with employees to define action plans to work on areas requiring improvement.

The global survey will be repeated each year.

4. A contribution to environmental, social and societal challenges

4.1 Climate change

In response to climate change and the risks linked to rising temperatures, Saint-Gobain's goal is to encourage the emergence of low-carbon economies in the countries in which it operates.

Saint-Gobain's objective is to continue to increase the benefits associated with the use of its products and solutions while reducing the carbon impact of their production. The Group's strategy is thereby embedding a transition to a low-carbon economy through risk control and the development of new market opportunities. The implementation and results of this strategy should be included in a scenario to limit global warming to under 1.5 °C.

Therefore, Saint-Gobain is focusing its action plans around the following areas:

- the transition to a low-carbon economy requires a change in lifestyles, linked to a change in the energy offering, and more generally to the dwindling of natural resources. To address demographic growth and increased urbanization, cities will integrate new principles of construction, mobility and personal services that are more sustainable, affordable and close to the needs of end-users;
- reducing the carbon footprint generated by the products and solutions sold by Saint-Gobain is absolutely crucial and has to encompass the entire value chain;
- the fight against climate change requires cooperation among all stakeholders, particularly governments, companies and civil society around a stringent international framework;
- in response to climate risks, by acting locally (country, regions, etc.) resilient local ecosystems favorable to a low-carbon economy can be identified. The ability to forge local partnerships is an asset in risk management.

Climate change is regularly monitored by the Board of Directors. The associated indicators and objectives are monitored in the CSR dashboard (see Chapter 4, Section 2.1). In February 2018, Directors took part in a half-day seminar on climate change and its consequences on companies.

The Strategy and CSR Committee of the Board of Directors regularly tracks the implementation of short-, medium- and long-term programs. Finally, considering that climate change is a strategic challenge for the Group, reducing CO_2 emissions is a performance criterion in the long-term compensation plans (see Chapter 4, Section 2.4).

The Head of Sustainable Development is responsible for the animation of the issue, which constitutes a risk as well as an opportunity.

In September 2019, Saint-Gobain made a commitment to carbon neutrality by 2050 at the Climate Action Summit organized by the Secretary General of the United Nations. The Group thus made official its support for the "Business Ambition for 1.5 °C" pledge launched by the Global Compact.

4.1.1 Seize the opportunities linked to the transition to a low carbon economy

Designing innovative solutions with carbon benefits

Saint-Gobain is innovating to develop solutions to reduce the carbon footprint of buildings throughout their life cycle:

- by reducing their energy consumption during the utilization phase; these are insulation and glazing solutions that improve energy efficiency;
- by reducing the carbon impact of its products and solutions: particularly by developing lighter building solutions, increasing the amount of recycled materials used to manufacture them or by using renewable energy to power its industrial processes.

In particular, the SCORE tool makes it possible to assess the carbon emission performance of construction products (see Chapter 3, Section 2.1.2).

A web platform called Green Buildings Saint-Gobain enables the Group's customers to evaluate the contribution of its products and solutions to obtaining LEED, BREEAM, WELL or international HQE certifications.

Measuring the carbon benefits of products and solutions

The innovative solutions developed by the Group to improve the energy efficiency of buildings lessen the negative impacts of the construction sector on the climate and cut consumers' energy bills, while enhancing well-being. They therefore play an important role in the fight against climate change, as they permit through a reduction of energy demand to decrease the quantity of greenhouse gases emitted. Thus, the benefits offered by the Group's thermal insulation products and glass exceed significantly the impacts associated to their production in terms of energy consumption and greenhouse gas emissions.

In partnership with EY, Saint-Gobain developed in 2015 a methodology that allows for the estimation of greenhouse gas emissions prevented thanks to the utilization of its insulation solutions in Europe. The calculations realized with 2014 sales numbers were updated in 2017 with 2016 sales; the scope of Europe was enlarged to the world. These updating efforts have permitted to confirm the three key teachings of 2015:

- after three months of use on average, the Group's insulation solutions compensate the emissions linked to their production. Beyond these three months, the gains continue to accumulate;
- the Group's insulation solutions produced and sold throughout the World in 2016 have generated, across their lifespan, a potential cumulated net prevention of over 1,200 million tons equivalent CO_2;

- the estimated potential prevention of the said solutions corresponds to about 90 times the Group's greenhouse gas emissions in 2016 over the same geographical scope.

Saint-Gobain's solutions are designed to be used in larger structures. Therefore, in addition to the carbon benefits linked to the products, Saint-Gobain solutions make it possible to reduce the carbon footprint of a building or car throughout their life cycle.

Co-developing solutions for new markets arising from the low-carbon economy

In response to the challenges of population growth and urbanization, it is imperative to design sustainable solutions and contribute to the construction of resilient cities that ensure the well-being of individuals in a context of resource scarcity and climate change.

New lightweight constructive methods can be used to meet these challenges. For example, the Group is investing in the fields of prefabrication and 3D printing.

The development of prefabricated or off-site construction solutions encourages the use of lighter construction methods using wood or metal structures as an alternative to traditional cement and brick constructions (see Chapter 2, Section 4.4.3 (a)).

The transition to a low-carbon economy is also impacting markets related to mobility and energy. Thus, the Mobility BU is working both on solutions to support customers in the transition to vehicles that emit less and less CO_2 and on adapting its offer to the development of hybrid or 100% electric vehicles.

4.1.2 Continuing to reduce the impact of production

In addition to the programs initiated at site level (see Chapter 3, Section 2.2.3 (b)), reducing the carbon footprint of production and thus the impact of the products requires three major strategies:

- an internal carbon price to speed up the transition to low-carbon technologies;
- a cross-business R&D program, "Improving our CO_2 footprint": to coordinate and expand research and development efforts to improve manufacturing processes and reduce their greenhouse gas emissions;
- scope 3 control to identify the main emissions factors and mitigate the overall impact of the products.

An internal carbon price to speed up the transition to low-carbon technologies

Setting an internal carbon price enables the current or potential impact of a regulatory carbon price on the Group's activities to be assessed, opportunities for growth in low-carbon sectors to be identified, investments in manufacturing and R&D to be refocused, and actions to reduce CO_2 emissions to be ranked. Saint-Gobain set two internal carbon price levels in 2016. The first is fixed at €30 per ton and applies to industrial investments above a certain threshold, investments associated with a change in energy source, energy investments on an existing or greenfield site with a total annual energy consumption of less than 10 GWh. The second carbon price level of €100 per ton is used for R&D investment in breakthrough technology. This price level is of demonstrable value in supporting low-carbon R&D projects in particular. The use of an internal carbon price also allows the Group to anticipate unfavorable financial consequences.

Under the European Union Emissions Trading Scheme (EU ETS), the new rules reducing the free allocation of carbon allowances from 2021 are not fully known. Based on current information, the Group believes that it will be able to maintain self-sufficiency in quotas in the medium term given its current stock level of more than 7 million tonnes of allocations.

Ensuring the control of its direct emissions and prudent management of previous allocations are two principles that Saint-Gobain has applied since the introduction of European regulations, and will continue to do so in this new phase.

The "Improving our CO_2 footprint" cross-business R&D program

The cross-functional program "Improving our CO_2 footprint" is led by R&D. Its objective is to create synergies between the various activities to accelerate the reduction of CO_2 emissions related to operations and, in priority, those related to industrial production. This program has three main components:

- the creation of a cross-functional network promoting the transfer of good practices and low-carbon technologies;
- prospecting and information sharing on new low-carbon technologies;
- the development of technical skills for a rapid and effective mastery of these new technologies.

The actions carried out within this program focus on day-to-day operational performance based on the WCM program (see Chapter 3, Section 2.2.1) and the specific action plans for "energy" and "CO_2" continuous improvement initiated by the EHS Department. They also focus on the evolution of equipment design and simple adaptation to low-carbon technologies that generate short-term benefits. This evolution is based on technical management and local deployment. Finally, in the medium and long term, the program initiates breakthrough innovation projects in areas such as energy recovery, CO_2 capture and recovery, alternative energies (biogas, hydrogen) and low-carbon raw materials.

Pragmatically, the working group identifies and analyzes projects for which rapid gains can be measured. The analysis also takes into account the impact on competitiveness and applies the rules related to the introduction of the internal carbon price.

These low-carbon solutions can address each of the impacts of industrial production: raw materials, energy use, energy efficiency and energy recovery, carbon capture and recovery. For example, Saint-Gobain has installed turbines in India and Italy to produce electricity from previously wasted energy.

Thus, on energy, processes that are technically adaptable to the exclusive use of electrical energy have been identified. For these processes, the transition is facilitated by the development of local renewable electricity grids and the growing share of low-carbon electricity in national grids. Energy buyers have therefore been involved in the program to identify reliable and competitive sources of green electricity in the countries in which we operate.

For processes for which the adaptation to the use of electrical energy is technically more complex, two axes of innovation are then deployed: one on the development of carbon-free energies (biogas, biomethane or hydrogen for example); and the other, to develop processes and make them compatible with an increasing use of green electricity.

In 2019, an initial assessment of the capacity of each of the Group's industrial processes to use only decarbonated energy was carried out:

- industrial processes for which 100% electrical technologies are available represent more than 55% of the Group's total energy consumption;
- industrial processes for which future solutions will be a combination of direct electrification and the use of decarbonated gas represent less than 30% of the Group's total energy consumption;
- alternatives to fossil fuels have yet to be identified for less than 15% of the Group's total energy consumption.

Scope 3 control

In parallel, Saint-Gobain has continued to evaluate the CO_2 emissions of the entire value chain of its activities and has identified the main categories forming scope 3 of the Group's industrial activities:

- purchases of raw materials;
- transport and logistics;
- use of products sold.

With regard to the use of products sold, the approach adopted by Saint-Gobain involves two points of view:

- impact: the scope 3 emissions resulting from the use of products sold have been evaluated. For example, for automobile windows, Saint-Gobain Sekurit is continuing to progress in its measures to lighten windows and incorporate external cullet in the composition of the glass in order to reduce vehicle CO_2 emissions;
- benefits: the innovating solutions developed by the Group to improve the energy efficiency of buildings make it possible to both reduce the negative impact of construction on the climate and reduce the users' energy bill. In order to highlight this contribution, in 2015 Saint-Gobain developed a methodology, in partnership with EY, that made it possible to estimate the greenhouse gas emissions avoided thanks to the insulation solutions sold in Europe by the Group (see Chapter 3, Section 4.1.1). This calculation, which was updated at global level in 2017, helped to confirm the previously-determined orders of magnitude, namely that once they have been in use for an average of three months, Saint-Gobain's insulation solutions offset the emissions linked to the whole of their life cycle.

In 2019, the Group updated its Scope 3 evaluation for each category, making the methodology and data more reliable, particularly for the trade purchase categories with the largest carbon impact.

Saint-Gobain has set a target of reducing greenhouse gas emissions related to its Scope 3 by 10% in absolute terms between 2017 and 2025. This target has been validated by the independent organization Science Based Targets Initiative (SBTi). In accordance with the SBT methodology, the Scope 3 emissions concerned by this objective take into account the purchase of raw materials and energy, transport and logistics, as well as the end of life of our products.

4.1.3 Fighting against climate change with stakeholders

Strong climate commitments

The Paris Agreement ratified in 2016 creates a multi-dimensional framework for economies to implement carbon reduction policies.

In September 2019, Saint-Gobain responded to a call for action issued by a broad coalition of business leaders, civil society representatives and UN leaders to help limit the rise in global temperature to a maximum of 1.5 °C above pre-industrial levels. Through its products and services, the Group is already making a significant contribution to improving energy efficiency and reducing carbon emissions in its building, mobility and industrial markets. Through this commitment, Saint-Gobain is going even further in reducing its impact. This 2050 vision is a key factor in advancing its medium- and long-term investment policy as well as its industrial roadmaps, R&D programs and product development strategy.

Saint-Gobain is campaigning for the introduction of a carbon price. This carbon price should enable a transition which does not disrupt competition between different companies and countries.

As part of the "Global Climate Action Agenda", Saint-Gobain is a member of the Alliance of companies for water and climate change. This initiative supports the actions of cities and watersheds involved in the sustainable management of water resources and adaptation to the consequences of climate change.

Saint-Gobain upholds the recommendations of the G20 Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD). In 2019, the Group participated in the TCFD Preparer Forum working group dedicated to the construction market and initiated by WBCSD.

Actions that support a strong and low-carbon economic growth

Saint-Gobain belongs to the ETC (Energy Transition Commission), a group of 30 figures from the energy and climate community. Pierre-André de Chalendar is one of the commissioners. The aim of the ETC is to accelerate the move to a low-carbon energy system that enables strong economic growth, while limiting global warming to levels well below 2°C.

Further, and because construction is its largest market, Saint-Gobain is particularly active in promoting sustainable construction and is involved in energy efficiency initiatives.

Throughout the world, an ambitious political framework makes it possible to remove technical as well as financial obstacles to the move to an efficient, comfortable and low-energy built environment.

The first priority is to significantly reduce the energy consumption of existing buildings. There are many technical solutions, providing not just environmental benefits but also a great improvement in comfort. The second priority is to ensure minimal energy consumption for all new buildings. Buildings designed with efficiency in mind right from the start are competitive buildings.

Saint-Gobain has been a member of the LEVEL(S) steering committee for over two years. The committee is an instrument developed by the European Commission in conjunction with the industry and the public sector and aims to establish a "common language" for sustainable construction, in order to take it beyond energy efficiency. The European Commission launched the pilot phase of LEVEL(S) in December 2017, which continued in 2019.

Market transformation also means changing the entire construction market value chain. Many stakeholders share this desire to promote more sustainable buildings. Saint-Gobain is building partnerships with them. The Green Building Councils (GBC) are a vital partner in this regard. The GBCs form a global network of national associations of construction market professionals and players. The GBC network offers a fast path for the deployment of sustainable construction technologies and dissemination of good practices, particularly *via* education for market players. They can create a collective momentum involving the various stakeholders (investors, builders, manufacturers, architects, etc.).

GBCs have a geographical organization that allows each of Saint-Gobain's units, at the national, regional and international levels, to actively contribute to their work. The Group is a member of 30 local GBCs worldwide, a partner of the European network of GBCs (ERN), and chairs the Corporate Advisory Board of the World Green Building Council (WGBC).

Saint-Gobain is committed to steering the global construction industry toward a low-carbon trajectory. For this reason, Saint-Gobain is a founding member of the "Global Alliance for Building and Construction" (GABC) and sits on its steering committee.

Training customers locally, keeping end user informed

Some of the training courses delivered by local teams (see Chapter 2, Section 4.4.4) cover energy efficiency and reducing the environmental impact of buildings. The building distribution area is particularly active on that subject. In France, the POINT P network has implemented "Energy Efficiency" counters in over 130 agencies. Sellers receive specific training, and tools such as a simulator to evaluate a project's energy efficiency are made available to customers. A training program on how to save energy in the construction industry is offered (FeeBat), along with a support mechanism for official recognition of the effectiveness of the steps taken called Certypro.

In other countries, like the Netherlands, Norway or even Denmark, dedicated spaces are offered to installers and individuals to provide them with advice and training in the realm of renewable energies.

Beyond building distribution, training structures are offered by country. They are open to craftsmen, installers, architects and other actors of the construction sector. They can also be associated with professional schools. In France, the Habitat France structure is committed to eight training centers for apprentices (CFA) for partnerships relative to the provision of training or for the accompaniment of instructors that answer to a center. A website dedicated to training called seformeravecsaint-gobain.com offers the possibility of training *via* e-learning or face-to-face. Guides called Les Essentiels de l'habitat allow craftsmen and professionals to train and learn about topics such as energy efficiency or the evolution of tomorrow's norms and standards for sustainable construction.

4.1.4 Manage the risks connected with climate change

In accordance with the TCFD recommendations, the Group assesses physical and transition risks. It publishes its assessments and risk reduction actions in the CDP questionnaire. In 2020, for the second year running, Saint-Gobain will be included in the CDP's Climate Change A list.

In addition to the physical and transition risks, the solutions produced and distributed by Saint-Gobain also contribute to reducing CO_2 emissions, in particular thermal insulation solutions that promote energy efficiency (see Chapter 3, Section 4.1.1).

The main physical risks

The Group manages the risks of losses aggravated by climate change (floods, rainfall or storms) as part of its industrial and distribution risk prevention policy (see Chapter 4, Section 2.2.2). This takes into account the increase in extreme climate events, which occasionally leads, in addition to damage to installations or stocks, to interruptions in production or supply. The degree of exposure and vulnerability of sites to natural events is regularly updated together with the action plan with a view to improving their level of prevention and protection.

Changes to water systems and, in particular, the development of water stress areas, which give rise to production risks and penalize local populations, are included in the Water Management policy (see Chapter 3, Section 2.2.3c).

The main transition risks

Saint-Gobain manages the risks associated with the increasing scarcity of certain raw materials by developing the circular economy (see Chapter 3, Section 4.2). In this way, certain virgin raw materials such as sand and gypsum can be replaced by recycled materials. The Group is engaged in the development of channels to accelerate the collection of waste, particularly construction site waste.

The implementation of an internal carbon price makes it possible to anticipate the financial impacts of the potential development of binding legislation on carbon emissions.

Finally, R&D investments, in particular the cross-functional R&D program "Improving our CO_2 footprint", enable the Group to anticipate its use of decarbonated energy, either by developing the supply of green electricity through purchasing, or through technical innovation and changes in industrial processes.

4.1.5 Committing to a 2°C scenario

Science-Based Targets initiative is an organization created by CDP, the United Nations Global Compact, the World Resources Institute and the WWF that aims to get companies to align their greenhouse gas emissions with the 2°C scenario target.

In April 2019, SBTi validated the Group's CO_2 emission reduction targets for its scopes 1, 2 and 3, *i.e.* a 10% reduction between 2017 and 2025 for the scope 1 + 2 on the one hand and the scope 3 on the other.

By validating its CO_2 emission reduction targets in absolute terms, SBTi confirms that Saint-Gobain's actions are well aligned on a 2°C trajectory.

Since September 2019 and the commitment to carbon neutrality by 2050, the Group has confirmed its willingness to be part of a 1.5 °C warming scenario. Measures, action plans and interim targets taking into account Saint-Gobain's investment cycles will be specified in 2020.

4.2 The circular economy

The circular economy is a resilient growth model suited to changes in available resources (dwindling resources, new energy sources, reduction of greenhouse gas emissions etc.) and to societal changes (urbanization, demographics, etc.). This model exists closest to the markets, at the regional level. Successfully transitioning to the circular economy will make it possible to continue offering solutions and services over the long-term which take into account environmental, labor and societal expectations and which balance well-being, sustainability and performance for stakeholders.

Saint-Gobain's strategy to develop the circular economy has the following focus areas:

- evolve products and solutions to promote increased integration of recycled or renewable materials, extend their lifespan and facilitate their recycling or reuse in order to reduce the resource intensity of the solutions;
- develop manufacturing processes;
- work with stakeholders to change society and to develop new business models and value chains.

The subject of the circular economy is managed by the Vice President of Sustainable Development, in collaboration with the Industrial, Marketing and Research and Development Departments.

4.2.1 Enhance the range of products, solutions and services

The increasing implementation of the circular economy is changing value chains and ecosystems. From the design phase of products, solutions or services with the benefits expected by customers and end users to the management of the end of life of products, the Saint-Gobain offer must adapt to new requirements: include more recycled materials to reduce the use of virgin raw materials and the consequences of their use, particularly on biodiversity; extend the lifespan of products to reduce their environmental impact; facilitate the recycling or reuse of products to successfully meet market needs with a limited impact on natural resources.

The Saint-Gobain portfolio of products and solutions is analyzed in a transversal manner under the responsibility of the marketing teams. There are three priorities:

- replace raw materials with recycled or renewable materials, including packaging;
- change formulations to reduce the content of dangerous substances and in some cases completely replace them, thus avoiding dissemination of the materials generated during the recycling process in the cycles;
- improve product recyclability and system including their packaging, by integrating repairability and ease of disassembly.

Likewise, product design incorporates these eco-innovation principles (see Chapter 3, Section 2.1.2).

The SCORE tool makes it possible to assess and improve the sustainable performance of products (see Chapter 3, Section 2.1.2). The product's role in the circular economy is a subject category on which the evaluation is based, particularly the ability to include recycled materials. Their life cycle analyses allow to measure the positive contribution of the choices made on the reduction environmental impacts of products and services.

Finally, because construction already represents 40% of global resources consumption, Saint-Gobain is actively and collaboratively participating in discussions on the evolution of construction methods towards lighter construction solutions integrating fewer materials for an at least equivalent performance.

4.2.2 Developing manufacturing processes

Reducing the volume of raw materials used for each functional unit produced and cutting waste generated by industrial processes are the pillars of the sustainable resources management policy introduced in 2015 (see Chapter 3, Section 2.2.3) with the intention of moving toward "zero non-recovered waste".

Synergies among the Group's different industrial processes are used to optimize the reuse of waste and by-products.

In the countries in which the Group operates, the teams are gradually introducing services to recover waste from customer activities, in particular waste from renovation or demolition/deconstruction.

This waste is collected, sorted, and reprocessed before being reused in the manufacturing process in the place of natural raw materials.

Overall synergies are possible across the businesses for each process or raw material to identify for each country the deposits, material qualities or good technical practices and favorable technical innovations.

Cross-business working groups including the manufacturing and technical departments, Purchases, sustainable development experts on the collection and processing of recycled materials have been set up to develop these global synergies.

The drive to replace as many non-recyclable raw materials as possible is part of the technological performance improvement program (see Chapter 3, Section 2.2.1). The aim of these replacements must be to maintain the quality and competitiveness of the products and solutions and potentially improve them while reducing their carbon footprint.

4.2.3 Working with stakeholders to change society and to develop new business models and value chains

Saint-Gobain takes part in the debate on the circular economy and is involved in collective initiatives to promote the transition to the circular economy.

For example, at the end of 2017, the Group signed up to the Factor 10 program, an initiative of the World Business Council for Sustainable Development (WBCSD) on the circular economy, in particular by co-leading the working group dedicated to the construction sector. A report identifying the challenges and obstacles was published for the COP24.

In many countries, Saint-Gobain is developing services for its customers which include waste and construction waste retrieval. Collected glass is recycled and used to make glazing or glass wool. Likewise, plaster waste collected can be recycled to make new plasterboards.

The presence in a country of distribution activities adds local synergies through the option of installing collection points close to sales outlets, making it easier to recycle customers' waste.

All of these services are provided directly by Saint-Gobain companies or in partnership with third-party companies.

The principles of the circular economy differ in each country and region of the world. These developments depend on a great variety of factors, such as modes of consumption, infrastructure and the industrial fabric, the legal context and the technical and logistical conditions of waste management.

Saint-Gobain organizations in the countries spearhead or take part in initiatives with local stakeholders: industrial initiatives involving an area, customers, and local authorities or communities.

In France, the Group has been heavily involved in the AFEP circular economy working group, which prepared a report and recommendations that were presented at the COP22.

Within their professional areas, Gypsum and Flat Glass for Buildings signed commitments with the French authorities on the recycling of waste plaster and glass.

The Commitment to Green Growth for flat glass signed by the trade associations in 2017 could lead to the collection and sorting of 80,000 tons of cullet per year in 2025 for the whole of the subsidiary in France.

To meet these objectives, in 2019, Saint-Gobain Glass France signed partnership agreements with five companies specialized in the recovery of windows at the end of their useful life. In addition to recovery, these companies sort and process glass to facilitate its reincorporation into glass floats.

Lastly, Saint-Gobain distribution activities in France have had a structure in place since January 1, 2017 to take back waste from the same types of construction materials, products and equipment, which are sold to professionals, thereby becoming the first private network of collection points for waste from construction and civil engineering sites.

In 2017, the "Plateforme du Bâtiment" brand offered trade customers a service called "Les Ripeurs" which provides a solution to collect and recover waste directly from their worksites in the Paris region. Customers use a mobile app to specify the type of waste, provide a time slot, the address of their worksite and their preferred waste removal method. Depending on the requirements, rubble bags or loose waste can be removed by "les Ripeurs" in three hours if they are on the floor or the sidewalk. They can also collect waste left in a provided dumpster or flexible container in 24 hours. At the end of 2019, two years after the launch, 1,500 customers had used this service and 7,000 tons of waste had been collected; 40% of it was recovered.

In 2019, the POINT.P brand launched a new worksite waste collection service: Batireprise. Waste collection centers are now available in 11 sales outlets. Their aim is to raise awareness and support construction trade customers in their waste sorting and recycling efforts. This service is provided in partnership with Suez. Furthermore, and across its whole network, in 2019, POINT.P had 76 of its own waste recycling centers, processing more than 100,000 m^3 of waste per year.

In the United Kingdom, a range of pilot schemes are underway to increase the amount of construction waste collected and boost the quality of recyclable materials. These operational pilots also promote innovation. A machine to more effectively separate glass from window supports has been designed and developed thanks to this initiative.

In 2019, the Group launched its ILOOP project, supported by the European Union *via* its LIFE finance program. This project aims to contribute to gradually recovering glass wool waste generated on building or demolition sites, which currently goes to landfill. It offers an innovative solution for closed loop recycling, that can transform waste into a high-quality secondary raw material that is used to manufacture new glass wool.

The project aims to offer building industry players new value chains to recycle glass wool in France, Benelux and part of Scandinavia, ultimately providing a profitable alternative to landfill.

This project, lasting 6.5 years, began at the end of 2019 and will continue until mid-2026. Its total amount is close to €13 million, and the level of planned subsidies exceeds €4 million.

In 2019, the Group also contributed to the WOOL2LOOP European project to recover mineral wool waste. Saint-Gobain Finland Oy is coordinating this circular economy project, the first innovation project supported by the European Union *via* its Horizon 2020 financing program. WOOL2LOOP aims to recover mineral wool waste from the construction and demolition sectors to convert it into new concrete-replacement materials, using geopolymer technology. The project also involves demolition, sorting, analysis and processing of mineral wool waste. Around 2.5 million tons of mineral wool waste are generated each year in Europe by the construction and demolition sectors and sent to landfill, representing an annual cost of around €250 million for the construction sector.

WOOL2LOOP acts across the entire value chain and involves the world's largest construction materials producers, innovative companies in the circular economy field and research institutes. The three-year project has started on June 1, 2019 and its budget is almost €7 million, over €5 million of which is financed by the EU.

4.3 Promoting local, inclusive economic development

4.3.1 For an inclusive economy

Local answers for affordable housing

In the numerous countries where it is present, Saint-Gobain develops solutions adapted to the poorest populations. Programs are initiated locally depending on the particular situations of each country. The solutions offered meet the criteria for sustainable and comfortable solutions with particular attention to the cost price of housing and the ease of implementation of materials. The resulting energy efficiency provides the future tenant with an improved quality of life at a controlled cost. These programs are deployed in particular in Sub-Saharan Africa, Brazil, Central America and India. In South Africa, for example, the Gypsum activity provides an attic insulation solution to improve the thermal comfort of residents, reducing peak heat levels by 5 °C in the afternoon. In Brazil, a prototype house has been developed that can be built at a low cost, takes up to 75% less time to build, and generates fewer material landfills. In Kenya, Saint-Gobain is involved in government affordable housing programs. Brasilit, Weber, Gyproc, Isover and Adfors are the most active brands in these markets.

Direct jobs, indirect jobs and jobs generated by the Group

Saint-Gobain participates to economic and industrial dynamics in regions where the Group has established sites, as well as in suppliers' labor pools. Saint-Gobain's employment footprint can thus be calculated at three levels:

- direct jobs, which take into account the Group's paid employment;
- indirect jobs, which take into account employment generated by purchases of the Group among its suppliers and subcontractors;
- induced jobs, which take into account employment triggered by purchases within the national economy made by direct employees of the Group through the wages they receive and by the employees of Saint-Gobain's suppliers to the extent of their solicitation in the purchasing frame of the Group.

In 2016, Saint-Gobain updated and extended the indirect jobs study. Driven by EY, this study henceforth also concerns induced jobs. The study covered the 2015 data and includes more than 90% of the Group's purchases.

For 170,500 direct jobs in 2015, the Group generates over 549,000 indirect jobs, to which are added over 190,000 induced jobs.

The Group's impact on employment (2016)

4.3.2 Contributing to economic development and to local employment

The Group's expertise at the service of the development of employment pools and the inclusion of populations in difficulty

The Group maintains relationships with local partners in many of its countries, particularly in France to boost local employment and support disadvantaged populations with their career aspirations.

In France, Saint-Gobain Développement is the structure that specializes in assisting local development and the revitalization of the regions through its plural contribution to the local economy:

- direct partnerships with SMEs: Saint-Gobain Développement offers global support to developing SMEs. This support consists in the granting of participating loans at low rates without guarantees and support in the form of skills and transfer of know-how. These actions fall within the framework of a long-term partnership "from manufacturer to entrepreneur";
- support in the form of skills: experienced Saint-Gobain employees that wish to share their expertise with the SMEs supported by the Group can provide their technical support. These measures take place on a voluntary basis according to the procedures defined by the engagement letter. This program has a double impact: gain in the efficacy of measures favoring local economic development, and positive returns internally in terms of team motivation and commitment;
- support for the development networks and local bodies: contribute towards economic development through a permanent collaboration with local participants and more particularly the ALIZE system or the ENTREPRENDRE Network which bring together a large number of local networks and participants (large enterprises, institutional networks, regional communities, chambers of commerce and industry, etc.). These networks are present across the French territory;
- professional insertion of young people that are alienated from the workplace: participation in programs such as *100 chances 100 emplois*.

Detailed indicators of Saint-Gobain Développement's measures are shown in Chapter 4, Section 2.4.

In the United Kingdom and Ireland, Saint-Gobain is actively looking for ways to support its customers and members of the community, by helping them to develop and improve their skills, either to develop their business, or find a job in the construction industry. The Entrepreneurship Foundation program, for the customers of SMEs, aims to speed up the growth of their businesses by offering them online business management training and certification. Thanks to this program, customers can also build their network with Saint-Gobain professionals in the various entities.

In North America, Saint-Gobain has built a partnership with the NGO YouthBuild USA that feeds a double ambition: providing former out-of-school young adults with the opportunity to learn green building skills and participate in sustainable renovation projects while earning their high school equivalences. This way, the Group has been contributing since 2011 to the integration and sensitization of young people to the construction sector through a significant financial support ($1.5 million in eight years), but also through the provision of the time and expertise of its voluntary employees. This initiative has led to around ten sustainable renovation projects in four communities where the company operates: Canton, OH; Worcester, MA; Schenectady, NY and Philadelphia, PA. Through the partnership, the company has created what it calls a virtuous cycle. By providing underprivileged young people with the tools to create a brighter future, the company addresses several business and societal issues, including filling the gap for skilled workers in manufacturing and construction and creating an affinity for its building materials among program participants.

These initiatives are even more needed in developing countries like South Africa or India.

Important efforts are being made in South Africa to overcome the shortage of skills in ceiling and partition installation through the "Saint-Gobain YouthBuild Academy". This training program, launched in 2003 and financially supported since 2016 by YouthBuild International, aims to share the know-how of Group employees with unemployed youth from disadvantaged communities, through a combination of theoretical courses and the achievement of a local renovation project. The "Saint-Gobain YouthBuild Academy" is the only CETA (Construction Education Training Authority) accredited training provider with accreditation to facilitate the National Certificate: Ceiling & Partition Installation NQF 3 in Sub-Saharan Africa. The Group sustainably supports youth employment while contributing to the dynamism of its sector of activity. Since its creation, about 1,000 people have benefited from this program. This model is about to be expanded to Zambia and Botswana. In 2019, Saint-Gobain also took part in the national Y.E.S. program to combat youth unemployment. 39 young black unemployed between the ages of 18 and 35 were employed and will be trained for 12 months. This will enable them to gain work experience and eventually be hired on a long-term basis by Saint-Gobain or outside the Group.

Finally, in India, activities also invest significantly in the skill development of local communities for a significant impact. For instance, Saint-Gobain Glass has implemented the "Learn while Earn" program in collaboration with the Nettur Technical Training Foundation (NTTF Bangalore), which aims to train young people of the 18-25 age range and delivers a diploma in manufacturing technology. To this day, the two training centers have welcomed 276 students and 92 of them were subsequently employed by Saint-Gobain. For its part, the "Skill Development Initiative" aims to provide short professional training courses to disadvantaged young people from the communities in which Saint-Gobain operates in order to develop their skills and thus their employability. This program includes both theoretical classes and practical workshops directly in the company. Since its inception in 2002, this initiative has reached approximately 18,000 people. The Saint-Gobain India Foundation is also very active in the field of education. For example, the Puthri project provides Saint-Gobain mentors and professional coaches for girls aged 12-18 to encourage them to continue their studies. In 2019, 12 sessions were held and 300 girls took part.

4.3.3 The Saint-Gobain Foundation, at the heart of philanthropic initiatives

a) The Saint-Gobain International Corporate Foundation

The Saint-Gobain International Corporate Foundation is based on employee commitment. All Group employees – both current and retired – can sponsor solidarity actions in two areas:

- the professional integration of young adults in difficulty;
- the construction, improvement or renovation, in the general interest, of living spaces for people in precarious situations, contributing in particular to reducing energy consumption and preserving the environment.

Projects must be carried out by a non-profit organization and be located near a Group site. The Foundation provides financial support for the projects it selects.

In 2018, the Foundation specified its main selection criteria:

- projects with a strong focus on health or disability, must have a social (socially excluded people) or professional integration dimension;
- the amount requested is assessed on the basis of the number of beneficiaries;
- projects with strong social innovation are particularly encouraged;
- terms of professional integration, it is important to check that the training courses are qualifying.

Since 2008, the year it was created, the Foundation has supported 244 projects, including 40 in 2019, contributing to helping approximately 200,000 people around the world.

Every year, the Foundation publishes an annual report in which its actions and impact are evaluated.

b) Other local foundations

The Saint-Gobain Corporation Foundation

In North America, the Saint-Gobain Corporation Foundation is active in organizing three programs:

- matching gifts, allowing up to 50% of employees' personal donations to NGOs or to education to be matched;
- community gifts, whereby each industrial site located in the United States or Canada makes a contribution to the benefit of a local community; donations and initiatives are left to the discretion of the sites, according to local priorities and needs;
- direct grants, a program of direct support to certain non-governmental organizations for social and societal development, improving energy efficiency and preserving the environment.

The Saint-Gobain India Foundation

In India, the Saint-Gobain India Foundation's mission is to improve the living conditions of the most disadvantaged populations by supporting education-related projects, targeted particularly at young girls. It is also active in the areas of learning, health and the environment. In partnership with 18 Non-Governmental Organizations (NGOs), approximately 9,500 girls have benefited from these programs each year.

Foundations in the activities

In France, the PAM Foundation of the Pipe Division helps young people in social or financial difficulty by providing them with the support of a sponsorship provided by the Company's employees. The Fondation Placoplatre supports the integration of young people through work in the building sector. It also supports programs related to the preservation of the environment and the development of cultural activities in the vicinity of the sites.

c) Local societal actions

In addition to the Saint-Gobain Foundation's projects, companies, activities and countries, within their respective perimeters and according to their local challenges, implement sponsorship actions in the Group's key markets, but also in areas such as education, research, culture and health.

In the United Kingdom, for example, Saint-Gobain supports the charity Barnardo's, which helps young adults in difficulty by providing them with training in construction skills and by building accommodation facilities for them.

In the United States, the YouthBuild association, which trains young dropouts or unemployed people, in particular by teaching them how to build homes for people in difficulty, receives long-term support from the Group: financial donations and skills sponsorship from Saint-Gobain employees.

d) Cultural, artistic, educational and general interest sponsorship

Every year, Saint-Gobain undertakes to support cultural and scientific projects connected with its identity, its history or its strategy with regard to habitat.

The sponsorship policy has three focus areas:

- **Cultural sponsorship**: Saint-Gobain provides long term support to major cultural institutions. Every year, exhibition projects that resonate with its identity, its assets or its businesses also benefit from financial sponsorship or sponsorship in kind. The Group's know-how and expertise (in glass and other construction materials) are regularly requested, for exhibition designs in particular.

  In 2019, Saint-Gobain continued its exceptional support to the Château de Versailles for the major project to restore the chapel, with *Manufacture des glaces* (now Saint-Gobain) providing the glass for the windows. The restoration is expected to be completed in 2020.

  2019 marked the 30th anniversary of the Louvre Pyramid, one of Saint-Gobain's most famous creations, for which a extra clear, anti-reflective glass was specially developed. To mark this special occasion, Saint-Gobain provided financial support to the Louvre by also launching a unique, numbered series of pieces ("éclats") made with the original glass from the Louvre Pyramid. This series of 793 engraved pieces was sold in the Louvre gift shop.

  Saint-Gobain provided sponsorship to the *Cité de l'architecture et du patrimoine* for its exhibition spaces and supported the Global Award for Sustainable Architecture exhibition, which will tour southern Africa in 2019-20. The exhibition features architects who share sustainable development principles and take a participatory approach to architecture to meet the needs of societies, in both the North and the South of the planet.

  In the field of architecture, Saint-Gobain also supported the Tony Garnier exhibition, *L'air du temps*, at the Musée urbain Tony Garnier in Lyon, as well as the prix Fimbacte and the prix AMO, organized by the *Association des Architectes et Maîtres d'Ouvrage*.

  Verrerie de Saint-Just provided colored glass for the windows, designed by Tahar Ben Jelloun, in the church of Saint-Genulf in Thoureil (Maine-et-Loire).

  After the dramatic fire at Notre-Dame in Paris, Saint-Gobain provided expertise and materials from Verrerie de Saint-Just to restore the windows of the cathedral.

  As in previous years, substantial sponsorship was provided for the Opéra National de Paris which enabled Saint-Gobain employees, as well as beneficiaries from charitable organizations supported by the Saint-Gobain Foundation, to attend opera or dance performances.

  And in 2019, for the first time, Saint-Gobain took part in the *Nuit Blanche à Paris* by providing mirrors to Daniel Buren for his original and dreamlike "camion du miroitier" installation.

- **Scientific publications and seminars**: Saint-Gobain enables institutions, associations and researchers to publish works and reviews and hold seminars, meetings or festivals relating to its history or areas of involvement (principally architecture).

  Saint-Gobain provides long-term support to the Centre international du Vitrail, les *Rendez-vous de l'histoire de Blois* (22nd edition focusing on Italy) and the salon *Histoire de lire de Versailles*.

  In 2019, Saint-Gobain will have enabled the publication of a work about the painter Reynold Arnould who reconciled art and industry in the 1950s and 1960s, by Presses universitaires de Nanterre. Saint-Gobain also contributed to the publication of a work on Colbert, for the 400th anniversary of his birth.

  In 2019, the Group also supported the Congrès international d'histoire des entreprises (Paris) and the seminar on Colbert organized by the Fondation Colbert, and a day at the Institut National d'Histoire de l'Art on the "production, usage and restoration of glass materials in architecture (19th-20th century)".

- **Educational measures** : these actions aim to promote the dissemination of scientific and technical culture among young people. Saint-Gobain provides long-term support to the Fondation La Main à la pâte and the association C.Génial (classroom talks by Saint-Gobain employees, factory visits and participation in competitions).

In 2019, Saint-Gobain also joined the Universcience Partenaires endowment fund, which supports Universcience, la *Cité des sciences et de l'industrie de La Villette* and the *Palais de la découverte*.

4

2019 results and outlook for 2020

The 2019 consolidated financial statements were approved and adopted by Saint-Gobain's Board of Directors at its meeting of February 27, 2020.

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2019 KEY FIGURES

€42.6 bn Sales

- +1.9% Actual
- +2.4% Like-for-like

€3,390 m Operating income

- +5.7% Actual
- +4.7% Like-for-like

€1,915 m Recurring net income
EPS: **€3.53**, + 11%

- +10.0% Réel

€1,857 m Free cash flow

- +50.2%

€10,491 m Net debt

- 2.2x EBITDA

- Organic growth at 2.4%, with prices up 1.8% and volumes up 0.6%
- Increase in operating income to €3,390 million, up 5.7% as reported and 4.7% like-for-like, including a rise of 1.6% in the second half
- 30 basis point gain in the operating margin[1] to 8.0% for the year and 8.4% for the second half
- Further increase of 10.0% in recurring net income[2] and 11.0% in recurring earnings per share
- Sharp 50% rise in free cash flow[3], representing a significant improvement in the free cash flow conversion ratio[4] at 44%
- Reduction in net debt, down to €10.5 billion at end-2019 from €11.2 billion at end-2018
- "Transform & Grow" ahead of targets: (1) divestments representing around €3.3 billion in sales, ahead of the initial target, and continuation of selective acquisitions; (2) cost savings program delivering results faster than initially expected, with savings of €120 million in 2019 compared to savings of over €80 million announced at the end of July
- 2019 dividend up to €1.38 per share, to be paid wholly in cash

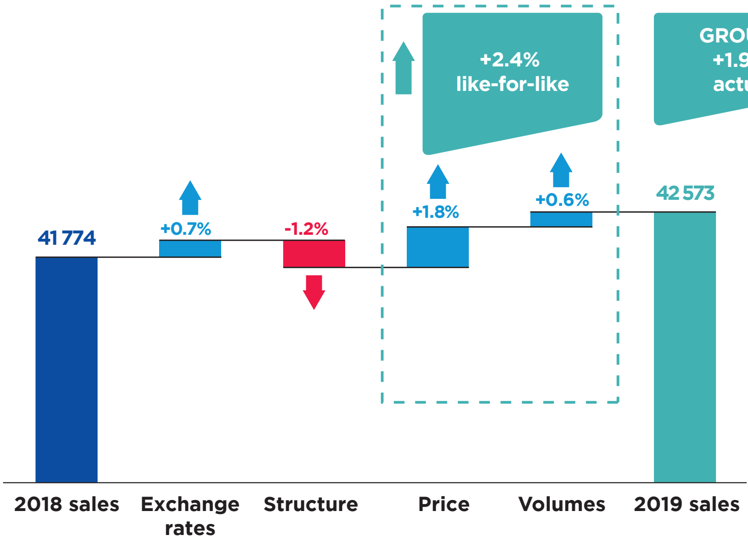
1. *Operating margin = operating income divided by sales.*
2. *Recurring net income = net attributable income excluding capital gains and losses on disposals, asset write-downs, material non-recurring provisions and Sika income.*
3. *Free cash flow = EBITDA less depreciation of right-of-use assets, plus net financial expense excluding Sika, plus income tax, less investments in property, plant and equipment and intangible assets excluding additional capacity investments, plus changes in working capital requirement.*
4. *Free cash flow conversion ratio = free cash flow divided by EBITDA less depreciation of right-of-use assets.*

1. Financial results

1.1 2019 Performance

2019: organic growth at 2.4%

Sales (M€)



- **Exchange rates:** mainly appreciation of the **US dollar**
- **Scope:** acceleration in **divestments in the context of "Transform & Grow"**
- **Organic growth of 2.4%** driven by prices in a less supportive market

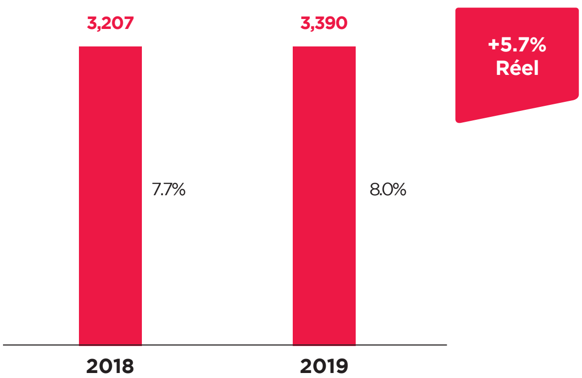
4

The Group's 2019 **sales** totaled **€42,573 million**, up 1.9% on a reported basis and **up 2.4% like-for-like**, with prices up 1.8% in a less inflationary environment for raw material and energy costs. Volumes were up 0.6% in a less supportive market environment overall.

Changes in **Group structure** had a negative 1.2% impact on sales, and a particularly negative impact of 4.7% in the fourth quarter, with negative structure impacts for the year of 5.8% in Asia-Pacific, of 3.0% in Northern Europe and of 0.4% in Southern Europe – Middle East & Africa. In 2019, the Group structure impact also reflects ongoing acquisitions in new niche technologies and services (Kaimann in technical insulation), in Asia and emerging countries (Join Leader in adhesives) and to consolidate our strong positions (Hunter Douglas in specialty ceilings). In light of the hyperinflationary environment in Argentina, this country which represents less than 1% of the Group's consolidated sales, is excluded from the like-for-like analysis.

Sales growth benefited from a positive 0.7% **currency effect**, resulting mainly from the appreciation of the US dollar against the euro, despite the depreciation of Nordic krona and the Brazilian real.

Operating income up 4.7% like-for-like



- **30bps improvement in operating margin**
- **€120m impact on operating income from "Transform & Grow" cost savings**
- **Price-cost spread slightly positive;** <€450m input cost inflation in 2019
- **€310m in cost savings** generated by the **operational excellence** program, aimed at offsetting inflation (excluding raw material and energy costs)

Operating income rose once again in 2019, up 5.7% as reported and 4.7% like-for-like over the year, including a rise of 1.6% in the second half. The Group's operating margin increased to 8.0% from 7.7% in 2018 (7.5% as reported prior to the IFRS 16 adjustment), with 8.4% in the second half (versus 8.1% in second-half 2018).

Acceleration in the Group's transformation continues apace:

- divestments completed to date for an amount over €1 billion represent sales of approximately €3.3 billion, exceeding the initial target of more than €3 billion by the end of 2019. The full-year operating margin impact is an improvement of more than 40 basis points, reaching the "Transform & Grow" target. In 2019 alone, the positive operating margin impact was 15 basis points;
- the program to unlock €250 million in additional cost savings over the period 2019-2021 thanks to the new organization is producing results faster than initially expected, with an accelerated timetable: a €120 million impact on operating income in 2019 (versus over €80 million estimated at the end of July), and overall savings of €200 million in 2020 and €250 million in 2021.

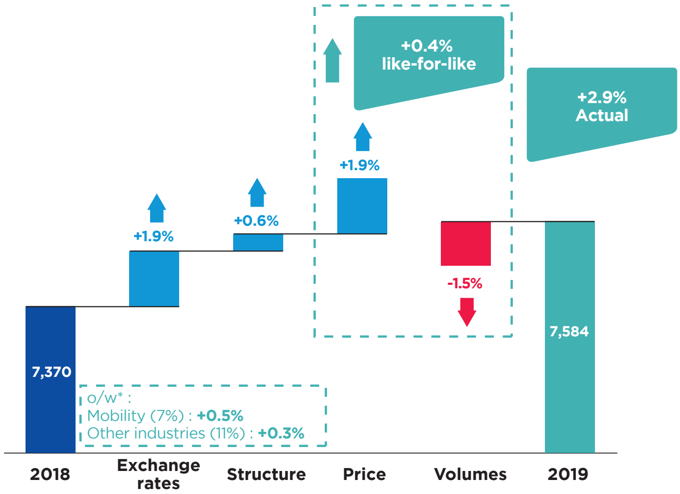
The Group also pursued its operational excellence program (outside the scope of "Transform & Grow"), which aims to offset inflation excluding that in raw material and energy costs. This program generated cost savings of €310 million in 2019 compared to 2018.

1.1.1 Segment performance (like-for-like sales)

a) High Performance Solutions

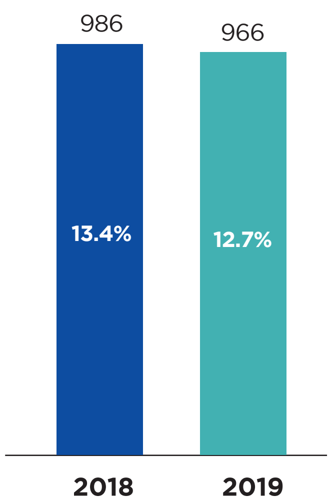
High performance solutions : Solid results outperforming peers in a difficult market environment

› SALES (€M)



* Sales by sub-segment as a % of Group total and like-for-like growth

› OPERATING INCOME (€M) AND MARGIN (%)

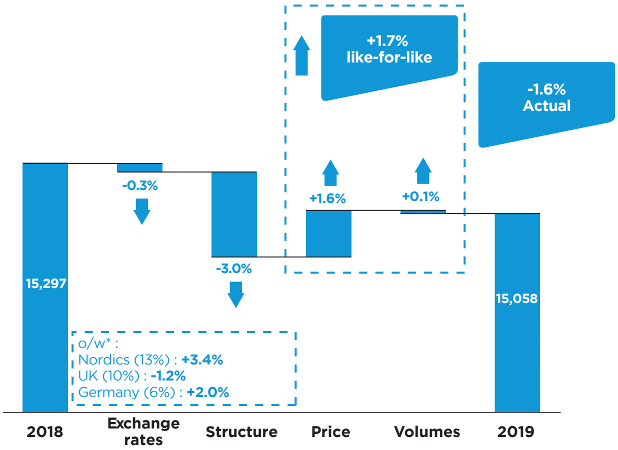


High Performance Solutions (HPS) sales rose 0.4%, driven by good pricing progression. Volumes were down slightly, affected by the slowdown in industrial markets. Against this backdrop, the operating margin came in at 12.7% compared to 13.4% in 2018, with 12.5% in the second half (compared to 12.4% in second-half 2018).

- **Mobility** sales were up slightly in a global automotive market that remains challenging (market volumes down around 6%), but benefited from a weaker comparison basis in the second half. Despite the ongoing contraction in Europe and China, the differentiating strategy focused on high value-added products, in particular those for electric vehicles, continues to pay off. Our activities in the aerospace market advanced significantly;
- activities serving **Industry** reported a decline in sales, with a slowdown in industrial markets in most regions in the second half;
- activities serving the **Construction Industry** saw further growth, buoyed by gains in market share, upbeat trends in external thermal insulation solutions (ETICS) and recent acquisitions;
- **Life Sciences** continued to enjoy a strong growth dynamic in the pharmaceutical and medical sector, aided by recent investments in additional capacity.

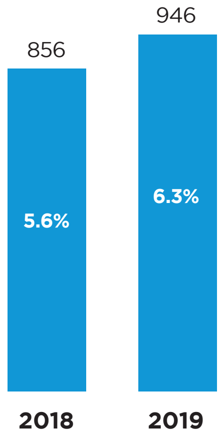
b) Northern Europe

Sales (€M)



* Sales by country as a % of Group total and like-for-like growth.

Operating income (€M) **and margin** (%)



Northern Europe reported a 1.7% rise in sales over the year, stabilizing in the second half (-0.2%) with a particularly negative calendar impact in the fourth quarter.

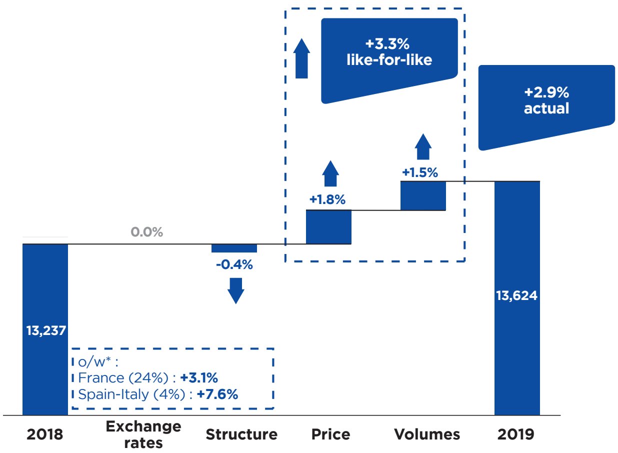
Sales in Nordic countries rose, particularly in Distribution, with the renovation market remaining robust but new construction slowing down.

The UK contracted amid a difficult economic environment, particularly in Distribution in the second half. Sales in Germany were up slightly despite a decrease in volumes in the second half with less favorable trends in non-residential; Eastern Europe continued to advance, benefiting from sales synergies within each country under the new organization.

The operating margin for the region rose sharply to 6.3% from 5.6% in 2018, fueled by a positive raw material and energy price-cost spread and the acceleration of "Transform & Grow" in terms of portfolio optimization and cost savings.

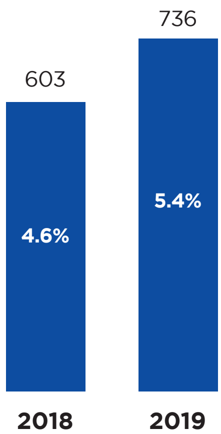
c) Southern Europe – Middle East & Africa

Sales (€M)



* Sales by country as a % of Group total and like-for-like growth.

Operating income (€M) **and margin** (%)



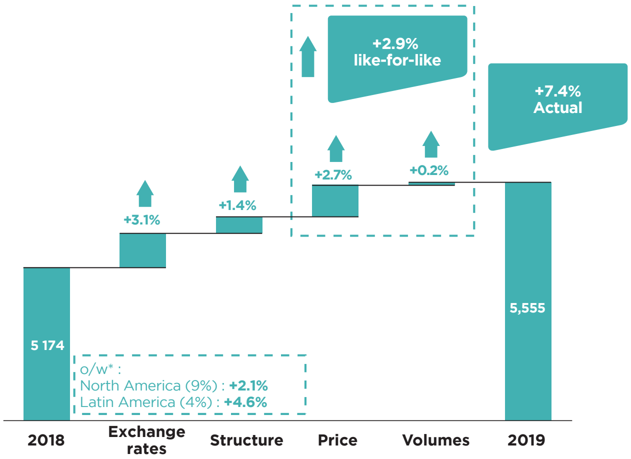
Southern Europe – Middle East & Africa saw a 3.3% rise in sales over the year and a 2.3% rise in the second half, despite a particularly negative calendar effect in the fourth quarter. Distribution continued to drive growth; industrial businesses progressed, led by energy efficiency solutions and to a lesser extent, facade solutions (glass and mortars).

France had a good year, buoyed by a construction market where renovation was supportive despite a slowdown in new construction in the second half. The Group's energy efficiency renovation solutions continued to perform strongly, with double-digit growth in insulation. Distribution continued to progress, benefiting from its stronger presence in digital and from training initiatives for trade professionals in the full range of Saint-Gobain solutions. The reorganization of technical sales teams in the context of the new organization is also paying off. Other European countries continued to progress and particularly Spain, driven by sales synergies unlocked by "Transform & Grow" initiatives and market share gains. The Middle East and Africa were down, especially Turkey in a very tough environment. Pipe continued its successful efforts to improve competitiveness in a difficult export market.

The operating margin for the region increased sharply, up to 5.4% from 4.6% in 2018, driven by a sharp improvement in France and the acceleration of cost savings under "Transform & Grow".

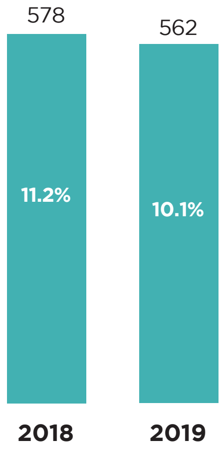
d) Americas

Sales (€M)



* Sales by country as a % of Group total and like-for-like growth.

Operating income (€M) **and margin** (%)



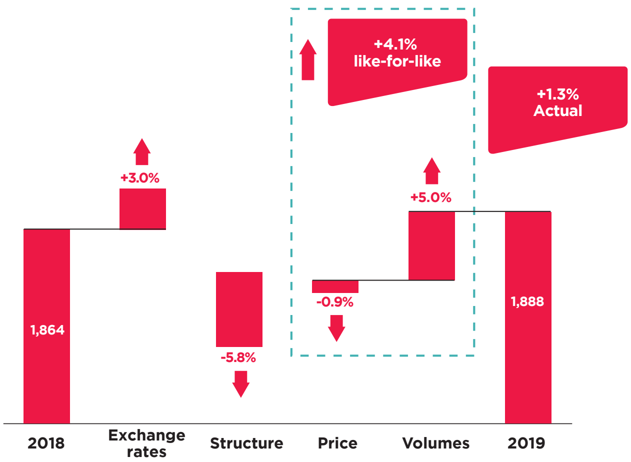
The **Americas** reported 2.9% organic growth.

North America was up 2.1% over the year and 4.7% in the second half, buoyed by better volumes in gypsum, where we have an enhanced range of acoustic solutions (specialty ceilings), and in exterior solutions, where roofing and siding sales teams were successfully combined. Insulation reported a good overall performance. After a good start to the year, prices were down slightly in the second half against a high comparison basis in 2018. Canada retreated over the year, affected by a decline in the construction market. Latin America posted 4.6% growth for the year, slowing to 0.5% in the second half, particularly in Brazil in glass amid a still uncertain macroeconomic environment.

The operating margin for the region came in at 10.1% compared to 11.2% in 2018, which had been bolstered by a very strong second-half performance; second-half 2019 (11.2%) improved on the first half (9.0%) despite a more difficult environment in Latin America, due chiefly to an upturn in volumes in North America.

e) Asia-Pacific

Sales (€M)



Operating income (€M) **and margin** (%)

Asia-Pacific delivered 4.1% organic growth, spurred by continued strong momentum in productivity solutions (gypsum and mortars). Glass declined in the second half owing to lower plant utilization rates given the contraction in the automotive market which put pressure on prices.

India progressed significantly, especially in gypsum which continued to deliver double-digit growth, and in glass to a lesser extent. The Group has developed a comprehensive integrated offering in residential and customer productivity improvement solutions (combining glass, gypsum and mortars) in the country, targeting new growth niches. Elsewhere in Asia, China reported a good year, notably benefiting from the start-up of a new plaster plant in the first half and strong growth in mortars aided by the combination of marketing and sales teams under the new organization. South-East Asia was driven by higher volumes, notably in Vietnam, but continued to face a fiercely competitive environment which put pressure on sales prices.

The operating margin for the region progressed to 10.6% from 10.4% in 2018, in particular thanks to higher volumes.

1.2 Financial results

Consolidated **sales** advanced 2.4% like-for-like, with a positive 1.8% price effect. On a reported basis, sales were 1.9% higher, with a positive 0.7% **currency impact** and a negative 1.2% **Group structure impact** reflecting the acceleration in the divestment program.

Consolidated **operating income** was up 5.7% on a reported basis and 4.7% like-for-like. The operating margin rose to 8.0% of sales from 7.7% in 2018 (7.5% as reported before the IFRS 16 adjustment). **Ebitda** increased by 4.8% to €4,870 million, while the Ebitda margin increased to 11.4% of sales from 11.1% in 2018.

Increase in business income and Ebitda

(en M€)	2018	2019	2019/2018
Operating income	**3 207**	**3 390**	**+ 5,7%**
Non-operating costs excl. Sika	(462)	(421)	
Sika non-operating income	180		
Disposal gains (losses)	(1)	(13)	
Asset write-downs and other	(2 073)	(403)	
BUSINESS INCOME	**851**	**2 553**	**+ 200%**
Operating income	**3 207**	**3 390**	**+ 5,7%**
Operating depreciation and amortization	1 904	1 901	
Non-operating costs excl. Sika	(462)	(421)	
EBITDA	**4 649**	**4 870**	**+ 4,8%**

4

Non-operating costs improved, at €421 million compared to €462 million in 2018 (excluding a one-off gain of €180 million relating to the Sika transaction), despite €130 million in restructuring costs associated with the execution of the “Transform & Grow” initiative. The accrual to the provision for the legacy asbestos liabilities of the former CertainTeed Corporation in the US now carried by DBMP LLC amounted to €88 million in 2019.

The **net balance of capital gains and losses on disposals, asset write-downs and corporate acquisition fees** represented an expense of €416 million compared to an expense of €2,074 million in 2018. In 2019, this item mainly includes write-downs of businesses sold. **Business income** was €2,553 million compared to €851 million in 2018.

Recurring net income up + 10,0 % and recurring EPS up + 11,0 %

(en M€)	2018	2019	2019/2018
BUSINESS INCOME	**851**	**2 553**	**+ 200%**
Net financial income (expense)	**115**	**(468)**	
o/w Sika	601	28	
o/w finance costs	(486)	(496)	
Average cost of gross debt	2,3%	1,8%	
Income tax	**(492)**	**(631)**	
Tax rate on recurring net income	24 %	25 %	
NET ATTRIBUTABLE INCOME	**397**	**1 406**	
RECURRING NET INCOME	**1 741**	**1 915**	**+ 10,0%**
Recurring net income (in euros)*	**3,18**	**3,53**	**+ 11,0%**

* *Recurring EPS : calculated based ont the weighted average number of shares outstanding.*

Net financial expense excluding Sika remained virtually stable at €496 million versus €486 million in 2018 (excluding a €601 million gain relating to the Sika transaction). Dividends received from Sika totaled €28 million.

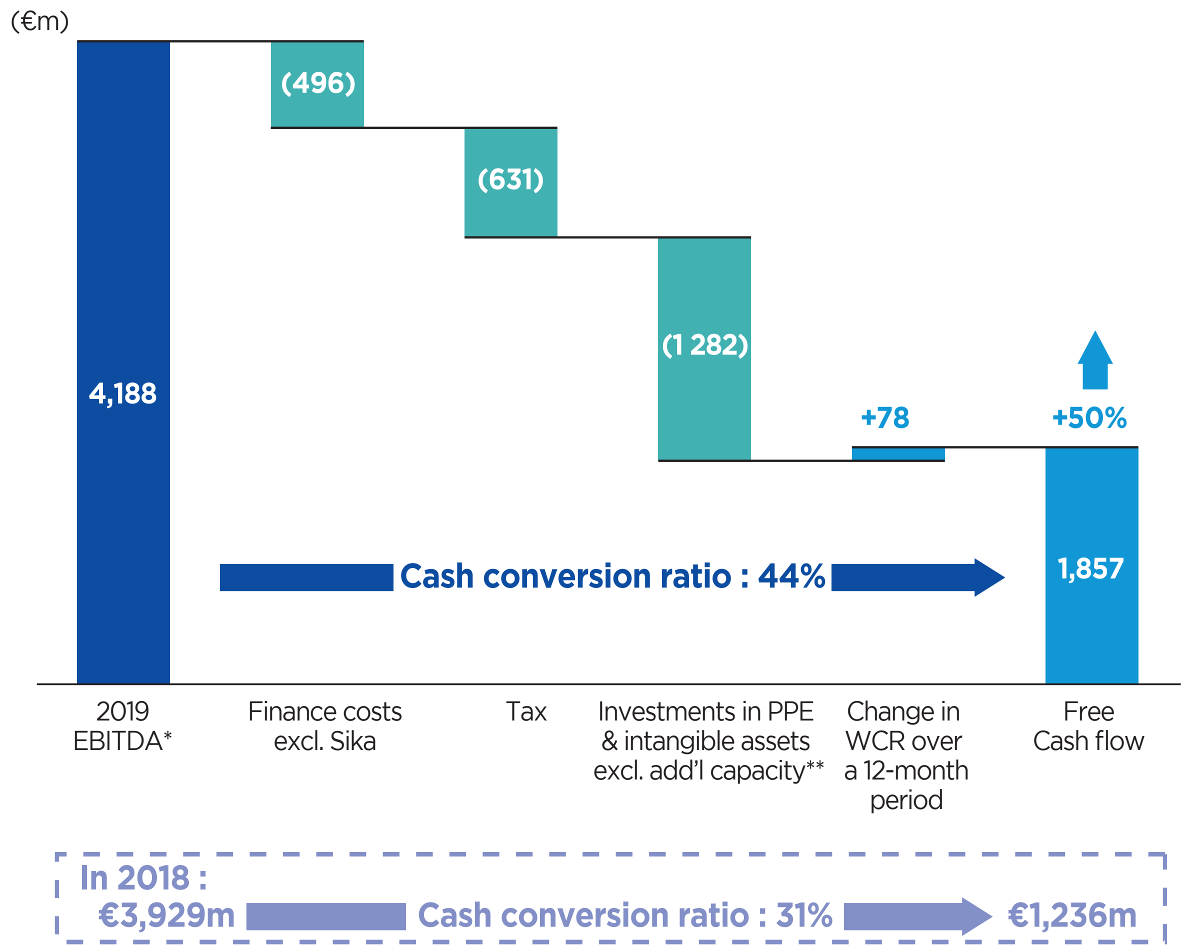
The income tax rate on recurring net income was 25% (versus 24% in 2018). **Income tax** totaled €631 million compared to €492 million in 2018.

Recurring net income (excluding capital gains and losses, asset write-downs, material non-recurring provisions and Sika income) increased 10.0% to €1,915 million.

Net attributable income rose sharply to €1,406 million from €397 million in 2018.

Investments in property, plant and equipment and intangible assets (capital expenditure) were down 2.0% to €1,818 million and declined as a percentage of sales, at 4.3% versus 4.4% in 2018. Additional capacity investments for organic growth represented €536 million, mainly in Life Sciences, Construction Industry, energy efficiency solutions (in Europe) and facade solutions (glass in Mexico and India).

Sharp 50% increase in free cash flow (€M)



* EBITDA less depreciation of right-of-use assets: €4,870m - €682m = €4,188m (versus €3,929m in 2018)

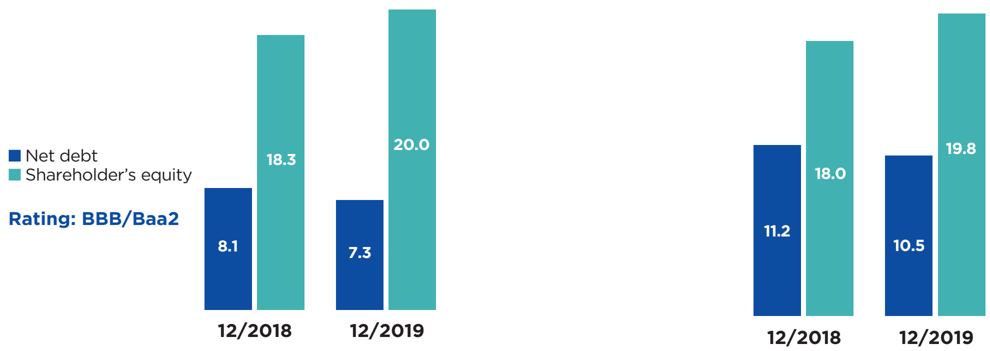
** Investments in PPE and intangible assets = €1,818m, including €536m in additional capacity investments linked to organic growth

Free cash flow increased 50.2% to €1,857 million (4.4% of sales versus 3.0% in 2018), with an increased free cash flow conversion ratio of 44% (versus 31% in 2018), thanks mainly to a significant improvement in working capital requirement and a decrease in non-operating costs. The operating working capital requirement came in at 27 days' sales at December 31, 2019 compared to 29 days at December 31, 2018.

Investments in securities totaled €297 million (€1,699 million in 2018 which included Sika for €933 million) and were made to develop innovative niches (American Seal, HTMS) and the Group's positions in emerging counties (mortars in Peru, plasterboard and ceilings in Latin America), and to consolidate our strong positions (acoustic solutions in the US with Norton Industries).

Divestments represented €1,052 million in 2019 compared to €148 million in 2018, and include the sale of Distribution in Germany, Hankuk Glass Industries in South Korea, Silicon Carbide and DMTP in France.

Decrease in net debt (€BN)



	Before IFRS 16*		After IFRS 16	
	12/2018	12/2019	12/2018	12/2019
Net debt/shareholders' equity	44%	36%	62%	53%
Net debt/EBITDA	2.1	1.8	2.4	2.2

* before IFRS 16: 12-2019 estimated

1.3 Shareholder policy

In 2019, the Group bought back 8.5 million shares, contributing to the reduction in the number of shares outstanding (542.1 million at December 31, 2019).

At today's meeting, Compagnie de Saint-Gobain's Board of Directors decided to recommend to the June 4, 2020 Shareholders' Meeting to pay in cash an **increased dividend of €1.38 per share**. This dividend represents **39% of recurring net income** and a dividend yield of 3.8% based on the closing share price at December 31, 2019 (€36.50). The ex-dividend date has been set at June 8 and the dividend will be paid on June 10, 2020.

During 2020 the Group will reduce the number of shares outstanding in accordance with its portfolio optimization and its wider capital allocation policy.

1.4 Strategic priorities: update on "Transform & Grow"

"Transform & Grow": acceleration in portfolio rotation

- Divestments completed to date represent around €3.3 billion in sales, ahead of the objective set for end-2019: Northern Europe (Distribution in Germany, Optimera in Denmark, glazing installation in the UK and glass processing in Sweden and Norway, expanded polystyrene in Germany); Southern Europe – Middle East & Africa (DMTP, K par K, expanded polystyrene in France, Glassolutions in the Netherlands); Asia-Pacific (Pipe at Xuzhou in China, Hankuk Glass Industries in South Korea); High Performance Solutions (Silicon Carbide). The full-year operating margin impact is over 40 basis points, reaching the "Transform & Grow" objective. The total amount of divestments represents over €1 billion;
- Acquisition of Continental Building Products finalized on February 3, 2020 for a total enterprise value of €1,287 million, with 2019 sales of $505 million and 2019 adjusted Ebitda of $126 million before synergies of at least $50 million on a full-year basis in 2022. The newly integrated team, composed of the most talented employees from the two companies, has already begun to deploy its action plan to unlock the expected synergies;
- 18 acquisitions completed in 2019 for €261 million, representing full-year sales of €189 million and Ebitda of €36 million;
- The strategic review of the business portfolio in the context of the new organization will lead to an additional dynamic of divestments and acquisitions and has already enabled us to identify further opportunities for divestments that are currently at various stages of progress.

"Transform & Grow": acceleration in the cost savings program

The program to unlock €250 million in additional cost savings by 2021 thanks to the new organization is producing results faster than initially expected, with an accelerated timetable: a €120 million impact in 2019 (versus a previous expectation of over €80 million), overall savings of €200 million in 2020 (versus a previous expectation of €150 million) and overall savings of €250 million in 2021, with a positive impact on the operating margin of around 60 basis points.

1.5 Outlook

On February 27 2020, at the presentation of 2019's financial résults, in an environment marked by certain macroeconomic uncertainties, Saint-Gobain indicated that it should continue to benefit from its attractive positions on the renovation and high value-added solutions markets.

In the macroeconomic environment prevailing at that date, and **excluding the impact of the coronavirus, Saint-Gobain anticipated the following trends for the segments**:

- High Performance Solutions: continued slowdown in industrial markets with an easier comparison basis in the automotive sector;
- Northern Europe: mixed performance overall, with slight growth expected in Nordic countries but a more uncertain situation in the UK;
- Southern Europe – Middle East & Africa: overall growth expected for the region. In France, markets should be supported by solid renovation activity, while new construction should see a moderate slowdown;
- Americas: market growth in both North and Latin America;
- Asia-Pacific: further growth excluding coronavirus impact.

Saint-Gobain had also identified the following priorities for 2020:

a) Improvement in the Group's profitable growth profile, driven by:

- the **continuation of its portfolio optimization** (divestments and acquisitions); the integration of Continental Building Products,
- the **strategy of differentiation and innovation**, to improve our customers' productivity, develop sustainable solutions and contribute to the well-being of all;

b) Increased free cash flow generation and further increase in operating margin, driven by:

- **constant focus on the price-cost spread** thanks to strong pricing discipline,
- the continuation of its **cost savings program** in the context of "**Transform & Grow**", unlocking **additional savings of €80 million in 2020** (representing total savings of €200 million over the 2019-2020 period),
- a **decrease in property, plant and equipment and intangible assets investments** (capital expenditure) to around **€1.6 billion** after an investment peak and thanks to continued optimization of maintenance capital expenditure,
- the continuation of the **operational excellence program**, aimed at offsetting inflation (excluding raw material and energy costs): around **€300 million** in additional cost savings in 2020 (calculated on the 2019 cost base); continued discipline on cost structure.

The Group targeted then for 2020 a further like-for-like increase in operating income with an uncertainty about the impact of the coronavirus.

As at the date of publication of this Universal registration document, given the coronavirus pandemic, this guidance for 2020 is no longer valid and it is not currently possible to evaluate the pandemic's impact.

Saint-Gobain's businesses are disrupted in the countries impacted by the coronavirus, with very different situations from one country to another.

Since the start of the health crisis in China, the Group has taken the necessary measures to ensure the health of its employees, customers, suppliers and other stakeholders. It is cooperating with the authorities in each country where it is present.

In terms of its business activity, Saint-Gobain is quickly adapting to the evolution in demand, aiming for operational continuity, depending on the health situation and on government decisions in each country, whilst reducing costs (reduction of teams, partial unemployment or stoppages) and prioritizing the health of its stakeholders:

- in the Distribution activities, which mostly serve trade professionals rather than the general public, the Group has adjusted its service offering to customers over the last few days, with new procedures in terms of orders for collection, delivery and via online and telephone orders; in particular, certain brands in France that were closed for a few days have progressively recommenced business;
- in the manufacturing activities, sites have made the necessary adjustments given the impacts of the crisis on the value chain, in particular in the automotive market. The operation of our factories is continuously adapted as the situation evolves, in a very flexible manner within the new organization. In this respect, all of our Chinese factories have restarted operations, following the rapid improvement in demand.

Given the context, Saint-Gobain is taking all necessary actions to limit the effects of the pandemic on its operating profit and cash as much as possible:

- much greater decrease in capital expenditure than the €200m reduction initially planned for 2020 versus 2019 by deferring all possible projects that were scheduled in the coming months;
- adaptation of cost structure and postponement of expenses, using local measures where appropriate, in particular unemployment and partial unemployment;
- ever tighter monitoring of working capital evolution.

Furthermore, the Group has a very solid financial position and has the necessary cash and financing in place to cope with the consequences of the pandemic. As of December 31, 2019, the Group's cash and cash equivalents stood at €5.0 billion. In addition, the financing sources available to the Group have recently been further reinforced as at the date of this Universal registration document in the current coronavirus context:

- a new syndicated credit line of €2.5 billion, in addition to the confirmed and undrawn back-up credit lines of €4.0 billion;
- access to the new Pandemic Emergency Purchase Program (PEPP) launched by the European Central Bank on March 18, 2020.

The Group will provide a new update upon publication on April 23 of its first trimester sales for 2020.

These forward-looking statements are either trends or objectives, and are not to be considered as projected results. Although Saint-Gobain believes that the expectations reflected in such forward-looking statements are based on reasonable assumptions as at the time of publishing this document, investors are cautioned that these statements are not guarantees of its future performance. Actual results may differ materially from the forward-looking statements as a result of a number of known and unknown risks, uncertainties and other factors, many of which are difficult to predict and are generally beyond the control of Saint-Gobain, including but not limited to the risks described in Chapter 6, Section 1 of this Universal Registration Document. Accordingly, readers of this document are cautioned against relying on these forward-looking statements. These forward-looking statements are made as of the date of this Universal Registration Document. Saint-Gobain disclaims any intention or obligation to complete, update or revise these forward-looking statements, whether as a result of new information, future events or otherwise.

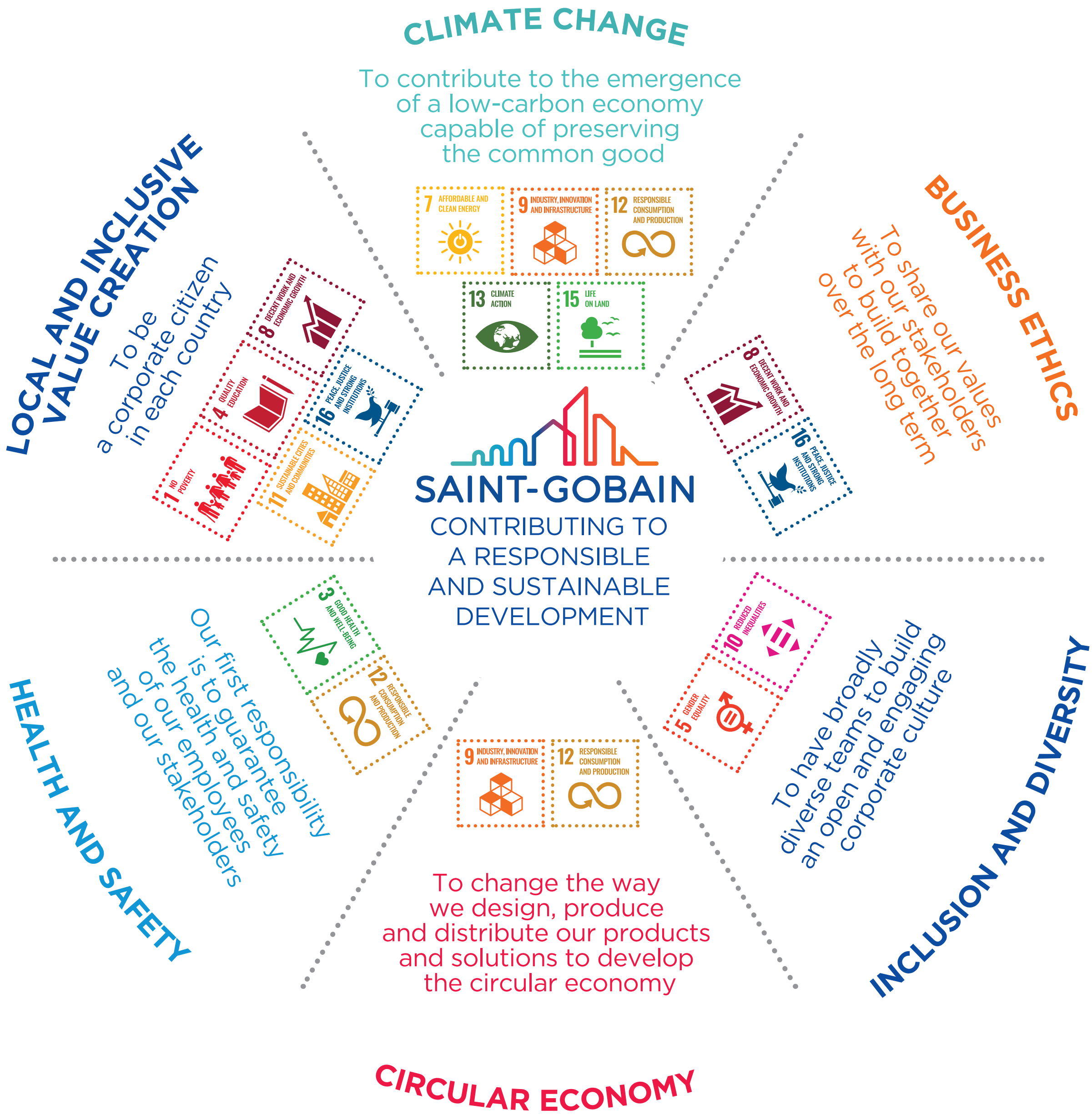
2. Non-financial results

2.1 Alignment of the CSR dashboard with the Group's challenges

The Group has prioritized its CSR challenges and actions. These key challenges relate to risks and opportunities identified in accordance with legal requirements (see Chapter 2, Section 2.3). They also take into consideration the expectations of stakeholders identified in the materiality analysis, as well as the Group's environmental and societal challenges.

A CSR roadmap was published in 2019. It is a tool for managing the Group's CSR strategy. This roadmap is based on six key challenges for the Group: business ethics, climate change, inclusion and diversity, the circular economy, health and safety across the entire value chain and the creation of inclusive local value.

This new roadmap demonstrates Saint-Gobain's willingness to assess its performance in terms of the environmental, social and societal impacts of its activities, taking the expectations of its stakeholders into account.



The Group has also developed its CSR dashboard in line with the roadmap, under the supervision of the Board of Directors.

	OBJECTIVES	INDICATORS 2018	INDICATORS 2019
Business ethics To share our values with our stakeholders to build together over the long term	**Train 100%** of new managers to the **Adhere** (Principles of Conduct and Action), **Comply** (competition law) **and Act** (fight against corruption) programs during their first year with Saint-Gobain	96% *Adhere* 94% *Comply* 95% *Act*	**93%** *Adhere* **92%** *Comply* **89%** *Act*
Climate change To contribute to the emergence of low-carbon economy capable of preserving the common good	Reduce our **carbon emissions by 20%** by 2025 (base 2010)	11.7%	**14.5%**
Inclusion and diversity To have broadly diverse teams to build an open and engaging corporate culture	Keep a diversity index always **above 90%**	91%	**91.4%**
	Have **25% of women managers** by 2020	23.8%	**24.2%**
	Have **25% women senior managers** by 2025	15.2%	**17.1%**
Circular economy To change the way we design, produce and distribute our products and solutions to develop the circular economy	**Reduce the use of virgin natural raw materials** (sand, gypsum)	9,024,612 AVOIDED TONS	**8,461,903 AVOIDED TONS**
	Reduce non-recovered waste by 50% by 2025 (base 2010)	15.9%	**11.5%**
Health and safety across the entire value chain Our first responsibility is to guarantee the health and safety of our employees and our stakeholders	Achieve a lost-time and non-lost-time accident rate **(TRAR) of 2.2** in 2020 (employees, temporary workers and contractors on site)	2.4	**2.2** *(Objective 2.3)*
Local and inclusive value To be a corporate citizen everywhere	Percentage of our **employees responding to our satisfaction survey**	71.9%	**74%**
	Percentage of our **shares held by employees through the Group savings plan (PEG)**	8%	**8.7%**
	Percentage of our **employees who have received training** during the year	87.7%	**79.1%**

2.2 Integration of the United Nations Sustainable Development Goals

To embed the Sustainable Development Goals (SDGs) within its CSR approach, Saint-Gobain draws upon the materiality analysis (see Chapter 2, Section 2.3), the Group's stakeholder dialogue, and its understanding of its value chain. Generally, Saint-Gobain is actively following the debates on SDGs and reporting, especially the working group initiated by the Global Compact. The 17 SDGs were subdivided into different levels: SDGs aligned with the strategy, moderately aligned SDGs (limited scope of influence or associated with a specific activity) and non-priority SDGs where the Group has little or no impact.

SDG *SDGs aligned with the strategy*

SDG *SDGs moderately aligned with the strategy*

SDG *Non-priority SDGs*

SDG 1

SDG 1. No poverty: to create inclusive growth in the countries where it operates.

- ***for employees***: the Group provides its employees with high-quality jobs (see Chapter 3, Section 3);
- ***for local communities***: Saint-Gobain contributes to economic development and local employment (see Chapter 3, Section 4.3.2).

SDG 3

SDG 3. Good health and well-being: to ensure healthy lives and promote the well-being of all at all ages.

- **for employees*:*** health and safety issues are central to the Saint-Gobain EHS Charter and are values held by all Group stakeholders (see Chapter 3, Section 3.1);
- ***for customers***: one of the Group's priorities is to design comfortable and sustainable products (see Chapter 3, Section 2.1);
- ***for local communities***: Saint-Gobain offers sustainable and comfortable solutions to promote local, inclusive economic development (See Chapter 3, Section 4.3);
- ***for suppliers***: the Group encourages its suppliers to improve the workplace health and safety of its employees through its Responsible Purchasing policy (see Chapter 3, Section 1.2.4).

SDG 4

SDG 4. Quality education: to promote lifelong learning opportunities.

- ***for employees***: Saint-Gobain's aim is to be a preferred employer, known and recognized for the richness of the career paths it offers (see Chapter 3, Section 3.3);
- ***for customers***: the Group provides training to professionals with, for example, training for trade customers (see Chapter 2, Section 4.4.4);
- ***for local communities***: the Group maintains relationships with local partners in many of the countries where it operates, to boost local employment and support disadvantaged populations with their career aspirations (see Chapter 3, Section 4.3). Saint-Gobain also helps society through sponsorship and philanthropy (see Chapter 3, Section 4.3.3).
- ***for civil society***: supporting young people is a priority in all countries where the Group operates. For example, in France, 4.2 % of contracts are youth contracts. The Group offers several different types of internships, work/study programs, apprenticeships and the International Postgraduate Internship Program (VIE)

SDG 5

SDG 5. Gender equality: to be inclusive by promoting equal opportunities.

- ***for employees:*** Saint-Gobain is working to create an environment conducive to fairness and equality, which is crucial to employees' professional growth, while fostering training and the cohesion of high-performance operational teams (see Chapter 3, Section 3.3.4);
- ***for local communities***: the Saint-Gobain India Foundation has dedicated itself to improving the living conditions of the most destitute people by supporting educational projects, particularly for young girls (see Chapter 3 Section 4.3.3).

SDG 7

SDG 7. Affordable and clean energy: to use our potential for local consumption to develop local renewable energy networks.

- ***for civil society***: Saint-Gobain is a member of the ETC (Energy Transition Commission) whose aim is to accelerate the transition to a low-carbon energy system (see Chapter 3, Section 4.1.3);
- ***for local communities***: the objective of the cross-disciplinary R&D program, "Improvement of our CO_2 footprint", is to create synergies among different activities to accelerate the reduction in operations-related CO_2 emissions and, as a priority, those relating to industrial production (see Chapter 3, Section 4.1.2). This is done through the use of competitive low-carbon energy.

SDG 8

SDG 8. Decent work and economic growth: to create conditions guaranteeing quality jobs for our employees.

- ***for employees***: in 2018, Saint-Gobain launched a 4.0 version of its OPEN program (Our People in an Empowering Network), a management tool designed to boost the satisfaction of its employees (see Chapter 3, Section 3.2.1);
- ***for suppliers***: the Group's suppliers that are signatories are committed to guaranteeing decent working conditions (see Chapter 3, Section 1.2.4);
- ***for civil society***: as part of the Global Deal, Saint-Gobain is committed to ensuring decent work for all (see Chapter 3, Section 1.1.5).

SDG 9

SDG 9. Industry, innovation and infrastructure: to build our innovation into sustainable development and a circular economy (see Chapter 3, Section 4.2.).

- ***for employees***: to develop solutions that anticipate market trends, the Group has introduced an eco-innovation approach and measures the sustainable performance of its products and solutions (see Chapter 3, Section 2.1.2);
- ***for civil society***: Saint-Gobain has been a member of the WBCSD Board with responsibility for "climate, energy, the circular economy, towns and cities, and mobility" since 2017 (see Chapter 3, Section 1.1.4).

SDG 10

SDG 10. Reduced inequalities: to be inclusive by promoting equal opportunities.

- ***for employees***: Saint-Gobain is working to create an environment conducive to fairness and equality, which is crucial to employees' professional growth, while fostering training and the cohesion of high-performance operational teams (see Chapter 3, Section 3.3.4);
- ***for local communities***: wherever it is present, the Group undertakes to promote inclusion and diversity in all its forms: gender, nationalities, training, career paths, generational diversity, disabilities and ethnic and social origins (see Chapter 3, Section 3.3.4);
- ***for civil society:*** Saint-Gobain Foundation supports projects with a societal dimension helping socially excluded persons (see Chapter 3, Section 4.3.3).

SDG 11

SDG 11. Sustainable cities and communities: offering sustainable and affordable solutions in response to lifestyle changes in line with increasing urbanization.

- ***for customers***: Saint-Gobain designs, produces and distributes increasingly sustainable solutions (see Chapter 2, Section 4.1.1);
- ***for civil society***: at the local level, Group subsidiaries are becoming involved in partnerships, e.g. with the Green Building Councils (GBC) (see Chapter 2, Section 4.1.2).

SDG 12

SDG 12. Responsible consumption and production: to change the way we design, produce and distribute our products and solutions to develop the circular economy.

- ***for employees***: today, eco-innovation is covered in the training programs provided for new research managers and R&D project leaders (see Chapter 3, Section 2.1.2);
- ***for customers***: Saint-Gobain designs, produces and distributes sustainable and comfortable solutions (see Chapter 3, Section 2.1).

SDG 13

SDG 13. Climate action: to contribute to the emergence of low-carbon economies capable of preserving the common good (see Chapter 3, Section 4.1).

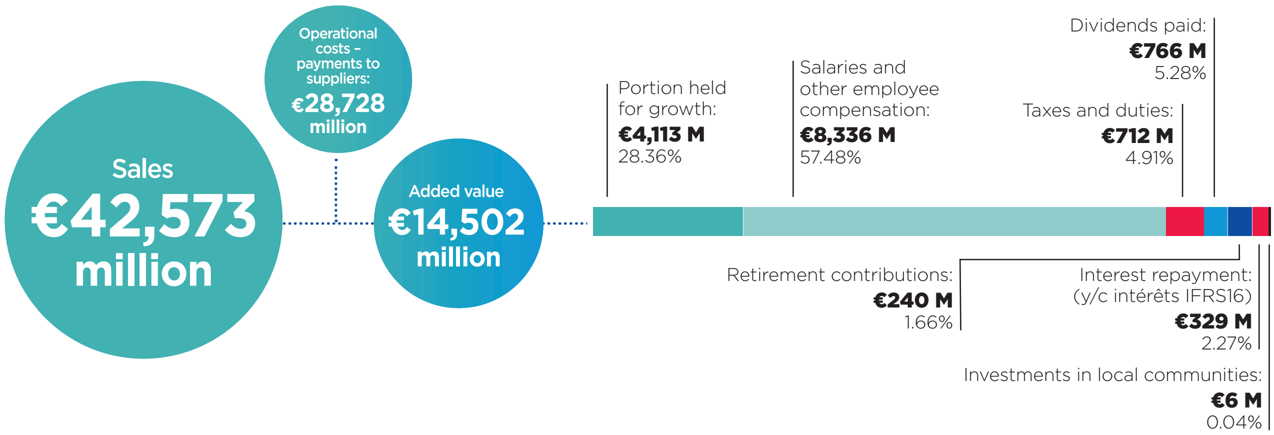
- ***for customers***: Saint-Gobain is committed, in conjunction with a number of private and public players, to increasing its positive contribution and to creating virtuous dynamics (see Chapter 2, Section 4.1.2);
- ***for civil society***: the Group's goal is to encourage the emergence of a low-carbon economy in the countries in which it operates (see Chapter 3, Section 4.1);
- ***for investors***: Saint-Gobain upholds the recommendations of the Task Force on Financial Disclosures (TCFD) (see Chapter 3, Section 4.1.3);
- ***for regulatory authorities***: the Group takes part in the public debate on climate change (see Chapter 2, Section 1.1.4).

SDG 16

SDG 16. Peace, justice and strong institutions: to share our values with our stakeholders.

- ***for employees***: the Group's responsible approach is based on its code of ethics: the Principles of Conduct and Action (see Chapter 3, Section 1.1.1);
- ***for suppliers***: the Responsible Purchasing approach incorporates suppliers' compliance with the Suppliers' Charter, based on Principles of Conduct and Action (see Chapter 3, Section 1.2);
- ***for civil society***: compliance with the law, the principles of the code of ethics and respect for human rights constitute the Group's fundamental values (see Chapter 3, Section 1.1.1).

2.3 Value creation in line with stakeholders' expectations



2.4 Non-financial indicators

ENVIRONMENT	2019	2018	2017	GRI
Environmental management				
Total environmental expenditure, of which:	€155.4 M	€159.4 M	€150.2 M	EN31
a) Salaries and other payroll expenses for environmental officers	€27.9 M	€28.2 M	€28.6 M	103-2
b) Environmental certification and renewal costs (ISO 14001, EMAS or ISO 5001)	€2.7 M	€3.0 M	€3.1 M	307-1
c) Environmental taxes	€7.1 M	€6.8 M	€6.0 M	307-1
d) Insurance and warranties	€12.2 M	€16.6 M	€9.2 M	103-2
e) Environmental fines	€0.1 M	€0.4 M	€0.2 M	307-1
f) Cost of environmental incidents	€0.7 M	€0.8 M	€1.0 M	307-1
g) Cost of technical measures	€9.9 M	€9.7 M	€7.9 M	103-2
h) Environmental R&D budget	€80.9 M	€78.3 M	€75.2 M	103-2
i) Soil decontamination, site remediation and other clean-up costs	€13.9 M	€15.6 M	€19.0 M	307-1
Capital expenditure on environmental management measures	€86.0 M	€84.1 M	€74.1 M	
Provisions for environmental risks	€153.8 M	€151.4 M	€154.4 M	
Number of sites certified for Environment management (ISO 14001 and/or EMAS) (1)	610	599	620	
Percentage of sites certified on the relevant scope	76%	77%	77%	
Number of sites certified for Energy management (ISO 50001) (1)	160	158	162	
Proportion of certified sites in scope of consolidation	20%	19%	18%	
Number of quality-certified sites (1)	656	635	657	
of which ISO 9001	597	583	606	
Proportion of sites certified (across the total scope)	60%	62%	60%	

(1) The values are adjusted to the 2019 scope and/or to the scope to which the 2017-2019 environment applies.

RAW MATERIALS AND PRODUCTION WASTE	2019	2018	2017	GRI
Monitoring the goal to reduce non-recovered waste by 50% between 2010 and 2025	(11.5)%	(15.9)%	(13.2)%	
Quantity of waste generated	1.585 Mt	1.614 Mt	1.755 Mt	306-2
Quantity of hazardous waste generated	0.102 Mt	0.123 Mt	0.111 Mt	306-2
Quantity of non-recovered waste	0.515 Mt	0.517 Mt	0.575 Mt	306-2
Quantity of non-recovered hazardous waste	0.045 Mt	0.038 Mt	0.032 Mt	306-2
Quantity of waste reused or recycled	1.083 Mt	1.091 Mt	1.066 Mt	
Recycled materials incorporated in the product (cullet, gypsum, scrap iron)	8.382 Mt	8.961 Mt	8.297 Mt	
Natural raw materials saved	8.462 Mt	9.025 Mt	8.323 Mt	
ENERGY				
Monitoring the goal to reduce energy consumption by 15% between 2010 and 2025	(2.1)%	(2.9)%	(2.8)%	302-3
Total energy consumption of entire Group	41,974 GWh	44,111 GWh	45,789 GWh	302-1
Change in total energy consumption	(2,137) GWh (4.8)%	(1,678) GWh (3.7)%	1,267 GWh 2.8%	302-4
Variation in production in sellable units	(3)%	14%	9%	
Total indirect energy consumption	8,480 GWh	9,610 GWh	9,486 GWh	302-1
Change in indirect total energy consumption	(1,130) GWh (11.8)%	124 GWh 1.3%	191 GWh 2%	302-4
Electricity consumption	8,375 GWh	9,504 GWh	9,325 GWh	302-1
Consumption of renewable electricity generated on site	10 GWh	5 GWh	5 GWh	
Consumption of renewable electricity (electricity purchases, electricity generated on site and biomass)	2,454 GWh	2,343 GWh	1,731 GWh	
Utilities consumption (steam, hot water, etc.)	95 GWh	102 GWh	156 GWh	302-1
Total direct energy consumption	33,494 GWh	34,501 GWh	36,303 GWh	302-1
Change in direct total energy consumption	(1,007) GWh (2.9)%	(1,802) GWh (5.0)%	1,077 GWh 3.1%	302-4
Coal and coke consumption	3,714 GWh	3,654 GWh	5,576 GWh	302-1
Natural gas consumption	26,243 GWh	26,229 GWh	26,088 GWh	302-1
Petroleum products consumption	2,622 GWh	3,411 GWh	3,415 GWh	
Sale outside the Group of renewable electricity generated on site	97 GWh	112 GWh	99 GWh	
Sale outside the Group of utilities (steam, hot water, etc.) produced on site	0.7 GWh	0.7 GWh	2 GWh	
GHG EMISSIONS				
Monitoring the goal to reduce CO_2 emissions (scope 1+2) by 20% between 2010 and 2025	(14.5)%	(11.7)%	(7.6)%	305-4
Total CO_2 emissions (scope 1 and 2)	10.8 Mt	11.7 Mt	13.0 Mt	305-1
Change in total CO_2 emissions (scope 1 and 2)	(0.9) Mt (7.7)%	(1.3) Mt (10)%	0.4 Mt 3.2%	305-5
Direct CO_2 emissions (scope 1)	8 Mt	8.6 Mt	9.6 Mt	305-1
Variation in direct CO_2 emissions	(0.6) Mt (7)%	(1) Mt (10.4)%	0.4 Mt 4.3%	305-5
Other relevant indirect emissions (entire Group or scope of reporting concerned) of greenhouse gases, by weight (tons-equivalent of CO_2)	Not applicable	Not applicable	Not applicable	305-1
Indirect GHG emissions (purchases of electricity, steam, hot water) (scope 2)	2.7 Mt CO_2-eq	3.1 Mt CO_2-eq	3.4 Mt CO_2-eq	305-2
Change in indirect emissions of greenhouse gases (purchases of electricity, steam, hot water)	(0.4) Mt CO_2-eq (12.9)%	(0.3) Mt CO_2-eq (8.8)%	0 Mt CO_2-eq 0%	305-5
Development of CO_2 impact (scope 1+2) on Group turnover (2010 value: 0.47)	0,25 kgCO_2/€	0.28 kgCO_2/€	0.32 kgCO_2/€	305-4
Other indirect GHG emissions (scope 3) included in our "Science-Based Targets"	23.7 Mt			
OTHER EMISSIONS INTO THE AIR				
Monitoring the goal to reduce SO_2 emissions by 20% between 2010 and 2025	(57.5)%	(46.0)%	(44.8)%	
SO_2 emissions	11,366 t	18,213 t	18,229 t	305-7
Monitoring the goal to reduce NO_x emissions by 20% between 2010 and 2025	(23)%	(20.6)%	(19)%	
NO_x emissions	18,116 t	19,308 t	20,704 t	305-7
Monitoring the goal to reduce dust emissions by 20% between 2010 and 2025	(54.7)%	(49.0)%	(43.3)%	
Dust emissions	5,512 t	7,482 t	7,732 t	305-7

WATER	2019	2018	2017	GRI
Total water withdrawal	48.9 M of m^3	52.8 M of m^3	54.6 M of m^3	303-1
Surface water withdrawal on sites with very high water stress *(sites with withdrawal >5,000 m^3/year)*	57,763 M of m^3	59,806 M of m^3	61,202 M of m^3	303-2
Surface water withdrawal on sites with high and very high water stress *(sites with withdrawal >5,000 m^3/year)*	0.003 m^3 per unit produced	0.007 m^3 per unit produced	0.013 m^3 per unit produced	
Municipal water withdrawal	16.1 M of m^3	16.2 M of m^3	15.5 M of m^3	303-1
Surface water withdrawal	12.2 M of m^3	15.1 M of m^3	17.7 M of m^3	303-1
Ground water withdrawal	17.8 M of m^3	19.0 M of m^3	19.2 M of m^3	303-1
Monitoring the goal to reduce water discharge by 80% between 2010 and 2025	(34.5)%	(35.0)%	(36.9)%	
Total water discharge	25.3 M of m^3	27.6 M of m^3	27.5 M of m^3	306-1
Water discharges into the surrounding environment	16.2 M of m^3	18.9 M of m^3	18.4 M of m^3	306-1
Water discharges into the municipal waste water collection system	8.5 M of m^3	8.2 M of m^3	8.7 M of m^3	306-1
Quantity of water reused in production processes through internal recycling systems	275.5 M of m^3	322.2 M of m^3	322.6 M of m^3	
ENVIRONMENTAL EVENTS				
Number of serious major Group environmental events or accidents	0	0	1	

HEALTH AND SAFETY	2019	2018	2017	GRI
Group accident frequency rate (TRAR) (employees, temporary workers and permanent subcontractors)	2.2	2.4	2.6	403-2
Total recordable accident rate with and without lost time of more than 24 hours (employees, temporary workers and permanent subcontractors).	1.2	1.3	1.3	403-2
Group accident severity rate (employees)	0.09	0.09	0.11	403-2
Number of fatal incidents connected with the work of Saint-Gobain employees	2	1	1	403-2
Number of fatal incidents connected with the work of subcontractors	3	5	0	
Number of fatal incidents connected with the work of temporary workers	0	0	0	
Number of fatal incidents connected with the work of third parties	0	0	2	
Number of sites with over one million hours worked without lost-time accidents, and/or accumulating over five years of work without lost-time accidents	254	280	276	
Number of Health & Safety certified sites at the actual scope (OHSAS 18001 – ILO OSH 2001 – ISO 45000)	368	364	378	
Percentage of sites offering medical inspections at comparable scope	81%	80%	78%	
Number of occupational illnesses in France Definition reviewed in 2017	71	71	51	
Absenteeism rate	3.5%	3.6%	3.4%	
Percentage of employees covered by social security in France, and coverage rate	100% receive 95% coverage rate	100% receive 95% coverage rate	100% receive 95% coverage rate	401-2
Education, training, advising, prevention and risk control programs to assist employees in the event of severe illness	YES	YES	YES	
Extension of the program to families	Advice and assistance in case of severe accident	Advice and assistance in case of severe accident	Advice and assistance in case of severe accident	
Extension of the program to communities	Sometimes in collaboration with associations	Sometimes in collaboration with associations	Sometimes in collaboration with associations	
Proportion of health and safety agreements signed with entities representing personnel	5.2%	7.5%	5.8%	403-4

EMPLOYMENT	2019	2018	2017	GRI
Number of employees				
Total headcount	170,639 people	181,001 people	179,149 people	
Percentage of workers	40.6%	40.5%	40.6%	
Fixed-term employment contract[1]	6.1%	6.9%	6.7%	102-8
Percentage of fixed-term employment contracts transformed into permanent contract	35.4%	53.1%	48.6%	
Turnover rate	11.7%	11.0%	9.5%	
Resignation rate	6.1%	6.2%	5.4%	
Layoff rate	4.5%	3.7%	3.2%	
Managers turnover	10.7%	8.9%	8.0%	
Recruitment				
Hiring rate	16.3%	19.0%	16.1%	401-1
Number of employees hired	26,665 people	34,299 people	28,412 people	401-1
Hiring rate of young people under 30	48.6%	45.8%	44.8%	401-1
Hiring rate of employees aged 50 or older	8.3%	8.0%	7.3%	401-1
Hiring rate by gender M/F	74.2% 25.8%	73.6% 26.4%	74.4% 25.6%	401-1
Manager hiring rate by gender M/F	72.2% 27.8%	68.3% 31.7%	71.6% 28.4%	401-1
Proportion of youth contracts (work/study programs, apprenticeship etc.) in France	4.0%	4.2%	3.9%	
Work structure				
Overtime rate	4.0%	4.4%	4.1%	102-8
Percentage of temporary workers	4.6%	5.9%	5.1%	102-8
Rate of part-time employees	4.2%	4.2%	4.1%	102-8

(1) Basis of calculation: excluding North America, i.e. 86.2% of the Group scope.

DIVERSITY	2019	2018	2017	GRI
Gender diversity				
Employee distribution by gender (M/F)	77.6%/22.4%	77.4%/22.6%	77.8%/22.2%	102-8
Share of women managers among managers **Goal: 25% by 2020**	24.2%	23.8%	22.6%	405-1
Promotion of female managers among all management promotions	26.0%	27.7%	25.9%	405-1
Percentage of female managers hired	27.8%	31.7%	28.4%	
Percentage of female managers among all senior executives (senior management) **Goal: 25% by 2020**	17.1%	15.2%	12.7%	405-1
Percentage of women on the Executive Committee	23.5%	21.4%	17.6%	
Turnover rate by gender	11.5%/12.5%	10.7%/11.9%	9.4%/9.8%	
Age diversity				
Proportion of young people under 30	18%	18%	17.8%	405-1
Proportion of people between 30 and 50	57%	54%	55.1%	405-1
Proportion of people over 50	25%	28%	27.1%	405-1
Disability				
Proportion of disabled employees within the Group	1.5%	1.5%	1.6%	405-1
Proportion of disabled employees in France	2.9%	2.9%	3.0%	405-1
Number of workstations fitted out for disabled employees in France	193	222	182	

TALENT DEVELOPMENT	2019	2018	2017	GRI
Training (1)				
Proportion of payroll of training investment	0.93%	1.1%	1.1%	
Employees who received training during the year	79.1%	87.7%	87.2%	404-1
Average number of training hours per employee per year	31.6 hours	23.3 hours	19.2 hours	404-1
Average number of training hours per employee per year and by gender M/F	35.1 hours/21.0 hours	23.5 hours/22.9 hours	19.2 hours/19.6 hours	404-1
Share of technical internships and EHS training (2)	54.4% EHS training	41.4% EHS training	46,5% EHS training	

(1) According to the note on methodology in Chapter 9, Section 2.1.

(2) In 2016, the indicators are calculated based on the number of technical, EHS and personal development numbers of training courses.

EMPLOYEES' ENGAGEMENT	2019	2018	2017	GRI
Annual reviews				
Proportion of Group employees receiving annual reviews	59.8%	61.4%	61.3%	404-3
Proportion of non-managers receiving annual reviews	53.7%	56.3%	55.8%	404-3
Proportion of managers receiving annual reviews	88.8%	87.2%	89.1%	404-3
Employee relations				
Percentage of employees with employee representation	54.4%	53.7%	57.5%	
Percentage of Group employees covered by a collective bargaining agreement (in France)	64.9% (100% in France)	66% (100% in France)	69% (100% in France)	102-41
Number of agreements signed with employee representatives	1,437	1,506	1,595	
Minimum prior notice period before any organizational change	two weeks to several months, depending on the country	two weeks to several months, depending on the country	two weeks to several months, depending on the country	402-1
Group Savings Plan				
Proportion of shares held by Group employees	8.7%	8%	7.4%	401-2
Number of countries participating in the Group Savings Plan	47	47	42	401-2

NON-DISCRIMINATION	2019	2018	2017	GRI
Equal treatment				
Ratio of basic average male to female wages	0.95	0.91	0.91	405-2
Ratio of basic average male to female wages for junior managers	0.98	0.99	0.97	405-2
Ratio of basic average male to female wages for confirmed managers	0.95	0.95	0.95	405-2
Ratio of basic average male to female wages for senior managers	0.96	0.92	0.94	405-2
Ratio of total average male to female remuneration	0.93	0.88	0.87	405-2
Ratio of total average male to female remuneration for junior managers	0.97	0.97	0.95	405-2
Ratio of total average male to female remuneration for confirmed managers	0.93	0.93	0.93	405-2
Ratio of total average male to female remuneration for senior managers	0.93	0.88	0.91	405-2
Number of incidents declared				
Total incidents *of which:*	54	59	77	406-1
Disability	9	5	5	
Harassment	32	32	49	
Ethnic origin	3	1	1	
Gender	2	0	0	
Other	8	21	22	

GROUP VALUES	2019	2018	2017	GRI
Principles of Conduct and Action				
Training of managers in their first year	93%	96%	80.7%	412-2
Incorporation of the Principles into the employee welcome booklets (fixed-term and indefinite-term contracts)	100%	100%	100%	
Number of people receiving in-person training at the management school	703	651	619	
Number of trainers trained for local deployment	33	89	82	
Percentage of countries with at least one local trainer	100%	100%	93%	
Human rights				
Percentage of countries identified as human rights risks having a local trainer in the Principles of Conduct and Action	100%	100%	100%	
Number of incidents involving forced or compulsory labor	0	0	0	409-1
Number of incidents involving union freedom	2	1	1	407-1
Other incidents involving human rights, including child labor	0	0	0	
Reports received through the occupational whistle-blowing system *In 2017, a new occupational whistle-blowing system was set up in Brazil.*	537	406	210	103-2
Anti-corruption				
ACT training: training of managers in their first year	89%	95%	87.2%	
Number of cases of corruption reported	0	0	0	205-3
Compliance program				
Online Training Comply (anti-trust laws): proportion of managers trained in the 1st year after joining the Group	92%	94%	88.7%	
Compliance statements (Internal Audit program)	221	699	659	
Major fines for non-compliance with laws and regulations	0	0	0	206-1
Number of non-financial penalties for violation of laws and regulations	0	0	0	206-1

RESPONSIBLE PURCHASING	2019	2018	2017	GRI
Trade suppliers and outside contractors				
Total trade purchases covered by the Suppliers Charter	85.7%	83%	83.5%	
Proportion of suppliers per CSR performance level (evaluation includes in particular human rights, working conditions, fight against corruption, against forced labor, against child labor, etc.) as a percentage of sales(1)				
Critical suppliers	16%	9%	4%	414-2
Suppliers that require improvement	45%	18%	29%	414-2
High-performance suppliers	39%	73%	67%	414-2
Number of audited supplier plants:	60	70	46	
Critical suppliers	0%	0%	0%	
Suppliers that require improvement	68%	69%	62%	
High-performance suppliers	32%	31%	34%	
Responsible timber purchases	96.5%	95%	94%	
Non-trade suppliers and outside contractors				
Training in the Responsible Purchasing policy (including Purchasing Department)	2,525 (1,239)	2,734 (1,163)	2,279 (1,171)	
Total non-trade purchases covered by the Suppliers Charter	89.1%	82.6%	80.4%	
Proportion of suppliers per CSR performance level (evaluation includes in particular human rights, working conditions, fight against corruption, against forced labor, against child labor, etc.)				
Critical suppliers	2.7%	2.4%	1.8%	414-2
Suppliers that require improvement	91.5%	92.1%	92.7%	414-2
High-performance suppliers	5.7%	5.5%	5.5%	414-2
Number of audits: 428 third-party audits from 2011 and 179 audits managed by employees since 2016 including:				
Proportion of audits concluding on a “critical” CSR performance	8.9%	8.7%	8.5%	
Proportion of audits concluding on a “to be improved” CSR performance	59.3%	58.8%	60.9%	
Proportion of audits concluding on an “effective” CSR performance	31.9%	32.5%	30.6%	
Percentage of certified timber purchases (pallets)	95.8%	95.9%	96.2%	

(1) In contrast to the years 2018 and 2017, the 2019 figures do not include suppliers from the Nordic countries.

LOCAL IMPACT	2019	2018	2017	GRI
Local economic development				
Number of agreements signed with companies to create external jobs in France	3 agreements	9 agreements	40 agreements	203-2
Financial commitment pursuant to agreements to assist SMEs in France	€0.17 M	€0.43 M	€1.43 M	203-2
Number of days of technical support to SMEs in France	145 days	131 days	211 days	203-2
Number of external jobs created in France through the support of Saint-Gobain Développement	67 jobs	96 jobs	320 jobs	203-2
Support to local communities				
Investments in projects	€6.1 M	€6.8 M	€6.3 M	
Number of projects received by the International Saint-Gobain Initiatives Corporate Foundation	64	83	56	
Number of projects accepted by the International Saint-Gobain Initiatives Corporate Foundation	40	49	25	
Cultural sponsorship	€1.1 M	€1.1 M	€1.1 M	

5

Corporate governance

1. Composition and operation of the governing bodies

Following Sections 1.1 and 1.2, prepared with the assistance of the Board's Nomination and Remuneration Committee and the Lead Independent Director report, pursuant to Articles L.225-37 *et seq.* of the French Commercial Code, the composition of the Board and conditions for the preparation and organization of the Board's works (see Chapter 5, Section 4 for the entire report of the Board of Directors on corporate governance).

Compliance with the AFEP-MEDEF Corporate Governance Code

Compagnie de Saint-Gobain refers to and complies with the AFEP-MEDEF Corporate Governance Code for French listed companies in its updated version of June 2018, which may be found on the MEDEF website at the following address: www.medef.com

The Company's practices comply with all recommendations contained in the AFEP-MEDEF Code (the "AFEP-MEDEF Code").

AFEP-MEDEF Code recommendation revoked	Saint-Gobain practice and justification
None.	None.

1.1 Composition of the Board of Directors

1.1.1 Members of the Board of Directors

The Board of Directors consists of the 14 members named below, appointed for four-year terms. It includes one Director representing employee shareholders and two Employee Directors, appointed pursuant to the law, and one Lead Independent Director in charge of overseeing the efficient running of the Company's governance bodies.

73 %
INDEPENDENT DIRECTORS, COMMITTEE CHAIRMEN ALL INDEPENDENT

96 %
ATTENDANCE RATE

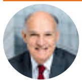
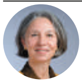
1
LEAD INDEPENDENT DIRECTOR

45 %
WOMEN

2
EMPLOYEE DIRECTORS

1
DIRECTOR REPRESENTING EMPLOYEE SHAREHOLDERS

The table below gives a general overview of the members of the Board of Directors and its Committees as at February 1, 2020.

	Name	Age	Independent (1)	Other terms (4)	■ ARC	● NRC	▼ SCSRC	Years of seniority
	**Pierre-André de Chalendar**	61	No	1			▼	14
	**Lydie Cortes**	48	No (2)	0		● (5)		1.5
	**Iêda Gomes Yell**	63	Yes	2		●		4
	**Anne-Marie Idrac**	68	Yes	3		★		9
	**Pamela Knapp**	61	Yes	3	■			7
	**Agnès Lemarchand**	65	Yes	2	■			7
	**Frédéric Lemoine**	54	No	0			▼	11
	**Dominique Leroy**	55	Yes	1		● (5)		2
	**Jacques Pestre**	63	No (3)	0				9
	**Denis Ranque**	68	No	1		●		17
	**Gilles Schnepp**	61	Yes	2	■			11
	**Jean-Dominique Senard** ◆	66	Yes	1			★	8
	**Philippe Thibaudet**	39	No (2)	0				1.5
	**Philippe Varin**	67	Yes	0	★			7
	NUMBER OF MEETINGS			**BOARD: 9**	**ARC: 4**	**NRC: 3**	**SCSRC: 5**	
	ATTENDANCE RATE			**96%**	**100%**	**90%**	**100%**	

(1) According to the criteria set forth in Recommendation 8.5 of the AFEP-MEDEF Code, see Chapter 5, section 11.2 for more details.
(2) Employee Director, appointed pursuant to the law, not included in the calculation of the Director independence ratio at the Board of Directors, in compliance with the recommendations of the AFEP-MEDEF Code, nor in the gender parity ratio at the Board of Directors, in accordance with the law.
(3) Director representing employee shareholders, appointed pursuant to the law, not included in the calculation of the Director independence ratio at the Board of Directors, in compliance with the recommendations of the AFEP-MEDEF Code, nor in the gender parity ratio at the Board of Directors, in accordance with the law.
(4) Held within listed companies (excluding Compagnie de Saint-Gobain).
(5) Since June 6, 2019.

■ AUDIT AND RISK COMMITTEE.
● NOMINATION AND REMUNERATION COMMITTEE.
▼ STRATEGY AND CORPORATE SOCIAL RESPONSIBILITY COMMITTEE.
★ PRESIDENT OF A COMMITTEE.
◆ LEAD INDEPENDENT DIRECTOR

Each year, specifically on the occasion of its assessment, the Board of Directors considers the desirable balance of its composition and that of the Committees. Regarding the diversity and internationalization of the Saint-Gobain Group's activities, it specifically provides for the presence of Directors with international experience, and ensures that the profiles and competencies represented at the Board reflect, to the greatest possible extent, the diversity of challenges the Group may face, to guarantee to shareholders and the market that its tasks are executed with the necessary competency, independence and objectivity.

The following biographies show the members of the Board of Directors as of February 1, 2020, their experience and their respective competencies, and the principal offices and functions they exercise or have exercised outside the Group over the past five years, to the best of the Company's knowledge.

PIERRE-ANDRÉ DE CHALENDAR

Chairman of the Board of Directors
Member of the Strategy and CSR Committee
Principal office held: Chairman and Chief Executive Officer of Compagnie de Saint-Gobain
Compagnie de Saint-Gobain – "Tour Saint-Gobain" – 12 Place de l'Iris – 92400 Courbevoie, France

61 years old
Nationality: French
Number of shares held: 186,465
Date of first election: June 2006
Term start date: June 2018
Term end date: General Shareholders' Meeting convened to approve the financial statements for fiscal year 2021

Expertise and experience
Pierre-André de Chalendar joined Compagnie de Saint-Gobain as Corporate Planning Director on October 1, 1989.
Appointed Director of Abrasives Europe (1992-1996), then of the Abrasives Division (1996-2000), the Head Office of which was located in Worcester, United States, before being named Vice President for the United Kingdom and the Republic of Ireland (2000-2002), Pierre-André de Chalendar was named Senior Vice President of Compagnie de Saint-Gobain in charge of the Building Distribution Sector in 2003.
Appointed Chief Operating Officer of Compagnie de Saint-Gobain in May 2005, elected Director in June 2006, then Chief Executive Officer of Compagnie de Saint-Gobain on June 7, 2007, he has been Chairman and Chief Executive Officer since June 3, 2010.
Within the Saint-Gobain Group, he is a Director of Saint-Gobain Corporation and of GIE SGPM Recherche. He was Chairman of the Board of Directors of Verallia (former Packaging Sector) from March 2011 to March 2014.
His offices and duties held outside the Group over the past five years are described below.
Pierre-André de Chalendar has been a Director of Compagnie de Saint-Gobain since June 2006.

Offices and duties held outside the Group
- Director of BNP Paribas*

Other offices held outside the Group and expired over the past five years
- Director of Veolia Environnement* (up to April 2015)

* Listed company

LYDIE CORTES

Employee Director
Member of the Nomination and Remuneration Committee
Principal office held: Product safety coordinator
Saint-Gobain Weber France – Route de Lyon 01960 Servas, France

48 years old
Nationality: French
Number of shares held: 1,752
Date of first election: May 2018
Term start date: June 2018
Term end date: General Shareholders' Meeting convened to approve the financial statements for fiscal year 2021

Expertise and experience
Lydie Cortes joined the Saint-Gobain Group in 1992, working at the Saint-Gobain Weber research and development laboratory on the Servas site, where she performed various functions, first as a color development and control technician, then as a technician for the development of control methods for finished pulp goods. From 1999 to 2012, she was an R&D technician for the formulation of finished powder goods.
Since 1996, Lydie Cortes has held various elected and union offices, including member of the Works Committee, Employee Representative and member of the Weber CHSCT, and, since 2004, CFDT Central Trade Union Representative.
Since 2007, Lydie Cortes has been a member of the Company's Works Council, and in 2010, she was elected Secretary of the European Convention and to the Saint-Gobain Select Committee.
Ms. Lydie Cortes has been the product safety coordinator (management and evaluation of hazard classes of raw materials and semi-finished goods, use awareness and prevention) at Saint-Gobain Weber France since 2012.
Lydie Cortes has been a Director of Compagnie Saint-Gobain since June 2018.

Offices and duties held outside the Group
None.

Other offices held outside the Group and expired over the past five years
None.

IÊDA GOMES YELL

Independent Director
Member of the Nomination and Remuneration Committee
Principal office held: Research fellow and Director of companies
Compagnie de Saint-Gobain – "Tour Saint-Gobain" – 12 Place de l'Iris – 92400 Courbevoie, France

63 years old

Nationalities: Brazilian, British

Number of shares held: 800

Date of first election: June 2016

Term start date: June 2016

Term end date: General Shareholders' Meeting convened to approve the financial statements for fiscal year 2019

Expertise and experience

Iêda Gomes Yell was Chief Executive Officer of Companhia de Gas de São Paulo from 1995 to 1998.
She then held various senior positions within the BP Group, in particular as Vice President of Pan American Energy (1998-1999), Vice President of Regulatory Affairs (1999-2000), Chairman of BP Brazil (2000-2002), Vice President of Development of BP Solar (2002-2004), and Vice President of BP Integrated Supply and Trading (2004-2011). She was also a member of the Board of BP Brasil Ltd and BP Egypt Investments Ltd up to 2011. Iêda Gomes Yell was also Vice President of New Ventures for the Middle East and South Asia (2004-2011) and Independent Chairman of British Taekwondo Ltd. (2011-2016).
She has also held several senior positions within professional organizations (the Brazilian Association of Infrastructure, the International Gas Union, the US Civil Engineering Foundation and the Brazilian Association of Gas Distribution Companies).
In 2011, she founded Energix Strategy Ltd, a consulting company on the energy markets based in Warrington that she chaired until October 2017.
In addition, Iêda Gomes Yell serves as Director of the Department of the Infrastructure of the Federation of the State Industry of São Paulo (since 2012), member of the Advisory Board of the Companhia de Gas de São Paulo (since 2013), Councilor to the Brazilian Chamber of Commerce of England, research fellow within the Fundação Getulio Vargas Energia and Director and co-founder of Will Latam, a non-profit organization for the development of women executives (since 2014). Iêda Gomes Yell has been a visiting research fellow at the Oxford Institute for Energy Studies since September 2012.
Her other offices and positions held during the last five years are described below.
Iêda Gomes Yell has been a Director of Compagnie de Saint-Gobain since June 2016.

Offices and duties held outside the Group

- Director and member of the Audit and Risk Committee of Bureau Veritas*
- Director and member of the Nominating and Corporate Governance Committee and Remuneration Committee of Exterran Corporation* (United States)
- Director and Chairman of the Governance Committee of InterEnergy Group Holdings**
- Director and member of the Strategy Committee and of the Human Resources, Compliance and Sustainability Committee of Prumo Logistica S.A.** (Brazil)

Other offices held outside the Group and expired over the past five years

- Director and member of the Compliance Committee of Odebrecht SA (Brazil)
- Founding Chairman of Energix Strategy Ltd** (up to 2017)

* Listed company
** Non-listed foreign company

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ANNE-MARIE IDRAC

Independent Director
Chairwoman of the Nomination and Remuneration Committee
Principal office held: Director of companies
Compagnie de Saint-Gobain – "Tour Saint-Gobain" – 12 Place de l'Iris – 92400 Courbevoie, France

68 years old

Nationality: French

Number of shares held: 827

Date of first election: June 2011

Term start date: June 2015

Term end date: General Shareholders' Meeting convened to approve the financial statements for fiscal year 2022

Expertise and experience

Anne-Marie Idrac held various positions from 1974 to 1995 in the Ministry of Public Works in the areas of environment, housing, urban development and transport, specifically as Chief Executive Officer of the Établissement public d'aménagement de Cergy-Pontoise (1990-1993), then Director of Land Transport (1993-1995).
In 1995, she was appointed Junior Minister for Transport, a position she held until June 1997.
She was elected Member of Parliament for Yvelines in 1997 and 2002, and Regional Council Member for Île-de-France from 1998 to 2002.
From 2002 to 2006, Anne-Marie Idrac was Chairman and Chief Executive Officer of RATP, then Chairman of SNCF from 2006 to 2008.
In March 2008, she was appointed Junior Minister for Foreign Trade, a position she held until November 2010.
Anne-Marie Idrac was also President of the European-France Movement from 1999 to 2005 and member of the Economic and Social Council from 2004 to 2008. She is also Chairman of the Advisory Board of the School of Public Affairs of Sciences Po Paris and Deputy Chairman of the Robert Schuman Foundation and is senior advisor of the firm Sia Partners. In addition, since 2017, Ms. Idrac has been Senior Representative of the French Government for autonomous vehicle development strategy and, since January 2020, President of the France Logistique association.
Her other offices and positions held during the last five years are described below.
Anne-Marie Idrac has been a Director of Compagnie de Saint-Gobain since June 2011.

Offices and duties held outside the Group

- Director of Air-France KLM*
- Director of Bouygues*
- Director of Total*
- Director of Sanef

Other offices held outside the Group and expired over the past five years

- Chairman of the Supervisory Board of Toulouse-Blagnac Airport (until 2018)
- Member of the Supervisory Board of Vallourec* (up to May 2015)
- Director of Médiobanca* (Italy) (up to 2014)

* Listed company

PAMELA KNAPP

Independent Director
Member of the Audit and Risk Committee
Principal office held: Director of companies
Compagnie de Saint-Gobain – "Tour Saint-Gobain" – 12, place de l'Iris – 92400 Courbevoie, France

61 years old

Nationality: German

Number of shares held: 1,818

Date of first election: June 2013

Term start date: June 2017

Term end date: General Shareholders' Meeting convened to approve the financial statements for fiscal year 2020

Expertise and experience

Pamela Knapp began her career in 1987 as an M&A consultant at Deutsche Bank Morgan Grenfell GmbH and Fuchs Consult GmbH.
In 1992, she was named Director of Strategic Projects, then of the Maintenance & Services Branch in the Transportation Systems Division of the Siemens Group, where she served until 1997. From 1998 to 2000, she was a board member and Chief Financial Officer (CFO) of Siemens SA, Belgium and Luxembourg.
In 2000, she became Director of the Siemens Group's central Corporate Development Executives Department then, starting in 2004, board member and Chief Financial Officer of the Power Transmission and Distribution Division of the Siemens Group, until 2009. From 2009 until October 2014, she was a member of the Management Board of GfK SE. Pamela Knapp was also a member of the Supervisory Board of Monier Holdings SCA from 2009 to 2013.
Since May 2018 she has been a member of the Supervisory Board and Audit Committee of Lanxess AG, Germany.
Her other offices and positions held during the last five years are described below.
Pamela Knapp has been a Director of Compagnie de Saint-Gobain since June 2013.

Offices and duties held outside the Group

- Member of the Supervisory Board, the Nomination, Remuneration and Governance Committee and the Finance and Audit Committee of Peugeot SA*
- Director and member of the Audit Committee of NV Bekaert* (Belgium)
- Member of the Supervisory Board and Audit Committee of Lanxess AG* (Germany)

Other offices held outside the Group and expired over the past five years

- Member of the Management Board of GfK SE, (Germany) (2009-2014)
- Director of HKP Group AG (Switzerland) (2012-2019)
- Director and member of the Audit Committee of Panalpina World Transport (Holding) Ltd* (Switzerland) (2015-2019)

AGNÈS LEMARCHAND

Independent Director
Member of the Audit and Risk Committee
Principal office held: Director of companies
Compagnie de Saint-Gobain – "Tour Saint-Gobain" – 12 Place de l'Iris – 92400 Courbevoie, France

65 years old

Nationality: French

Number of shares held: 2,252

Date of first election: June 2013

Term start date: June 2017

Term end date: General Shareholders' Meeting convened to approve the financial statements for fiscal year 2020

Expertise and experience

Agnès Lemarchand began her professional life with various operational responsibilities within the Rhône-Poulenc Group from 1980 to 1985.
Appointed in 1986 as Chief Executive Officer of Industrie Biologique Française (IBF), she created IBF Biotechnics, a subsidiary of the Rhône-Poulenc Group and the Institut Mérieux, in the United States in 1987, of which she was appointed Chairman and Chief Executive Officer.
In 1991, she joined the Ciments Français Group as Chief Executive Officer of Prodical, an industrial minerals subsidiary which she led from 1991 to 1996. She joined the Lafarge Group in 1997, held the position of Director of strategy for the Specialty Materials branch, then in 1999 was appointed Chairman and Chief Executive Officer of Lafarge Chaux.
In 2004, she took over, together with its senior executives, the Lafarge Chaux subsidiary in the United Kingdom and founded Steetley Dolomite Limited, where she served as executive Chairman for 10 years before selling the company to the industrial group Lhoist. Agnès Lemarchand was a member of the Supervisory Board of Mersen from 2007 to 2013 and member of the Economic, Social and Environmental Council (Economic Activities Section), from 2012 to 2014. She is a member of the ESG Committee of the Institut français des administrateurs.
Her other offices and positions held during the last five years are described below.
Agnès Lemarchand has been a Director of Compagnie de Saint-Gobain since June 2013.

Offices and duties held outside the Group

- Director of Solvay SA* (Belgium)
- Director of BioMérieux*

Other offices held outside the Group and expired over the past five years

- Chairman of Orchad SAS (up to October 2019)
- Director of CGG* (up to November 2017)
- Member of the Supervisory Board of Vivescia Industries, representing BPI France Participations (up to December 2015)
- Member of the Supervisory Board of Areva* (up to January 2015)
- Executive Chairman of Steetley Dolomite Limited (United Kingdom) (up to 2014)

* Listed company

FRÉDÉRIC LEMOINE

Director
Member of the Strategy and CSR Committee
Principal office held: Chairman of Allegro Cantabile
Compagnie de Saint-Gobain – "Tour Saint-Gobain" – 12 Place de l'Iris – 92400 Courbevoie, France

54 years old

Nationality: French

Number of shares held: 3,600

Date of first election: April 2009

Term start date: June 2016

Term end date: General Shareholders' Meeting convened to approve the financial statements for fiscal year 2019

Expertise and experience

From 1995 to 1997, Frédéric Lemoine was Deputy Chief of Staff to the Ministry of Labor and Social Affairs, in charge of coordinating Social security reform and hospital reform, and was simultaneously a Technical Advisor for the Secretary of State for Health and Social Security.
From 1998 to 2002, he reported to Serge Kampf and the Management Board of Capgemini as Vice-Executive Director, then Chief Financial Officer, before being appointed Senior Vice President in charge of Capgemini Ernst & Young finances.
From 2002 to 2004, he was Deputy Secretary-General to the office of the French President Jacques Chirac, specifically in charge of economic and financial affairs.
From October 2004 to 2008, he was Senior Advisor at McKinsey. From March 2005 to April 2009 he was Chairman of the Supervisory Board of Areva, and member and then non-voting member of the Supervisory Board of Générale de Santé from 2006 to 2009.
He became a member of the Wendel Supervisory Board in June 2008, a position he resigned from upon his appointment as Chairman of the Management Board of Wendel in April 2009. In that capacity, Frédéric Lemoine was a Director of Legrand from 2009 to 2013. His ceased to hold office at Wendel on December 31, 2017 but remains its only representative on the Board of Directors of Compagnie de Saint-Gobain until 2020.
In 1992-1993, he led the Heart Institute of Ho Chi Minh City, Vietnam, and became from 2004 to 2013 General Secretary of the Alain Carpentier Foundation which supported that hospital.
His other offices and positions held during the last five years are described below.
Frédéric Lemoine has been a Director of Compagnie de Saint-Gobain since April 2009.

Offices and duties held outside the Group

- Chairman of Allegro Cantabile
- Director of Pictet Alternative Advisors Holding SA (Switzerland)

Other offices held outside the Group and expired over the past five years

- Chairman of the Management Board of Wendel* (2009-2017) and various offices in companies in which Wendel held an interest
- Chairman of the Board of Directors of Bureau Veritas* (up to 2017)

* Listed company

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DOMINIQUE LEROY

Independent Director
Member of the Nomination and Remuneration Committee
Principal office held: Senior Advisor at Bain & Company
Compagnie de Saint-Gobain – "Tour Saint-Gobain" – 12 Place de l'Iris – 92400 Courbevoie, France

55 years old

Nationality: Belgian

Number of shares held: 1,000

Date of first election: November 2017

Term start date: November 2017

Term end date: General Shareholders' Meeting convened to approve the financial statements for fiscal year 2022

Expertise and experience

Dominique Leroy held various positions at Unilever Belgium and Benelux for 24 years. Having started out in marketing, finance and client development, between 1999 and 2006 she was appointed first Director of Operations Division, then Director of Logistics and finally Director of Client Development at Unilever Foods Belgium. Up to 2011, she was then Director of Client Development and member of the Management Committee, then Managing Director of Unilever Benelux, where she also sat on the Management Committee from 2008 to 2011.
In 2011, she joined Proximus Group (formerly Belgacom) as Vice President with responsibility for sales and e-business for the Consumer Business Unit, before becoming its Executive Vice President in June 2012. Between January 2014 and September 2019, Dominique Leroy was CEO of Proximus Group, listed on the first market of Euronext Brussels. Since October 2019, she has been a Senior Advisor at Bain & Company.
At Proximus Group, she also chaired the Boards of Directors of BICS and Be-Mobile and was a Director of Proximus Art.
Dominique Leroy is currently an independent member of the Supervisory Board, the Governance and Appointments Committee and a member of the Sustainable Development and Innovation Committee of Ahold Delhaize. She chaired the International Advisory Board of the Solvay Brussels School of Economics and Management until October 2019.
Her other offices and positions held during the last five years are described below.
Dominique Leroy has been an independent Director of Compagnie de Saint-Gobain since November 2017.

Offices and duties held outside the Group

- Senior Advisor at Bain & Company (Belgium)
- Member of the Supervisory Board and member of the Governance and Appointments Committee and the Sustainable Development and Innovation Committee of Ahold Delhaize* (Netherlands)

Other offices held outside the Group and expired over the past five years

- Chief Executive Officer of Proximus* (Belgium) (up to September 2019)
- Director and Chairman of the Audit Committee of Lotus Bakeries* (up to 2018)

* Listed company

JACQUES PESTRE

Director representing employee shareholders
Principal office held: Senior Vice President of SGDB France in charge of Corporate Social Responsibility
SGDB France – Immeuble le Mozart – 13/15 rue Germaine Tailleferre – 75940 Paris cedex 19, France

63 years old

Nationality: French

Number of shares held: 3,447

Date of first election: June 2011

Term start date: June 2015

Term end date: General Shareholders' Meeting convened to approve the financial statements for fiscal year 2022

Expertise and experience

Jacques Pestre joined the Saint-Gobain Group over 30 years ago. He began his career there in 1980 within the Insulation Division as a field sales representative, then as Director of Sales (1982-1984), before being appointed Southwest Regional Director of Isover.
In 1987, Jacques Pestre was appointed Regional Director of Saint-Gobain Flat Glass, a position he held until 1988, before being appointed as Agency Head of Miroiteries de l'Ouest. From 1989 to 1995, Jacques Pestre was Chief Executive Officer of Somir SA. From 1995 to the end of August 2011, Jacques Pestre successively served as Operational Sales Director for Point.P BMSO (until 2000), Regional President for the Point.P Group (until 2007) then Area President for the Point.P Group (2010), Senior Vice President in charge of Specialist Brands of SGDB France.
Since September 2011, Jacques Pestre has been Deputy CEO of SGDB France responsible for the Point.P brand.
Jacques Pestre also serves as Chairman, Chairman of the Board of Directors or Director in the following companies of the Saint-Gobain Group Building Distribution Sector: DOCKS DE L'OISE, SONEN (since 2012), BMSO, BMCE, COMASUD, BMRA, Méridionale des Bois et Matériaux MBM, and CIBOMAT.
Jacques Pestre has been a Director of Compagnie de Saint-Gobain since June 2011 and Chairman of the Supervisory Board of FCPE "Saint-Gobain PEG France".

Offices and duties held outside the Group

None.

Other offices held outside the Group and expired over the past five years

None.

DENIS RANQUE

Director
Member of the Nomination and Remuneration Committee
Principal office held: Chairman of the Board of Directors of Airbus SE (1)
Airbus SE – 42 avenue Raymond Poincaré – 75116 Paris, France

68 years old

Nationality: French

Number of shares held: 888

Date of first election: June 2003

Term start date: June 2015

Term end date: General Shareholders' Meeting convened to approve the financial statements for fiscal year 2022

Expertise and experience

Denis Ranque began his career at the Ministry of Industry, where he held several positions in the energy sector, before joining the Thomson Group in 1983 as Planning Director.
The following year he was transferred to the Electronic Tubes Division, first as Director of the "Space" activity then, starting 1986, as Director of the Hyperfrequency Tubes Department. Two years later, this division became a subsidiary of Thomson Tubes Électroniques, for which he was appointed Chief Executive Officer in 1989.
In April 1992, he was appointed Chairman and Chief Executive Officer of Thomson Sintra "Submarine activities". Four years later, he became Chief Executive Officer of Thomson Marconi Sonar, the sonar systems joint venture of THOMSON-CSF and GEC-MARCONI.
In January 1988, Denis Ranque was appointed Chairman and Chief Executive Officer of the THOMSON-CSF Group, which in 2000 took the name THALES, which he left in 2009 due to a change of shareholder. He is currently Chairman of the Board of Directors of Airbus. Denis Ranque was Chairman of the Board of Directors of Mines Paris Tech, the *Cercle de l'Industrie*, the *Association Nationale de la Recherche et de la Technologie* and the *Haut Comité de Gouvernement d'Entreprise*. He is currently Chairman of the Board of Directors of the Fondation de l'École Polytechnique.
His other offices and positions held during the last five years are described below.
Denis Ranque has been a Director of Compagnie de Saint-Gobain since June 2003.

Offices and duties held outside the Group

- Chairman of the Board of Directors of Airbus SE* (Netherlands)
- Director of CMA-CGM

Other offices held outside the Group and expired over the past five years

- Director of Scilab Enterprises (up to 2017)

* Listed company
(1) As announced by the Airbus SE Group on April 10, 2019, Denis Ranque will step down as Chairman of the Board of Directors of Airbus SE at the end of the 2020 General Shareholders' Meeting.

GILLES SCHNEPP

Independent Director
Member of the Audit and Risk Committee
Principal office held: Chairman of the Board of Directors of Legrand(1)
Legrand – 128 avenue du Maréchal de Lattre de Tassigny – 87045 Limoges Cedex, France

61 years old
Nationality: French
Number of shares held: 800
Date of first election: June 2009
Term start date: June 2017
Term end date: General Shareholders' Meeting convened to approve the financial statements for fiscal year 2020

Expertise and experience
Gilles Schnepp began his career at Merrill Lynch in 1983 and was appointed Director of the Bonds and Derivatives Departments in 1988. In 1989, he joined the Legrand Group where he held several positions before being appointed Senior Vice President (2000), member of the Management Committee and Director (2001), Vice Chairman and Chief Executive Officer (2004), Chairman and Chief Executive Officer of Legrand (2006) and Chairman of the Board of Directors in 2018. He has also been President of the FIEEC (Federation of Electrical, Electronic and Communication Industries) since July 2013 and has been a member of the Medef since 2018, serving as a member of the Executive Council and Chairman of the Ecological and Economic Transition Commission. He has also been, since May 2019, Vice-President and Independent Reference Member of the Supervisory Board of Peugeot SA and President of the Appointments, Remuneration and Governance Committee and member of the Finance and Audit Committee of that company.
His other offices and positions held during the last five years are described below.
Gilles Schnepp has been a Director of Compagnie de Saint-Gobain since June 2009.

Offices and duties held outside the Group
- Chairman of the Board of Directors of Legrand*
- Vice-President and Independent Reference Member of the Supervisory Board, President of the Appointments, Remuneration and Governance Committee and member of the Finance and Audit Committee of the Peugeot SA*

Other offices held outside the Group and expired over the past five years
- Chairman and Chief Executive Officer of Legrand* (up to 2018)
- Various positions and functions within subsidiaries of the Legrand Group

* Listed company
(1) As was announced by the Legrand Group on February 28, 2020, Gilles Schnepp will step down as Chairman of the Board of Directors of Legrand on July 1st, 2020. He will remain a member of the Board of Directors of Legrand as from this date.

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JEAN-DOMINIQUE SENARD

Lead Independent Director
Independent Director
Chairman of the Strategy and CSR Committee
Principal office held: Chairman of the Board of Directors of Renault
Renault – 13 Quai Alphonse le Gallo – 92100 Boulogne-Billancourt, France

66 years old
Nationality: French
Number of shares held: 4,425
Date of first election: June 2012
Term start date: June 2016
Term end date: General Shareholders' Meeting convened to approve the financial statements for fiscal year 2019

Expertise and experience
Jean-Dominique Senard began his career with various financial and operational responsibilities within the Total Group from September 1979 to September 1987, before working at Saint-Gobain from 1987 to 1996.
From September 1996 to March 2001, he was Chief Financial Officer of the Pechiney Group and member of the Group's Executive Committee. He then managed the Primary Aluminum Division of the Pechiney Group until 2004. Then, as member of the Alcan Group Executive Committee, he was in charge of Pechiney's integration and Chairman of Pechiney SA.
Jean-Dominique Senard joined Michelin in March 2005 as Chief Financial Officer and member of the Executive Council of the Michelin Group. In May 2007, he became Non-Limited Partner of the Michelin Group before being appointed Limited Managing Partner in May 2011 alongside Michel Rollier, and then Chairman from May 2012 to May 2019. Jean-Dominique Senard was a Director of SEB from 2009 to 2013.
Jean-Dominique Senard was coopted as a new Director and elected Chairman of the Board of Directors of Renault on January 24, 2019.
His other offices and positions held during the last five years are described below.
Jean-Dominique Senard has been a Director of Compagnie de Saint-Gobain since June 2012.

Offices and duties held outside the Group
- Chairman of the Board of Directors of Renault*

Other offices held outside the Group and expired over the past five years
- Head of Management of Michelin** (up to 2019)

* Listed company

PHILIPPE THIBAUDET

Employee Director
Principal office held: EHS Operations Manager
Saint-Gobain Isover – 19 rue Paul Sabatier – 71102 Chalon-sur-Saône, France

39 years old
Nationality: French
Number of shares held: 686
Date of first election: May 2018
Term start date: June 2018
Term end date: General Shareholders' Meeting convened to approve the financial statements for fiscal year 2021

Expertise and experience
Philippe Thibaudet has spent his professional career at the Saint-Gobain Isover Chalon-sur-Saône plant as a continuous-shift production operator.
He began his union career path very early on, first at the Chalon-sur-Saône plant, then in the central, national and European union organizations of the Saint-Gobain Group as representative of the CGT.
He has been responsible for industrial activity and collective bargaining in all professional sectors covered by the CGT National Federation of Glass and Ceramic Workers.
Within the Saint-Gobain Isover and the Saint-Gobain Group union organizations, he was an employee representative, member of the CHSCT, member of the Works Committee, member of the Central Works Council, secretary of the CHSCT, member of the Company's Works Council, member of the Convention for European Social Dialogue, Trade Union Delegate, SGI Central Trade Union Delegate and FNTVC-CGT Federal Secretary. Lastly, he was also the CWC Alternate Representative on the Isover Board of Directors.
Philippe Thibaudet has been EHS Officer at Saint-Gobain Isover in Chalon-sur-Saône since July 1, 2019.
Philippe Thibaudet has been a Director of Compagnie de Saint-Gobain since June 2018.

Offices and duties held outside the Group
None.

Other offices held outside the Group and expired over the past five years
None.

PHILIPPE VARIN

Independent Director
Chairman of the Audit and Risk Committee
Principal office held: Chairman of the Board of Directors of Orano (1)
Orano – 1 place Jean Millier – 92400 Courbevoie, France

67 years old
Nationality: French
Number of shares held: 3,026
Date of first election: June 2013
Term start date: June 2017
Term end date: General Shareholders' Meeting convened to approve the financial statements for fiscal year 2020

Expertise and experience
Philippe Varin joined the Pechiney Group in 1978 as a researcher. He subsequently held various management positions within this Group (management control, strategy, project management), before being appointed as head of the Rhenalu Division in 1995 and then General Director of the Aluminum Division and member of the Group's Executive Committee in 1999.
In 2003, he joined the Anglo-Dutch Steelmaking Group Corus as Chief Executive Officer. Between 2006 and 2013, he was a Director of BG Group Plc.
Appointed Chairman of the Management Board of Peugeot SA in June 2009, he left the Group in June 2014. From January 2015 to December 2019, he was Chairman of the Board of Directors of Areva.
Philippe Varin is currently Chairman of the Board of Directors of Orano. He is also Chairman of France Industrie, Vice Chairman of the Conseil national de l'Industrie, and Chairman of the France Committee of the International Chamber of Commerce.
His other offices and positions held during the last five years are described below.
Philippe Varin has been a Director of Compagnie de Saint-Gobain since June 2013.

Offices and duties held outside the Group
- Chairman of the Board of Directors of Orano
- Chairman of PRM3C SASU

Other offices held outside the Group and expired over the past five years
- Chairman of the Board of Directors of Areva (2015-2019)
- Chairman of the Board of Directors of Peugeot SA* (2009-2014)
- Chairman of the Board of Directors of Peugeot Citroën Automobiles SA (2010-2014)
- Director of PCMA Holding BV (2009-2014)
- Director of Faurecia SA* (2009-2014)
- Director of Banque PSA Finance SA (2009-2014)
- Director of EDF* (2014-2016)

* Listed company
(1) As was announced by the Suez group on January 31, 2020, the Board of Directors of Suez* will appoint Philippe Varin as non-executive Chairman of the Board, subject to his appointment as a Director by the Suez Shareholders' Meeting on May 12, 2020.

1.1.2 Independence, diversity policy and representation of employee shareholders and employees on the Board of Directors

Independence

The Board has reviewed each Director's situation with regard to all the independence criteria set out in the AFEP-MEDEF Code on corporate governance of listed companies, with which the Company complies, at the proposal of the Nomination and Remuneration Committee.

The Board of Directors, at its meeting of February 27, 2020, also scrutinized, as it does every year, with the same attention as it reviewed the other criteria, the business relationships that existed between the Saint-Gobain Group and the other companies or groups of companies where each Director holds office. The Board's review, described below, concluded that, with the exception of Jean-Dominique Senard, Gilles Schnepp, Philippe Varin and Denis Ranque, none of these Directors, nor any company or group of companies within which they hold office as senior executives or exercise board chairmanship functions, has any business relationship with the Company, its group or its management.

The Board then carried out a quantitative and qualitative review of the case of Jean-Dominique Senard, Chairman of the Board of Directors of Renault, Gilles Schnepp, Chairman of the Board of Directors of Legrand, Philippe Varin, Chairman of the Board of Directors of Orano, and Denis Ranque, Chairman of the Board of Directors of Airbus, and the business relationship between, respectively, the Renault Alliance (Renault, Nissan, Mitsubishi), Legrand, Orano or Airbus groups on the one hand and Saint-Gobain on the other.

The business transactions between each of these groups and Saint-Gobain, including business activities at an international level, represent less than 0.1% of their respective consolidated net sales and fall substantially below the 1% materiality threshold set by the Board. Furthermore, the Board of Directors highlighted that, because of the structure of the Saint-Gobain Group, its size and the diversity of its business activities, the Board's role was not designed to intervene in the business relationships of the Group's various business activities, which are managed in a decentralized manner by their respective heads. Jean-Dominique Senard, Gilles Schnepp, Philippe Varin and Denis Ranque, therefore, in their capacity as Directors of the Saint-Gobain Group, have no direct or indirect decision-making powers within the establishment of or for maintaining these business transactions. If, however, for any extraordinary reason, such an issue should be discussed by the Board, the Board's internal rules regarding conflict of interest are such that the Director concerned would be required to inform the Chairman and CEO and the Lead Independent Director of his situation, and to abstain from participating in such debates or deliberations on the matter in question (see Chapter 9, Section 1.1.2).

On the basis of the above, the Board has deemed that Jean-Dominique Senard, Gilles Schnepp, Philippe Varin and Denis Ranque do not maintain, either directly or indirectly, any significant business relationship with the Group which may affect their freedom of judgment or their independence.

Chapter 5, Section 1.1.3 deals with conflicts of interest of members of the Board of Directors, and the absence of services contract between Directors and the Company or any company within the Group.

The Board of Directors concluded from its review of Directors' independence against the criteria set down by the AFEP-MEDEF code that, as of February 1, 2020, eight Directors out of eleven (*i.e.* 72.7%) completely satisfied the independence criteria, and were therefore considered to be independent Directors: Iêda Gomes Yell, Anne-Marie Idrac, Pamela Knapp, Agnès Lemarchand, Dominique Leroy, Jean-Dominique Senard, Gilles Schnepp and Philippe Varin. In compliance with the recommendations of the AFEP-MEDEF Code, Jacques Pestre, representing employee shareholders, and Lydie Cortes and Philippe Thibaudet, representing employees, were not included in calculating that proportion.

The table below summarizes the results of the independence review of each Director in relation to the criteria set out in the AFEP-MEDEF Code.

	Criteria [1]							
Director	**Criterion 1:** ***Employee or Executive Director during the preceding five years***	**Criterion 2:** ***Cross-directorships***	**Criterion 3:** ***Significant business relationships***	**Criterion 4:** ***Family relationships***	**Criterion 5:** ***Statutory Auditor***	**Criterion 6:** ***Term of office greater than 12 years***	**Criterion 7:** ***Non-Executive Director***	**Criterion 8:** ***Major shareholder***
Pierre-André de Chalendar	×	✓	✓	✓	✓	×	✓	✓
Lydie Cortes	×	✓	✓	✓	✓	✓	✓	✓
Iêda Gomes Yell	✓	✓	✓	✓	✓	✓	✓	✓
Anne-Marie Idrac	✓	✓	✓	✓	✓	✓	✓	✓
Pamela Knapp	✓	✓	✓	✓	✓	✓	✓	✓
Agnès Lemarchand	✓	✓	✓	✓	✓	✓	✓	✓
Frédéric Lemoine	✓	✓	✓	✓	✓	✓	✓	× [2]
Dominique Leroy	✓	✓	✓	✓	✓	✓	✓	✓
Jacques Pestre	×	✓	✓	✓	✓	✓	✓	×
Denis Ranque	✓	✓	✓	✓	✓	×	✓	✓
Gilles Schnepp	✓	✓	✓	✓	✓	✓	✓	✓
Jean-Dominique Senard	✓	✓	✓	✓	✓	✓	✓	✓
Philippe Thibaudet	×	✓	✓	✓	✓	✓	✓	✓
Philippe Varin	✓	✓	✓	✓	✓	✓	✓	✓

In this table, ✓ represents a criterion of independence that has been met and × represents a criterion of independence that has not been met.

(1) According to the criteria set out in Recommendation 8.5 of the AFEP-MEDEF Code: (i) not be or not have been within the previous five years an employee or executive officer of Compagnie de Saint-Gobain or employee, executive officer or Director of a company within the Compagnie de Saint-Gobain scope of consolidation, (ii) not hold a cross-directorship as defined by Recommendation 8.5.2 of the AFEP-MEDEF Code, (iii) not have a significant business relationship with the Saint-Gobain Group, (iv) not be related by close family ties to a corporate officer of Compagnie de Saint-Gobain, (v) not have been Statutory Auditor of Compagnie de Saint-Gobain within the previous five years and (vi) not be a Director of Compagnie de Saint-Gobain for more than twelve years, it being specified that the loss of the status of independent Director occurs on the date when this twelve years is reached, (vii) not receive, for a non-executive officer, variable compensation in cash or in the form of shares or any compensation linked to the performance of Compagnie de Saint-Gobain or the Saint-Gobain Group, and (viii) not represent a major shareholder of Compagnie de Saint-Gobain.

(2) This criterion was considered not to have been met despite Wendel's withdrawal from the capital of Compagnie de Saint-Gobain (see Section 2 of Chapter 7).

Diversity policy, complementarity of skills and Director experience

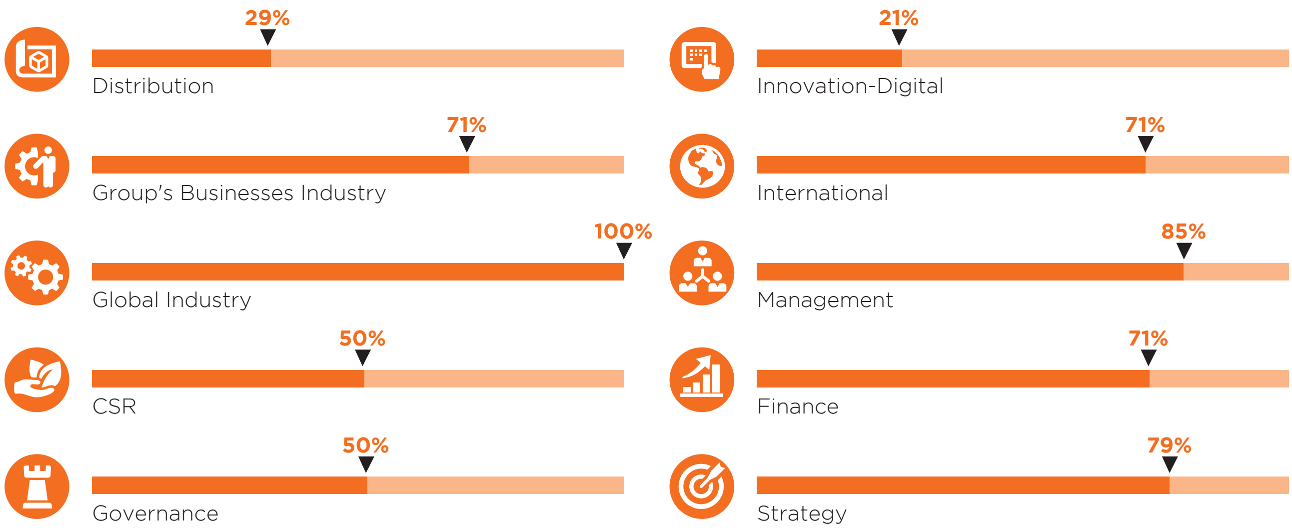
As of February 1, 2020, three members of the Board of Directors out of eleven (*i.e.*, 27%) are of foreign nationality (Jacques Pestre, representing the employee shareholders, and Lydie Cortes and Philippe Thibaudet, representing the employees, are not included to establish this percentage). Further, the majority of Directors has, or has had, very strong international exposure, managing groups with a significant proportion of their activities, or exercising significant duties, outside of France (see Chapter 5, Section 1.1.1).

In addition, as part of its self-assessment conducted in 2019 with the assistance of a specialized consulting firm (see Section 1.2.4 of Chapter 5), the Board of Directors was of the opinion that its composition satisfactorily reflected the necessary diversity in terms of age, gender and experience. The Board believes that its size is adequate. The skills and experience of its members have been judged to be varied and complementary, in terms of knowledge of the industry and the Group's businesses, as well as innovation/digital, management, strategy and matters of finance, governance and/or corporate social responsibility (see biographies in Chapter 5, Section 1.1.1).

It also believed that it would be desirable, for future recruitments, to strengthen digital/numeric/e-commerce skills, increase internationalization, and continue lowering the average age of the Board while maintaining a good balance between Directors with more seniority and more recently appointed Directors. It is deemed to be important for future recruitments to maintain the proportion of Executive Directors who hold office in another large group or have experience of that nature.

As such, Jean-François Cirelli, whose appointment as Director will be proposed at the next Shareholders' Meeting since Frédéric Lemoine did not want to renew his term of office, would contribute to the Board of Directors of Saint-Gobain his operational experience as a former executive director of GDF Suez, his experience in investments as senior advisor of Advent International, along with his in-depth knowledge of international investors in his capacity as Chairman of BlackRock's subsidiairy in France, Belgium and Luxembourg, one of the world's leading asset management companies, and, therefore, his expertise in strategy, management and finance.

The chart below summarizes the skills of the members of the Board of Directors as of February 1, 2020:



Lastly, the Board intends to maintain balanced numbers of men and women (see the paragraph on Gender parity below).

Gender parity

As of February 1, 2020, the Board includes five women among eleven members (45.5%), *i.e.* more than 40%, in accordance with the Law of January 27, 2011 on gender parity at Boards of Directors. In accordance with the law, Jacques Pestre, who represents employee shareholders, and employee representatives Lydie Cortes and Philippe Thibaudet are not counted in calculating this proportion.

Representation of employee shareholders and employees

Lydie Cortes and Philippe Thibaudet were appointed as Employee Directors by the Company's Works Council (*Comité de Groupe*) in accordance with the Company's bylaws. These were amended by the General Shareholders' Meeting of June 7, 2018 to provide for the appointment of two Employee Directors regardless of the size of the Board of Directors, even though, given its size, the law only required the appointment of one Employee Director. This initiative, in anticipation of the PACTE Law published in May 2019, is fully in line with Saint-Gobain's culture of social dialogue.

Jacques Pestre, the Director representing employee shareholders, is also appointed in accordance with the law. The Employee Directors and the Director representing employee shareholders are members of the Board of Directors in the same way as the other Directors and have voting rights. Subject to the laws applying specifically to them, these Directors are subject to all legal and statutory provisions, have the same rights and are subject to the same duties, as fixed, in particular, by the Board's internal rules, as those applicable to the other Directors.

By law, one member of the Economic and Social Committee (Vincent Cotrel, elected by the members of the Economic and Social Committee and representing employees) holds a seat on the Board of Directors in a consultative capacity.

The Company bylaws and the Board's internal rules provide that each Director must hold a minimum of 800 registered shares, with the law exempting employee Directors, whether shareholders or not, from this type of obligation.

1.1.3 Conflicts of interest and statements regarding members of the Board of Directors

To the best knowledge of Compagnie de Saint-Gobain, as of February 1, 2020, there are no family relationships between the Company's Directors and, within the past five years, no Director has been found guilty of fraud, been associated with a bankruptcy, sequestration or liquidation, received an official public penalty or sanction issued by a statutory or regulatory authority and/or been prevented by a court from acting as a member of an administrative, management or supervisory body of an issuer of securities, or from taking part in managing or conducting an issuer's business.

To the best of Compagnie de Saint-Gobain's knowledge, there are no conflicts of interest between Compagnie de Saint-Gobain and the personal and professional activities of the members of its Board of Directors, and there are no service contracts between any members of the Board and either Compagnie de Saint-Gobain or any of its subsidiaries that provide for the conferral of benefits at the term of such contracts. The Lead Independent Director reviewed for this purpose the responses provided by each Director to the questionnaire sent to them.

The Board's internal rules address conflicts of interest in the event such a situation arises: the concerned Director has the duty to inform the Chairman and Chief Executive Officer and the Lead Independent Director thereof, and to refrain from participating in the discussions and deliberations on the subject in question (see Chapter 9, Section 1.1.2).

Moreover, in accordance with the new Article L.225-39 of the French Commercial Code resulting from the PACTE Law, the Board has adopted a procedure for regularly assessing whether agreements relating to current operations and entered into under normal conditions meet these conditions. In summary, this procedure consists of:

- a reminder of the scope of the agreements at issue as well as a typology of the agreements that may be considered current for Compagnie de Saint-Gobain (excluding agreements that may be entered into with Directors); and
- the determination of the persons in charge, within the General Secretariat, the Treasury and Financing Department, the Finance Department and the Corporate Legal Department, of the classification of such agreements depending on the nature of the agreements in question.

In 2019, no agreements were entered into between Compagnie de Saint-Gobain and any of its Directors, and no agreements meeting the criteria for classification as related-party agreements were entered into between Compagnie de Saint-Gobain and the BNP Paribas Group of which Pierre-André de Chalendar is a director (see Chapter 5, Section 5).

1.1.4 Re-election of the Board of Directors and changes in its composition

The members of the Board of Directors may be re-elected in a staggered and balanced fashion as follows:

Date of expiration of the term of office	Director and date of first election
Upon completion of the General Shareholders' Meeting approving the financial statements for the fiscal year ended December 31, 2019	Iêda Gomes Yell (June 2016) Frédéric Lemoine (April 2009) Jean-Dominique Senard (June 2012)
Upon completion of the General Shareholders' Meeting approving the financial statements for the fiscal year ended December 31, 2020	Pamela Knapp (June 2013) Agnès Lemarchand (June 2013) Gilles Schnepp (June 2009) Philippe Varin (June 2013)
Upon completion of the General Shareholders' Meeting approving the financial statements for the fiscal year ended December 31, 2021	Pierre-André de Chalendar (June 2006) Lydie Cortes (May 2018) Philippe Thibaudet (May 2018)
Upon completion of the General Shareholders' Meeting approving the financial statements for the fiscal year ended December 31, 2022	Anne-Marie Idrac (June 2011) Jacques Pestre (June 2011) (1) Dominique Leroy (November 2017) Denis Ranque (June 2003)

(1) *Since Jacques Pestre did not stand for re-election as a member of the Supervisory Board of the Saint-Gobain PEG France corporate mutual fund (FCPE) as he wanted to exercise his retirement rights, his term of office on the Supervisory Board expired at the end of the Supervisory Board meeting of March 9, 2020, which entails the end of his term of office as Director representing employee shareholders in Compagnie de Saint-Gobain.*

A proposal will be made to the General Shareholders' Meeting to be held on June 4, 2020 to renew the terms of office as Directors of Iêda Gomes Yell and Jean-Dominique Senard. These Directors have shown high levels of attendance: in 2019, Iêda Gomes Yell attended all Board meetings and all meetings of the Nomination and Remuneration Committee, and Jean Dominique Senard, Lead independent Director, attended eight of the nine Board meetings and all meetings of the Strategy and Corporate Social Responsibility Committee, which he chairs.

Frédéric Lemoine did not wish to renew his term of office in view of Wendel's withdrawal from the share capital of Compagnie de Saint-Gobain (see Chapter 7, Section 2). During the years of his term, his experience and judgment have contributed greatly to the discussions and decisions of the Board.

A proposal will be made to the General Shareholders' Meeting of June 4, 2020 for the appointment of Jean-François Cirelli as Director. Jean-François Cirelli would contribute, in particular, to the Board of Directors of Saint-Gobain his operational experience as a former executive director of GDF Suez and his experience in investments as senior advisor to Advent International, along with his knowledge of international investors in his capacity as Chairman of BlackRock's subsidiary in France, Belgium and Luxembourg, one of the world's leading asset management companies and, therefore, his expertise in strategy, management and finance.

In addition, to replace Jacques Pestre, whose term of office as Director representing employee shareholders came to an end when his term of office as member of the Supervisory Board of the Saint-Gobain PEG France came to an end, the Board of Directors will co-opt, in accordance with the bylaws, a Director representing employee shareholders among the members of the supervisory boards of the corporate mutual funds of the Saint-Gobain Group's Saving Plan.

This cooptation will be subject to ratification by the General Shareholders' Meeting of June 4, 2020, for the remainder of Jacques Pestre's term of office, *i.e.* until the end of the General Shareholders' Meeting called to approve the financial statements for fiscal year 2022.

In the event of the renewal of the terms of office of Iêda Gomes Yell and Jean-Dominique Senard, the appointment of Jean-François Cirelli, independent Director, and the ratification of the co-optation of the Director representing employee shareholders, the number of women on the Board of Directors would be five out of eleven (*i.e.* a proportion of 45.5% calculated in accordance with the law) and the number of independent Directors on the Board would be nine out of eleven (*i.e.* a proportion of 81.8% calculated in accordance with the rules set forth in the AFEP-MEDEF Code).

Summary of changes in the composition of the Board of Directors

The following table shows the changes in the composition of the Board of Directors in fiscal year 2019 and the changes proposed to the General Shareholders' Meeting of June 4, 2020:

	General Shareholders' Meeting of June 6, 2019	General Shareholders' Meeting of June 4, 2020
Cessation of duties	None	Frédéric Lemoine Jacques Pestre (3)
Renewal	Anne-Marie Idrac (June 2011) (1) Dominique Leroy (November 2017) (1) Jacques Pestre (June 2011) (3) Denis Ranque (June 2003)	Iêda Gomes Yell (June 2016) (1) Jean-Dominique Senard (June 2012) (2)
Proposed nomination/ratification	None	Jean-François Cirelli (1) The co-opted Director representing employee shareholders

(1) *Independent Director.*
(2) *Lead independent Director.*

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The following table shows the changes in the composition of the Board with regard to independence, representation of women, and representation of foreign members during fiscal year 2019, and as foreseen by the end of the General Shareholders' Meeting of June 4, 2020, subject to the renewal, appointment and ratification of the cooptation of the Directors listed above:

	As from the General Shareholders' Meeting of June 7, 2018	As from the General Shareholders' Meeting of June 6, 2019	As from the General Shareholders' Meeting of June 4, 2020 (subject to approval)
Percentage of independent Directors (1)	73%	73%	82%
Percentage of women (2)	42%	45%	45%
Percentage of foreign nationals (3)	27%	27%	27%

(1) *In accordance with the rules set by the AFEP-MEDEF Code.*
(2) *Excluding Directors representing employees and, since the PACTE Law published in May 2019, excluding Directors representing employee shareholders.*
(3) *Excluding employee Directors appointed under specific mandatory legal provisions.*

Summary of changes in the composition of the Committees of the Board of Directors

The tables below show the changes in the composition of the three Committees of the Board of Directors during fiscal year 2019.

Audit and Risk Committee	Since the General Shareholders' Meeting of June 8, 2017
Chairman	Philippe Varin (1)
Members	Pamela Knapp (1) Agnès Lemarchand (1) Gilles Schnepp (1)

(1) *Independent Director.*

Nomination and Remuneration Committee	Between October 27, 2017 and June 6, 2019	Since the General Shareholders' Meeting of June 6, 2019
Chairman	Anne-Marie Idrac (1)	Anne-Marie Idrac (1)
Members	Iêda Gomes Yell (1) Pascal Laï (2) (3) Denis Ranque	Lydie Cortes (2) Iêda Gomes Yell (1) Dominique Leroy (1) Denis Ranque

(1) Independent Director.
(2) Employee Director, not included in the ratio of independent Directors, in accordance with the recommendations of the AFEP-MEDEF Code.
(3) Member of the Nomination and Remuneration Committee until June 7, 2018.

Strategy and Corporate Social Responsibility Committee	Since the General Shareholders' Meeting of June 8, 2017
Chairman	Jean-Dominique Senard (1)
Members	Pierre-André de Chalendar Frédéric Lemoine

(1) Independent Director.

1.2 Operation of the Board of Directors

1.2.1 Governance structure: combined Chairman of the Board/CEO roles and Lead Independent Director

Combination of the Chairman of the Board and CEO roles

At its meeting of June 3, 2010, the Board of Directors of Compagnie de Saint-Gobain resolved to recombine the roles of Chairman of the Board of Directors and Chief Executive Officer by appointing Pierre-André de Chalendar as Chairman and Chief Executive Officer.

The combination of the roles of Chairman of the Board of Directors and Chief Executive Officer, which were separated in June 2007 to ensure a smooth handover of powers from Jean-Louis Beffa, was decided following the cessation, by application of the age limit set out in the bylaws, of the role of Chairman of the Board of Jean-Louis Beffa who subsequently became honorary Chairman of Compagnie de Saint-Gobain, to Pierre-André de Chalendar.

Having discussed the matter most recently in its meeting of November 21, 2019 in connection with the executive session conducted by the Lead Independent Director, the Board of Directors concluded that -as it is- combining the two roles is in the best interests of the company as it is well suited to Saint-Gobain and to the experience and highly transparent approach of the Chairman and Chief Executive Officer, and it helps to ensure more responsive and efficient corporate governance and strategy implementation.

The assessment of the Board's work, which has taken place every year since 2013, found that all Directors were satisfied with combining the roles, and wished for this to continue including, in 2018, on the occasion of the renewal of Pierre-André de Chalendar's term of office as Director.

The Chairman and Chief Executive Officer is vested with the broadest authority to act under all circumstances on behalf of the Company within the scope of its corporate purpose and subject to the limits set by law, the bylaws and/or internal rules of the Board of Directors (see Chapter 5, Section 1.2.2 and Chapter 9, Section 1.1).

It should also be emphasized that the balance of power on the Board, which guarantees compliance with the rules of governance, is ensured by the role played in particular by:

- all Board Directors, especially, but not only, independent Directors, who account for 73% of the Board of Directors, 100% of members of the Audit and Risk Committee and three quarters of the members of the Nomination and Remuneration Committee, and the Committee Chairmen, all independent, all of whom are extremely competent and experienced; as well as;
- the permanent representatives of the main shareholders, the PEG corporate mutual fund and, until 2019, Wendel, and;
- the Employee Directors appointed by the Saint-Gobain Group Works Council, in accordance with the bylaws of the Company and pursuant to the law.

To this should be added:

- the specific role played in respect of governance matters and management of conflicts of interests by the Lead Independent Director, a position held by Jean-Dominique Senard, an independent Director, who has very good knowledge of the Group (see below);
- the appointment of a Chief Operating Officer effective January 1, 2019 (see Chapter 5, Section 1.3.1);

- the ability of the Directors to meet in the absence of the Executive Director during or after a Board meeting (see Chapter 5, Section 1.2.2 and Chapter 9, Section 1.1.2); and
- the limitation of the powers of the Executive Directors regarding all capital expenditures, restructuring, disposals, acquisitions and financial investment and divestment projects in individual amounts greater than €150 million, and any material transaction that fall outside the scope of Saint-Gobain's stated strategy, which require the prior approval of the Board of Directors (see Chapter 5, Section 1.2.2 and Chapter 9, Section 1.1.2).

Lead independent Director

The Board of Directors, taking into account the development of the practice within companies in France chaired by a combined Chair of the Board/CEO and the expectation of certain investors expressed during the dialogue that the Company has with them, has created the role of Lead Independent Director, a position held by Jean-Dominique Senard, an independent Director, since June 8, 2017.

The Lead Independent Director oversees in particular the efficient running of the Company's governance bodies. In particular, he is responsible for preventing the occurrence of conflict of interest situations, leading the assessment of the organization and operations of the Board of Directors, convening, chairing and facilitating executive sessions, being a point of contact for shareholders of Compagnie de Saint-Gobain on governance matters and ensuring that Directors receive the relevant information to exercise their duties under the best possible conditions. A description of his powers and the resources available to him appears in Chapter 9, Section 1.1.2.

The Lead Independent Director reports to the Board of Directors on the completion of his mission on an annual basis.

Activities during fiscal year 2019

In 2019, the Lead independent Director attended eight of the nine meetings of the Board of Directors and all meetings of the Strategy and Corporate Social Responsibility Committee, which he chairs.

At the meeting of the Board of Directors on February 27, 2020, Jean-Dominique Senard presented a review of his activity as Lead independent Director for fiscal year 2019. His work as Lead independent Director consisted of:

- working with the Chairwoman of the Nomination and Remuneration Committee to examine the independent status of the Directors in light of the criteria set out in the AFEP-MEDEF code (including through the review of conflict of interests questionnaires and the analysis of business relationships);
- verifying the existence and content of succession plans for the Chairman and Chief Executive Officer in the event of an unanticipated vacancy as well in the long term, and discussing them with the Chairman and Chief Executive Officer; presenting this work to the members of the Nomination and Remuneration Committee and to the Board together with the Chairwoman of the Nomination and Remuneration Committee;
- chairing, or co-chairing with the Chairwoman of the Nomination and Remuneration Committee depending on the topics being addressed, meetings of the Board held without the Executive Directors present ("executive sessions") (see Section 1.2.2 below);
- discussing with the Chairman and Chief Executive Officer the interactions and cooperation between that officer and the Chief Operating Officer;
- participating in the evaluation of the organization and operation of the Board and its Committees, which took place under the following conditions:

  The Lead Independent Director reviewed the draft questionnaire to be submitted to the Directors prepared by the specialized consulting firm selected to evaluate the Board.

  The Lead Independent Director spoke with the Chairman and Chief Executive Officer and the Chairwoman of the Nomination and Remuneration Committee, and was available to the Directors who wanted to discuss the individual contributions of the Directors to the work of the Board in light of their skills and their respective participation in deliberations.

  The specialized consulting firm presented the results of the Board's evaluation to the Directors, who then met in an executive session under the chairmanship of the Lead Independent Director. This was an opportunity to raise again the topic of separation or combination of the roles of Chairman of the Board of Directors and Chief Executive Officer (see Section 1.2.4 below);
- meeting with the future independent Director after discussing the selection of candidates with the Chairwoman of the Nomination and Remuneration Committee;
- at the request of the Chairman and Chief Executive Officer, meeting and engaging in dialogue with several shareholders about Saint-Gobain's principles of governance, in preparation for the 2019 General Shareholders' Meeting and, at the end of 2019, in preparation for the 2020 General Shareholders' Meeting;
- reviewing the draft agendas for the meetings of the Board of Directors and the Committees in fiscal year 2020;
- reviewing the section of this chapter on the "Composition and operation of the Board of Directors".

The Lead Independent Director presented a summary of his second year in that office to shareholders at the General Shareholders' Meeting held on June 6, 2019.

1.2.2 Operating rules of the Board of Directors – internal rules

In line with the recommendations of the AFEP-MEDEF corporate governance code for French listed companies, the Board of Directors adopted a set of internal rules in 2003, as a supplement to the applicable laws and regulations and the Company's bylaws, aimed at defining the conditions for the operation of the Board and its committees (Nomination and Remuneration Committee, Audit and Risk Committee, Strategy and Corporate Social Responsibility Committee), as well as the Lead Independent Director's responsibilities and powers.

The version of the Board's internal rules in force at February 1, 2020, which incorporates successive revisions of the AFEP-MEDEF Code and the PACTE Law, is reproduced in its entirety in Chapter 9, Section 1.1.2, with the exception of the provisions regarding the Board Committees which are reproduced below.

Board activities

The internal rules provide for Board activities to include the following:

- examination and approval of the Saint-Gobain Group annual report and consolidated and corporate financial statements, both annual and interim;
- examination and approval each year of the Saint-Gobain Group budget;
- examination and approval of the strategic orientations of the Saint-Gobain Group at least once a year and monitoring of their implementation, taking into account the social and environmental challenges of its business;
- prior approval of investment transactions, restructurings, disposals, acquisitions, taking or selling of equity interests in individual amounts greater than €150 million, and any significant transaction not falling within the strategy announced by the Saint-Gobain Group.

Ability to debate without the presence of the Executive Directors

The Board's current internal rules afford Directors the authority to meet without the presence of the Executive Directors during or after a session, in order to assess the performance of the Executive Directors and to reflect on the future of the Saint-Gobain's Group Management. Thus, each year, the Chairman and Chief Executive Officer shall leave the sessions of the Board and the Nomination and Remuneration Committee during such discussions (deliberations and votes) on issues involving the assessment of his performance and the setting of his variable compensation (February sessions), as well as during the Board's assessment, the discussions on the combination of the Chairman of the Board of Directors and CEO roles, on his succession plans and on his long-term compensation scheme (November sessions). The same rules apply to the Chief Operating Officer.

The Board intends to continue to meet in 2020 without the presence of the Executive Directors to discuss governance issues more generally, beyond the issues of Executive Director compensation and the assessment of the Board, at the initiative and under the chairmanship of the Lead Independent Director, co-chaired if necessary by the Chairwoman of the Nomination and Remuneration Committee if the Lead Independent Director is a different person and if topics within the purview of the Nomination and Remuneration Committee (including the succession plan and the components of the Executive Directors' compensation) are discussed. This option applies at the start of every meeting of the Board of Directors.

Prior and permanent information for Directors

At each meeting, the Board is provided with an analysis of the Saint-Gobain Group's operating income and net debt situation, prepared as of the end of the month preceding the meeting, as well as an update on the Saint-Gobain stock price compared to the CAC 40 index and an industry index.

Between meetings, the Directors receive copies of all press releases issued by Compagnie de Saint-Gobain and, as the case may be, any relevant information about events or transactions that are material for the Saint-Gobain Group. Directors are entitled to request any other documents they consider necessary to make an informed contribution to the Board's discussions; requests are put to the Chairman and Chief Executive Officer, who may submit the request to the Board for a decision.

The Lead Independent Director ensures that the Directors receive the relevant information to exercise their duties under the best possible conditions.

Directors' duties

The internal rules stipulate the duties of Directors, specifically with regard to stock trading ethics (status of occasional insider, closed periods, reporting of trades involving Saint-Gobain securities and the obligation to hold their Saint-Gobain shares in registered form), with regard to confidentiality and the management of potential conflicts of interest.

Other provisions in the internal rules

Finally, the internal rules provide for the distribution of the annual amount allocated by the General Shareholders' Meeting as compensation for the work of the Directors and the right of Directors to additional training on the specific activities of the Saint-Gobain Group, its businesses, business lines, and social and environmental responsibility challenges.

1.2.3 Principal activities of the Board and its Committees during fiscal year 2019

a) Principal activities of the Board during fiscal year 2019

The Board of Directors held nine meetings in 2019. The attendance rate of the Directors in office as of February 1, 2020 for all of those sessions was 96%. Nine of the fourteen Directors attended every meeting of the Board. Five Directors missed only one meeting. No Director missed more than one meeting.

The table below summarizes Director attendance, on an individual basis, at the meetings of the Board of Directors and the Committees of which they are members as of February 1, 2020.

	Attended			
	9	4	3	5
First and last name (function)	**Board meetings [1]**	**meetings of the Audit and Risk Committee**	**meetings of the Nomination and Remuneration Committee**	**meetings of the Strategy and Corporate Social Responsibility Committee**
Pierre-André de Chalendar *(Chairman and Chief Executive Officer)*	100%	N/A	N/A	100%
Lydie Cortes *(Employee Director)*	100%	N/A	100% [2]	N/A
Iêda Gomes Yell *(independent Director)*	100%	N/A	100%	N/A
Anne-Marie Idrac *(independent Director)*	100%	N/A	100%	N/A
Pamela Knapp *(independent Director)*	89%	100%	N/A	N/A
Agnès Lemarchand *(independent Director)*	89%	100%	N/A	N/A
Frédéric Lemoine *(Director)*	100%	N/A	N/A	100%
Dominique Leroy *(independent Director)*	100%	N/A	50% [2] [3]	N/A
Jacques Pestre *(Director representing employee shareholders)*	100%	N/A	N/A	N/A
Denis Ranque *(Director)*	89%	N/A	100%	N/A
Gilles Schnepp *(independent Director)*	100%	100%	N/A	N/A
Jean-Dominique *Senard (Lead Independent Director)*	89%	N/A	N/A	100%
Philippe Thibaudet *(Employee Director)*	89%	N/A	N/A	N/A
Philippe Varin *(independent Director)*	100%	100%	N/A	N/A

(1) The 89% rate corresponds to one missed meeting.

(2) As from June 6, 2019, the date of his appointment as a member of the Nomination and Remuneration Committee in accordance with the decision of the Board of Directors of November 22, 2018.

(3) The 50% rate corresponds to one of the two missed meetings held on or after June 6, 2019 taking into account pre-existing commitments at the time of her appointment.

The principal topics discussed during Board of Directors meetings are listed below.

Monitoring of the strategic orientations of the Group and its businesses

At each meeting, consistent with its internal rules, the Board is informed of the Group's situation and discusses it. During each meeting, including a half-day seminar dedicated to a presentation on the Group's strategy, the Board also reviewed and approved the Group's strategic orientations or a specific aspect of the strategy, such as a comparison with the main competitors and the position of a business (in particular Building Distribution and Piping) or a Region after having heard, if necessary, an operational manager from the relevant businesses or Regions.

The Board also reviewed the disposal projects implemented as part of the Group's portfolio optimization strategy, one of the two pillars of the Transform & Grow program, including the disposal of Building Distribution in Germany. It also reviewed contemplated acquisitions, such as the acquisition of Continental Building Products in the United States (see Chapter 1, Section 2 and Chapter 2, Section 5.4.2).

At this year's strategy seminar in September, the Board of Directors discussed the Group's businesses and Regions with the operational managers, in particular matters of capital allocation and portfolio movements. It also heard from new heads of central functions: marketing and development, innovation and technology, and industrial performance.

The Board also monitored the progress of the implementation of the new organizational structure as part of the Transform & Grow transformation plan as well as the progress of the cost reduction plan.

Financial management

Pursuant to its legal competency, the Board approved the annual and consolidated financial statements, as well as the various reports relating to them, after hearing the opinions of the Chairman of the Audit and Risk Committee and the Statutory Auditors. The Board also approved the draft resolutions to be submitted to the General Shareholders' Meeting of June 6, 2019, specifically the proposed dividend distribution, and the reports provided to shareholders, and convened the General shareholders' and holders of *Titres Participatifs*'s Meetings.

It approved the report on payments made to Governments (extractive industries).It approved the budget of the Saint-Gobain Group, various provisional management reports and documents, and renewed the annual authorizations granted to the Chairman and Chief Executive Officer to issue bonds, sureties and guarantees. In accordance with the law, it also adopted a procedure for assessing the current agreements entered into under normal terms and conditions and reviewed the related-party agreements and commitments entered into in prior years whose execution continued during fiscal year 2019.

It implemented the Company's stock buyback program.

Internal control and risk management

The Board of Directors undertook a review of the internal control and risk management processes in force within the Group, following analysis of the mapping of major financial and non-financial risks updated in 2019 by the Audit and Internal Control Department, and after hearing the report of the Chairman of the Audit and Risk Committee on these topics.

In particular, the Board of Directors reviewed the results of the audit conducted by an external service provider regarding the cybersecurity of the Saint-Gobain Group and of the revised post-audit cybersecurity monitoring plan.

On several occasions, it reviewed the position of the Company and Group with regard to certain risks, procedures, litigation (notably in relation to asbestos, competition, the Grenfell Tower fire in the United Kingdom, and the environment) and the evolving regulatory environment. The General Secretary reported on the implementation and changes in the Group's Compliance program (see Chapter 3, Section 1.1.2).

Lastly, the Board of Directors reviewed the services assigned to the Statutory Auditors and their network as authorized by the Audit and Risk Committee.

Corporate Social Responsibility/Climate change

Over four sessions, one point on the agenda was dedicated to corporate social responsibility matters, specifically the following topics:

- non-financial results and development of the dashboard to focus on the key challenges (see Chapter 2, Section 1.5 and Chapter 4, Section 1.2);
- climate change and reducing CO_2 emissions (carbon impact of production and contribution of Saint-Gobain solutions) and appearance on the CDP's A List for the first time;
- monitoring of CO_2 and energy roadmaps (reduction of energy consumption, in particular carbon), "R&D, CO_2 and energy" innovation programs;
- corporate social responsibility roadmap;
- compliance program (anti-trust, embargoes, fight against corruption);
- duty of vigilance and adoption of a Human Rights policy;
- human resources policy (in particular, non-discrimination and diversity policy, particularly with regard to the balanced representation of women and men including on governing bodies, professional and equal pay, talent management) (see Chapter 3, Section 3.3.2);
- Health and Safety policy (see Chapter 3, Section 3.1);
- environmental policy, for the purpose of contributing to the emergence of a low-carbon economy capable of preserving the common good (see Chapter 3, Section 4).

In addition, in April 2019, the Directors took part in a half-day seminar organized specifically for them by the Group, which was devoted to the circular economy and its challenges for the businesses. External experts, recognized internationally and in complementary fields of expertise, gave presentations to the Directors and discussed the following with them:

- the general outlook for and resources of the circular economy;
- the regulatory approach by country and sector;
- the circular economy in the construction world.

This seminar was intended to give every Director a better understanding of the challenges of the circular economy for the Saint-Gobain Group and its implications for the Group's strategy.

Governance

Pursuant to the AFEP-MEDEF code of corporate governance for French listed companies and under the supervision of the Lead Independent Director, the Board formally performed the annual assessment of its operations with a specialized firm of consultants and discussed the results of the assessment (see Chapter 5, Section 1.2.4).

On the proposal of the Lead Independent Director, it discussed the unification of the functions of Chief Executive Officer and Chairman of the Board of Directors.

It confirmed the existence and implementation of succession plans for the Chairman and Chief Executive Officer in the event of an unanticipated vacancy and the existence of a sufficient number of potential successors in the long term.

It reviewed the situation of Director independence. At the proposal of the Nomination and Remuneration Committee, it also discussed changes in its size and composition due to the expiration of the terms of certain Directors. It made proposals for the renewal of terms of office and the appointment of independent Directors in view of the General Shareholders' Meeting of June 4, 2020 (see Chapter 5, Section 1.1.4).

Lastly, it ruled on the training program for the Employees Directors .

Compensation of the Chairman and Chief Executive Officer and the Chief Operating Officer and long-term employee remuneration

The Board decided the general principles of the compensation policy for the Chairman and Chief Executive Officer and the Chief Operating Officer for 2019 and, at its February 27, 2020 meeting, for 2020 (see Chapter 5, Section 2.2.2 (e)). In particular, it reviewed and approved the various components of the compensation of Pierre-André de Chalendar and Benoit Bazin (fixed portion, variable portion and long-term compensation instruments) and the respective balance of these various components (see Chapter 5, Section 2.2) and decided to implement and approve the main characteristics of the 2019 performance share plan and set the performance criteria of that plan that may benefit Executive Directors and certain categories of employees (see Chapter 5, Section 2.4).

As part of the ongoing development of employee shareholders, the Board resolved to again offer its employees and former employees the opportunity to subscribe to, under certain conditions, a share capital increase reserved for them in 2020, up to a maximum of 6.1 million shares, *i.e.* slightly more than 1% of share capital at a maximum (see Chapter 7, Section 2.3).

b) Principal activities of the Committees during fiscal year 2019

Board Committees

The Board has established three Committees aimed at improving its operations and effectively contributing to the preparation of its deliberations: the Audit and Risk Committee, the Nomination and Remuneration Committee, and the Strategy and Corporate Social Responsibility Committee. These Committees do not have their own decision-making authority (barring specific provision otherwise provided for by the internal rules of the Board of Directors as regards the Audit and Risk Committee's approval of non-audit services assigned to the Statutory Auditors), and report to the Board regarding their activities, conclusions and proposals.

The Board's internal rules incorporate the rules governing the composition, prerogatives and responsibilities of each Committee, as described below.

The activities of these three Committees during fiscal year 2019 were regularly presented to the Board in the form of activity reports and proposals.

Composition of Committees

The Board's practice is to allow some time for all new Directors to adapt before proposing a position on a committee, since active participation on a committee requires familiarity with the operation of the Board of Directors and its Committees, and the ability to understand the major challenges with which the Company is faced, which can only be acquired after a certain period of time.

At the recommendation of the Nomination and Remuneration Committee, the Board of Directors thus considers, on a case-by-case basis, the opportunity to propose to Directors their participation in one of the three Committees, depending upon the most appropriate schedule. Further, in its examination of the composition of the Committees and appointment of new Directors to these Committees, the Board ensures compliance with the recommendations of the AFEP-MEDEF Code with regard to the proportion of independent Directors on these Committees. The Board of Directors decided, in particular, to appoint Dominique Leroy, independent Director, and, in accordance with the recommendations of the AFEP-MEDEF Code, Lydie Cortes, Employee Director, as members of the Nomination and Remuneration Committee at the close of the General Shareholders' Meeting of June 6, 2019.

Audit and Risk Committee	
Composition	
Philippe Varin	**Agnès Lemarchand**
Chairman	Member
Pamela Knapp	**Gilles Schnepp**
Member	Member

100 %
INDEPENDENT DIRECTORS

100 %
ATTENDANCE RATE

At February 1, 2020, all of the members of the Audit and Risk Committee (100%), including its Chairman, were independent Directors. No Executive Directors sit on the Committee.

By virtue of their current or past positions as Finance Directors and/or Chief Executive Officers, each Committee member has considerable experience and high-level expertise in financial and accounting matters (see biographies in Chapter 5, Section 1.1.1). It should be noted that each newly appointed member consults with the Group's Chief Financial Officer on specific accounting, financial and operational aspects of the Saint-Gobain Group.

Responsibilities (extracts from the Board's internal rules)

In accordance with the internal rules of the Board of Directors effective February 1, 2020, the Audit and Risk Committee has the following responsibilities:

- Without encroaching on the role of the Board of Directors, the Audit and Risk Committee is primarily responsible for overseeing the following matters:
  - the process of preparing financial and non-financial accounting information,
  - the efficiency of the internal control and risk management systems,
  - work performed by the Statutory Auditors on the financial statements of the Company and the Group,
  - Statutory Auditors independence;
- it ensures that any questions relating to the preparation and control of financial and non-financial accounting information are followed up on, that the accounting policies used to prepare the financial statements are both appropriate and applied consistently from one period to the next, and that the internal procedures used to collect and control accounting and financial information provide the necessary assurance in this regard;

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- it reviews the interim and annual financial statements of the Company and the Group, as presented by senior management, prior to their examination by the Board of Directors;
- it reviews the scope of consolidation and, if applicable, the reasons why any companies have been excluded;
- it reviews significant risks, including those of a social and environmental nature, and off-balance sheet commitments, based on an explanatory report prepared by the Chief Financial Officer;
- it receives updates from senior management on organization and operation of the risk management system;
- it reviews the Group's internal control action plan and receives updates at least once a year on the plan's results;
- it makes recommendations concerning the organization of the internal audit function and receives a copy of the internal audit program as well as executive summaries of the internal audit reports;
- it reviews the external Statutory Auditors' work plan and conclusions of their checks. As well as the post-audit report prepared by the Statutory Auditors concerning their main observations and the accounting options selected for preparation of the financial statements;
- it conducts the Statutory Auditor selection process, expresses an opinion on the amount of proposed statutory audit fees requested for performing tasks connected with a statutory audit, submits the results of the selection process to the Board and puts forward candidate Statutory Auditors for appointment by the General Shareholders' Meeting;
- it approves, with regard to rules in force and in accordance with the procedures implemented within the Group, under the responsibility of the Board of Directors, the services other than the certification of the accounts they can be assigned to the Statutory Auditors and members of their network to be provided to Compagnie de Saint-Gobain and other Group entities;
- each year it reviews the Statutory Auditors statement of independence, the amount and breakdown of the fees paid to them and to the members of their network by the Group over the past year, by category of service, as well as the percentage of these fees in their turnover, and reports to the Board its opinion concerning the Statutory Auditors' independence.

Activities in 2019

The Audit and Risk Committee met four times in 2019, in February, April, July and September, with an attendance rate of 100%.

The following were the major topics of discussion:

- detailed advance review of the annual and consolidated financial statements (February) and interim statements (July) and discussions with senior management, the Finance Department and the Statutory Auditors prior to the meetings scheduled with the Board of Directors. On these occasions, the Committee discussed with the Statutory Auditors the main audit issues raised with the Finance Department during the accounts closing process, particularly the key risk exposures and material off-balance sheet commitments described in the Chief Financial Officer's explanatory note to the Committee. The main points of the results of the statutory audit, as well as the accounting options applied, were also discussed;
- review of the Audit and Internal Control Department's activity report for 2019, its audit plan for 2020 and its report on major fraud incidents;
- review of work related to the 2019 update of the mapping of major financial and non-financial risks by the Audit and Internal Control Department and discussion with General Management, the Finance Department and the Audit and Internal Control Department;
- the Audit and Risk Committee was informed of developments in cyberthreats and reviewed and discussed the results of the Group's cybersecurity monitoring audit as well as the revised post-audit cybersecurity monitoring plan performed by an external service provider;
- review of the Cash Generating Units;
- update on cost reductions related to the implementation of the Transform & Grow program;
- the status of asbestos litigation, in particular in the United States and France. The Committee regularly discusses in detail with the Statutory Auditors the financial and accounting consequences of this litigation for the US subsidiaries involved and for the Group, in order to present a report on this issue to the Board;
- granted authorization for services other than statutory certification assigned to the Statutory Auditors and review of fees received by each Statutory Auditor of the Group's companies during fiscal year 2019 for their auditing assignments, as well as for their other services (see Chapter 9, Section 1.4);

The Committee also conducted, without any other attendance, interview of the Statutory Auditors, and then, individual interview of the Vice President – Financial Management, the Vice President – Treasury and Financing, Risks & Insurance, the Senior-Vice President in charge of Internal Audit and Internal Control, and the Chief Financial Officer, in accordance with the recommendations of the AFEP-MEDEF Code. It did not call on outside experts to assist in the fulfillment of its tasks, with the exception of the service provider tasked with the Saint-Gobain Group's cyber security audit.

The Committee reported to the Board of Directors on its activities during the Board meetings of February 21, May 22, July 25 and November 21, 2019.

Nomination and Remuneration Committee

Composition

Anne-Marie Idrac Chairman	**Dominique Leroy** Member (since June 6, 2019)
Lydie Cortes Member (since June 6, 2019)	**Denis Ranque** Member
Iêda Gomes Yell Member	

3/4
INDEPENDENT DIRECTORS, INCLUDING THE CHAIRMAN OF THE COMMITTEE

90 %
ATTENDANCE RATE

As of February 1, 2020, the Nomination and Remuneration Committee consisted of three independent Directors out of a total of four members (3/4), including its Chairwoman. Lydie Cortes, Employee Director has joined the Committee since the General Shareholders' Meeting of June 6, 2019, in accordance with the recommendations of the AFEP-MEDEF Code (see Chapter 5, Section 1.1.4), as did Dominique Leroy, independent Director. The Employees Director is not included in the computation of the ratio of independent Directors, in accordance with the recommendations of that code. No Executive Directors sit on this Committee.

Responsibilities (extracts from the Board's internal rules)

The Committee fulfills the duties of both a nominations committee and a remuneration committee, provided for in the AFEP-MEDEF Code.

According to the Board of Directors' internal rules in force at February 1, 2020, the Nomination and Remuneration Committee has the following responsibilities:

- it is responsible for making proposals to the Board in all cases where one or more seats on the Board fall vacant or the terms of one or more Directors are due to expire. the Committee organizes the procedure to select candidates for election as independent Directors, based on the criteria set out in the AFEP-MEDEF Code;
- it reviews annually each Director's situation in relation to the independence criteria set out in the AFEP-MEDEF code, and reports its conclusions to the Board;
- through its Chairwoman, it obtains assurance from the Chairman and Chief Executive Officer that a candidate has been identified for succession to his/her position in the event that it falls vacant for an unforeseen reason, and that enough potential successors are available to step in when they might be needed;
- it recommends candidates to the Board in the event that the position of Chairman and Chief Executive Officer falls vacant for any reason;
- it reviews any proposals by the Chairman and Chief Executive Officer for the appointment of a Chief Executive Officer and/or one or more Chief Operating Officers, and reports its conclusions to the Board;
- it makes recommendations to the Board concerning the amount and terms and conditions (in particular the criteria for the variable portion) of the compensation of the Chairman and Chief Executive Officer and, where applicable, of the Chief Operating Officers and concerning the determination of the other aspects of their positions;
- it discusses the Group's overall stock option and performance share policy and whether options should be exercisable for new or existing shares, and reviews senior management's proposals concerning stock option and performance share plans for the Saint-Gobain Group employees;
- it reviews the Chairman and Chief Executive Officer's recommendations concerning his implementation of long-term compensation plans;
- it makes recommendations concerning the granting of stock options, performance shares and long-term compensation to the Chairman and Chief Executive Officer and other members of the Saint-Gobain Group Management.

Activities in 2019

The Nomination and Remuneration Committee met three times in 2019, in February, September and November, with an attendance rate of 90%.

The following were the major topics of discussion:

- the Committee made recommendations to the Board on the variable portion of Pierre-André de Chalendar's 2018 compensation. It also made proposals to the Board regarding the compensation policy for the Chairman and Chief Executive Officer for 2019 pursuant to the *say on pay ex ante* regime (in particular, the amount of the fixed compensation and the cap, the criteria and the targets to use to determine the variable portion of his compensation for 2019 and the rules on caps to be applied with respect to the allocation of long-term compensation instruments in 2019). It made proposals to the Board for allocations or payment when the Compensation policy was implemented to the benefit of Pierre-André de Chalendar in 2019 (see Chapter 5, Section 2.2);
- the Committee made its recommendations to the Board in the context of the appointment of Benoit Bazin as Chief Operating Officer effective January 1, 2019. Notably, it made proposals to the Board regarding the compensation policy for the Chief Operating Officer for 2019 pursuant to the "say on pay" *ex ante* regime (in particular, the amount of the fixed compensation and the cap, the criteria and the targets to use to determine the variable portion of his compensation for 2019 and the rules on caps to be applied with respect to the allocation of long-term compensation instruments in 2019). It made proposals to the Board for allocations or payment when the Compensation policy was implemented to the benefit of Benoit Bazin in 2019 (see Chapter 5, Section 2.2);
- the Committee also discussed the stock option and performance share plans (the long-term, deferred, variable and conditional compensation plans for Executive Directors and certain employees are subject to performance criteria), decided to propose that the Board of Directors grant only performance shares in 2019 and, notably, set the service and performance criteria applicable to those plans;

- the Committee proposed that the Board of Directors submit for approval at the General Shareholders' Meeting of June 4, 2020 the renewal of the terms of office as Directors of Iêda Gomes Yell and Jean-Dominique Senard, which expire at the end of that Meeting. In addition, since Frédéric Lemoine did not wish to renew his term of office as Director in view of Wendel's withdrawal from the share capital of Compagnie de Saint-Gobain (see Section 2 of Chapter 7), the Committee initiated a search process with a specialized firm for a new independent Director with a profile as an executive of an industrial group with an international dimension or with such experience, or profiles with experience in digital technology, who is younger than the Board average. Following a selection process and interviews conducted both by the specialist firm and by the Chairwoman of the Committee and the Lead Independent Director, the Committee recommended to the Board, after discussion, that the candidacy of Jean-François Cirelli be submitted for the approval of the General Shareholders' Meeting of June 4, 2020;
- following discussions between the Chairwoman of the Committee and the Lead Independent Director on this matter, it confirmed the existence of succession plans for the Chairman and Chief Executive Officer in the event of an unanticipated long-term vacancy;
- the Committee examined the Directors' independence status with regard to all independence criteria set forth in the AFEP-MEDEF Code, together with the Lead Independent Director with regard to conflicts of interest and business relationships (see Chapter 5, Section 1.1.2);
- it made proposals regarding the training program of the employee Directors;
- finally, it reviewed the "Corporate Governance" section of the 2018 Registration Document.

The Committee reported to the Board on its activities and offered its recommendations during the Board meetings of February 21, September 26 and November 21, 2019.

Strategy and Corporate Social Responsibility Committee

Composition

JEAN-DOMINIQUE SENARD Chairman	**FRÉDÉRIC LEMOINE** Member
PIERRE-ANDRÉ DE CHALENDAR Member	

100 %

ATTENDANCE RATE

Responsibilities (extracts from the Board's internal rules)

According to the Board of Directors' internal rules in force at February 1, 2020, the Strategy and Corporate Social Responsibility (CSR) Committee has the following responsibilities:

It is responsible for examining and identifying potential improvements to the Group's business plan, reviewing any strategic issues proposed by its members.

It ensures that corporate social responsibility issues are taken into account when defining and implementing the Group's strategy.

Activities in 2019

The Strategy and CSR Committee met five times in 2019, in February, March, May, July, September and November, with an attendance rate of 100%.

Its work focused on the 2019 budget, the outlook and development of the Group's business, the progress of the implementation of the new organizational structure as part of the Transform & Grow transformation plan as well as the progress of the cost reduction plan, the Group's disposal projects - the Group's portfolio optimization strategy being one of the two pillars of the Transform & Grow program, and the acquisition projects (see Section 5.4.2 of Chapter 2) and all other strategic matters submitted to the Board. More specifically, the Committee examined certain aspects of the Group's strategy (notably of a business or a Region). It also proposed to the Board subjects to address during the course of the strategic seminar.

It also worked on corporate social responsibility matters, specifically the following topics: non-financial results and development of the dashboard to focus on priority challenges, climate change and reducing CO_2 emissions (carbon impact of production and contribution of Saint-Gobain solutions), monitoring CO_2 and energy roadmaps, "R&D, CO_2 and energy" innovation programs.

The Committee reported to the Board on its activities and offered its recommendations during the Board meetings of February 21, March 21, May 22, July 25, September 26 and November 21, 2019.

1.2.4 Board assessment

Procedure

Formal assessments of the Board's performance and that of the Committees are carried out each year, in accordance with the Board's internal rules.

These assessments are conducted with the assistance of outside consultants (as in 2019) every three years.

In the intervening years, it is carried out on the basis of a questionnaire sent to each of the Directors.

In accordance with the wishes of the Directors expressed at the end of the assessment conducted in 2018 to obtain, for those who so wish, feedback on their individual contributions, each year, the assessment also includes the following three stages:

- confidential review of each Director's individual contribution by the Chairwoman of the Nomination and Remuneration Committee, the Lead Independent Director and the Chairman and Chief Executive Officer;
- individual review for each Director with the Chairman of the Board of Directors; and
- the option for every Director who wishes so, to request feedback on his/her individual contribution from the Chairman and Chief Executive Officer or the Lead Independent Director.

The Directors' individual contributions are also closely examined by the Nomination and Remuneration Committee, and then by the Board, on the occasion of the renewal of the terms of Directors and recomposition of the Committees, as needed.

The organization of the 2019 assessment was decided by the Board at its meeting of September 26, 2019, upon proposal from the Lead Independent Director. The fourteen Directors in office as of that date were consulted and participated in the Board's assessment process conducted by the specialized consulting firm. The Directors who are members of a Board committee also reported on the operation of the Committees in which they participate.

Beforehand, the consultant had sent each of them an interview guide that had been previously validated by the Lead Independent Director

The firm reported the results of this assessment to the Board of Directors on November 21, 2019.

General observations

The assessments highlighted the satisfaction of the Directors with the significant progress made, over several years and, in particular, since the adoption of the Transform & Grow plan and the announcement of the new organisation. This positive perception is therefore confirmed.

The Directors are unanimously of the opinion that the dynamics of the Board, characterized by the interaction of the Directors in the decision-making process for all matters within their remit, and with the Chairman and Chief Executive Officer, and the performance of the Board, characterized by the quality of the decisions taken, are absolutely satisfactory and in net progress compared to the last assessment.

The Directors are of the opinion that the Board operates well, that it is independent, competent with a high proportion of Directors with general management experience, balanced and diverse in its composition, and addresses all topics within its remit. They highlighted the real implication of the Board in the discussion and approval of the strategy which was materialized by the active role into the strategic repositioning appreciated by all the Directors. They are satisfied with the relevance, quality, transparency and clarity of the information made available to them for the performance of their duties, in particular on the implementation of the Saint-Gobain Group's Transform & Grow transformation program, whose adoption gave rise to constructive discussions within the Board.

The Directors also praised the half-day seminar devoted to the circular economy organized specifically for them by the Group.

They noted the constructiveness of the dialogue and the free discussions within the Board and with senior management, in particular the Chairman and Chief Executive Officer whose availability they praise, the transparent operation of the Board, as well as the availability of the management.

The Directors emphasized the successful appointment of the Chief Operating Officer, who participates in all meetings of the Board of Directors, and the effective and balanced relationship between him and the Chairman and Chief Executive Officer.

They also emphasized the effective contribution of the employee Directors and the effective operation and quality of the work of the Board Committees.

Composition of the Board of Directors

The Board's size has changed over the last five years, from 18 members in December 2014 due to the incorporation of two employee Directors whose appointment was required by law, to 17 members after the 2015 General Shareholders' Meeting, 16 members after the 2016 General Shareholders' Meeting, then 14 members since the 2017 General Shareholders' Meeting (see Chapter 5, Section 1.1.4). It is now considered adequate. The composition of the Board is considered satisfactory.

The Directors believed that it would be desirable, for future recruitments, to consider increasing the internationalization, and continuing lowering the average age of the Board while maintaining a good balance between Directors with more seniority and more recently appointed Directors. It is deemed to be important for future recruitments to maintain the proportion of Executive Directors who hold office in other large groups or have experience of that nature.

The assessment of the Board carried out during 2019 revealed that the expertise and experience of the Directors were deemed varied and complementary, in terms of knowledge of the industry and the Group's Businesses and in terms of innovation/digital, management, strategy, finance, governance and/or corporate social responsibility knowledge.

Further to discussion, the Directors confirmed their desire to maintain the combined roles of Chairman of the Board of Directors and Chief Executive Officer (see Chapter 5, Section 1.2.1).

The responsibilities of the Lead Independent Director are unanimously considered adequate. The Directors believe that his work complements the work of the Nomination and Remuneration Committee's very well. The Lead Independent Director's personality and his discreet and efficient way of working are appreciated and the harmonious articulation with the Chairman and Chief Executive Officer was noted.

Results of implementing the 2019 recommendations and paths to improvement in 2020

Directors believe that the recommendations formulated upon completion of the 2018 assessment were duly taken into account in 2019. In particular, these involve further development in the following areas: climate change, value creation, stock price trends, activity portfolio rotation speed, changes in the business model and jobs related to digitization, analysis of technological risks and opportunities (in particular developments in cybersecurity risks) and the improvement of Directors' knowledge of the Group's main operational managers.

In order to sustain progress, the Board adopted the following conclusions on the proposal of the Lead Independent Director, resulting from the assessment:

- continue the reflection within the Nomination and Remuneration Committee regarding the evolution of the composition of the Board and the preparation of the succession and renewal within it;

- consider, in the context of future recruitments, increasing internationalization and continuing lowering the average age of the Board;
- continue the reflection on the future governance of the Group;
- consider the positioning and format of the Strategy Committee;
- continue to examine the following topics in greater detail: climate change and its strategic impact, value creation and stock price trends;
- closely monitor the implementation of the Transform & Grow plan and the potential or ongoing disposals and acquisitions;
- report to the Board on the roadshow process;
- continue the practice of executive sessions;
- organize training sessions on topics of interest for Saint-Gobain's activities;

1.2.5 Directors' induction process

The Board of Directors meets once a year at one of the Group's plants or research centers.

In May 2019, the Board of Directors visited the glass wool plant in Vamdrup, Denmark.

Each new Director may ask for training on the topic of his or her choice and visit the Group's plants, distribution facilities or research centers. In this context, new Directors may also visit various industrial or Building Distribution sites, and any Director may, at his or her request, meet with members of the Executive Committee (see Chapter 1, Section 4.2).

Further, employee Directors benefit from the law on supplementary training, the content of which is set every year by the Board of Directors, after consultation of such Employee Directors.

1.3 Group Management

1.3.1 Chairman and Chief Executive Officer and Chief Operating Officer

The General Management of Compagnie de Saint-Gobain consists of the Chairman and Chief Executive Officer and, since January 1, 2019, of a Chief Operating Officer. The operational organization of the Saint-Gobain Group's Management is provided by an Executive Committee chaired by the Chairman and Chief Executive Officer (see Chapter 1, Section 4.2).

Chairman and Chief Executive Officer

Since the combination of the offices of Chief Executive Officer of Compagnie de Saint-Gobain with Chairman of the Board of Directors on June 3, 2010, the position of Chairman and Chief Executive Officer has been held by Pierre-André de Chalendar, whose term as Director was renewed by the General Shareholders' Meeting of June 7, 2018 (see Chapter 5, Section 1.2.1).

The Chairman and Chief Executive Officer is vested with the broadest authority to act under all circumstances on behalf of Compagnie de Saint-Gobain within the scope of its corporate purpose and subject to the limits set by law, the bylaws and/or internal rules of the Board of Directors (see Chapter 5, Section 1.2.2 and Chapter 9, Section 1.1). On the balance of powers within the Board of Directors to ensure proper compliance with the rules of governance, see Chapter 5, Section 1.2.1.

Chief Operating Officer

At its meeting on November 22, 2018, the Board of Directors, on the proposal of the Chairman and Chief Executive Officer and the recommendation of the Nomination and Remuneration Committee, appointed Benoit Bazin as Chief Operating Officer effective January 1, 2019. He is more specifically in charge of the Saint-Gobain Group's transformation program announced on November 26, 2018 (see Chapter 1, Section 3). He also participates in meetings of the Board of Directors.

In 1995, Benoit Bazin joined the French Ministry of Economy and Finance as rapporteur to the Inter-Ministerial Committee for Industrial Restructuring. He then moved to the Treasury Department, where he was responsible for State investments in the aeronautics, electronics and defense industries.

He joined Saint-Gobain in 1999 as Director of the Abrasives Branch Plan. In September 2000, he was appointed Director of Planning of Compagnie de Saint-Gobain. In 2002, he became General Manager of North America and Agglomerates and Abrasives Worldwide in the Abrasives Branch. In 2005, he was appointed Chief Financial Officer of Compagnie de Saint-Gobain. Benoit Bazin headed the Building Distribution Sector from 2009 to the end of 2015 and the Construction Products Sector from 2016 to the end of 2018.

He was Senior Vice President of Compagnie de Saint-Gobain from 2010 to the end of 2018.

In addition, Benoît Bazin was a Director and member of the Essilor Audit and Risk Committee from 2009 to 2017, and Chairman of the Audit and Risk Committee from May 2016 to March 2017.

The Chief Operating Officer is subject to the same power limitations as the Chairman and Chief Executive Officer (See Chapter 5, Section 1.2.2 and Chapter 9, Section 1.1).

1.3.2 Executive Committee

As part of the transformation of the Saint-Gobain Group announced on November 26, 2018, the General Management Committee was replaced as of January 1, 2019 by an Executive Committee. This Committee, whose composition reflects the new organizational structure of the Saint-Gobain Group, comprises 17 members as of January 1, 2020 (see Chapter 1, Section 2). In addition to the Chairman and Chief Executive Officer and the Chief Operating Officer, the main operational and functional managers of the Saint-Gobain Group are members (see Chapter 1, Section 3).

The mission of the Executive Committee is to review operational management, coordinate project management and implement Saint-Gobain Group strategy. It meets every month.

2. Management and Directors compensation

This section, prepared with the assistance of the Board's Nomination and Remuneration Committee, describes the compensation for the Directors, the executive corporate officers and members of Group General Management, and sets out the long-term compensation schemes in place within the Group.

2.1 Compensation paid to Directors

2.1.1 Compensation policy for Directors (*Say on Pay ex ante*)

Directors receive compensation, set at an annual total of €1.1 million by the General Shareholders' Meeting of June 5, 2014 with effect from January 1, 2015.

The rules for the distribution of the Directors' compensation, applicable since the 2015 fiscal year, and agreed by the Board of Directors at its meeting of September 25, 2014, are as follows:

- the Chairman and Chief Executive Officer of Compagnie de Saint-Gobain does not receive any compensation in respect of his role as Director;
- the other members of the Board of Directors each receive a fixed amount of €24,750 per year plus €3,300 for each Board meeting attended during the year;
- the Chairmen and members of the Audit and Risk Committee, the Nomination and Remuneration Committee, the Strategy and Corporate Social Responsibility Committee (excluding Pierre-André de Chalendar) each receive a fixed amount of €5,500 and €2,750 per year, respectively, plus a variable portion of €2,200 for each Committee meeting attended during the year;
- the amounts granted in respect of the fixed base amount are pro-rated when terms of office begin or end during the course of a fiscal year;
- the compensation is paid in two half-yearly installments in arrears, with any balance available from the annual amount distributed at the beginning of the next year based on each Director's or Committee member's attendance rate at the prior year's Board or Committee meetings.

The variable fee represents the bulk of their compensation if Directors consistently attend both Board and Committee meetings.

The Lead Independent Director did not wish to receive any compensation in respect of this role.

2.1.2 Compensation components paid to Directors during the 2019 fiscal year or granted in respect of the same fiscal year, subject to the approval of the General Shareholders' Meeting of June 4, 2020 (*Say on Pay ex post*)

Order No. 2019-1234 of November 27, 2019 on compensation for Directors of listed companies requires that the fixed, variable and exceptional components of the total compensation and benefits of any kind paid or granted to company's Directors in respect of the past fiscal year are submitted each year for approval of the Ordinary Shareholders' Meeting. This vote is binding (as opposed to an advisory vote).

The table below shows the individual compensation received by the members of the Board of Directors (fixed and variable components combined) for their mandate as Directors in respect of fiscal years 2018 and 2019 pursuant to the compensation policy outlined in Section 2.1.1 above.

Table 3 – Summary of each Director's compensation (AMF nomenclature)

Non-Executive corporate officers	Gross amounts received (in EUR)	
	for 2019	for 2018
Lydie Cortes (1) (2)	82,162	35,867
Alain Destrain (2) (3)	-	38,002
Iêda Gomes Yell	86,940	85,715
Anne-Marie Idrac	89,690	93,922
Pamela Knapp	85,139	91,172
Pascal Laï (2) (3)	-	46,469
Agnès Lemarchand	85,139	80,257
Frédéric Lemoine	94,145	92,992
Dominique Leroy	78,560	62,954
Jacques Pestre	73,383	73,869
Denis Ranque	81,536	82,077
Gilles Schnepp	90,543	91,173
Jean-Dominique Senard	91,491	101,199
Philippe Thibaudet (1) (2)	67,979	35,867
Philippe Varin	93,293	88,465
TOTAL	**1,100,000**	**1,100,000**

(1) *Director as from June 7, 2018.*

(2) *It should be noted that, at the time they took up their positions and for the entire duration of their terms as Employee Director, Lydie Cortes, Alain Destrain, Pascal Laï and Philippe Thibaudet each decided to donate to the trade unions with which they are each affiliated, i.e. the Confédération Française Démocratique du Travail (for Lydie Cortes and Pascal Laï) and the Confédération Générale du Travail (for Alain Destrain and Philippe Thibaudet), respectively, all compensation (net of social charges) paid by the Company for their terms as Directors. The net amount of this compensation is consequently paid directly by Compagnie de Saint-Gobain to these trade unions.*

(3) *Director until June 7, 2018.*

With the exception of the Employee Directors and the Director representing employee shareholders, who received compensation for their salaried positions, the non-Executive Directors received no other compensation from Compagnie de Saint-Gobain or any Saint-Gobain subsidiary for their mandates in respect of the 2018 and 2019 fiscal years.

2.2 Compensation of executive corporate officers

2.2.1 General principles of the compensation policy for the executive corporate officers

The Board of Directors and the Nomination and Remuneration Committee are committed to ensuring that the compensation of the executive corporate officers complies at all times with the recommendations of the AFEP-MEDEF corporate governance code for French listed companies and in particular meets transparency and performance measurement requirements. They also ensure that it evolves taking into account the Group's performance and market practices.

The compensation package of the executive corporate officers is determined by taking into account all pay components (fixed compensation, annual variable compensation, multi-year variable compensation, compensation for loss of office and pension benefits), with a view to achieving a balanced mix of these components.

When setting the various components of the compensation of the executive corporate officers, the Board of Directors also takes into consideration the benchmarks of CAC 40 companies comparable to Saint-Gobain in terms of sales, workforce and international scope of operations.

The Board of Directors also seeks to ensure that the granting of long-term compensation instruments (stock options, performance shares and performance units, as the case may be) to the executive corporate officers in a given fiscal year does not represent a disproportionate share of their maximum total compensation in respect of that fiscal year and has conditioned these grants to demanding ceiling and holding rules.

2.2.2 Compensation and benefits allocated to the executive corporate officers

a) Summary of the compensation and benefits paid or granted to the executive corporate officers for the 2019 fiscal year

In line with the above principles, the compensation policies applicable to the Chairman and Chief Executive Officer and the Chief Operating Officer for 2019 were set by the Board of Directors at its meetings of February 21, 2019 and November 22, 2018, based on the recommandations of the Nomination and Remuneration Committee, and were approved by the General Shareholders' Meeting of June 6, 2019 (ninth and tenth Resolutions).

The following tables present a summary of the total compensation, stock options and performance shares granted to Pierre-André de Chalendar, Chairman and Chief Executive Officer, and to Benoit Bazin, Chief Operating Officer, for the fiscal years ended December 31, 2018 and December 31, 2019. No stock options or performance units were allocated to them in 2019.

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Table 1 – Summary of compensation, stock options and performance shares paid or granted to the executive corporate officers (AMF nomenclature)

(in EUR before social charges and income tax)	**2019 fiscal year**	**2018 fiscal year**
Pierre-André de Chalendar, Chairman and Chief Executive Officer		
Compensation paid or granted in respect of the fiscal year *(see Table 2 for details)*	2,740,303	2,314,317
Value of multi-year variable compensation allocated during the year	0	0
Value of stock options granted during the year *(see Table 4 for details)*	-	109,148
Value of performance shares granted during the year *(see Table 6 for details)*	1,803,267	1,090,961
TOTAL	**4,543,570**	**3,514,426**
Benoit Bazin, Chief Operating Officer as of January 1, 2019		
Compensation paid or granted in respect of the fiscal year *(see Table 2 for details)*	1,429,680	-
Value of multi-year variable compensation allocated during the year	0	-
Value of stock options granted during the year *(see Table 4 for details)*	-	-
Value of performance shares granted during the year *(see Table 6 for details)*	901,634	-
TOTAL	**2,331,314**	**-**

b) Compensation and benefits paid or granted to the executive corporate officers for the 2019 fiscal year

The tables below present the breakdown of the fixed and variable compensation and other benefits allocated to Pierre-André de Chalendar, Chairman and Chief Executive Officer, and to Benoit Bazin, Chief Operating Officer, for the fiscal years ended December 31, 2018 and December 31, 2019.

Table 2 – Summary of the compensation paid or granted to the executive corporate officers (AMF nomenclature)

	2019		2018	
(in EUR before social charges and income tax)	Amounts granted (2)	Amounts paid (3)	Amounts granted (2)	Amounts paid (3)
Pierre-André de Chalendar, Chairman and Chief Executive Officer				
Fixed compensation (1)	1,200,000	1,200,000	1,200,000	1,200,000
Annual variable compensation (1)	1,536,630	1,110,644	1,110,644	1,487,270
Multi-year variable compensation	0	0	0	0
Exceptional compensation (1)	0	0	0	0
Compensation in respect of the Director's term of office (4)	0	0	0	0
Benefits in kind: company car	3,673	3,673	3,673	3,673
TOTAL	**2,740,303**	**2,314,317**	**2,314,317**	**2,690,943**
Benoit Bazin, Chief Operating Officer as of January 1, 2019				
Fixed compensation (1)	750,000	750,000	-	-
Annual variable compensation (1)	677,925	0	-	-
Multi-year variable compensation	0	0	0	0
Exceptional compensation (1)	0	0	-	-
Compensation in respect of the Director's term of office (4)	N/A	N/A	-	-
Benefits in kind: company car	1,755	1,755	-	-
TOTAL	**1,429,680**	**751,755**	**-**	**-**

(1) *On a gross basis before taxes.*

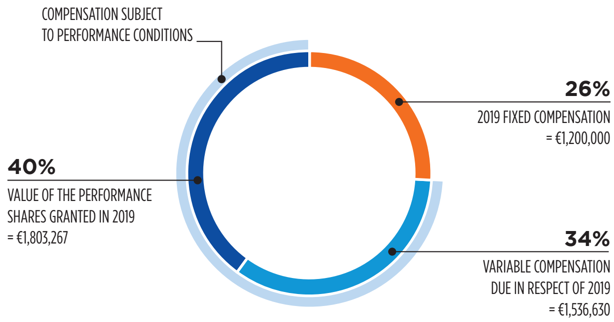
(2) *Compensation allocated during the year, regardless of payment date.*

(3) *Compensation paid during the year.*

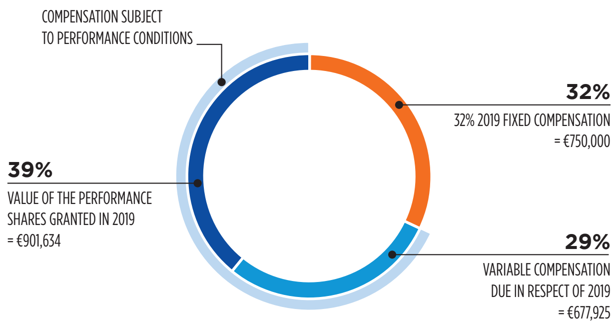
(4) *Compensation allocated to Compagnie de Saint-Gobain's Chairman and Chief Executive Officer for Director's duties in non-Group companies, in which the Group holds stakes, are repaid to Compagnie de Saint-Gobain in full.*

The graphs below show the breakdown of the various components of the compensation of Pierre-André de Chalendar, Chairman and Chief Executive Officer, and of Benoit Bazin, Chief Operating Officer, paid or granted during the 2019 fiscal year.

Pierre-André de Chalendar, Chairman and Chief Executive Officer



Benoit Bazin, Chief Operating Officer



The various components of the compensation paid to Pierre-André de Chalendar and Benoit Bazin during the 2019 fiscal year or granted in respect of the same fiscal year were decided by the Board of Directors at its meetings of November 21, 2019 and February 27, 2020 in accordance with the compensation policies for the Chairman and Chief Executive Officer and the Chief Operating Officer approved by the General Shareholders' Meeting of June 6, 2019 (ninth and tenth resolutions), as follows:

Fixed compensation

The fixed compensation paid to the Chairman and Chief Executive Officer and the Chief Operating Officer is commensurable with their experience and responsibilities as Chairman and Chief Executive Officer and Chief Operating Officer, and shall be compared with the fixed compensation offered for equivalent positions within similar large companies in terms of net sales, workforce and international scope of operations.

Fixed compensation for Pierre-André de Chalendar, Chairman and Chief Executive Officer

In line with the compensation policy approved by the General Shareholders' Meeting of June 7, 2018, the fixed compensation paid to Pierre-André de Chalendar was set at €1,200,000 for the duration of his term of office. The Board of Directors and the Nomination and Remuneration Committee noted, upon the renewal of Pierre-André de Chalendar's term of office and with the assistance of an external firm, that this level of compensation was at the median for industrial CAC 40 companies comparable to Saint-Gobain in terms of size, sales, workforce and international scope of operations.

Fixed compensation for Benoit Bazin, Chief Operating Officer

In line with the compensation policy approved by the General Shareholders' Meeting of June 6, 2019, the fixed compensation paid to Benoit Bazin was set at €750,000 for the 2019 fiscal year. The Nomination and Remuneration Committee noted, with the assistance of an external firm, that this level of compensation was at the median for industrial CAC 40 companies comparable to Saint-Gobain in terms of size, sales, workforce and international scope of operations.

Annual variable compensation

This compensation component recognizes the contribution of the Chairman and Chief Executive Officer and the Chief Operating Officer to the Group's results over the past fiscal year. It is expressed as a percentage of the annual fixed compensation.

At its meetings of November 22, 2018 and February 21, 2019, on the recommendation of the Nomination and Remuneration Committee, the Board decided to maintain the cap on Pierre-André de Chalendar's variable compensation for 2019 unchanged, at 170% of his annual fixed compensation (cap unchanged since 2014), and to set Benoit Bazin's variable compensation at 120% of his annual fixed compensation.

On the recommendation of the Nomination and Remuneration Committee, at the meeting held on February 21, 2019, the Board also decided on the components and objectives of Pierre-André de Chalendar and Benoit Bazin's 2019 variable compensation, as follows (structure unchanged for the Chairman and Chief Executive Officer since 2014):

- concerning the quantitative portion of the variable compensation, which represents two thirds, the four following objectives adapted to the strategy of the Group, each counting for 25%, were defined:
  - the "ROCE" (Return on Capital Employed),
  - the Group's operating income,
  - the Group's recurring net income per share,
  - The "OFCF" (Operating Free Cash Flow); and
- a qualitative portion consisting of one third, based on the following three objectives:
  - the further implemention of the Group's digital transformation,
  - implementation of the corporate social responsibility policy, and
  - implementation of the "Transform & Grow" plan.

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Quantifiable and qualitative variable compensation owed for fiscal year 2019 to the Chairman and Chief Executive Officer and the Chief Operating Officer was set by the Board of Directors at its meeting of February 27, 2020, upon proposal of the Nomination and Remuneration Committee, as follows:

		Weighting of objectives	Possible variation in respect of each objective (EUR)	Amount at Target level (EUR)	Percentage completion compared to Target	Completion (EUR)
Pierre-André de Chalendar, Chairman and Chief Executive Officer						
Quantifiable objectives* (2/3) of which:	Group operating income	25%	0 to 340,000	204,000	89%	180,846
	ROCE	25%	0 to 340,000	204,000	119%	242,862
	Group recurring net income per share	25%	0 to 340,000	204,000	129%	262,922
	OFCF	25%	0 to 340,000	238,000	143%	340,000
	Quantifiable total	**2/3**	**0 to 1,360,000**	**850,000**	**121%**	**1,026,630**
Qualitative objectives (1/3)	**Qualitative (global)**	**1/3**	**0 to 680,000**	**408,000**	**125%**	**510,000**
TOTAL VARIABLE SHARE		**100%**	**0 TO 2,040,000**	**1,258,000**	**122%**	**1,536,630**
Benoit Bazin, Chief Operating Officer as from January 1, 2019						
Quantifiable objectives* (2/3), of which:	Group operating income	25%	0 to 150,000	90,000	89%	79,787
	ROCE	25%	0 to 150,000	90,000	119%	107,145
	Group recurring net income per share	25%	0 to 150,000	90,000	129%	115,993
	OFCF	25%	0 to 150,000	105,000	143%	150,000
	Quantifiable total	**2/3**	**0 to 600,000**	**375,000**	**121%**	**452,925**
Qualitative objectives (1/3)	**Qualitative (global)**	**1/3**	**0 to 300,000**	**180,000**	**125%**	**225,000**
TOTAL VARIABLE SHARE		**100%**	**0 TO 900,000**	**555,000**	**122%**	**677,925**

* *The corresponding portion of variable compensation becomes payable if 86% to 92% of the Target is achieved, depending on the objective concerned, and it reaches its maximum if the Target reaches 106% to 110% of the Target, depending on the objective concerned.*

At Target, the variable compensation of the Chief Executive Officer and the Chief Operating Officer determined according to all quantifiable criteria amounts to €850,000 and €375,000, respectively. Within the Group, the budget is based on ambitious objectives that are not always met and the variable compensation's objectives are therefore challenging.

Qualitative variable compensation for Pierre-André de Chalendar, Chairman and Chief Executive Officer, and Benoit Bazin, Chief Operating Officer

The Board of Directors, at its meeting of February 27, 2020, on the recommendation of the Nomination and Remuneration Committee, set at 125% the global achievement rate of the three qualitative objectives applying to the 2019 variable compensation of Pierre-André de Chalendar, Chairman and Chief Executive Officer, and Benoit Bazin, Chief Operating Officer as outlined above. It took the following main achievements into consideration in particular:

- excellent implementation of the Transform & Grow program, in particular as regards to: the very good functioning of the new governance in the context of the new organization; the very good implementation of the portfolio optimization strategy (completed or announced disposals at end of 2019 in terms of sales – around €3.3 billion – exceed the target set at the beginning of the year; the acquisition of Continental has been completed in very good conditions); the excellent results of cost reductions (the initial target of €50 million was largely exceeded with €120 million of cost reductions realized) (see Chapter 1, Section 2, Chapter 2, Section 5.5.2 and Chapter 4, Section 1); profitable growth in line with the deployment of growth synergies in all geographies;
- very good further implementation of the Group's digital transformation, demonstrated by: the performance level of key indicators (e-commerce sales growth in key geographical zones for the Building Distribution activities particularly in France and the Nordic countries; very good level of coverage of the PIM in the construction products perimeter; growth of the traffic on the 100 main websites of the Group and increase of the number of followers on social media (see Chapter 1, Section 1.1.)); further deployment of the digitalization program within the Distribution activities (ramping up of digital services, use of "big data" tools, digitalization and robotization of the logistic) and within the industrial activities (number of robots, launch of a "data & analytics" academy to enhance the analysis of data in factories) (see Chapter 2, Section 5.3); and the Group's resilience to the risk of cyber-attacks, as confirmed, on the one hand, by the results of the Saint-Gobain Group cyber security audit conducted by the Audit and Risks

Committee (see Chapter 5, Section 1.2.3) noting the good level of protection of the Group's infrastructures *via* the partitioning of critical websites, the further deployment of the cyber defense plan and the increasing maturity of the detection system, and on the other hand, by the fact that the Group has not had a day off this year despite the number of daily attacks;

- very good implementation of the corporate social responsibility policy: positive evolution in the frequency rate of accidents with and without work stoppage of more than 24 hours (TF2) compared to 2018 (see Chapter 3, Section 3.1); increase in the representation of women among managers and executives beyond the objectives set, enabling them to be on the expected trajectory of the diversity target figures (see Chapter 3, Section 3.3); very good rates of the Compliance e-learning trainings on the three priority matters: competition, anti-corruption and embargo; further implementation of the GDPR regulation with, in particular, the finalization of the setting up of a "Data Privacy" network within the context of the new organization of the Group, the further implementation of the personal data management platform (One Trust), the implementation of a unique sustainable purchasing organization and the increase of the number of external audits (see Chapter 3, Section 1.2); the establishment of an action plan including initiatives for the realization of 2°C scenarios, whose 2025 objectives were submitted to the Science Based Target initiative, the commitment by Saint-Gobain to net-zero carbon emissions by 2050 which engages the Group to a 1.5 °C trajectory; the implementation of an action plan on energy (process-by-process improvement of energy efficiency with a focus on the most consuming sites and the use of renewable energy) (see Chapter 3, Section 4.1); and the constitution of a tool box in circular economy with the preparation of a detailed roadmap for the main countries (mainly in Europe).

In all, Pierre-André de Chalendar's total compensation (fixed and variable) for fiscal year 2019 amounted to €2,736,630, an increase of 18% compared to 2018.

As a reminder, the annual variable compensation paid in 2019 for fiscal year 2018 to Pierre-André de Chalendar for his mandate as Chairman and Chief Executive Officer was amounted to €1,110,644, as approved by the Ordinary Shareholders' Meeting of June 6, 2019 (8th resolution)

In all, Benoit Bazin's total compensation (fixed and variable) for fiscal year 2019 amounted to €1,427,925.

Long-term remuneration policy

Cap on the executive corporate officer's grants relative to their total compensation

In addition to the restrictions set out below, the Board of Directors resolved, in accordance with the AFEP-MEDEF Code, that at the time they would be granted to the Chairman and Chief Executive Officer and Chief Operating Officer, the 2019 grants of stock options, performance shares and performance units could not represent a value (according to IFRS standards) greater than 85% of the executive corporate officers' total gross maximum compensation for the same year (fixed compensation plus maximum variable compensation for the same year), as in 2018.

Further, the Board of Directors decided that any grant of stock options, performance shares or performance units to the Chief Operating Officer would be capped at 50% of those granted to the Chairman and Chief Executive Officer.

In 2019, performance shares granted to the Chairman and Chief Executive Officer and the Chief Operating Officer amounted to a total value (according to IFRS standards), at the time of their grant, of €1,803,267 and €901,634 corresponding to 56% and 54% respectively of their 2019 total maximum gross compensation.

No stock option or performance unit plan was implemented in 2019.

Cap on the executive corporate officer's grants relative to the overall allocation envelope

At its meeting of February 21, 2019, the Board of Directors decided, as in previous years, that the Chairman and Chief Executive Officer and Chief Operating Officer could not receive more than 10% and 5% respectively of the overall grants of performance shares and performance units allocated under long-term compensation plans to be set up in 2019.

Hedging rules

The Chairman and Chief Executive Officer and Chief Operating Officer formally committed not to hedge their risk either on stock options or on shares resulting from the exercise of stock options, on performance shares or on performance units they have been or will be granted during their term of office as executive corporate officers, until the cessation of their duties. To the best of the Company's knowledge, the Chairman and Chief Executive Officer and the Chief Operating Officer have not hedged their risk.

Closed periods

In their capacity as executive corporate officers and by virtue of the applicable regulations as reminded in the Board's internal rules (see Chapter 9, Section 1.1.2), Pierre-André de Chalendar and Benoit Bazin must refrain from carrying out any transactions on Saint-Gobain securities for thirty days prior to Board meetings during which the annual consolidated financial statements and the half-year consolidated financial statements are examined, for fifteen days prior to the release of quarterly consolidated sales and on the day following the release of the full and half-year results. Outside of these periods, they are also required, as are the other Directors, to abide by the provisions on the prevention of insider trading.

Stock options

The tables below present the stock options exercised by the Chairman and Chief Executive Officer and the Chief Operating Officer during the 2019 fiscal year.

No stock option plan was implemented in 2019.

Table 4 – Stock options granted in 2019 to the executive corporate officers (AMF nomenclature)

Name	Plan date	Type of options (purchase or subscription)	Value (based on method used to prepare the consolidated financial statements)	Number of options granted during the fiscal year	Exercise price	Exercise period
Pierre-André de Chalendar, Chairman and CEO	-	-	-	-	-	-
Benoit Bazin, COO	-	-	-	-	-	-

Table 5 – Stock options granted in respect of the term of office and exercised in 2019 by the executive corporate officers (AMF nomenclature)

Name	Plan date	Type of options (purchase or subscription)	Number of options exercised during the fiscal year	Exercise price
Pierre-André de Chalendar, Chairman and CEO	11/19/2009	Subscription	123,333	36.34
Benoit Bazin, COO since 01/01/2019	N/A	N/A	N/A	N/A

Performance shares

The following tables show the performance shares granted or delivered to the executive corporate officers during the 2019 fiscal year.

Table 6 – Performance shares granted in 2019 to the executive corporate officers (AMF nomenclature)

Name	Plan date	Number of shares granted during the year	Value of shares (based on method used to prepare the consolidated financial statements)	Vesting date	Availability date	Performance condition
Pierre-André de Chalendar, Chairman and CEO	11/21/2019	90,000	1,803,267	11/21/2023	11/24/2023	See Chapter 5, Section 2.4.3
Benoit Bazin, COO	11/21/2019	45,000	901,634	11/21/2023	11/24/2023	

Grant to Pierre-André de Chalendar, Chairman and Chief Executive Officer, during the 2019 fiscal year

At the Board meeting of November 21, 2019, Pierre-André de Chalendar, on the proposal of the Nomination and Remuneration Committee, was granted 90,000 performance shares (compared to 67,000 performance shares in 2018), representing approximately 0.016% of the share capital, less than the sub-cap set by the General Shareholders' Meeting of June 6, 2019 and less than the 10% cap on the overall grant envelope for performance shares and performance units decided by the Board.

This increase (23,000 performance shares) is justified, on the one hand, by the non-renewal of stock option grants in 2019 (58,000 stock options were granted to Pierre-André de Chalendar in 2018) which was decided upon with a view to simplifying the grants to all members of the Executive Committee (who now receive 100% performance shares) and, on the other hand, by the fact that long-term variable compensation as well as the structure (long-term compensation in relation to theoretical overall compensation) of the compensation paid to the Chairman and Chief Executive Officer were not reviewed when his mandate was renewed in 2018. This readjustment to long-term compensation (which has remained unchanged since 2012, with the exception of 2016, when it changed to reflect the tightening of the stock market criterion), brings the long-term compensation paid to the Chairman and Chief Executive Officer closer to the median paid by comparable CAC 40 industrial companies by increasing the long-term compensation component in relation to his total theoretical compensation. This moderate increase complies with the Compensation policy voted by the General Shareholders' Meeting on June 6, 2019 (9th resolution).

Grant to Benoit Bazin, Chief Operating Officer, during the 2019 fiscal year

At the Board meeting of November 21, 2019, on the proposal of the Nomination and Remuneration Committee, Benoit Bazin was granted 45,000 performance shares, representing approximately 0.008% of the share capital, less than the sub-cap set by the General Shareholders' Meeting of June 6, 2019 and less than the 5% cap on the overall grant envelope for performance shares and performance units decided by the Board.

In line with the compensation policy for the Chief Operating Officer, this grant does not exceed the cap set at 50% of the grants of performance shares or performance units to the Chairman and Chief Executive Officer.

The features of the performance shares, specifically the service and performance conditions to which the allocation is subject and which apply to the Chairman and Chief Executive Officer and the Chief Operating Officer, are explained in Chapter 5, Section 2.4.

Table 7 – Performance shares granted in respect of the term of office and delivered to the executive corporate officers during the 2019 fiscal year (AMF nomenclature)

Name	Plan date	Number of shares delivered during the year	Availability date
Pierre-André de Chalendar, Chairman and CEO	-	-	-
Benoit Bazin, COO since 01/01/2019	N/A	N/A	N/A

Rules for holding shares

The Chairman and Chief Executive Officer and the Chief Operating Officer is required to retain 50% of the performance shares in 2019 that we be delivered to them, until the end of their duties. However, this holding obligation will cease to apply (in the same way as previous years in the case of the Chairman and Chief Executive Officer) if and when the total number of Saint-Gobain shares that the Chairman and Chief Executive Officer and the Chief Operating Officer personally hold in registered form – at the delivery date of the performance shares – represents the equivalent of five years or three years' gross fixed compensation respectively (based on the average opening prices quoted for Saint-Gobain shares in the twenty trading days preceding the delivery date of the performance shares and the amount of their gross fixed compensation applicable at that time).

Performance units

By analogy with the rules applicable to performance shares, the tables below show performance units granted to the Chairman and the Chief Executive Officer and the Chief Operating Officer during 2019, and the number of performance units that became exercisable by them during the year.

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Table 6 bis – Performance units granted in 2019 to executive corporate officers

Name	Plan date	Number of performance units granted during the year	Value of the units (based on method used to prepare the consolidated financial statements)	Exercise period	Performance conditions
Pierre-André de Chalendar, Chairman and CEO	-	-	-	-	-
Benoit Bazin, COO	-	-	-	-	-

No performance unit plan was implemented during fiscal year 2019.

Table 7 bis – Performance units granted in respect of the term of office and which became exercisable by the executive corporate officers during the 2019 fiscal year

Name	Plan date	Number of performance units that became exercisable in 2019	Starting date of the exercise period
Pierre-André de Chalendar, Chairman and CEO	11/26/2015	39,816	11/26/2019
Benoit Bazin, COO since 01/01/2019	N/A	N/A	N/A

c) Compensation ratios

Comparative evolution of the compensation paid to executive corporate officers, to employees of Compagnie de Saint-Gobain and of the consolidated subsidiaries of the Group in France, and the Saint-Gobain Group's performance

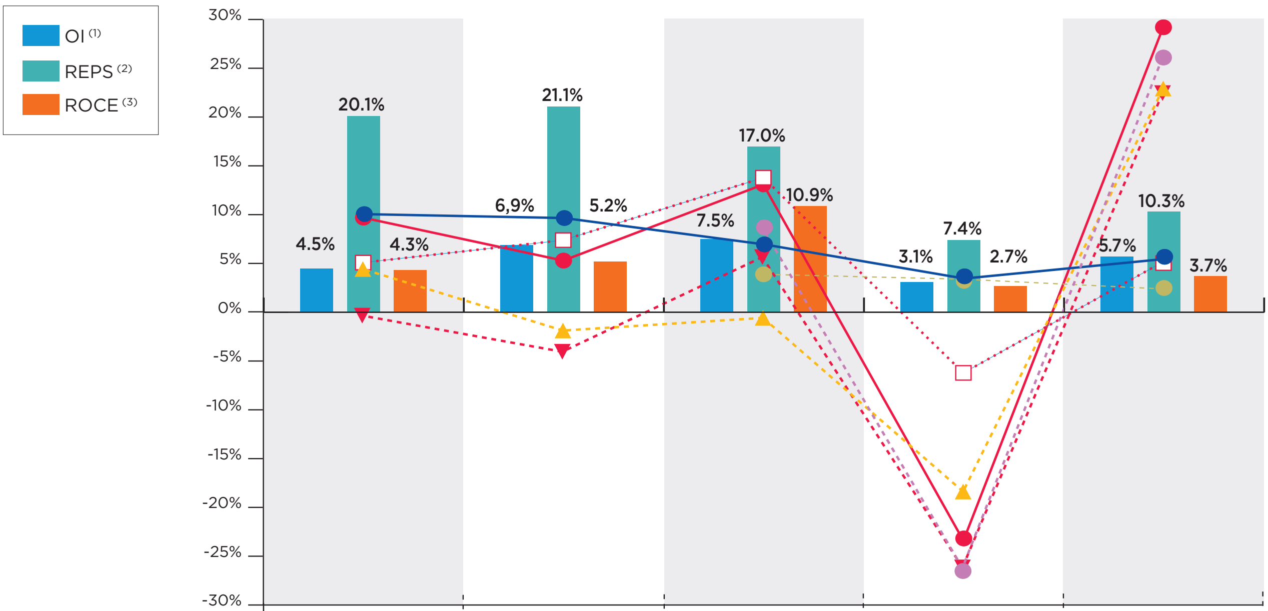
Pursuant to Article L.225-37-3 7 of the French Commercial Code, the graph below shows the comparative evolution, over the last five fiscal years, in:

- the compensation of the executive corporate officers;
- the average compensation of Compagnie de Saint-Gobain's employees;
- the ratios between the compensation of the executive corporate officers and the average and median compensation of Compagnie de Saint-Gobain's employees; and
- the performance of the Saint-Gobain Group (operating income, return on capital employed (ROCE) and recurring earnings per share),

and, on a voluntary basis, over the last three fiscal years:

- the average compensation of the employees of the consolidated subsidiaries of the Saint-Gobain Group in France; and
- the ratios between the compensation of the executive corporate officers and the average compensation of these employees in France.

Comparative evolution (in %) of the compensation paid to executive corporate officers, to employees of Compagnie de Saint-Gobain and of the consolidated subsidiaries of the Group in France, and the Saint-Gobain Group's performance



	2015	2016	2017	2018	2019
Compensation of the executive corporate officers					
Pierre-André de Chalendar, Chairman and CEO	9.6%	5.2%	13.0%	-23.5%	29.2%
Benoit Bazin, Chief Operating Officer (4)					N/A
Compensation and ratios - Compagnie de Saint-Gobain scope					
Average compensation of employees	5.0%	7.3%	13.7%	-6.3%	5.1%
Median compensation of employees	10.0%	9.6%	6.9%	3.4%	5.4%
Ratio on average compensation					
Pierre-André de Chalendar, Chairman and CEO	4.4%	-1.9%	-0.6%	-18.4%	22.9%
Benoit Bazin, Chief Operating Officer (4)					N/A
Ratio on median compensation					
Pierre-André de Chalendar, Chairman and CEO	-0.3%	-4.0%	5.7%	-26.1%	22.5%
Benoit Bazin, Chief Operating Officer (4)					N/A
Compensation and ratio - France scope					
Average compensation of employees	-	-	3.8%	3.3%	2.3%
Ratio on average compensation					
Pierre-André de Chalendar, Chairman and CEO	-	-	8.9%	-26.0%	26.3%
Benoit Bazin, Chief Operating Officer (4)					N/A

(1) Operating income
(2) Recurring earnings per share
(3) Return on capital employed
(4) Benoit Bazin was appointed Chief Operating Officer with effect from January 1, 2019.

Compensation ratios

Pursuant to Articles L. 225-37-3 6° and 7° of the French Commercial Code, the table below shows the ratios between the compensation level of the executive corporate officers of Compagnie de Saint-Gobain and the average and the median compensation of its employees over the last five fiscal years, based on full-time equivalent.

Table 1 – Change in of the ratios on average and median compensation over the last five fiscal years – Compagnie de Saint-Gobain

		2019	2018	2017	2016	2015
Ratio on average compensation	**Pierre-André de Chalendar**, Chairman and Chief Executive Officer	24	19	24	24	24
	Benoit Bazin, Chief Operating Officer (1)	12	N/A	N/A	N/A	N/A
Ratio on median compensation	**Pierre-André de Chalendar**, Chairman and Chief Executive Officer	43	35	47	44	46
	Benoit Bazin, Chief Operating Officer (1)	22	N/A	N/A	N/A	N/A

(1) *Benoit Bazin was appointed Chief Operating Officer with effect from January 1, 2019.*

In a proactive approach to ensure that Saint-Gobain Group stakeholders receive relevant and transparent information, the table below presents the ratio between the average compensation of the executive corporate officers of Compagnie de Saint-Gobain and the average compensation of the employees of the consolidated subsidiaries of the Saint-Gobain Group in France based on full-time equivalent. As the Smart'R management tool –which makes possible to follow centrally the compensation within the different French entities- was put in place in January 2017, the ratio on average compensation, on the French perimeter, is presented as from that fiscal year.

Table 2 – Change in of the ratio on average compensation over the last three fiscal years – France

		2019	2018	2017
Ratio on average compensation France	**Pierre-André de Chalendar**, Chairman and Chief Executive Officer	106	84	113
	Benoit Bazin, Chief Operating Officer (1)	54	N/A	N/A

(1) *Benoit Bazin was appointed Chief Operating Officer with effect from January 1, 2019.*

The difference between the ratios on Compagnie de Saint-Gobain's average compensation and on average compensation in France is mainly due to the distribution structure of the employees in the scopes concerned: thus, while in 2019, the Compagnie de Saint-Gobain comprised 80% of managers (including all members of the Executive Committee of the Saint-Gobain Group except those based in a foreign country) and 20% of administrative employees, the French perimeter comprises 22% of managers, 52% of administrative employees and 26% of blue collars.

Method used to calculate compensation ratios

To calculate the compensation ratios presented above, Compagnie de Saint-Gobain referred to the guidelines on compensation multiples published by the Afep on January 28, 2020. The compensation components and the methodology selected are shown below.

Compensation components selected

For executive corporate officers: all compensation components paid or granted in respect of the given fiscal year, put to the vote of the General Shareholders' Meeting (Say on Pay ex post), i.e.:

- fixed compensation paid during the given fiscal year;
- the annual variable compensation granted in respect of the same fiscal year;
- any exceptional compensation paid during the same fiscal year;
- long-term compensation instruments granted during the same fiscal year (stock options, performance shares and/or performance units) at IFRS value on the grant date;
- benefits in kind (company car) granted during the same fiscal year (book value);
- it being specified that executive corporate officers are not granted any compensation in respect of their directors' term of office within the Saint-Gobain Group.

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For employees:

- the fixed compensation paid during the given fiscal year;
- for reasons of information availability on the publication date of the Universal registration document, the annual variable (annual bonus, profit-sharing, incentive schemes, payments into the Group savings account, as applicable) and exceptional (premiums) compensation paid during the same fiscal year;
- long-term compensation instruments granted during the same fiscal year (stock options, performance shares and/or performance units) at IFRS value on the grant date;
- benefits in kind granted during the same fiscal year (book value);
- to ensure consistency with the compensation components paid to the executive corporate officers, termination of office indemnities are not included.

Employees taken into account

Only the employees who have entered into an indefinite or fixed-term employment contract with Compagnie de Saint-Gobain or a consolidated subsidiary of the Saint-Gobain Group registered in France and who have been continuously employed in these companies from January 1 to December 31 of the fiscal year in question were taken into account when calculating the ratios. The employees who have entered into a part-time employment contract with Compagnie de Saint-Gobain or a consolidated subsidiary of the Saint-Gobain Group registered in France were not taken into account when calculating the ratios but represent less than 3% of the workforce on the considered perimeter.

Concept of full time equivalent

To determine the average and median compensation paid to employees of Compagnie de Saint-Gobain and the consolidated subsidiaries of the Saint-Gobain Group registered in France on a full-time equivalent basis, the methodologies already in use within the Group for the employee data reporting reviewed by the independent third party were used (see Chapter 9, Section 2.1).

Changes in scope

Within the French perimeter, the consolidated companies sold during a given fiscal year are excluded from the ratios calculations of that fiscal year. The acquired companies which were in the process of being consolidated on December 31, 2019 are excluded from the ratios calculations, but represent less than 1% of the total number of employees of the consolidated subsidiaries of the Saint-Gobain Group registered in France.

d) Employment contract, retirement benefits and termination benefits for executive corporate officers

For the Chairman and Chief Executive Officer

Table 11 – Employment contract, retirement benefits and termination benefits allocated in the event of termination of office of the Chairman and Chief Executive Officer (AMF nomenclature)

Name	Employment contract		Supplementary pension arrangements		Indemnities or benefits due or likely to be due as a result of termination or a change of role		Indemnities in relation to a non-compete clause	
	Yes	No	Yes	No	Yes	No	Yes	No
Pierre-André de Chalendar, Chairman and CEO		X (1)	X		X		X	

(1) *Resignation on June 3, 2010.*

At its meeting of February 22, 2018, on the recommendation of the Nomination and Remuneration Committee, the Board of Directors authorized the renewal of the following commitments, made to Pierre-André de Chalendar, Chairman and Chief Executive Officer, corresponding, on the one hand, to compensation components, indemnities or benefits that are or may be due as a result of the termination of his duties as Chairman and Chief Executive Officer of Compagnie de Saint-Gobain falling within the scope of former Article L. 225-42-1 of the French Commercial Code in force at the time, and, on the other hand, to the continuation of the benefit of the Group health and personal risk insurance policies for the duration of his term of office. These commitments were approved by the General Shareholders' Meeting of June 7, 2018 (Resolutions 8, 9 and 10).

The terms of these commitments, which are similar to 2010's and 2014's, were amended on the occasion of their renewal to incorporate the new recommendations introduced by the revised versions of the AFEP-MEDEF Code.

Compensation for loss of office of the Chairman and Chief Executive Officer

See "Termination compensation" in paragraph a) of Chapter 5, Section 2.2.4.

Non-compete indemnity

See "Non-compete indemnity" in paragraph a) of Chapter 5, Section 2.2.4.

Supplementary pension arrangements

See "Supplementary pension arrangements" in paragraph a) of Chapter 5, Section 2.2.4.

Health and personal risk insurance

See "Health and personal risk insurance" in paragraph a) of Chapter 5, Section 2.2.4.

For the Chief Operating Officer

Table 11 – Employment contract, retirement benefits and termination benefits allocated in the event of termination of office of the Chief Operating Officer (AMF nomenclature)

Name	Employment contract		Supplementary pension arrangements		Indemnities or benefits due or likely to be due as a result of termination or a change 1of role		Indemnities in relation to a non-compete clause	
	Yes	No	Yes	No	Yes	No	Yes	No
Benoit Bazin, COO	X[(1)]		X		X		X	

(1) *Benoit Bazin's employment contract was suspended as of January 1, 2019, when he became Chief Operating Officer.*

At its meeting of November 22, 2018 and on the proposal of the Nomination and Remuneration Committee, the Board of Directors authorized the undertaking of the following commitments in favor of the Chief Operating Officer, within the scope of former Article L. 225-42-1 of the French Commercial Code in force at that time: non-compete agreement, severance indemnity, maintenance of the defined-benefit supplementary pension arrangements and health and personal risk insurance.

These commitments in favor of Benoit Bazin are justified by the suspension of his employment contract as from January 1, 2019, when he became Chief Operating Officer, after a career of more than 19 years within the Saint-Gobain Group.

These commitments were approved by the General Shareholders' Meeting of June 6, 2019 (Resolutions 11, 12 and 13).

Severance indemnity for the Chief Operating Officer

See "Severance indemnity" in paragraph b) of Chapter 5, Section 2.2.4.

Non-compete indemnity

See "Non-compete indemnity" in paragraph b) of Chapter 5, Section 2.2.4.

Supplementary pension arrangements

See "Supplementary pension arrangements" in paragraph b) of Chapter 5, Section 2.2.4.

Health and personal risk insurance

See "Health and personal risk insurance" in paragraph b) of Chapter 5, Section 2.2.4.

2.2.3 Compensation components paid to the executive corporate officers during the 2019 fiscal year or granted in respect of that fiscal year, subject to approval of the General Shareholders' Meeting of June 4, 2020 (*Say on Pay ex post*)

Order no. 2019-1234 of November 27, 2019 on compensation for directors of listed companies requires that the fixed, variable and exceptional components of the total compensation and benefits of any kind paid or granted to directors and executive corporate officers in respect of the past fiscal year are submitted each year for approval by the Ordinary Shareholders' Meeting. This vote is binding (as opposed to an advisory vote).

The compensation components paid to Pierre-André de Chalendar, Chairman and Chief Executive Officer, and Benoit Bazin, Chief Operating Officer, in 2019 or granted in respect of that fiscal year were decided by the Board of Directors at its meetings of February 21, 2019, November 21, 2019 and February 27, 2020, on the proposal of the Nomination and Remuneration Committee, pursuant to the compensation policies for the Chairman and Chief Executive Officer and Chief Operating Officer approved by the General Shareholders' Meeting of June 6, 2019 (ninth and tenth Resolutions) and in line with the principles outlined in Chapter 5, Section 2.2.1 above.

a) Compensation components paid to Pierre-André de Chalendar, Chairman and Chief Executive Officer, in 2019 or granted in respect of that fiscal year (*Say on pay ex post*)

The following table shows the compensation components paid to Pierre-André de Chalendar, Chairman and Chief Executive Officer in 2019 or granted in respect of that fiscal year, subject to shareholders' approval at the General Shareholders' Meeting of June 4, 2020, in accordance with Article L.225-100 of the French Commercial Code.

Compensation components paid to Pierre-André de Chalendar, Chairman and Chief Executive Officer, in 2019 or granted in respect of that fiscal year (Article L.225-100 of the French Commercial Code) *(Say on pay ex post)*

Compensation components submitted to vote	Amounts paid or granted or book value submitted to vote (in EUR)	Description
Fixed compensation	**Amount paid: €1,200,000**	In accordance with the compensation policy approved by the General Shareholders' Meeting of June 6, 2019 (9th Resolution).
Annual variable compensation	**Amount due: €1,536,630** Board of Directors meeting of February 27, 2020)	At its February 21, 2019 meeting, the Board of Directors decided, based on the recommendations of the Nomination and Remuneration Committee, to maintain the cap on the amount of Pierre-André de Chalendar's variable compensation in respect of fiscal year 2019 unchanged at 170% of his fixed compensation, and fixed the quantifiable and qualitative objectives detailed below, determining, up to a limit of 2/3 and 1/3 respectively, the variable portion of his compensation (cap and structure unchanged since 2014). Based on the recommendations of the Nomination and Remuneration Committee, the Board of Directors, at its February 27, 2020 meeting, determined Pierre-André de Chalendar's variable compensation as follows, taking into account the extent to which the objectives outlined below have been achieved: ■ the portion of the variable compensation based on the fulfillment of the four quantifiable objectives (return on capital employed (ROCE), Group operating income, Group recurring earnings per share and operating free cash flow) amounted to €1,026,630, which corresponds to an achievement rate against the target of 121% of the various quantifiable objectives (the completion rate of the various quantifiable objectives is presented in Chapter 5, Section 2.2.2 (b)); ■ the portion of the variable compensation based on the fulfillment of the three qualitative objectives (further implementation of the Group's digital transformation, implementation of the corporate social responsibility policy and implementation of the Transform & Grow plan) amounted to €510,000, which corresponds to an achievement rate against the Target of 125% of the various qualitative objectives (see details in Chapter 5, Section 2.2.2 (b)). Variable compensation totaled €1,536,630 for 2019, corresponding to an achievement rate against the Target of 122%. Overall, Pierre-André de Chalendar's total compensation (fixed and variable) amounted to €2,736,630 for 2019, an increase of 18% compared to 2018. *Pursuant to the law, payment of the annual variable compensation is subject to the approval of the Ordinary Shareholders' Meeting of June 4, 2020.* *As a reminder, the annual variable compensation paid in 2019 in respect of the 2018 fiscal year amounted to €1,110,644, as approved by the Ordinary Shareholders' Meeting of June 6, 2019 (8th Resolution).*
Deferred variable compensation	**None**	Pierre-André de Chalendar has not been granted any deferred variable compensation.
Multi-year variable compensation	**None**	Pierre-André de Chalendar has not been granted any multi-year variable compensation.
Exceptional compensation	**None**	Pierre-André de Chalendar has not been granted any exceptional compensation.

Compensation components paid to Pierre-André de Chalendar, Chairman and Chief Executive Officer, in 2019 or granted in respect of that fiscal year (Article L.225-100 of the French Commercial Code) *(Say on pay ex post)*

Compensation components submitted to vote	Amounts paid or granted or book value submitted to vote (in EUR)	Description
Performance shares	Amount allocated: €1,803,267 (valuation based on method used to prepare the consolidated financial statements)	At its meeting of November 21, 2019, the Board of Directors decided, on the proposal of the Nomination and Remuneration Committee, to grant Pierre-André de Chalendar 90,000 performance shares (compared to 67,000 since 2016). This increase (23,000 performance shares) is justified, on the one hand, by the non-renewal in 2019 of a stock option plan (58,000 stock options granted to Pierre-André de Chalendar in 2018) decided to simplify the grants to all the members of the Executive Committee (who now receive 100% of performance shares) and, on the other hand, by the fact that long-term variable compensation as well as the compensation structure (long-term compensation in relation to the theoretical overall compensation) of the Chairman and Chief Executive Officer were not reviewed when his mandate was renewed in 2018. This readjustment of the long-term compensation (which has remained unchanged since 2012, with the exception of 2016, to take into account the hardening of the stock market criterion), brings the long-term compensation of the Chairman and Chief Executive Officer closer to the median of comparable CAC 40 industrial companies by increasing the long-term compensation component in relation to his theoretical overall compensation. This moderate increase complies with the compensation policy voted by the General Shareholders' Meeting on June 6, 2019 (9th Resolution). This allocation represents less than the sub-cap set by the General Shareholders' Meeting of June 6, 2019 and is less than the cap of 10% of the overall allocation envelope of performance shares and performance units decided by the Board. It represents a total value (according to IFRS) at the time it was granted of €1,803,267, corresponding to 56% of the total maximum gross compensation of the Chairman and Chief Executive Officer in respect of the 2019 fiscal year (compared to 37% in 2018). Therefore, it is not disproportionate and complies with the decision by the Board of Directors on February 21, 2019 that stock options, performance shares and performance units granted to the Chairman and Chief Executive Officer could not represent in 2019, at the time of their allocation, a value (according to IFRS) greater than 85% of his total maximum gross compensation for the same year (fixed compensation plus maximum variable compensation for the same year). Refer to Chapter 5, Section 2.4.3 for a description of the service and performance conditions applying to the vesting of performance shares. The performance conditions for performance shares allocated by the Group are demanding, as evidenced by the achievement rates for the latest three performance share plans for which the performance condition has been determined (66.4% for the 2015 plan, 86.4% for the 2014 plan and 89.2% for the 2013 plan). Percentage of share capital represented by the allocation of performance shares to the Chairman and Chief Executive Officer: approximately 0.016%. Date of authorization by the General Shareholders' Meeting: June 6, 2019 (Resolution 24th). Date of the Board's grant decision: November 21, 2019.
Stock options	None	No stock options were allocated to Pierre-André de Chalendar in 2019.
Performance units	None	No performance units were allocated to Pierre-André de Chalendar in 2019.
Compensation in respect of the Director's term of office	None	Pierre-André de Chalendar does not receive any compensation for his term of office as Director of Compagnie de Saint-Gobain.
In-kind benefits	€3,673 (book value)	Pierre-André de Chalendar has use of a company car.
Compensation for loss of office	None	See "Termination compensation" in paragraph a) of Chapter 5, Section 2.2.4. on page 165 below.
Non-compete indemnity	None	See "Non-compete indemnity" in paragraph a) of Chapter 5, Section 2.2.4. on page 166 below.
Supplementary pension arrangements	None	See "Supplementary pension arrangements" in paragraph a) of Chapter 5, Section 2.2.4. on page 167 and 168 below.

b) Compensation components paid to Benoit Bazin, Chief Operating Officer, in 2019 or granted in respect of that fiscal year (*Say on pay ex post*)

The following table shows the compensation components paid to Benoit Bazin, Chief Operating Officer, in 2019 or granted in respect of that fiscal year, subject to shareholders' approval at the General Shareholders' Meeting of June 4, 2020, in accordance with Article L.225-100 of the French Commercial Code.

Compensation components paid to Benoit Bazin, Chief Operating Officer, in 2019 or granted in respect of that fiscal year (Article L.225-100 of the French Commercial Code) (*Say on pay ex post*)

Compensation components submitted to vote	Amounts paid or granted or book value submitted to vote (in EUR)	Description
Fixed compensation	**Amount paid: €750,000**	In accordance with the compensation policy approved by the General Shareholders' Meeting of June 6, 2019 (10th Resolution).
Annual variable compensation	**Amount due: €677,925** (Board of Directors meeting of February 27, 2020)	At its February 21, 2019 meeting, the Board of Directors decided, based on the recommendations of the Nomination and Remuneration Committee, to set the cap on Benoit Bazin's variable compensation in respect of fiscal year 2019 at 120% of his fixed compensation, and set the quantifiable and qualitative objectives detailed below, determining, up to a limit of 2/3 and 1/3 respectively, the variable portion of his compensation. Based on the recommendations of the Nomination and Remuneration Committee, the Board of Directors, at its February 27, 2020 meeting, determined Benoit Bazin's variable compensation as follows, taking into account the extent to which the objectives outlined below have been attained: ■ the portion of the variable compensation based on the fulfillment of the four quantifiable objectives (return on capital employed (ROCE), Group operating income, Group recurring earnings per share and operating free cash flow) amounted to €452,925, which corresponds to an achievement rate against the Target of 121% of the various quantifiable objectives (the completion rate of the various quantifiable objectives is presented in Chapter 5, Section 2.2.2 (b)); ■ the portion of the variable compensation based on the fulfillment of the three qualitative objectives (further implementation of the Group's digital transformation, implementation of the corporate social responsibility policy and implementation of the Transform & Grow plan) amounted to €225,000, which corresponds to an achievement rate against the Target of 125% of the various qualitative objectives (the completion rate of the various qualitative objectives is presented in Chapter 5, Section 2.2.2 (b)). Variable compensation totaled €677,925 for 2019, corresponding to an achievement rate against the Target of 122%. Overall, Benoit Bazin's total compensation (fixed and variable) amounted to €1,427,925 in 2019. *Pursuant to the law, payment of the variable compensation is subject to the approval of the Ordinary Shareholders' Meeting of June 4, 2020.*
Deferred variable compensation	**None**	Benoit Bazin has not been granted any deferred variable compensation.
Multi-year variable compensation	**None**	Benoit Bazin has not been granted any multi-year variable compensation.
Exceptional compensation	**None**	Benoit Bazin has not been granted any exceptional compensation.

Compensation components paid to Benoit Bazin, Chief Operating Officer, in 2019 or granted in respect of that fiscal year (Article L.225-100 of the French Commercial Code) (*Say on pay ex post*)

Compensation components submitted to vote	Amounts paid or granted or book value submitted to vote (in EUR)	Description
Performance shares	**Amount granted: €901,634** **(value based on the method used to prepare the consolidated financial statements)**	The Board of Directors, at its meeting of November 21, 2019 decided, on the recommendation of the Nomination and Remuneration Committee, to grant Benoit Bazin 45,000 performance shares, less than the sub-cap set by the General Shareholders' Meeting of June 6, 2019, and less than the 5% cap of the overall allocation envelope of performance shares and performance units decided by the Board. Likewise, in accordance with the decision of the Board of Directors at its meeting of February 21, 2019, this grant does not exceed the cap of 50% of stock options, performance shares and performance units granted to the Chairman and Chief Executive Officer. This allocation also represents a total value (according to IFRS) at the time it was granted of €901,634, corresponding to 54% of the total maximum gross compensation of the Chief Operating Officer in respect of the 2019 fiscal year. Therefore, it is not disproportionate and complies with the decision of the Board of Directors on February 21, 2019 that stock options, performance shares and performance units granted to the Chief Operating Officer could not represent in 2019, at the time of their allocation, a value (according to IFRS) greater than 85% of his total maximum gross compensation for the same year (fixed compensation plus maximum variable compensation for the same year) Refer to Chapter 5, Section 2.4.2 for a description of the service and performance conditions applying to the vesting of performance shares. The performance conditions for performance shares allocated by the Group are demanding, as evidenced by the achievement rates for the latest three performance share plans for which the performance condition has been determined (66.4% for the 2015 plan, 86.4% for the 2014 plan and 89.2% for the 2013 plan). Percentage of share capital represented by the allocation of performance shares to the Chairman and Chief Executive Officer: approximately 0.008%. Date of authorization by the General Shareholders' Meeting: June 6, 2019 (Resolution 24). Date of the Board's grant decision: November 21, 2019.
Stock options	**None**	No stock options were granted to Benoit Bazin in 2019.
Performance units	**None**	No performance units were granted to Benoit Bazin in 2019.
Compensation in respect of the director's term of office	**None**	Benoit Bazin is not a Director of Compagnie de Saint-Gobain.
In-kind benefits	**€1,755** **(book value)**	Benoit Bazin has use of a company car.
Severance indemnity	**None**	See "Severance indemnity" in paragraph b) of Chapter 5, Section 2.2.4. on page 172 below.
Non-compete indemnity	**None**	See "Non-compete indemnity" in paragraph b) of Chapter 5, Section 2.2.4. on page 173 below.
Supplementary pension arrangements	**None**	See "Supplementary pension arrangements" in paragraph b) of Chapter 5, Section 2.2.4. on page 174 below.

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2.2.4 Compensation policies for the executive corporate officers subject to approval of the General Shareholders' Meeting of June 4, 2020 (*Say on Pay ex ante*)

Order no. 2019-1234 of November 27, 2019 on the compensation paid to executive corporate officers of listed companies requires that their compensation policy is put to the Ordinary Shareholders' Meeting for approval each year. This vote is binding (as opposed to an advisory vote).

At its meeting of February 27, 2020, the Board of Directors, on the proposal of the Nomination and Remuneration Committee, determined the following compensation policies the Chairman and Chief Executive Officer and the Chief Operating Officer.

The general principles of the compensation policy for the executive corporate officers described in Chapter 5, Section 2.2.1 were reviewed by the Board of Directors and were confirmed for the 2020 fiscal year.

a) Compensation policy for the Chairman and Chief Executive Officer subject to approval of the General Shareholders' Meeting of June 4, 2020 (*Say on Pay ex ante*)

The table below details the compensation policy for the Chairman and Chief Executive Officer for the 2020 fiscal year, that is subject to the approval of the General Shareholders' Meeting of June 4, 2020 pursuant to Article L.225-37-2 of the French Commercial Code, including the commitments made in his favor on matters such as compensation components, and indemnities or benefits due or likely to be due in the event of termination of his duties. These commitments were approved by the General Shareholders' Meeting of June 7, 2018 pursuant to the related-party agreements procedure in force at the time (8th to 10th Resolutions).

Compensation policy for the Chairman and Chief Executive Officer, for the 2020 fiscal year, subject to the approval of the Ordinary Shareholders' Meeting (Article L.225-37-2 of the French Commercial Code)

Compensation components attributable to the Chairman and Chief Executive Officer	Cap	Description
Fixed compensation	-	The fixed compensation of the Chairman and Chief Executive Officer is commensurate with his experience and responsibilities as Chairman and Chief Executive Officer, and shall be compared with fixed compensation offered by similar large companies in terms of sales, workforce and international scope of operations. The fixed portion of the Chairman and Chief Executive Officer's compensation is €1,200,000 for the duration of his term, which was renewed by the General Shareholders' Meeting of June 7, 2018.
Annual variable compensation	**170% of the fixed compensation**	The Board of Directors decided to maintain the cap on the annual variable part of the compensation of the Chairman and Chief Executive Officer unchanged at 170% of his fixed compensation (cap unchanged since 2014). The amount of the variable compensation for the 2020 fiscal year will be decided by the Board of Directors in 2021 based on the achievement of quantifiable and qualitative objectives that it established, respectively at 2/3 and 1/3 of the variable portion of his compensation (structure unchanged since 2014). As regards the quantifiable objectives, the Board decided to maintain for the 2020 fiscal year, the following four quantifiable objectives, each counting for 25%, deemed relevant for assessing the operational and financial performance of the Saint-Gobain Group and its strategy (unchanged since the renewal of his mandate in 2010): the rate of return on capital employed (ROCE), the operating income of the Group, the recurring net income of the Group per share and the operating Free Cash Flow. In addition, the Board retained the following qualitative objectives, deemed relevant to the extent that they reflect the implementation of strategic orientations for the 2020 fiscal year: further evolution of the portfolio's turnover, further implementation of the "Transform & Grow" plan and the Group's digital transformation, and implementation of the corporate social responsibility policy. *In accordance with the law, the payment of the annual variable compensation will be conditioned to the approval of the 2021 Ordinary Shareholders' Meeting.*
Deferred variable compensation	None	The Board of Directors does not intend to grant deferred variable compensation to the Chairman and Chief Executive Officer in 2020.
Multi-year variable compensation	None	The Board of Directors does not intend to grant multi-year variable compensation to the Chairman and Chief Executive Officer in 2020.
Exceptional compensation	None	The Board of Directors does not intend to grant exceptional compensation to the Chairman and Chief Executive Officer in 2020. *In accordance with the law, the payment of the exceptional compensation would be conditioned to the approval of the 2021 Ordinary Shareholders' Meeting.*
Indemnity for taking up office	-	The Board of Directors reserves the option, if a new Chief Executive Officer should be recruited outside the Group, to grant him/her an indemnity for taking up office to compensate for the loss of benefits, in compliance with current practices, such as the annual variable compensation and/or long-term compensation components which he/she was entitled to as part of his/her previous duties. This indemnity for taking up office could take the form of payments in cash and/or allocation of securities subject to performance conditions.

Compensation policy for the Chairman and Chief Executive Officer, for the 2020 fiscal year, subject to the approval of the Ordinary Shareholders' Meeting (Article L.225-37-2 of the French Commercial Code)		
Compensation components attributable to the Chairman and Chief Executive Officer	**Cap**	**Description**
Long-term compensation	**Cap for grants of long-term compensation instruments to the Chairman and CEO, *i.e.*, stock options, performance shares and performance units (valuation based on IFRS standards) set at 85% of his 2020 total maximum gross compensation** **and** **Cap on allocation to the Chairman and CEO fixed at 10% of the overall grants of performance shares and performance units in 2020** **and** **Caps for allocation to the executive corporate officers as provided for by the 23rd (options) and 24th (perfor-mance shares) resolutions of the General Shareholders' Meeting of June 6, 2019**	The Board of Directors has decided that grants of stock options, performance shares and performance units to the Chairman and Chief Executive Officer in 2020, could not, at the time of their grant, represent a value (in accordance with the IFRS standards) greater than 85% of his total maximum gross compensation for the 2020 fiscal year (fixed compensation plus maximum variable compensation for the 2020 fiscal year). *The grants of stock options, performance shares and performance units to the Chairman and Chief Executive Officer for the 2019 and 2018 fiscal years represented a value of less than 60% and 40% respectively of his total maximum gross compensation for such fiscal years.* In addition, the Board of Directors has decided that the Chairman and Chief Executive Officer may not receive more than 10% of the overall grants of performance shares and performance units allocated under the 2020 long-term compensation plans. As a reminder, the General Shareholders' Meeting of June 6, 2019 decided to maintain, despite the appointment of a second executive corporate officer, the sub-cap on the granting of stock options to executive corporate officers at 10% of the cap set by the 23rd resolution (sub-cap being also applicable to the 24th resolution of the same Meeting related to the grant of performance shares which itself fixed a sub-cap at 10% for the allocation to the executive corporate officers). *The grants of stock options, performance shares and performance units to the Chairman and Chief Executive Officer represented, in 2019, approximately 0.016% of the Company's share capital and less than 10% of the total allocation of performance shares and performance units granted under the long-term compensation plans implemented in 2019.* The Board of Directors, on the recommendation of the Nomination and Remuneration Committee, intends, as it stated at the General Shareholders' Meeting of June 6, 2019, to, once again this year, subject the exercise of stock options and the vesting of the performance shares to a **service condition and performance conditions based as a minimum on the following criteria historically used for the Group's long-term compensation plans:** ▪ **an internal performance criterion (Group ROCE);** ▪ **a relative performance criterion (the stock market performance of the Saint-Gobain share *vis-à-vis* the CAC 40 index);** ▪ **a criterion related to corporate social responsibility introduced in 2017.** These criteria have been considered relevant by the Board of Directors as they reflect the operational, financial and non-financial performance of the Saint-Gobain Group and ensure an alignment of the beneficiaries with the interest of Saint-Gobain shareholders. If these criteria cease to be relevant, the Board would set criteria of comparable stringency to continue implementing coherent long term compensation instruments. **The period for assessing the conditions of performance for the long term compensation instruments shall not be shorter than three years** (see pages 62 to 67 of the notice for the General Shareholders' Meeting of June 6, 2019 for further details). As in the past, the Board will set for the executive corporate officers, for any allocation in 2020 under long-term compensation plans, a **demanding obligation to retain shares** resulting from the exercise of stock options or vested performance shares or to reinvest in shares upon exercise of performance units, that the executive corporate officers will be required to retain in registered form until the cessation of their duties.

Compensation policy for the Chairman and Chief Executive Officer, for the 2020 fiscal year, subject to the approval of the Ordinary Shareholders' Meeting (Article L.225-37-2 of the French Commercial Code)

Compensation components attributable to the Chairman and Chief Executive Officer	Cap	Description
Consequences of departure of the Director on his stock options, performance shares and performance units	-	a) In the event of his departure as Director as a result of **death, disability or retirement**, as provided in the rules of the relevant long-term compensation plans, the Chairman and Chief Executive Officer **will not be deprived of his right to exercise stock options and performance units or to receive the performance shares** that he has been granted on his departure date. b) In **the event of his departure as Director** for other reasons, with the exception of the following, which will lead to forfeiture of the rights: ■ dismissal for serious misconduct or gross negligence separate from his duties; and ■ resignation (other than in the 12 months following a merger or demerger affecting Compagnie de Saint-Gobain, the acquisition of control of Compagnie de Saint-Gobain or a significant change in the Group's strategy leading to a major refocusing of its activity). **The Board of Directors may,** at the proposal of the Nomination and Remuneration Committee, decide whether to **maintain, purely on a *prorata temporis* basis,** his benefit of the stock options, performance shares and performance units that he holds on his departure date and for which the minimum exercise period has not lapsed or which have not been delivered on that date, as the case may be. Any such decision by the Board of Directors must be **justified** in accordance with the AFEP-MEDEF code. The exercise of stock options and performance units, and the allocation of performance shares, would nonetheless **remain subject** in this case **to the fulfillment of the performance condition(s)** stipulated in the rules of the relevant plans.
Compensation in respect of the Director's term of office	None	The Chairman and Chief Executive Officer does not receive any compensation for his term of office as Director within Compagnie de Saint-Gobain.
In-kind benefits	-	The Chairman and Chief Executive Officer has a company car.

Compensation policy for the Chairman and Chief Executive Officer, for the 2020 fiscal year, subject to the approval of the Ordinary Shareholders' Meeting (Article L.225-37-2 of the French Commercial Code)

Compensation components attributable to the Chairman and Chief Executive Officer	Cap	Description
Compensation for loss of office	**Cap set at twice the gross annual total compensation, including the non-compete indemnity**	In the event of **forced termination** of office, irrespective of the form of termination under the following circumstances: a) he is removed from office or his mandate as Chairman and Chief Executive Officer is not renewed on expiry, other than at his own initiative or as a result of gross or willful misconduct or serious misconduct not related to his duties as Chief Executive Officer, or b) he is forced to resign within the twelve months following: ■ the date of approval by the shareholders of a merger or demerger affecting Compagnie de Saint-Gobain, or ■ the effective date on which a third party or group of investors acting in concert acquires control of Compagnie de Saint-Gobain (in accordance with Article L.233-3 of the French Commercial Code), or ■ the announcement by Compagnie de Saint-Gobain's management bodies of a significant change in the Group's strategy leading to a major refocusing of its business, **Pierre-André de Chalendar would be able to receive compensation not to exceed twice his gross annual total compensation, defined as the sum of his fixed compensation, on an yearly basis, as Chairman and Chief Executive Officer at the date on which his functions cease, and of the average annual variable compensation received or receivable in respect of his last three full fiscal years in office.** In any case, no compensation for loss of office would be due if Pierre-André de Chalendar were to leave Compagnie de Saint-Gobain at his own initiative under circumstances other than those described above, or if, upon leaving the Company on his initiative under one of the circumstances described above, he were eligible to retire during the twelve months following termination of his duties as Chairman and Chief Executive Officer and to receive a pension under the so-called "SGPM" defined benefit plan (see "Supplementary pension arrangements"). **In no case may the sum of the indemnity for termination of office and the non-compete indemnity described below exceed twice Pierre-André de Chalendar's gross annual total compensation.** Payment of the compensation for termination of office will be subject to fulfillment of a performance condition evidenced by the allocation by the Board of Directors of a variable part of compensation at least equal to one-half of the average maximum amount fixed for this variable part for the last three full fiscal years during which he will be Chairman and Chief Executive Officer and ending prior to the date on which he ceases his duties. This performance condition is challenging, as demonstrated by the amount of the variable part of his compensation received for the past two fiscal years, which amounted, with respect to the 2019 fiscal year, to 75.33%, and, with respect to the 2018 fiscal year, to 54.44% of the maximum amount fixed for the variable part of his compensation.Payment of the compensation for termination of office will be dependent on the Board of Directors' verification, in compliance with the legislation in force, of the fulfillment of this performance condition as of the date his duties are terminated. Date of authorization by the Board of Directors: February 22, 2018. Date of approval by the General Shareholders' Meeting, according to the related-party agreements procedure in force at the time: June 7, 2018 (8th Resolution).

Compensation policy for the Chairman and Chief Executive Officer, for the 2020 fiscal year, subject to the approval of the Ordinary Shareholders' Meeting (Article L.225-37-2 of the French Commercial Code)

Compensation components attributable to the Chairman and Chief Executive Officer	Cap	Description
Non-compete indemnity	**Cap set at one year of total annual gross compensation** **and** **Combined non-compete indemnity and the termination indemnity capped at two years of total annual gross compensation**	Pierre-André de Chalendar has signed a firm and binding non-compete undertaking in favor of Compagnie de Saint-Gobain with a term of one year as from the date of his loss of office as Chairman and Chief Executive Officer. In consideration for this undertaking, in the event of his loss of office as Chairman and Chief Executive Officer for any reason whatsoever, he would receive a **non-compete indemnity equal to one year's total gross compensation**. Gross annual compensation is considered as comprising the same fixed and variable amounts used to calculate his compensation for loss of office referred to above. Under no circumstances will **the sum of the indemnity under the non-compete agreement and the compensation for loss of office exceed twice Pierre-André de Chalendar's total annual gross compensation**. It should be noted that the non-compete undertaking is a means of **protection of the Saint-Gobain Group**, the non-compete indemnity being a mandatory financial compensation for the restrictions imposed. The Board of Directors reserves the right to unilaterally waive application of the non-compete agreement no later than on the date of termination of the Chairman and Chief Executive Officer's duties, in which case he will be released from any commitment and no amount will be due to him on this account. Date of authorization by the Board of Directors: February 22, 2018. Date of approval by the General Shareholders' Meeting, according to the related-party agreements procedure in force at the time: June 7, 2018 (8th Resolution).

Compensation policy for the Chairman and Chief Executive Officer, for the 2020 fiscal year, subject to the approval of the Ordinary Shareholders' Meeting (Article L.225-37-2 of the French Commercial Code)		
Compensation components attributable to the Chairman and Chief Executive Officer	**Cap**	**Description**
Supplementary pension arrangements	-	Pierre-André de Chalendar is a beneficiary of the defined benefit pension plan (SGPM) applicable to all employees and managers of Compagnie de Saint-Gobain who, as he did, joined the Company prior to January 1, 1994, under conditions identical to those applicable to all beneficiaries of this pension plan. This differential type plan, which was closed to new entrants on January 1, 1994 is subject to "Article 39 of the General Tax Code". As of December 31, 2019, 216 retired former employees of Compagnie de Saint-Gobain were receiving benefits under the plan – so-called "SGPM" – and a further 28 active employees will be entitled to benefits on retirement. Commitments made to Pierre-André de Chalendar and all beneficiaries of the pension plan (current and retired employees) are partly financed, in the amount of approximately 53% of the total, through outsourcing to two insurance companies, without transfer of the lifetime income risk. To benefit from the plan, Pierre-André de Chalendar will have to retire at 60 or over on a full pension under the compulsory government-sponsored schemes after contributing to the SGPM plan for at least 15 years. If he leaves Compagnie de Saint-Gobain before fulfilling these conditions, he will not be able to claim this benefit, unless forced to terminate his activity for health reasons. Benefits under the plan are determined so that retirees receive a guaranteed total income in retirement. The guaranteed amount depends on the retiree's years of service (up to 35 years) and is determined on a declining scale for each tranche of gross annual compensation excluding exceptional or temporary payments. Benefits received by the retiree under other basic and compulsory pension plans during the period are deducted from the guaranteed amount for the purpose of calculating the plan's total guaranteed benefits. Pierre-André de Chalendar's pension will be based on his final year's fixed compensation. His years of service with the Group will be calculated as from October 1, 1989, the date he joined the Saint-Gobain Group. If he were to leave after completing the maximum number of pensionable years of service under the "SGPM" plan, Pierre-André de Chalendar would be entitled to total guaranteed pension benefits (including pension benefits paid under the basic and compulsory pension schemes) representing a guaranteed replacement rate of approximately 47% of his final year's fixed compensation. The seniority-based supplementary pension benefits under the "SGPM" plan that would be paid by Compagnie de Saint-Gobain, which corresponds to the difference between these guaranteed total benefits and the amount of benefits paid under the basic and compulsory pension schemes, would therefore be approximately 37% of his latest fixed compensation set in the event of retirement at maximum seniority. Pierre-André de Chalendar's maximum supplementary retirement payout is significantly lower than the AFEP-MEDEF code's recommended cap, which is 45% of the sum of the fixed and annual variable compensations. The annual increase in Pierre-André de Chalendar's potential rights is 1.5% of his fixed compensation per year of seniority, and thus represents only 50% of the 3% cap of the annual compensation previously set by law. Finally, with regard to expenses associated with the payment of the seniority-based supplementary pension benefits referred to above, the Company would be required to pay a contribution on the premiums paid to the two insurance companies mentioned above (those premiums are also deductible from the corporate income tax base), the rate of which is set at 24%. At December 31, 2019, the estimated amount of the pension that Pierre-André de Chalendar will receive as supplemental pension would come to a gross amount of €345,000 per year. This indicative amount is calculated according to the procedures set forth by Article D.225-29-3 of the French Commercial Code, according to which the pension must be estimated on an annual basis, take into account the accumulated years of service of the executive corporate officer in his/her duties on the fiscal year-end date, be based on the compensation during the last fiscal year(s) and be calculated disregarding the effective satisfaction of the conditions to which the commitment is subject, as if the executive corporate officer could benefit from it starting the day after fiscal year-end.

Compensation policy for the Chairman and Chief Executive Officer, for the 2020 fiscal year, subject to the approval of the Ordinary Shareholders' Meeting (Article L.225-37-2 of the French Commercial Code)		
Compensation components attributable to the Chairman and Chief Executive Officer	**Cap**	**Description**
		The lifetime benefits granted consist of the retirement income described above, as well as life insurance, to which Pierre-André de Chalendar will be eligible to subscribe like other retirees upon retiring, the annual premium of which is estimated as at December 31, 2019 to be less than €9,000. This premium is assumed in its entirety by Compagnie de Saint-Gobain in the first year of retirement, after which only 50% continues to be assumed by the Company. In accordance with the law and upon the renewal of the term of office of the Chairman and Chief Executive Officer, at its meeting of February 22, 2018, the Board of Directors defined, on the recommendation of the Nomination and Remuneration Committee, the performance condition to which the annual increase in Pierre-André de Chalendar's pension rights shall be subject, as follows: allocation by the Board of Directors of an annual variable compensation at least equal to one-half of the average maximum amount set for that annual variable compensation for the last three full fiscal years during which he held the position of Chairman and Chief Executive Officer and ending prior to the date of assessment of the performance condition. The fulfillment of this performance condition conditioning the increase in rights as of October 1 is ascertained each year by the Board of Directors, in accordance with the law. Date of authorization by the Board of Directors: February 22, 2018. Date of approval by the General Shareholders' Meeting, according to the related-party agreements procedure in force at the time: June 7, 2018 (9 th Resolution).
Health and personal risk insurance	-	Pierre-André de Chalendar continues to benefit in full from the Group's health and personal risk insurance policies entered into with GAN and Mutuelle Malakoff Médéric, respectively, which all the employees of Compagnie de Saint-Gobain also benefit from. Date of authorization by the Board of Directors: February 22, 2018. Date of approval by the General Shareholders' Meeting, according to the related-party agreements procedure in force at the time: June 7, 2018 (10th Resolution).

b) Compensation policy for the Chief Operating Officer subject to approval of the General Shareholders' Meeting of June 4, 2020 (*Say on Pay ex ante*)

At its meeting of November 22, 2018, the Board of Directors, on the proposal of the Chairman and Chief Executive Officer and the recommendation of the Nomination and Remuneration Committee, appointed Benoit Bazin as Chief Operating Officer effective January 1, 2019 (see Chapter 5, Section 1.3).

The employment contract for Benoit Bazin, who joined the Saint-Gobain Group on September 1, 1999, has been suspended since January 1, 2019 and for the duration of his term of office as Chief Operating Officer.

The table below details the compensation policy for the Chief Operating Officer for the 2020 fiscal year, that is submitted to the approval of the General Shareholders' Meeting of June 4, 2020 pursuant to Article L.225-37-2 of the French Commercial Code, including the commitments made in his favor on matters such as compensation components and indemnities or benefits due or likely to be due in the event of termination of his duties. These commitments were approved by the General Shareholders' Meeting of June 6, 2019 pursuant to the related-party agreements procedure in force at the time (11th to 13th Resolutions).

Compensation policy for the Chief Operating Officer, for the 2020 fiscal year, subject to the approval of the Ordinary Shareholders' Meeting (Article L.225-37-2 of the French Commercial Code)

Compensation components attributable to the Chief Operating Officer	Cap	Description
Fixed compensation	-	The fixed compensation of the Chief Operating Officer is commensurate with his experience and responsibilities as Chief Operating Officer and shall be compared with fixed compensation offered by similar large companies in terms of net sales, workforce and international scope of operations. In accordance with these principles, on November 22, 2018, on the proposal of the Nomination and Remuneration Committee, the Board of Directors decided to set the fixed compensation at €750,000 for 2019. This amount is maintained for 2020.
Annual variable compensation	**150% of the fixed compensation**	The Board of Directors decided, on February 27, 2020, on the proposal of the Nomination and Remuneration Committee, to increase the cap on the annual variable compensation of the Chief Operating Officer from 120% to 150% of his fixed compensation. The Board of Directors noted the successful implementation by the Chief Operating Officer of the Transform & Grow plan, the achievement of the targets set, and the efficient and sustainable implementation of the new organization. This level of annual variable compensation is at the median of the benchmark of similar large companies in terms of sales, workforce and international scope of operations. The amount of the variable compensation for the 2020 fiscal year will be decided by the Board of Directors in 2021 based on the achievement of quantifiable and qualitative objectives that it established, respectively at 2/3 and 1/3 of the variable portion of his compensation (structure unchanged compared to 2019). As regards the quantifiable objectives, the Board decided to adopt the same quantifiable objectives for the 2020 fiscal year as those applicable to the Chairman and Chief Executive Officer, *i.e.* the following four objectives, each counting for 25%, deemed relevant for assessing the operational and financial performance of the Saint-Gobain Group and its strategy: the rate of return on capital employed (ROCE), the operating income of the Group, the recurring net income of the Group per share and the operating Free Cash Flow. The Board retained the following qualitative objectives, deemed relevant to the extent that they reflect the implementation of strategic orientations for the 2020 fiscal year: further evolution of the portfolio's turnover, further implementation of the "Transform & Grow" plan and the Group's digital transformation, and implementation of the corporate social responsibility policy. *In accordance with the law, the payment of the annual variable compensation will be conditioned to the approval of the 2021 Ordinary Shareholders' Meeting.*
Deferred variable compensation	**None**	The Board of Directors does not intend to grant deferred variable compensation to the Chief Operating Officer in 2020.
Multi-year variable compensation	**None**	The Board of Directors does not intend to grant variable multi-year compensation to the Chief Operating Officer in 2020.

Compensation policy for the Chief Operating Officer, for the 2020 fiscal year, subject to the approval of the Ordinary Shareholders' Meeting (Article L.225-37-2 of the French Commercial Code)		
Compensation components attributable to the Chief Operating Officer	**Cap**	**Description**
Exceptional compensation	**None**	The Board of Directors does not intend to grant exceptional compensation to the Chief Operating Officer in 2020. *In accordance with the law, the payment of any exceptional compensation would be conditioned to the approval of the 2021 Ordinary Shareholders' Meeting.*
Indemnity for taking up office	**None**	The Board of Directors reserves the option, if a new Chief Operating Officer should be recruited outside the Group, to grant him/her an indemnity for taking up office to compensate for the loss of benefits, in compliance with current practices, such as the annual variable compensation and/or long-term compensation components which he/she was entitled to as part of his/her previous duties. This indemnity for taking up office could take the form of payments in cash and/or allocation of securities subject to performance conditions
Long-term compensation	**Cap on grants of long-term compensation instruments to the COO, *i.e.*, stock options, performance shares and performance units (valuation based on IFRS standards) set at 85% of his 2020 total maximum gross compensation** **and** **Cap for allocation to the COO fixed at 5% of the overall grants of performance shares and performance units in 2020** **and** **Caps on grants to the executive corporate officers provided for by the 23rd (options) and 24th (performance shares) resolutions of the General Shareholders' Meeting of June 6, 2019**	The Board of Directors has decided that grants of stock options, performance shares and performance units to the Chief Operating Officer in 2020, could not, at the time of their grant, represent a value (in accordance with the IFRS standards) greater than 85% of his total maximum gross compensation for the 2020 fiscal year (fixed compensation plus maximum variable compensation for the 2019 fiscal year). In 2019, the stock options, performance shares and performance units granted to the Chief Operating Officer represented less than 55% of his total maximum gross compensation in respect of that fiscal year. As a reminder, the General Shareholders' Meeting of June 6, 2019 decided to maintain, despite the appointment of a second executive corporate officer, the sub-cap on the grant of stock options to executive corporate officers at 10% of the cap set by the 23rd resolution (sub-cap being also applicable to the 24th resolution of the same Meeting related to the grant of performance shares which itself fixed a sub-cap at 10% for the allocation to the executive corporate officers). In addition, the Board of Directors has decided that the Chief Operating Officer may not receive more than 5% of the overall grants of performance shares and performance units allocated under the 2020 long-term compensation plans. *The grants of stock options, performance shares and performance units to the Chief Operating Officer represented, in 2019, approximately 0.008% of the Company's share capital and less than 5% of the total allocation of performance shares and performance units granted under the long-term compensation plans implemented in 2019.* As in 2019, for any allocation in 2020 under long-term compensation plans, the Board will set for the Chief Operating Officer a **demanding obligation to retain shares** resulting from the exercise of stock options or vested performance shares or to reinvest in shares upon the exercise of performance units, which the Chief Operating Officer will be required to hold in registered form until the end of his duties. The characteristics of the long-term compensation plans for the Chief Operating Officer will be identical to the ones described for the Chairman and Chief Executive Officer (see AFEP-MEDEF table, Chapter 5, Section 2.2.4 (e), paragraph on "Long-term compensation").

Compensation policy for the Chief Operating Officer, for the 2020 fiscal year, subject to the approval of the Ordinary Shareholders' Meeting (Article L.225-37-2 of the French Commercial Code)

Compensation components attributable to the Chief Operating Officer	Cap	Description
Consequences of the departure of the Chief Operating Officer on his stock options, performance shares and performance units granted during his term of office as Chief Operating Officer	-	a) In the event of **termination of his office as executive corporate officer**, the Chief Operating Officer (or his heirs in the event of death**) shall be deprived of his right to exercise stock options or receive performance shares, performance units and other long-term compensation instruments** granted to him during his term as Chief Operating Officer for which the minimum exercise period, or the acquisition period, will not have expired as of the date of termination of his office as executive corporate officer (with the exception of events of death, disability or retirement, in which case the long-term compensation instruments will be maintained as stated in the related rules for the long-term compensation plans). b) **The Board of Directors shall nevertheless have the option**, on the proposal of the Nomination and Remuneration Committee, **to maintain, exclusively on a *prorata temporis* basis**, the benefit of stock options, performance shares, performance units or other long-term compensation instruments granted to him during his office as Chief Operating Officer for which the minimum exercise period, or the acquisition period, as the case may be, will not have expired as of the date of termination of his office as executive corporate officer. Such decision by the Board of Directors shall occur no later than the day of the termination of office. Any such decision by the Board of Directors must be justified in accordance with the AFEP-MEDEF Code. The exercise of stock options and performance units, and the vesting of performance shares and other long-term compensation instruments would nonetheless remain subject in this case to the fulfillment of the performance conditions stipulated in the rules of the relevant plans. c) By exception, the Board of Directors **shall not have the option to maintain this benefit** in the following cases: ■ **dismissal for gross or serious misconduct, or serious misconduct not related to his duties**; and ■ **resignation** from the duties of company Director which does not constitute a case of **"Forced Resignation"**. "Forced Resignation" means a resignation from the duties of executive corporate officer that occurs within the twelve months following: ▪ the date of approval by the General Shareholders' Meeting of a merger or a demerger affecting Compagnie de Saint-Gobain, or ▪ the effective date on which a third party or group of investors acting in concert acquires control of Compagnie de Saint-Gobain (in accordance with Article L.233-3 of the French Commercial Code), or ▪ the announcement by the Company's management bodies of a significant shift in the Group's strategy leading to a major change in its business.
Compensation in respect of the director's term of office	**None**	The Chief Operating Officer is not a Director of Compagnie de Saint-Gobain.
In-kind benefits	-	The Chief Operating Officer has use of a company car.

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Compensation policy for the Chief Operating Officer, for the 2020 fiscal year, subject to the approval of the Ordinary Shareholders' Meeting (Article L.225-37-2 of the French Commercial Code)		
Compensation components attributable to the Chief Operating Officer	**Cap**	**Description**
Severance indemnity	**Cap set at twice the Reference Compensation, including the Indemnity related to the Employment Contract and the non-compete indemnity**	The Board of Directors authorized the insertion in Benoit Bazin's employment contract, which is suspended as of January 1, 2019 during the term of his office, of a severance indemnity ("Severance Indemnity"). **This Severance Indemnity shall be due in the event of termination of his employment contract (i) under conditions giving rise to payment of the Indemnity related to the Employment Contract** (as defined below under "Non-compete Indemnity") **or (ii) by a resignation from his employment contract occuring after a Forced Resignation** (as defined above under "Consequences of the departure of the Chief Operating Officer on stock options, performance shares and performance units granted during his term of office as Chief Operating Officer"), **provided that the notification of the termination of his employment contract occurs within 12 months of termination of his duties as Chief Operating Officer.** **No Severance Indemnity** will be due if the termination of the office or employment contract occurs because of a **gross or serious misconduct or serious misconduct not related to his duties, or a resignation** that is not a Forced Resignation. Similarly, no Severance Indemnity will be due if he has the possibility to claim retirement benefits. In the event of a Forced Resignation from his duties as Chief Operating Officer, Benoit Bazin may notify the company that this Forced Resignation also constitutes a notice of resignation from his salaried functions; there will be no grounds for payment by the company of an Indemnity related to the Employment Contract (as defined below). However, a Forced Resignation shall trigger the payment of the Severance Indemnity within the limits and conditions set out in this section. A Severance Indemnity constitutes a contractual indemnity. It shall be made in addition to the Indemnity related to the Employment Contract, which relates to the seniority acquired as an employee and is not subject to performance conditions. The Severance Indemnity is subject to the performance conditions described below. ■ *Amount*: **Its gross amount is such that the sum of the Indemnity related to the Employment Contract, the non-compete indemnity (if applicable) and the Severance Indemnity cannot, under any circumstances, be greater than twice the Reference Compensation** (as defined below) (the "Overall Cap"). **The gross amount of the Severance Indemnity shall be equal to the difference between, on the one hand, two times the amount of the Reference Compensation and, on the other hand, the sum of the Indemnity related to the Employment Contract and, if applicable, the non-compete indemnity.** ■ *Performance condition*: **The benefit of the Severance Indemnity shall be subject to the fulfillment of a performance condition defined as the allocation by the Board of Directors, on average for the three latest consecutive full fiscal years available during which he held the position of Chief Operating Officer that ended prior to the date of termination of his duties, of an annual variable compensation at least equal to half of the maximum amount set for that annual variable compensation.** This performance condition is challenging, as demonstrated by the amount of the annual variable compensation received in respect of the 2019 fiscal year which amounted to 75.33% of its maximum amount. The payment of the Severance Indemnity shall be subject to the prior verification by the Board of Directors, after consultation with the Nomination and Remuneration Committee, of the fulfillment of said performance condition assessed on the date of termination of his duties as Chief Operating Officer, and the waiver by Benoit Bazin of all proceedings and actions. Date of authorization by the Board of Directors: November 22, 2018. Date of approval by the General Shareholders' Meeting, according to the related-party agreements procedure in force at the time: June 6, 2019 (11th Resolution).

Compensation policy for the Chief Operating Officer, for the 2020 fiscal year, subject to the approval of the Ordinary Shareholders' Meeting (Article L.225-37-2 of the French Commercial Code)		
Compensation components attributable to the Chief Operating Officer	**Cap**	**Description**
Non-compete indemnity	**Cap set at one year of the Reference Compensation** **and** **Combined non-compete indemnity, Severance Indemnity and Indemnity related to the Employment Contract capped at two years' Reference Compensation**	The Board of Directors authorized the insertion of a non-compete clause in Benoit Bazin's employment contract, which was suspended starting January 1, 2019 during the term of office [(1)]. This clause stipulates a firm and irrevocable non-compete commitment from Benoit Bazin to the benefit of Compagnie de Saint-Gobain, for a period of one year following the termination of his employment contract, for any reason whatsoever, provided that such termination occurs within 12 months following the termination of his duties as Chief Operating Officer. ■ *Amount*: In consideration of this undertaking, Benoit Bazin shall receive a non-compete indemnity, including any paid leave indemnity, of an **amount equal to,** unless it is reduced under the circumstances specified in the following paragraph, Benoit Bazin's **gross total annual compensation** as Chief Operating Officer, defined as his fixed compensation, on an annual basis, as Chief Operating Officer received on the date of termination of his duties, and of the average of the annual variable compensation paid or to be paid to him for the three latest consecutive full fiscal years available during which he held the position of Chief Operating Officer that ended prior to the date of termination of his duties (this total gross annual compensation is defined as the "Reference Compensation").. Without prejudice to the Overall Cap defined in the description of the Severance Indemnity above, the **combination of this non-compete indemnity, the statutory indemnity or the indemnity related to the collective bargaining agreement that would be paid to Benoit Bazin in the event of dismissal, and any other indemnity related to the termination of the employment contract** (the statutory indemnity and any other indemnity being jointly defined, with the exception of the Severance Indemnity, as the "Indemnity related **to the Employment Contract") may not be greater than twice the amount of the Reference Compensation**. For this purpose, in the event of a termination of his employment contract resulting in the payment of an Indemnity related to the Employment Contract, the gross amount of the non-compete indemnity due to Benoit Bazin shall, if necessary, be reduced proportionally in light of the surplus amount. ■ *Payment*: This non-compete indemnity shall be paid monthly starting from the departure of Benoit Bazin. The payment of the non-compete indemnity would be excluded if Benoit Bazin claimed his retirement benefits. In any event, no indemnity will be paid beyond the age of 65. ■ *Waiver option*: However, the Board of Directors reserves its right to unilaterally waive application of the non-compete commitment no later than two months following the termination of the office of the Chief Operating Officer. In this case, the Chief Operating Officer would be released from any commitment and no sum would be due to him in this respect. Date of authorization by the Board of Directors: November 22, 2018. Date of approval by the General Shareholders' Meeting, according to the related-party agreements procedure in force at the time: June 6, 2019 (11th Resolution).

(1) Activity concerned: any company whose main activity is the trading in or production of construction materials similar to those produced by the Saint-Gobain Group. Territory: European Union, EFTA and Switzerland.

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Compensation policy for the Chief Operating Officer, for the 2020 fiscal year, subject to the approval of the Ordinary Shareholders' Meeting (Article L.225-37-2 of the French Commercial Code)		
Compensation components attributable to the Chief Operating Officer	**Cap**	**Description**
Supplementary pension arrangements		Benoit Bazin continues to fuly benefit fully from the defined-benefit supplementary pension plan set up in 2012, pursuant to Article L.137-11 of the French Social Security Code, under identical conditions to those applicable to all beneficiaries of this pension plan, subject to the following additional information (for further details, see https://www.saint-gobain.com/sites/sgcom.master/files/plan_retraite_2012_dgd.pdf): ■ Since Benoit Bazin joined the Saint-Gobain Group on September 1, 1999, he had accumulated 19 years and 4 months of service under the "2012" pension plan at January 1, 2019, when his term of office came into effect and his employment contract was suspended, it being noted that the years of service taken into account to calculate the supplementary pension under the "2012" pension plan is capped at 20 years. ■ In accordance with the law, **the annual increase in Benoit Bazin's potential rights under the "2012" supplementary pension plan** as from January 1, 2019 and during his term of office as Chief Operating Officer is **subject to a performance condition** defined as follows: allocation by the Board of Directors, on average, for the three latest consecutive full fiscal years available during which he held the position of Chief Operating Officer that ended prior to the date of assessment of the fulfillment of the performance condition, of an annual variable compensation at least equal to half of the maximum amount set for that annual variable compensation (condition similar to the one applicable to the Severance Indemnity described above). ■ The Board of Directors noted, in February 2020, that the performance condition applying to Benoit Bazin's rights' increase had been met. It was also noted that, in September 2019, Benoit Bazin reached the 20 years' service cap provided under the "2012" supplementary pension plan, and that therefore, he would be unable to acquire any additional rights under this plan in the future. Base compensation, consisting exclusively of fixed and variable components of his annual compensation and benefits in kind, taken into account to calculate Benoit Bazin's pension is the average of three consecutive years of base compensation, including the highest over the last ten years of activity. In the event of departure with the maximum years of service (acquired in September 2019) under the "2012" pension plan, Benoit Bazin would be entitled to an annual pension supplement equivalent to 24% of his last fixed compensation. Benoit Bazin's maximum supplementary theoretical retirement payout is significantly lower than the AFEP-MEDEF code's recommended cap, which is set at 45% of the sum of the fixed and annual variable compensations. This annuity is financed by premiums paid to an insurance company which are deductible from the corporate income tax base. With respect to the social security charges associated with the payment of the annuity, the Company would be subject to the payment of a contribution based on the premiums paid to the insurer, the rate of which is set by the French Social Security Code at 24%. At December 31, 2019, Benoit Bazin's estimated pension under the supplementary plan would amount to around €178,000 per year, below the cap for the "2012" pension plan (eight times the annual social security cap, i.e. €324,192 in 2019). This indicative amount is calculated according to the procedures set forth by Article D.225-29-3 of the French Commercial Code, according to which the pension must be estimated on an annual basis, take into account the accumulated years of service of the executive corporate officer in his/her duties on the fiscal year-end date, be based on the compensation during the last fiscal year(s) and be calculated disregarding the effective satisfaction of the conditions to which the commitment is subject, as if the executive corporate officer could benefit from it starting the day after fiscal year-end. The "2012" pension plan was frozen on December 31, 2019 so that no additional right related to years of service could be acquired after this date, in accordance with Order no. 2019-697 of July 3, 2019 on additional workplace pension plans. Date of authorization by the Board of Directors: November 22, 2018. Date of approval by the General Shareholders' Meeting, according to the related-party agreements procedure in force at the time: June 6, 2019 (12th Resolution).

Compensation policy for the Chief Operating Officer, for the 2020 fiscal year, subject to the approval of the Ordinary Shareholders' Meeting (Article L.225-37-2 of the French Commercial Code)		
Compensation components attributable to the Chief Operating Officer	**Cap**	**Description**
Health and personal risk insurance		By decision of the Board of Directors, Benoit Bazin continues to fully benefit from the Group's health and personal risk insurance policies entered into with GAN and Mutuelle Malakoff Médéric respectively during his term of office. Date of authorization by the Board of Directors: November 22, 2018. Date of approval by the General Shareholders' Meeting, according to the related-party agreements procedure in force at the time: June 6, 2019 (13th Resolution).

2.3 Compensation of members of the Group's Senior Management

Compensation paid to members of the Group's Senior Management is set at a level consistent with compensation packages offered by comparable groups. It is determined and reviewed, among other things, based on the results of specific surveys from specialized consultants commissioned by Group's Senior Management.

In addition to a fixed portion, it consists of a variable compensation set at a reasonable proportion of total compensation, the purpose of which is to reflect the manager's personal contribution to the Group's growth and results.

This principle has now been extended to all managerial staff. The performance objectives used are based on financial indicators such as Return On Investment (ROI) and Return On Capital Employed (ROCE), as well as personal objectives such as developing a certain type of business or entering a new geographic market. Most often, a safety indicator is also applied.

In this way, management compensation is clearly linked to performance and to the achievement of objectives that promotes a high level of personal commitment. Each manager's compensation can fluctuate significantly from one year to the next, based on the results achieved.

Total gross compensation received in 2019 from the Group's French and foreign companies by members of the Executive Committee as composed at December 31, 2019 (excluding the executive corporate officers and excluding long-term compensation components), amounted to €7.9 million (€15.3 million in 2018 received by members of the Senior Management Committee as composed at December 31, 2018), including €2.2 million (€4.2 million in 2018 received by members of the Senior Management Committee as composed at December 31, 2018) gross variable compensation. No termination benefit was received by members of the Executive Committee as composed at December 31, 2019 (€2.6 million in 2018 received by members of the Senior Management Committee as composed at December 31, 2018).

Pensions and other post-employment benefits (Defined Benefit Obligations in respect of length-of-service awards and pensions) accruing to the members of the Executive Committee as composed at December 31, 2019 (including the executive corporate officers) totaled €41.5 million at December 31, 2019 (€50.9 million at December 31, 2018 for members of the Senior Management Committee as composed at December 31, 2018).

Compensation allocated to Directors representing the Group (particularly members of Group's Senior Management) in Group companies other than Compagnie de Saint-Gobain are either reverted to their employer company, or paid directly to that company.

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2.4 Long-term compensation plans (stock options, performance shares and performance units)

2.4.1 Allocation policy

The objective of the Group's long-term Compensation policy is to retain and motivate Group's Senior Management, officers and employees, and to associate them with the Group's performance, in particular through conditional allocations of stock options, performance shares or performance units to reflect their fulfillment of the Group's long-term strategy.

At the recommendation of the Nomination and Remuneration Committee, the Board of Directors authorizes the features of the stock option and performance share plans, as well as the identity of the beneficiaries, and approves the principle of long-term compensation plans in the form of performance units to be implemented, if need be, by the Chairman and Chief Executive Officer. These plans are subject to a service condition and to the strict internal and/or relative performance criteria set by the Board (see below for details of each allocation).

In 2019, to simplify allocations, it was decided that a performance share plan only would be set up. This plan applied to 2,229 of the Group's managers and officers, in France and overseas: managers with outstanding performance and high-potential managers (2,192), the main functional and operational heads of the Entities and Regions (25), Executive Committee (12) excluding the executive corporate officers). Grants to the executive corporate officers are detailed in the paragraph "Long-term remuneration policy" in (b) of Chapter 5, Section 2.2.2.

The beneficiaries of this plan are of 54 different nationalities and work in 61 countries.

The performance share plan entitles beneficiaries to existing shares and therefore has no impact in terms of dilution. No stock option or performance unit plan was set up during fiscal year 2019.

The other instruments designed to associate employees with business results are presented in Chapter 7, Section 2.3 and Chapter 4, Section 2.4.

2.4.2 Performance share plans

Performance share plans have been set up by the Board of Directors every year since 2009.

Under the authorization granted by the twenty-fourth resolution of the General Shareholders' Meeting of June 6, 2019, at its meeting of November 21, 2019 the Board of Directors resolved to implement a performance share plan, following analysis and the recommendation of the Nomination and Remuneration Committee.

This plan covers 2,231 managers and officers of the Group in France and abroad, who were granted a total of 1,251,770 performance shares (including the grant to the executive corporate officers).

Note that no stock option or performance unit plans were in place in 2019, all beneficiaries having received performance shares (in 2018, 1,219,619 performance shares and 290,500 share options were granted).

The duration of the vesting period was set at four years, with delivery of the shares to occur on the fourth day after the close of this period.

The performance criteria applicable to the performance share plan implemented on November 21, 2019 include, as has been the case since 2015, an internal performance condition linked to Saint-Gobain Group's Return on Capital Employed, including goodwill, and a relative performance condition linked to the performance of the Saint-Gobain stock price compared to the performance of the CAC 40 stock market index. Furthermore, following dialog with investors, the long term compensation plans put in place since 2017 by the Board of Directors, on the proposal of the Nomination and Remuneration Committee, now include a criterion relating to corporate social responsibility. These criteria have been considered relevant by the Board of Directors as they reflect the operational, financial and non-financial performance of the Saint-Gobain Group and ensure an alignment of the beneficiaries with the interest of Saint-Gobain shareholders.

Vesting of performance shares is subject to fulfillment of the following cumulative conditions:

- *service condition*: to be an employee or a company director of a Saint-Gobain Group company throughout the entire duration of the vesting period, without interruption, except in a number of specific cases such as death, disability (as defined in paragraphs (2) and (3) of Article L. 341-4 of the French Social Security Code), no-fault termination, negotiated departure, retirement, transfer to another position within the Group, or change of control of the grantee's host company to outside the Group;
- *performance condition linked* to the following three criteria:
  - 65% of the shares initially allocated are subject to the criteria of Return on Capital Employed, including goodwill, of the Saint-Gobain Group (ROCE),
  - 20% of the shares initially allocated are subject to a criterion linked to the performance of the Saint-Gobain stock price versus the performance of the CAC 40 stock market index, and
  - 15% of the shares initially allocated are subject to a criterion linked to corporate social responsibility. This criterion, resulting from dialogue with investors, comprises the following three indicators, all quantifiable and published each year as key CSR indicators, each applying to 5% of the shares initially allocated: the total recordable accident rate – more than 24 hours' lost and non-lost time (TRAR), the reduction rate of CO_2 emissions and the senior executives diversity index.

However, the first 100 shares granted to each beneficiary other than Executive Committee members will be exempt from the performance conditions.

ROCE performance will be calculated as follows:

Arithmetic average of the ROCE for the years 2020, 2021 and 2022	Percentage of shares initially granted, contingent upon the ROCE (*i.e.* 65% of grant), vested
Greater than 12%	All
Between 9% and 12%	[Arithmetic average of 2020, 2021 and 2022 ROCE – 9%]/[12% - 9%]
9% or less	None

Stock price performance will be calculated by comparing the average opening listing price of the Saint-Gobain stock price and the CAC 40 index over the six months prior to November 21, 2019 to the average over the six months prior to November 21, 2023, as follows:

Performance of the Saint-Gobain stock price compared to the CAC 40 index	Percentage of shares initially granted, contingent upon the stock market performance (*i.e.* 20% of grant), vested
At least 10% greater	All
Between 0% and +10%	2/3+1/3*[(Performance of the Saint-Gobain stock price/CAC 40 index) (1) - 100%]/[110% - 100%]
Lower than the CAC 40 index	None

(1) *Saint-Gobain stock price performance/CAC 40 index performance (performance of the Saint-Gobain stock price versus performance of the CAC 40 index) is equal to: 100% + the difference between the performance of the Saint-Gobain stock price and that of the CAC 40 index, in both cases expressed as a percentage.*

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Performance in respect of the corporate social responsibility criterion is calculated as follows:

Arithmetic average TRAR of the Group for the years 2020, 2021 and 2022 (1) (2)	Percentage of shares initially granted, contingent upon the TRAR (*i.e.* 5% of grant), vested
Below 2.3	All
Between 2.3 and 2.7	Linear interpolation
Greater than 2.7	None

(1) *Total recordable accident rate – more than 24 hours' lost time and non lost time – for a million hours worked by the permanent and temporary employees and by permanent subcontractors of Saint-Gobain Group.*

(2) *In light of the excellent 2018 results, in which the TRAR decreased from 2.6 in 2017 to 2.3 in 2018, the Group set, when setting up the plan, the target of consolidating the performance achieved at a TRAR level of 2.3 (see Chapter 4, Section 2.1).*

Reduction of the Group's CO_2 emissions between 2018 and 2022(1) (2)	Percentage of shares initially granted, contingent on the percentage reduction in CO_2 emissions (*i.e.* 5% of the grant), vested
Greater than 4.7%	All
Between 3.6% and 4.7%	Linear interpolation
Below 3.6%	None

(1) *The results will be assessed based on iso-production.*

(2) *The Group set the objective of reducing Group CO_2 emissions by at least 20% by 2025 compared with the level measured for the year 2010 (see Chapter 4, Section 2.1).*

Arithmetic average of the diversity index for the years 2020, 2021 and 2022 (1) (2)	Percentage of shares initially granted, contingent upon the diversity index (*i.e.* 5% of grant), vested
Greater than 90%	All
Between 85% and 90%	Linear interpolation
Below 85%	None

(1) *Index corresponding to the proportion of the Group's senior executives satisfying at least one of the three following diversity characteristics: being non-French, having diverse professional experiences (having worked at Saint-Gobain in two countries different from the country of origin or at least in three different sectors, or having an experience of more than 12 years outside the Saint-Gobain Group), being a woman (see Chapter 4, Section 2.1).*

(2) *The Group set a general objective of maintaining a minimum of 90% of senior executives meeting one of the three abovementioned criteria and a target for 2025 of 25% of its senior executives being female (see Chapter 4, Section 2.1).*

The following table shows the history of the performance share plans outstanding at December 31, 2019 as well as the features of the 2015 plan, delivered in November 2019.

The performance conditions for performance shares allocated by the Group are demanding, as evidenced by the achievement rates for the latest three performance share plans for which the performance condition has been determined (66.4% for the 2015 plan [1], 86.4% for the 2014 plan, 89.2% for the 2013 plan). The performance condition relating to the 2016 plan will be determined in November 2020, since it includes, in addition to the ROCE criterion, a relative external criterion that is assessed over a 4-year period ending in November 2020.

The ten Group employees and non-executive officers who were granted the highest number of shares in 2019 were allocated 178,000 performance shares (global information), valued at €36.74 per share based on the closing stock price on the day preceding the grant decided by the Board of Directors' meeting of November 21, 2019.

The following table shows the history of the share grant plans in place at December 31, 2019 as well as the features of the 2015 plan, delivered in November 2019.

Fiscal year	2019	2018	2017	2016	2015
Date of General Meeting	06/06/2019	06/02/2016	06/02/2016	06/02/2016	06/04/2015
Date of Board of Directors' meeting	11/21/2019	11/22/2018	11/23/2017	11/24/2016	11/26/2015
Type of shares	existing	existing	existing	existing	existing
Total number of performance share rights initially granted (4+0)	1,251,770 (2)	1,219,619 (2)	1,226,680 (2)	1,231,320 (1)	500,910 (1)
of which shares granted to executive corporate officers: Pierre-André de Chalendar, Chairman and Chief Executive Officer	90,000	67,000	67,000	67,000	0
Benoit Bazin, Chief Operating Officer*	45,000	N/A	N/A	N/A	N/A
Total number of shares delivered	0	200 (4)	450 (4)	870 (4)	341,170 (3)
Number of rights forfeited	0	0	0	0	159,740 (5)
TOTAL OUTSTANDING PERFORMANCE SHARE RIGHTS	**1,251,770 (6)**	**1,219,419 (6)**	**1,226,230 (6)**	**1,230,450 (6)**	**0**

* *in position since January 1, 2019.*

(1) *Before application of the performance conditions related to the ROCE of the Saint-Gobain Group and the Saint-Gobain share price performance (see 2015 and 2016 Registration Documents).*

(2) *Before application of the performance conditions related to the ROCE of the Saint-Gobain Group, the Saint-Gobain share price performance and the Group's corporate social responsibility (see 2017, 2018 Registration Document and above).*

(3) *After taking into account service and performance conditions.*

(4) *By anticipation, as part of the exceptions defined in the service condition (including death, disability – see Chapter 5, Section 2.4.2).*

(5) *134,598 rights under the 2015 plan forfeited following partial achievement of the performance condition and 25,142 rights under the 2015 plan forfeited after consideration of the service condition.*

(6) *Subject to cumulative fulfillment of the service and performance conditions (see the Registration Document relating to the year in which the plan in question was implemented).*

(1) *Vesting of the performance shares granted in November 2015 was subject to a service condition and a performance condition, the latter being linked to the two following criteria: (i) 70% of the shares initially granted were subject to a ROCE criterion and (ii) 30% of the shares initially granted were subject to a stock market performance criterion of the Saint-Gobain share on the CAC 40 (see Chapter 5 of the 2015 Registration Document, Sections 2.4.2 and 2.4.3).). As the fulfillment rate of each of these criteria (as verified by the statutory auditors) were 94.8% and 0% respectively, the overall fulfillment rate of the 2015 plan's performance condition was 66.36%.*

2.4.3 Stock option plans

The Board of Directors approved stock option plans every year between 1987 and 2018. No stock option plan was implemented in 2019.

Under these plans, each beneficiary has a conditional right to exercise a certain number of options at a set price, each option carrying entitlement to the subscription or purchase of a Saint-Gobain share.

The lifetime of the options is 10 years.

The performance criteria applicable to the stock option plans implemented since 2017 are strictly identical to those applicable to the performance share plans for the same year.

The performance conditions for stock options granted by the Group are demanding, as evidenced by the achievement rates for the three latest stock option plans for which the performance condition has been determined (28.44% for the 2015 plan[1], 0% for the 2014 plan, and 58.9% for the 2013 plan). The performance condition for the 2016 plan will be determined in November 2020, since it includes, in addition to the ROCE criterion, a relative external criterion that is assessed over a 4-year period ending in November 2020.

Stock option plans are subject to fulfillment of a service condition that applies during the entire duration of the exercise period in a manner similar to that stipulated for performance shares (see Section 2.4.2 above).

The following table shows stock options granted to the ten highest-paid non-executive employees, and options exercised by them in 2019 (global information).

Table 9 – Options granted to the ten employees (excluding executive officers) who were granted the highest number of options and options exercised by them (AMF nomenclature)

	Total options granted or subscribed or purchased shares	Weighted average price	Plans
Options granted during the year by the issuer and any company included within the scope of the options allocation, to the ten employees of the issuer or of any company within this scope with the highest number of options granted (global information)	N/A	N/A	N/A
Options on the issuer and the companies referenced above, exercised during the year by the ten employees of the issuer or of these companies with the highest number of options thus purchased or subscribed (global information)	116,300	36.34	11/19/2009

The following table shows the history of the stock option allocation plans in place at December 31, 2019. There are no other stock option plans in place or other option instruments involving the shares, whether listed or non-listed, of Group companies within or outside France.

Table 8 – Historical information about stock option plans (AMF nomenclature)

Fiscal year	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Date of General Meeting	06/06/2019	06/02/2016	06/02/2016	06/02/2016	06/05/2014	06/05/2014	06/07/2012	06/07/2012	06/04/2009	06/04/2009
Date of Board of Directors' meeting	N/A	11/22/2018	11/23/2017	11/24/2016	11/26/2015	11/20/2014	11/21/2013	11/22/2012	11/24/2011	11/18/2010
Type*	N/A	purchase or subscription	purchase or subscription	purchase or subscription	purchase	purchase	purchase	subscription	subscription	subscription
Total number of exercisable options at the start of the Plan	N/A	290,500	284,500	280,000	224,950	234,550	247,250	253,000	482,150	1,144,730
Cumulative number of canceled or forfeited options	N/A	0	0	0	162,408 (5)	234,550 (4)	98,047(3)	202,994 (2)	459,650 (1)	1,117,390 (1)
Total number of exercisable options after adjustments and forfeitures	N/A	290,500 (7)	284,500 (7)	280,000 (6)	62,542	0	149,203	50,006	22,500	27,340
of which options granted to executive corporate officers:										

(1) Vesting of the stock options granted in November 2015 was subject to a service condition and a performance condition, the latter being linked to the two following criteria: (i) 70% of the options initially granted were subject to a stock market performance criterion of the Saint-Gobain share on the CAC 40 and (ii) 30% of the options initially granted were subject to a ROCE criterion (see Chapter 5 of the 2015 Registration Document, Section 2.4.2). As the fulfillment rate of each of these criteria (as verified by the statutory auditors) were 0% and 94.8% respectively, the overall fulfillment rate of the 2015 plan's performance condition was 28.44%.

Fiscal year	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Pierre-André de Chalendar, Chairman and Chief Executive Officer	N/A	58,000	58,000	58,000	14,220 (8)	0 (8)	29,465 (8)	8,235 (8)	0 (9)	0 (9)
Benoit Bazin, Chief Operating Officer**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Starting date of exercise period	N/A	11/22/2022	11/23/2021	11/24/2020	11/26/2019	11/20/2018	11/21/2017	11/22/2016	11/25/2015	11/19/2014
Expiration date	N/A	11/21/2028	11/22/2027	11/23/2026	11/25/2025	11/19/2024	11/20/2023	11/21/2022	11/23/2021	11/17/2020
Exercise price	N/A	€32.24	€49.38	€40.43	€39.47	€34.13	€38.80	€27.71	€31.22	€35.19
Number of options exercised at 12/31/2019	N/A	0	0	0	0	0	28,856	30,373	0	0
Exercisable options outstanding at 12/31/2019	N/A	290,500	284,500	280,000	62,542	0	120,347	19,633	0	0

* *Of the plans in place at December 31, 2019, the 2010 to 2012 plans are for the subscription of new shares and the 2013, 2014 and 2015 plans are purchase plans. For plans launched between 2016 and 2018, the Board of Directors has decided that it would determine the type of option (subscription or purchase) at the latest on the day before the start of the exercise period, with any options exercised prior to such decision considered as subscription options.*

** *in office at January 1, 2019.*

(1) *Because the performance condition for the 2010 and 2011 plans was not met, options not exercised before determining the result of the performance conditions as part of the early-exercise conditions were forfeited.*

(2) *Options which cannot be exercised following the partial fulfillment of performance conditions related to the relative performance of the Saint-Gobain share price to which all options granted in November 2012 were subject.*

(3) *Options which cannot be exercised following the partial fulfillment of performance conditions related to the relative performance of the Saint-Gobain share price to which all options granted in November 2013 were subject.*

(4) *Options which cannot be exercised following the partial fulfillment of performance conditions related to the relative performance of the Saint-Gobain share price to which all options granted in November 2014 were subject.*

(5) *Options which cannot be exercised due to the performance condition related to the relative performance of the Saint-Gobain share price not being met and the performance condition on the relative performance of the Saint-Gobain Group's ROCE being only partially met, to which all options granted in November 2015 were subject.*

(6) *Before application of the performance conditions related to the ROCE of the Saint-Gobain Group and the Saint-Gobain share price performance (see 2016 Registration Documents).*

(7) *Before application of the performance conditions related to the ROCE of the Saint-Gobain Group, the Saint-Gobain share price performance and the Group's corporate social responsibility (see 2017 and 2018 Registration Documents).*

(8) *After deducting the options granted that are not exercisable because the performance condition was only partly met.*

(9) *After deducting all the options granted that are not exercisable because the performance condition was not met.*

2.4.4 Performance unit plans

The Board approved the principle of implementing performance unit plans annually from 2012 to 2015, implemented by the Chairman and Chief Executive Officer (with the performance units granted to the latter being approved by the Board of Directors). No performance unit plan was implemented in 2019.

Subject to fulfillment of the service and performance conditions, performance unit plans in place offer grantees the opportunity to receive, over the long term (an exercise period of between four years from the grant date to ten years from that date), cash compensation for each unit equal to the Saint-Gobain share price on the reference date plus any dividend paid or distribution made from the start of the exercise period up to the reference date. Performance units constitute an operating expense adjustable each year but creating no shareholder dilution since they do not result in the creation of new shares.

The performance criteria applying to the performance unit plans implemented between 2012 and 2015 are strictly identical to those applicable to the performance share plans for the same year.

The performance conditions pertaining to the performance units granted by the Group are demanding, as evidenced by the achievement rates of the performance unit plans for which the performance condition has been determined (66.36% [1] for the 2015 plan, 86.4% for the 2014 plan and 89.2% for the 2013 plan).

Exercise of performance units is subject to fulfillment of a service condition that applies during the entire duration of the exercise period in a manner similar to that stipulated for stock options (see Section 2.4.2 above).

The following table shows the history of performance unit plans not vested at December 31, 2019 as well as the features of the 2015 plan, which vested in November 2019.

(1) *Vesting of the performance units granted in November 2015 was subject to a service condition and a performance condition, the latter being linked to the two following criteria: (i) 70% of the units initially granted were subject to a ROCE criterion and (ii) 30% of the units initially granted were subject to a stock market performance criterion of the Saint-Gobain share on the CAC 40 (see Chapter 5 of the 2015 Registration Document, Sections 2.4.2 and 2.4.4). As the fulfillment rate of these criteria (as verified by the statutory auditors) was 94.8% and 0% respectively, the percentage of overall fulfillment rate of the 2015 plan's performance condition was 66.36%.*

Table 10 bis – Historical information about performance unit plans

Fiscal year	2019	2018	2017	2016	2015
Date of Board of Directors' meeting	N/A	N/A	N/A	N/A	11/26/2015
Total number of units initially granted (4+0)				-	556,340 [1]
of which number of units granted to executive corporate officers:					
Pierre-André de Chalendar, Chairman and Chief Executive Officer	-	-	-	-	60,000
Benoit Bazin, Chief Operating Officer*	-	-	-	-	N/A
Starting date of exercise period	-	-	-	-	11/26/2022
Expiry date of performance unit exercise period	-	-	-	-	11/25/2022
Total number of units that have become exercisable	-	-	-	-	352,372 [2]
Total number of units forfeited	-	-	-	-	203,968 [3]
of which number of units granted to executive corporate officers which have expired: Pierre-André de Chalendar, Chairman and Chief Executive Officer	-	-	-	-	20,184
Benoit Bazin, Chief Operating Officer*	-	-	-	-	N/A
PERFORMANCE UNITS OUTSTANDING	**-**	**-**	**-**	**-**	**0**

* *in office as from January 1, 2019.*

(1) *Before application of the performance conditions related to the ROCE of the Saint-Gobain Group and the Saint-Gobain share price performance (see 2015 and 2015 Registration Documents).*

(2) *After taking into account service and performance conditions.*

(3) *of which 187,153 rights forfeited following partial achievement of the performance condition and 16,815 units forfeited following non-achievement of the service condition.*

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3. Company stock traded by Directors

Transactions by Directors involving Compagnie de Saint-Gobain shares exceeding an aggregate amount of €20,000 reported to the French Financial Markets Authority (*Autorité des marchés financiers)* in 2019 pursuant to Article L.621-18-2 of the French Financial and Monetary Code were the following:

	Securities	Type	Transaction date	Unit price	Total amount
Pierre-André de Chalendar *Chairman and Chief Executive Officer*	Units of the Saint-Gobain France FCPE (Saint-Gobain Group Savings Plan)	Subscription	May 15, 2019	€25.69	€253,061
	Exercise of stock options	Subscription (1)	November 15, 2019	€36.34	€123,333
	Shares	Disposal (2)	November 15, 2019	€37.50	€123,333
Benoit Bazin *Chief Operating Officer*	Units of the Saint-Gobain France FCPE (Saint-Gobain Group Savings Plan)	Subscription	May 15, 2019	€25.69	€15,196
Pamela Knapp *Director*	Shares	Acquisition	September 17, 2019	€34.88	€34,880

(1) *Exercise by the Chairman and Chief Executive Officer of the remaining 123,333 Saint-Gobain stock options of which he was a beneficiary under the stock option plan introduced in November 2009 (the right to exercise these options expired on November 18, 2019).*

(2) *Disposal by the Chairman and Chief Executive Officer of the 123,333 Saint-Gobain shares resulting from the exercise of the stock options (stock options plan introduced in November 2009) on the same day (see transaction above).*

4. Report of the Board of Directors on corporate governance (Article L. 225-37 of the French Commercial Code)

Report of the Board of Directors on corporate governance

This report on corporate governance was prepared in accordance with Articles L 225-37 et seq. of the French Commercial Code under the responsibility of the Board of Directors and based on information provided by the relevant departments of Compagnie de Saint-Gobain and was approved by the Board of Directors at its meeting of February 27, 2020.

The law stipulates that this report should include a number of corporate governance items.

Management and Directors' compensation (Articles L 225-37-2 and L 225-37-3)

As regards compensation, the report must present the draft resolutions of the Board of Directors relating to the compensation policy for the company's executive corporate officers and directors; this policy must comply with the company's corporate interest, contribute to its longevity and be part of its business strategy.

Furthermore, the report must include the total compensation and benefits of any kind paid or granted by Compagnie de Saint-Gobain to the company's executive corporate officers and directors during or in respect of the fiscal year, as well as commitments of any kind made by Compagnie de Saint-Gobain in favor of the executive corporate directors, such as compensation components, indemnities or benefits due or to be due as a result of taking, losing or changing office or subsequent to the performance thereof, including retirement commitments and other annuity benefits.

The report must also present changes, over the last five fiscal years, in the compensation of the executive corporate officers, the average compensation of Compagnie de Saint-Gobain's employees, the performance of the Saint-Gobain Group and the ratios between the compensation levels of the executive corporate officers of Compagnie de Saint-Gobain and the average and median compensation of its employees, on a full-time equivalent basis.

Finally, the report must contain an explanation of how total compensation complies with the compensation policy adopted, including how it contributes to the company's long-term performance, and how the performance criteria have been applied.

This information, set out in Chapter 5, Section 2, and prepared on the basis of details provided by the Legal, Human Resources and Finance Departments, was reviewed by the Nomination and Remuneration Committee and is included by reference in this report.

Composition and operation of the Board of Directors (Article L.225-37-4)

The report must include the composition of the Board of Directors and the conditions for preparing and organizing its work, as well as any limitations on the powers of the Chairman and Chief Executive Officer and the Chief Operating Officer (see Chapter 5, Section 1 and Chapter 9, Section 1.1).

The report must also include a list of all offices and duties held in all companies by every Compagnie de Saint-Gobain Board member during the year (see Chapter 5, Section 1.1), the method for exercising general management (see Chapter 5, Section 1.2.1), and adherence to a corporate governance code and application of its recommendations (see Chapter 5, Section 1).

The report must include a description of the diversity policy applied to the members of the Board of Directors, as well as a description of the objectives of that policy, its methods of implementation and the results achieved during the previous fiscal year (see Chapter 5, Section 1).

This information, prepared on the basis of details provided by the Legal Department, was reviewed by the Nomination and Remuneration Committee and the Lead Independent Director, and is included by reference in this report.

Other information (Articles L.225-37-4 and L.225-37-5)

Finally, the report must present information likely to have an impact in the event of a takeover bid (see Chapter 7, Section 2.6), related-party agreements and undertakings (see Chapter 5, Section 5), a description of the procedure to properly assess whether the agreements on current transactions concluded under normal conditions meet these conditions and information on its implementation (Chapter 5, Section 1.1), specific procedures for shareholders participation in the General Shareholders' Meeting (Chapter 9, Section 1.1) and must contain a summary table of current valid delegations of authority granted by the General Shareholders' Meeting regarding capital increases showing how these delegations of authority were used during the fiscal year (see Chapter 7, Section 1.2).

This information is prepared on the basis of details provided by the Legal and Financial Departments and is included by reference in this report.

The report must also include a description of how a balanced representation of women and men on the Executive Committee is sought and the gender diversity results in the 10% of the positions with the most responsibility in Compagnie de Saint-Gobain.

This information, which is listed in Chapter 3, Section 1.2, Chapter 3, Section 3.3.4, Chapter 4, Section 2.4 and Chapter 9, Section 3.3 and based on information submitted by the Human Resources Department, has been reviewed by the Board of Directors and is incorporated by reference into this report.

5. Statutory Auditors' special report on related-party agreements

(Annual General Meeting for the approval of the financial statements for the year ended December 31, 2019)

This is a free translation into English of the Statutory Auditors' special report on related-party agreements issued in French and is provided solely for the convenience of English-speaking users. This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

COMPAGNIE DE SAINT-GOBAIN S.A.

Les Miroirs

18, avenue d'Alsace

92400 Courbevoie

France

To the Shareholders,

In our capacity as Statutory Auditors of Compagnie de Saint-Gobain, we hereby report to you on related-party agreements.

It is our responsibility to report to you, based on the information provided to us, on the main terms and conditions of agreements that have been disclosed to us or that we may have identified as part of our engagement, as well as the reasons given as to why they are beneficial for the company, without commenting on their relevance or substance or identifying any undisclosed agreements. Under the provisions of article R.225-31 of the French Commercial Code *(Code de commerce)*, it is your responsibility to determine whether the agreements are appropriate and should be approved.

Where applicable, it is also our responsibility to provide you with the information required by article R.225-31 of the French Commercial Code *(Code de commerce)* in relation to the implementation during the year of agreements already approved by the Annual General Meeting.

We performed the procedures that we deemed necessary in accordance with professional standards applicable in France to such engagements. These procedures consisted in verifying that the information given to us is consistent with the underlying documents.

Agreements to be submitted for the approval of the annual general meeting

We were not informed of any agreements authorized and concluded during the year to be submitted for the approval of the Annual General Meeting in accordance with article L.225-38 of the French Commercial Code *(Code de commerce)*.

Agreements previously approved by an annual general meeting

Agreements approved during the year

We were informed that the following agreements, already approved by the Annual General Meeting of June 6, 2019, were not implemented during the year.

Insertion in Benoit Bazin's employment contract of a severance indemnity and a non-compete clause

Nature and conditions

Severance Indemnity

On the recommendation of the Nomination and Remuneration Committee, at its meeting of November 22, 2018, your Board of Directors authorized the insertion in Benoit Bazin's employment contract, which is suspended as of January 1, 2019 during the term of his office, of a severance indemnity ("Severance Indemnity"). This Severance Indemnity shall be due in the event of termination of his employment contract (i) under conditions giving rise to payment of the Indemnity related to the Employment Contract (as defined below under "Non-compete Indemnity") or (ii) by a resignation from his employment contract occuring after a Forced Resignation[1], provided that the notification of the termination of his employment occurs within 12 months following the termination of his duties as Chief Operating Officer.

No Severance Indemnity will be due if the termination of the office or employment contract occurs because of a gross or serious misconduct or serious misconduct not related to his duties, or a resignation that is not a Forced Resignation. Similarly, no Severance Indemnity will be due if he has the possibility to claim retirement benefits.

In the event of a Forced Resignation from his duties as Chief Operating Officer, Benoit Bazin may notify the company that this Forced Resignation also constitutes a notice of resignation from his salaried functions, there will be no grounds for payment by the company of an Indemnity related to the Employment Contract (as defined below under "Non-compete Indemnity"). However, a Forced Resignation shall trigger the payment of the Severance Indemnity within the limits and conditions set out in this section.

A Severance Indemnity constitutes a contractual indemnity. It shall be made in addition to the Indemnity related to the Employment Contract, which relates to the seniority acquired as an employee and is not subject to performance conditions. The Severance Indemnity is subject to the performance conditions described below.

Amount of the Severance Indemnity

Its gross amount is such that the sum of the Indemnity related to the Employment Contract, the Non-compete Indemnity (if applicable) and, the Severance Indemnity cannot, under any circumstances, be greater than twice the Reference Compensation (as defined below under "Non-compete Indemnity") (the "Overall Cap").

The gross amount of the Severance Indemnity shall be equal to the difference between, on the one hand, two times the amount of the Reference Compensation and, on the other hand, the sum of the Indemnity related to the Employment Contract and, if applicable, the Non-compete Indemnity.

Performance condition

The benefit of the Severance Indemnity shall be subject to the fulfillment of a performance condition defined as the allocation by the Board of Directors, on average for the three latest consecutive full fiscal years available during which he held the position of Chief Operating Officer that ended prior to the date of termination of his duties, of an annual variable compensation at least equal to half of the maximum amount set for that annual variable compensation.

The payment of the Severance Indemnity shall be subject to the prior verification by the Board of Directors, after consultation with the Nomination and Remuneration Committee, of the fulfillment of said performance condition assessed on the date of termination of his duties as Chief Operating Officer, and the waiver by Benoit Bazin of all proceedings and actions.

(1) "Forced Resignation" means a resignation from the duties of executive corporate officer that occurs within the twelve months following (i) the date of approval by the General Shareholders' Meeting of a merger or a demerger affecting Compagnie de Saint-Gobain, or (ii) the effective date on which a third party or group of investors acting in concert acquires control of Compagnie de Saint-Gobain (in accordance with Article L.233-3 of the French Commercial Code), or (iii) the announcement by the Company's management bodies of a significant shift in the Group's strategy leading to a major change in its business.

Non-compete clause

On the recommendation of the Nomination and Remuneration Committee, at its meeting of November 22, 2018, your Board of Directors authorized the insertion of a non-compete clause in Benoit Bazin's employment contract, which was suspended as of January 1, 2019 during the term of office. This clause stipulates a firm and irrevocable non-compete commitment from Benoit Bazin to the benefit of Compagnie de Saint-Gobain, for a period of one year following the termination of his employment contract, for any reason whatsoever, provided that such termination occurs within 12 months following the termination of his duties as Chief Operating Officer.

Amount of the Non-compete Indemnity

In consideration of this undertaking, Benoit Bazin shall receive a Non-compete Indemnity, including any paid leave indemnity, of an amount equal to, unless it is reduced under the circumstances specified in the following paragraph, Benoit Bazin's gross total annual compensation as Chief Operating Officer, defined as his fixed compensation, on an annual basis, as Chief Operating Officer received on the date of termination of his duties, and the average of the annual variable compensation paid or to be paid to him for the three latest consecutive full fiscal years avalaible during which he held the position of Chief Operating Officer that ended prior to the date of termination of his duties (this gross total annual compensation is defined as the "Reference Compensation").

Without prejudice to the Overall Cap defined in the description of the Severance Indemnity above, the combination of this Non-compete Indemnity, the statutory indemnity or the indemnity related to the collective bargaining agreement that would be paid to Benoit Bazin in the event of dismissal, and any other indemnity related to the termination of the employment contract (the statutory indemnity and any other indemnity being jointly defined, with the exception of the Severance Indemnity, as the "Indemnity related to the Employment Contract") may not be greater than twice the amount of the Reference Compensation. For this purpose, in the event of a termination of his employment contract resulting in the payment of an Indemnity related to the Employment Contract, the gross amount of the Non-compete Indemnity due to Benoit Bazin shall, if necessary, be reduced proportionally in light of the surplus amount.

Payment

This Non-compete Indemnity shall be paid monthly starting from the departure of Benoit Bazin. The payment of the Non-compete Indemnity would be excluded if Benoit Bazin claimed his retirement benefits. In any event, no indemnity will be paid beyond the age of 65.

Waiver option

The Board of Directors reserves its right to unilaterally waive application of the non-compete commitment no later than two months following the termination of the office of the Chief Operating Officer. In this case, the Chief Operating Officer would be released from any commitment and no sum would be due to him in this respect.

Approved by the Annual General Meeting of: June 6, 2019

(Statutory Auditors' special report of March 14, 2019)

Person concerned

Benoit Bazin – Chief Operating Officer

Neuilly-sur-Seine and Paris La Défense, March 16, 2020

The Statutory Auditors

PricewaterhouseCoopers Audit		KPMG Audit Department of KPMG SA	
Edouard Sattler	Cécile Saint-Martin	Pierre Antoine Duffaud	Bertrand Pruvost

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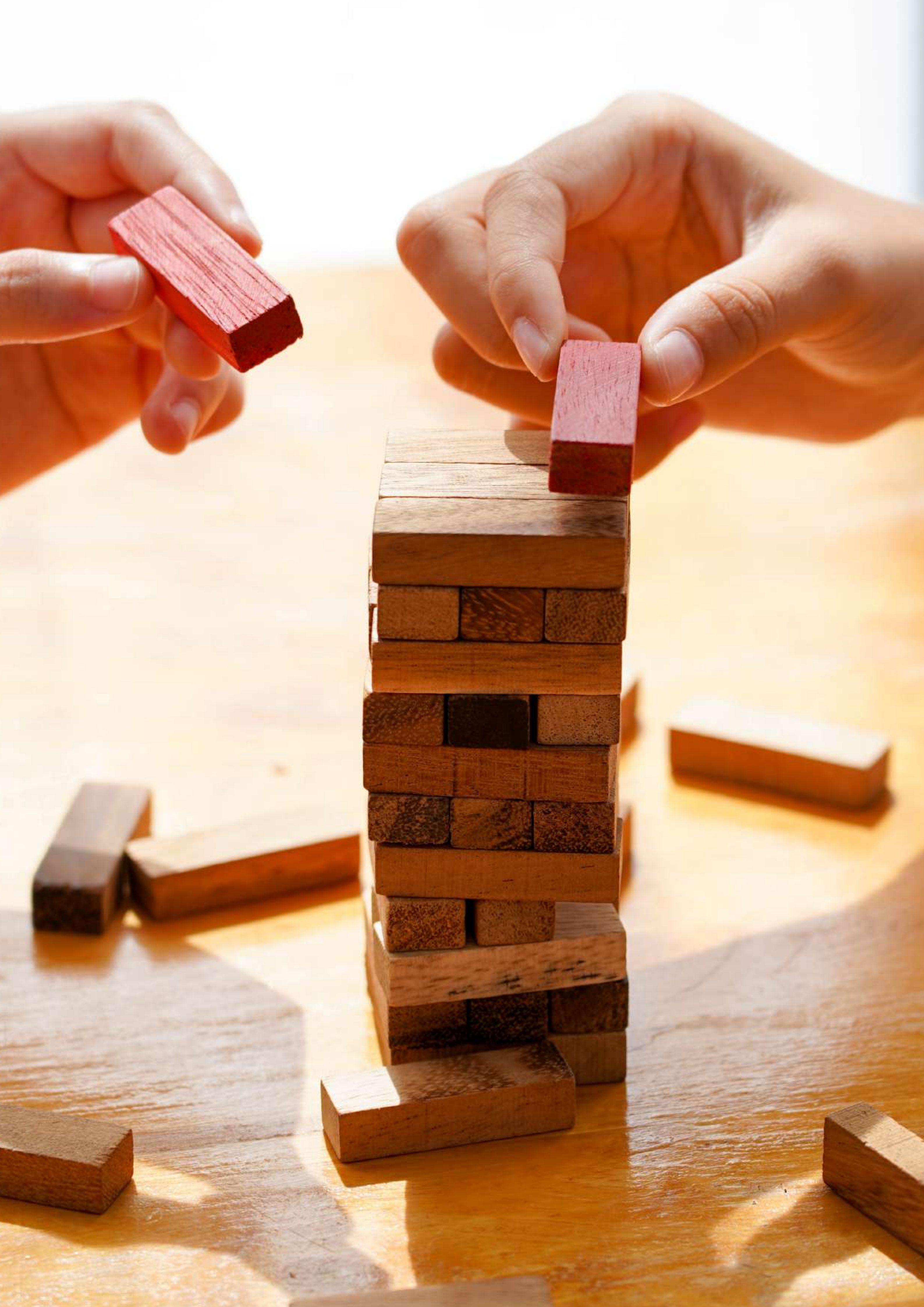

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Risks and control

1. Risk factors

The Saint-Gobain Group conducts its affairs in a constantly evolving environment. It is therefore exposed to risks, the occurrence of which could have a material adverse effect on its businesses, financial position, results and outlook. This chapter presents the main risks to which the Group believes it is exposed, as of the date of this Universal Registration Document.

Due to the Group's multiple geographic locations, the diversity of its markets and product ranges, as well as its development, the Saint-Gobain Group is exposed to different categories of risks. Pursuant to the provisions of Article 16 of Regulation (EU) 2017/1129 of the European Parliament and of the Council, the most important risk factors (identified with an asterisk), at the date of this Universal Registration Document, are mentioned in the first place within each of the risk categories mentioned below, in line with an evaluation based on their impact and likelihood. Saint-Gobain's evaluation of the impact of the risks may be modified at any time, particularly if new internal or external events occur.

It should be noted that there are other risks which may exist or arise, of which the Group is not aware as of the date of this Universal Registration Document, or the occurrence of which has not been considered as of that date as being likely to have a material adverse effect on the Group, its businesses, financial position, results and outlook.

1.1 Risks associated with the Group and its operations

1.1.1 Risks associated with economic cycles*

Most of the Group's markets are cyclical in nature. A significant portion of the Group's activities are linked to investment in the construction sector, namely the renovation (45%[1] of 2019 sales), new residential construction (21%[1] of 2019 sales) and non-residential construction (12%[1] of 2019 sales) markets, which generally follow the cyclical nature of the economic climate. Consequently, the Group's results are sensitive to the macroeconomic conditions of the geographic zones, both at regional and local levels, where the Group is active. As the Group is established in 68 countries around the world (especially in Western Europe, North America, Latin America in particular Brazil, Asia and Middle East/Africa), a deterioration in the global economic environment and financial markets due to a significant cyclical downturn or major recession in any of these geographical areas is likely to have a negative impact on the consumption of the Group's products in the region concerned, which may have a material adverse effect on the Group's sales, results, free cash flow generaltion and outlook.

1.1.2 Risks associated with the Group's international operations*

The Group is active worldwide, including outside Western Europe and North America. It is notably present in Eastern Europe, Asia, the Middle East and Latin America, in Brazil in particular. 20.6% of the Group's consolidated sales were generated in these areas in 2019. Generally speaking, the Group's activities in these regions carry higher risks than in Western European countries and North America, due to the existence of greater economic and political instability, as well as greater exposure to social and infrastructure disruptions than in more mature markets.

Thus, the direct and indirect consequences of political instability or of an unstable economic or regulatory environment in which the Group operates, in a country in which the Group is active or markets its products, could have a material adverse impact on investment levels in that country's construction sector, and consequently on the Group's businesses, financial position, results or outlook. In this regard, it is not possible, at the time of publication of this document, to forecast the economic impact and magnitude of the current coronavirus epidemic that began in China in December 2019. Nevertheless, a long-term epidemic accompanied by the implementation of restrictive measures to limit the spread and contain it could lead to an economic slowdown in a market in which the Group operates or have the effect of affecting global production chains, local supply or transport chains, or more generally impacting the global economy, which could have an adverse impact on its financial situation, results or prospects (see Section 1.5 of Chatper 4). However, most of the Group's businesses are local, with products manufactured and sold locally and a significant portion of its supplies sourced locally.

Moreover, legal or regulatory changes applicable to the Group's activities (involving, among other things, taxation, restrictions on capital transfers, customs duties, intellectual property and import and export licenses, the employment system or health, safety or the environment) could significantly increase the Group's costs in the various countries in which it is active, or limit its ability to freely transfer its capital, and consequently have a material adverse impact on its businesses, financial position, results and outlook.

(1) estimate of Saint-Gobain end markets.

Lastly, the Group operates in an uncertain geopolitical climate where trade tensions, notably between China and the United States, are becoming increasingly prominent. The Group mainly operates in local markets (see Section 1 of Chapter 2), although some of its manufacturing activities have global value chains (see Sections 1.2 to 2.4 of Chapter 2) and could be subject to political and trade tensions, such as the automotive industry. Further deterioration of global trade relations could therefore have an adverse effect on the Group's results and outlook in these business sectors.

1.1.3 Risks associated with innovation and the digital revolution

The Group has placed innovation at the heart of its strategy (see Section 5 of Chapter 2) in order to remain competitive and maintain a high level of operational excellence and financial and non-financial performance.

Certain markets in which the Group operates have undergone rapid change with the introduction of new products and solutions (for instance, off-site manufacturing, 3D printing and digital construction – see Section 4.3.4 of Chapter 2), new technologies and communication and distribution channels (see Section 5.1 of Chapter 2). The success of the Group depends on its capacity to keep pace with these changes at all times and integrate these new technologies into its product offerings, in order to respond effectively to customers' needs.

Thus, in November 2018, the Group established the Transform & Grow program to promote local decision-making as part of the strengthening of its regional businesses while maintaining a global structure for its global businesses, in line with its principles of flexibility and proximity to customers (see Section 3 of Chapter 1). One of the challenges for the establishment of the Transform & Grow program as regards innovation and digital transformation is the optimal reconciling, on the one hand, of initiatives and the coordination of marketing policies and strategic innovations on a global scale and, on the other, of the necessary local adaptations or initiatives to meet the needs of local markets and customers in the most relevant and efficient way possible (in particular sales channels and logistical services…). The Group may not be in a position to respond fully to these challenges, which could adversely affect its sales, results or outlook.

The Group's innovation policy notably also comprises an ambitious marketing approach which seeks to better understand, anticipate and respond to customer requirements, working where applicable directly with research and development to supply customized solutions. This policy of marketing innovation and operational excellence requires significant investments in research and development (€464 million as at December 31, 2019, *i.e.* 28% of the Group's total investments) as well as a tailored recruitment and training policy, especially in new professions associated with the digital boom (digital marketing, professions related to the use of data and Industry 4.0 for example – see Section 5.2.2 of Chapter 2), the expected benefits of which cannot be guaranteed.

The Group's sales, operating margins and results could be affected if it fails to invest or invests insufficiently in appropriate technologies related to digital transformation, or its incapacity to rapidly bring new products to market, if the Group's new products do not adequately address customer needs or if competing products are fastly introduced.

1.1.4 Intellectual property risk

The growth in the Group's activities relies on the protection of its manufacturing secrets (more than 400 patents registered in 2019 contributing to Saint-Gobain being classified, for the ninth consecutive year, as one of the 100 most innovative organizations worldwide by the Top 100 Global Innovators of Clarivate Analytics), brands and models, and other intellectual property rights (for a description of the Group's portfolio of patents and brands, see Sections 1.1, 3.2 and 3.3 of Chapter 1). If the Group was unable to obtain, protect and preserve its intellectual property rights, or its freedom to operate, this could result in the loss of its exclusive rights to use technologies and processes, which could have a material adverse effect on its results.

The Group has an active policy for the protection of its intellectual property rights but cannot rule out the risk of its products being counterfeited, the appropriation or illicit use of its intellectual property rights or an unfavorable ruling by the courts.

The Group may be forced to take legal action against third parties suspected of breaching its rights. Any such proceedings may give rise to significant costs and hamper growth in sales of the products manufactured using the rights concerned or force the Group to incur additional expenses to develop other technologies that do not use the disputed technology.

1.1.5 Risks associated with changes in the cost of energy and raw materials

The Group's industrial activities, some of which consume high levels of energy, for instance, such as building and automobile glass, Insulation or Gypsum (see Section 3 of Chapter 1 for a description of these activities), or are dependent on certain raw materials, could be impacted by a significant increase in prices resulting from difficulties in sourcing raw materials and/or energy (e.g. natural gas or electricity), or by the occurrence of natural disasters, extreme weather conditions, or geopolitical circumstances. For instance, at December 31, 2019, the Group's irrevocable commitments to purchase raw materials and energy represented €1.5 billion (see note 4.5.1 of the consolidated financial statements Section 1 of Chapter 8).

Its ability to pass on these cost increases to its customers depends to a large extent on market conditions and practices. Even in the event of repercussions for the Group, it may only pass these on to its customers in part and/or gradually over time. The Group's inability to immediately and/or fully pass on increases in the cost of raw materials and/or energy in the short term could have a material adverse effect on its operations, financial position or results.

The Group has set up hedging arrangements for some of the risks associated with the cost of energy and/or raw materials (see note 9.1 Financial Risks to the consolidated financial statements, Section 1 of Chapter 8). Nevertheless, it cannot guarantee that these hedges, which themselves represent a cost for the Group, will fully cover any additional costs incurred as a result of future price increases in the cost of energy and/or raw materials; they will depend on the underlying cost assumptions applied by the Group.

1.1.6 Industrial and environmental risks

The Group could incur significant expenses and be exposed to environmental liabilities as a result of its operation of past, present or future industrial sites (see Note 8 to the consolidated financial statements, Section 1 of Chapter 8).

The industrial and environmental risks arising from the operation of some sites primarily relate to the storage of certain hazardous substances.

As at December 31, 2019, seven sites were classified under Directive No. 2012/18/EU on the control of major-accident hazards involving dangerous substances, known as "Seveso III". These industrial sites are subject to specific regulations and close supervision by the competent authorities and the Group's Environment, Health and Safety Department.

These sites include Balsta (Gypsum) in Sweden, storing liquid natural gas, Etolikon (Gypsum) in Greece and Stjordal (Insulation) in Norway, storing liquefied petroleum gas, Mannheim (Flat Glass) in Germany, storing petroleum products, and Sully-sur-Loire (Sekurit Transport) in France, storing combustive liquids, which fall under the "low threshold" defined by the "Seveso III" Directive. Two other facilities are classified as "upper-tier": Bagneaux-sur-Loing (Flat Glass) in France, which stores arsenic (AS2O3) and Carrascal del Río (Flat Glass) in Spain, which stores, among other things, hydrofluoric acid (HF).

After identifying accident risks and their potential impact on the environment, preventive measures were implemented at these facilities, covering the design and construction of storage areas, as well as the manner in which they are used and maintained. Internal contingency plans have been developed to respond to incidents. The financial consequences of personal injury and damage to property that may arise by accident from plant operations are covered by the current Group civil liability and environment impairment liability insurance programs (for a description of these programs, see Section 1.5.2 of Chapter 6), with the exception of the Bagneaux-sur-Loing plant, which is insured under a specific policy subscribed by the joint venture operating the facility. In the event of an industrial accident, compensation payments to victims would be organized jointly by the company, the insurance broker and the insurer.

The Saint-Gobain Group also has to deal with risks relating to chronic pollution, and could therefore be required to incur expenses to restore active or closed industrial sites, whether in operation or closed, or clean up the environment. As at December 31, 2019, 78 European Group sites are classified as "IED" installations as defined by Directive 2010/75/EU on industrial emissions, and are subject to integrated pollution prevention and control regulations.

A breach of these regulations could result in fines or other civil, administrative or criminal penalties, specifically the withdrawal of permits and licenses needed for the activities in question to continue operation, which could have a material adverse effect on the Group's sales, results, free cash flow generation and its outlook.

Lastly, changes in environmental regulations, including their interpretation, and consideration of climate change risks (see Section 4.1 of Chapter 3) could cause the Group to incur significant expenses and/or investments.

1.1.7 Risks associated with external growth

The Group's strategy is based, in part, on external growth, in particular by acquiring businesses or assets, taking equity interests or establishing joint ventures in the Group's business lines and in geographic regions where the Group seeks to establish or strengthen itself (see Section 5.4 of Chapter 2). In this respect, the Group announced on November 12, 2019 that it had entered into an agreement to acquire 100% of the share capital of Continental Building Products, US specialist in plasterboard. This transaction was finalized on February 3, 2020 (see Section 5.4.2 of Chapter 2).

The Group may not, however, be in a position to identify attractive targets or to enter into transactions at the optimal time and/or under satisfactory conditions, especially in relation to the implementation of the portfolio rotation announced as part of the Transform & Grow program (see Section 2.1 of Chapter 1 and Section 5.4 of Chapter 2). The expected benefits of these external growth operations depend, in part, on the realization of expected synergies and integration of the activities of the acquired companies, and on relationships with other participants in the joint ventures. The Group gives no guarantees as to these objectives, which, if not fulfilled within the expected timeframes and at the expected levels, could affect the Group's financial position, results and outlook (see Section 2 of Chapter 1).

1.1.8 Risks associated with information systems

Daily management of the Group's activities, specifically the conduct of its commercial, industrial, logistics and accounting processes, particularly in its Distribution activities, requires the proper functioning of all technical infrastructure and computer applications. The risk of system malfunction or interruption, which may be external or internal in origin (computer viruses or hacking, service providers' defaults, blackouts or network shutdowns, natural disasters, human error, etc.), cannot be underestimated. It should be recalled that, in June 2017, the Group, as per numerous other companies and organizations in France and abroad, was affected by the NotPetya cyber-attack, which required IT systems to be disconnected in order to prevent the spread of the virus, as well as the introduction of alternative processes in all of the Saint-Gobain businesses. The impact of the cyber-attack on operating income for the 2017 fiscal year was calculated to be €-80 million, approximately half of which affected Building Distribution and the remainder affecting the industrial businesses. All of the information systems were back up and running within ten days, without any data being lost or compromised.

With a view to learning from NotPetya and minimizing the impact of this type of malfunction, the Information Systems Department, as part of a cyber-defense plan, introduced strict rules relating to the governance and security of information systems, both in terms of infrastructure and applications, data protection and business continuity plans. This plan is deployed at Group level, controlled by the Audit and Internal Control Department and by external audits (see Section 1.2.3 of Chapter 5: work of the Audit and Risks Committee). Furthermore, a new insurance program covering the Group's cyber risks has been set up.

The occurrence of such malfunctions may adversely affect the Group's operations, the protection of its know-how and its financial results.

1.2 Group structural risks

1.2.1 Risks associated with the Group's pension commitments and similar commitments*

The Group makes significant accounting accruals to cover pension and other post-employment benefit plans, mainly in Western Europe (particularly France, Germany, the Netherlands and the United Kingdom) and in North America (United States and Canada), most of these plans are closed to new entrants. As at December 31, 2019, the total amount of commitments in respect of pension plans stood at €12.2 billion (note 5.3 to the consolidated financial statements, Section 1 of Chapter 8).

The provision for pension plans recognized in the consolidated balance sheet (€2.6 billion at December 31, 2019) may be affected by adverse changes in the actuarial assumptions used to calculate the projected benefit obligation, by a reduction in the discount rates used to measure future commitments, a change in life expectancy or higher inflation, or a fall in the market values of plan assets, consisting mainly of equities and bonds.

1.2.2 Risks linked to cost reduction, restructuring and the implementation of the Transform & Grow program

The Group has undertaken a variety of cost-cutting and restructuring initiatives.

While further savings are planned, there is no guarantee that the forecast reductions will be achieved or that the related restructuring costs will not be higher than originally budgeted.

In particular, certain restructuring operations and other initiatives may cost more than expected, or the cost savings may be less than expected or take longer than expected to achieve. An increase in restructuring costs and/or the Group's inability to achieve the expected savings could have a material adverse effect on the Group's results and outlook.

In November 2018, the Group launched the Transform & Grow program, designed to accelerate its transformation by introducing a new organization, speeding up the rotation of its portfolio, reducing its costs and improving its operating margin (see Chapter 1, Section 2). The Saint-Gobain Group cannot guarantee that the objectives of the program will be fully achieved within the expected timeframes, which could have a material adverse effect on the Group's reputation, its operation, financial position, results or outlook.

1.2.3 Risks associated with goodwill and impairment of property, plant and equipment and intangible assets

Brands and goodwill make up a significant proportion of the Group's intangible assets, representing (€ 1.9 billion and €10 billion, respectively, at December 31, 2019). In line with Group accounting policies, goodwill and certain other intangible assets with indefinite use lives are tested for impairment periodically and whenever there is an indication that their carrying amount may not be fully recoverable. Goodwill and other identified intangible assets may become impaired as a result of worse-than-expected Group performance, unfavorable market conditions, unfavorable legal or regulatory changes or many other factors. The recognition of impairment losses on goodwill could have an adverse effect on consolidated net income.

Property, plant and equipment (€11,7 billion at December 31, 2019) represent roughly one-quarter of total assets and may become impaired in the event of adverse changes in the business (see note 6 to the consolidated financial statements, Section 1 of Chapter 8).

1.3 Financial risks

The Group is exposed to financial risks, and notably a liquidity risk on financing. In particular, in a crisis environment, the Group might be unable to raise the financing or refinancing needed to cover its investment plans on the credit or capital markets, or to obtain such financing or refinancing on acceptable terms. For more information on this liquidity risk and the other financial risks to which the Group is exposed, please see note 9.1 to the consolidated financial statements for the fiscal year ended December 31, 2019, presented in Chapter 8 of this Universal Registration Document.

1.4 Legal Risks

1.4.1 Risks associated with legal and administrative procedures

The Group is exposed to risks of litigation and claims arising in the normal course of business. The most significant disputes pending or for which the Group has received notifications are described below. These proceedings may result in a conviction, the payment of substantial damages, regulatory or even criminal sanctions, and may tarnish the Group's reputation and thus have a significant negative impact on the Group's image, financial position and operating results. The total provision for litigation and proceedings amounted to €573 million as of December 31, 2019 (see note 8 to the consolidated financial statements, Chapter 8, Section 1).

a) Anti-trust law and related proceedings*

Legal provisions covering competition apply to the Group companies in countries in which it operates. Violation of competition law exposes the Group to fines and, in certain countries, potential criminal sanctions on the Group and its employees involved. Any litigation filed by a competition authority could, in the event of conviction, give rise to the payment of fines and potentially damages, which is likely to have significant impact on the Group's reputation, financial situation and operating results.

The Saint-Gobain Group is firmly committed to opposing any practice that might violate competition rules and has long applied the principle of zero tolerance. A plan for compliance with competition law (the "Competition Plan") has been in place within the Group since 2007. The content of the Competition Plan is described further above in Chapter 3, Section 1.1.2.

Investigation by the Swiss Competition Commission in the sanitary products wholesale industry

In November 2011, the Swiss Competition Commission (Commission Suisse de la Concurrence) opened an investigation into anti-competitive practices in the sanitary products wholesale industry. In May 2014, the Commission Secretariat issued a notice of complaints against Sanitas Troesch and other wholesalers in the industry alleging that Sanitas Troesch and some of its competitors had, among other things, agreed in 2005 and 2012 to lower gross prices.

The total fine imposed on all companies involved is CHF 80 million. For Sanitas Troesch, the fine is CHF 28.5 million. Sanitas Troesch appealed this decision on May 2, 2016 and continues to firmly refute the claims made. The hearing took place before the Federal Administrative Court in January 2020 and the date on which the Federal Administrative Court will issue its decision is not yet known. However, a provision for claims and litigation was recognized at December 31, 2015 in an amount equivalent to the fine (unchanged at December 31, 2019).

Investigation by the French Competition Authority in the building insulation products industry

On August 6, 2014, the French Competition Authority sent a statement of objections to Saint-Gobain Isover and Compagnie de Saint-Gobain (as parent company of the Saint-Gobain Group). A hearing took place on May 11, 2016, whereupon the Competition Authority sent the case back for further investigation in light of the arguments put forward by Saint-Gobain Isover and Compagnie de Saint-Gobain. In October 2018, Saint-Gobain Isover and Compagnie de Saint-Gobain received a second statement of objections, in which the Competition Authority alleges anti-competitive practices in the building insulation products market, between 2001 and 2013.

Saint-Gobain Isover and Compagnie de Saint-Gobain reject the allegations in their response to the second statement of objections which was filed in January 2019.

A new report was sent by the Authority at the end of 2019, which gave rise to comments in response from Saint-Gobain Isover and Compagnie de Saint-Gobain on February 11, 2020.

To date, no decision of the French Competition Authority has been issued on the merits.

On the civil law front, Actis served in March 2013 a damages claim on Saint-Gobain Isover, the Centre Scientifique et Technique du Bâtiment, and the FILMM before the Paris Civil Court (*Tribunal de grande instance*) based on the facts being investigated by the Competition Authority. In an order dated December 16, 2014, the pre-trial judge declared a stay of proceedings while waiting for the decision from the Competition Authority.

b) Asbestos-related litigation

Current legal actions related to asbestos are described below.

Asbestos-related litigation in France

Inexcusable fault lawsuits

In France, eight further individual lawsuits were filed in 2019 by former employees (or persons claiming through them) of Everite and Saint-Gobain PAM – which in the past had carried out fiber-cement operations – for asbestos-related occupational diseases that affect or have affected them. As of December 31, 2019, a total of 830 such lawsuits had been issued against the two companies since 1996 with the aim of obtaining supplementary compensation over and above the amounts paid by the French Social Security authorities in this respect.

As of December 31, 2019, 794 of these 830 lawsuits had been completed in terms of both liability and quantum. In all these cases, the employers were held liable on the grounds of "inexcusable fault".

Compensation paid by Everite and Saint-Gobain PAM in settlement of these lawsuits totaled approximately €5 million (compared to €4.6 million in 2018).

Concerning the 36 lawsuits outstanding against Everite and Saint-Gobain PAM at December 31, 2019, one has been completed in terms of both liability and quantum, but is still pending on the determination of who will pay the compensation due.

Out of the 35 remaining lawsuits, at December 31, 2019, the procedures relating to the merits of 33 cases were at different stages, with five in the process of being investigated by the French Social Security authorities and 28 pending before the Civil Courts (*Tribunaux de Grande Instance*), which since January 1st, 2019 have been substituted to the social security courts as competent courts. The last two actions have been cancelled but the plaintiffs may request their restoration at any time within a two-year period following their cancellation.

In addition, as of December 31, 2019, 249 similar suits had been filed since the outset of the litigation by current or former employees, or persons claiming through them, of 13 French companies of the Group (excluding suits against companies that are no longer part of the Group), in particular by current or former employees who used equipment containing asbestos to protect themselves against heat from furnaces.

As of December 31, 2019, 221 lawsuits had been completed. In 138 of these cases, the employer was held liable for "inexcusable fault".

At the same date, compensation paid by these companies totaled approximately €8 million (compared to €7million in 2018).

As regards the 28 suits outstanding at December 31, 2019, three cases were still being investigated by the French Social Security authorities and 22 were being tried – including 18 pending before the Civil Courts (*Tribunaux de Grande Instance*) and four before the Appeal Courts. Lastly, three actions have been cancelled but the plaintiffs may request their restoration at any time within a two-year period following their cancellation.

Anxiety claims

Eight of the Group's French subsidiaries, including six that operate or have operated facilities in France classified as containing asbestos, are the subject of damages claims that are different from those described above.

"Facilities classified as containing asbestos" are defined as industrial facilities that have been closed or are still operating, which previously manufactured materials containing asbestos or used protection and insulation equipment containing asbestos and that are included by ministerial decree on the official list of facilities whose current or former employees are entitled to the early-retirement benefit paid to asbestos workers (ACAATA).

As of December 31, 2019, a total of 824 suits had been brought by current or former employees claiming compensation for prejudice of anxiety suffered as a result of their alleged exposure to asbestos. None of these plaintiffs were suffering from an asbestos-related disease and some of them were not receiving the ACAATA benefit. Of these 824 lawsuits, 720 have been finally disposed of, representing total amount of compensation of €7.6 million at December 31, 2019. The remaining 104 lawsuits are pending before the competent labor tribunals or appeal courts.

It should be clarified that the above figures do not take into account suits filed against companies that are no longer part of the Group.

The provision related to the asbestos-related litigation in France amounted to €4.1 million as of December 31, 2019 (€4.2 million as of December 31, 2018).

Asbestos-related litigation in the United States

In the United States, several companies that once manufactured products containing asbestos such as asbestos-cement pipes, roofing products and specialized insulation, have been facing legal action from persons other than their employees or former employees. These claims for compensatory – and in some cases punitive damages – are based on alleged exposure to these products, although in many instances the claimants cannot demonstrate any specific exposure to one or more products, or any specific illness or physical disability. The vast majority of these claims are made simultaneously against many other non-Group entities that have been manufacturers, distributors, installers or users of products containing asbestos.

Developments in 2019

Approximately 2,600 new asbestos-related claims were filed against CertainTeed Corporation in the United States in 2019, stable compared to 2018.

Virtually all lawsuits involving CertainTeed Corporation have either been settled out of court or dismissed. Around 2,500 of the pending claims were settled in 2019, compared to 4,300 in 2018 and 3,900 in 2017. Taking into account the number of claims outstanding at the end of 2018 (32,600), new claims arising during the year and settled claims, some 32,700 claims remain outstanding on active court dockets at December 31, 2019. A large number of these pending claims were filed more than five years ago and many of these claims were likely abandoned or otherwise lack merit.

Compensation paid in respect of these claims against CertainTeed Corporation (including claims settled prior to 2019 but only paid out in 2019 as well as claims fully settled and paid out in 2019), as well as compensation paid in 2019 by other Group businesses in the United States in connection with asbestos litigation, amounted to $59 million (compared to $67 million in 2018 and $76 million in 2017).

Action taken to achieve equitable and permanent Resolution of the former CertainTeed Corporation's legacy asbestos liabilities in the United States

DBMP LLC, an affiliate of CertainTeed LLC based in North Carolina, that holds the legacy asbestos liabilities of the former CertainTeed Corporation, announced that it filed, on January 23, 2020, a voluntary petition for relief under Chapter 11 of the U.S. Bankruptcy Code in the U.S. Bankruptcy Court for the Western District of North Carolina in Charlotte in an effort to achieve a certain, final and equitable Resolution of all current and future claims arising from the asbestos-related liabilities of the former CertainTeed Corporation.

DBMP LLC intends to seek court authority to establish a trust under Section 524 (g) of the U.S. Bankruptcy Code – a specific provision that is applicable to companies that face substantial numbers of asbestos-related claims – to achieve a fair and equitable Resolution of its asbestos-related liabilities. Upon establishment of the trust, current and future plaintiffs with qualifying claims will be able to receive faster payment of their claims without the delay, stress and uncertainty of litigation in the tort system; at the same time, the creation and funding of such a trust will permanently resolve DBMP LLC's liabilities.

During the course of this bankruptcy process, which can take 3 to 8 years, all asbestos litigation will be stayed and all related costs suspended, allowing DBMP LLC the time and protection to negotiate an agreement to be approved on behalf of all claimants and by the court.

This action has been taken as a result of the increasing risks presented in the US tort system. Despite the aging of the population and lessening opportunity for claimants to assert legitimate claims of exposure to the former CertainTeed Corporation asbestos-containing products, naming practices in the tort system continued to result in a steady volume of claims against DBMP LLC, with no foreseeable end in sight and, in general, an escalation of settlement demands and verdicts.

Impact on the Group's financial statements

The Group has recorded the estimated costs related to the Resolution of the DBMP LLC bankruptcy proceedings. This amount, determined with the assistance of external experts and advisors, amounts to $576 million as of December 31, 2019.

The provision for asbestos-related litigation recorded in the accounts of the former CertainTeed Corporation in the United States amounted to $568 million as of December 31, 2018.

At this stage of the proceedings, the stay of litigation as of January 23, 2020 results in all legal costs and indemnity payments related to DBMP LLC's numerous asbestos tort claims being suspended, and no more annual charges in relation to such claims ($99 million, corresponding to €88 million, in 2019).

For more details, please refer to note [12] to the consolidated financial statements, Chapter 8, Section 1.

Situation in Brazil

In Brazil, former employees of Brasilit, that once manufactured fiber cement containing asbestos, suffering from asbestos-related occupational illnesses are offered, depending on the case, either financial compensation alone or lifetime medical assistance combined with financial compensation. Around 1,200 contractual instruments have accordingly been signed to date.

Two class actions were initiated against Brasilit in 2017 by two associations defending former employees exposed to asbestos at the São Caetano (São Paulo state) and Recife (Pernambouc state) plants, asking for their medical assistance and compensation to be revised. These suits are currently at an early stage and first court decisions have not yet been made.

A third class action was initiated against Brasilit in 2019 in Capivari (State of São Paulo) by the Labor prosecutor asking for health insurance, as well as collective moral damages, in favor of employees, former employees and their respective families, as well as subcontractors who were exposed to asbestos. This suit is at an early stage.

Brasilit is subject to controls by the Ministry of Labor and continues to comply with all of its legal obligations with regard to medical assistance for its current and former employees.

In November 2017, the Supreme Court of Brazil decided to ban asbestos definitively across the country. Brasilit stopped using asbestos voluntarily as early as 2002.

c) Environmental disputes

PFOA matters in the United States

Levels of PFOA (perfluorooctanoic acid) in excess of U.S. Environmental Protection Agency (EPA) health advisories or state maximum containment levels for drinking water have been found in municipal water systems and private wells near current Saint-Gobain Performance Plastics (SG PPL) facilities in Hoosick Falls (New York) and Merrimack (New Hampshire), and two former facilities in North Bennington (Vermont) in the United States. PFOA and PTFE (polytetrafluorethylene) have never been manufactured by these plants. SG PPL is a processor of PTFE which it purchases from third party suppliers and which in the past contained traces of PFOA.

SG PPL has voluntarily provided bottled water in all three communities, installed point-of-entry treatment systems to residents and businesses in the Hoosick Falls and North Bennington areas, installed carbon filtration systems on the municipal water supply in Hoosick Falls and agreed to fund the installation of a carbon filtration system on the Merrimack Valley District's municipal water supply. In addition, it has voluntarily funded both completed and on-going construction of water line extensions in certain communities in the Merrimack and Bennington areas. The investigations are on-going and the scope of responsibility for SG PPL arising from environmental remediation and clean-up obligations at these sites has not yet been established. Without admitting liability, SGPPL has signed consent orders with the environmental regulators in New York in 2016, in Vermont in 2017, and in New Hampshire in 2018, pursuant to which SGPPL has agreed to complete investigations, implement interim or final remediation measures at its current and former facilities and in the case of Vermont and New Hampshire, fund construction of water lines. Responsibility, if any, is expected to be shared with other parties as regards in particular the Hoosick Falls site.

PFOA-related lawsuits alleging both health-related and economic damages claims have been filed in civil courts in New York, New Hampshire and Vermont, some of which are in the form of proposed class actions. It is difficult to predict the timing or outcome of any such litigation, or whether any additional litigation will be brought against SG PPL.

On December 31, 2019, the provision recorded by the Company in respect of this matter amounts to €21 million (See note 8 to the consolidated financial statements, Chapter 8, Section 1).

d) Other contingent liabilities

Grenfell Tower fire in the United Kingdom

Celotex provides insulation materials for specific applications for the building and construction industry.

Insulation materials from two Celotex ranges were purchased *via* distributors and used in refurbishing Grenfell Tower, London in 2015/2016, including as one component of the rainscreen cladding system designed and installed (by third parties) on the tower's external facade.

Following the Grenfell Tower fire on June 14, 2017, a Public Inquiry is underway, which will consider, among other things, the modifications made to the building as part of the refurbishment, the role played by the various construction professionals, and the information provided by the manufacturers of the products used. A criminal investigation into the circumstances of the fire is also in progress.

There are a large number of issues and circumstances that need to be explored and the implications for Celotex are unlikely to be known for some time.

The extent to which Celotex may incur civil or criminal liability in connection with the production, marketing, supply or use of its products is currently unclear.

e) Other proceedings and disputes

Some of the Group's companies may also be the subject of other claims made by their employees or by the tax authorities, or in the context of the enforcement of seller's warranties granted by the Group to the buyers of divested businesses (see note 4.5.2 to the consolidated financial statements, Chapter 8, Section 1). Apart from the proceedings and litigation described above, to the best of the Company's knowledge, no other government, court or arbitration proceedings exist (including pending proceedings or proceedings where the Company and/or the Group might be threatened) which could have or have had, in the last 12 months, a significant impact on the financial position or profitability of the Company and/or Group. See note 8 to the consolidated financial statements, related to provisions for claims and litigation, Chapter 8, Section 1.

1.4.2 Risk of regulatory changes

The Group is not subject to any specific regulations that could have an impact on its financial position, although the Group companies that operate industrial sites are generally required to comply with the specific national laws and regulations of the country where such sites are located. It is therefore, for example, with regard to France, subject to regulations applicable to classified sites, and certain regulations relating to the environment, aimed at reducing carbon dioxide emissions, in particular with a view to meeting the targets for reducing greenhouse gas emissions under the Paris Agreement which came into force on November 4, 2016.

A certain number of legislative measures are already in place in certain countries and regions in which the Group operates. As such, at European level, Directive 2003/87/EC of October 13, 2003, known as the "Quotas Directive", has set a cap on carbon dioxide emissions and a quota trading system for certain large production sites. Notwithstanding the Group's efforts to reduce CO_2 emissions, and broadly, the use of best available techniques for its investments (see Section 4 of Chapter 2 and Section 4 of Chapter 3), changes in regulations applicable to the Group's activities could impact the operation of its production sites, which could have a material adverse effect on its operation, financial position or results.

Laws and regulations applicable to the Group and to the materials and products it uses in its activities may change in a manner that may be unfavorable to the Group. The introduction of stricter regulations or more diligent enforcement of existing regulations may affect the conditions under which the Group operates its businesses, which could increase its operating expenses, limit the scope of its activities or act as a brake on business growth. More generally, the Group cannot guarantee that there will be no rapid or significant regulatory changes in the future with a material adverse effect on its business, financial position or results.

1.5 Insurance

The Group transfers its risks to the insurance market when this is the most efficient solution. Default by one or more of the Group's insurers could therefore lead to financial losses.

The Group's policy is to implement preventive programs and purchase insurance coverage to protect its assets and revenue. This policy is embedded within a Group doctrine, which takes into account current conditions in the insurance market. It is determined, coordinated and overseen by the Risks and Insurance Department. It defines insurance criteria for the most significant risks, such as property and business interruption, as well as general and product liability. With this in mind, a new insurance program to cover the Group's cyber risks was implemented at the end of 2017.

For other types of coverage, such as automobile fleet insurance, the Risks and Insurance Department advises the individual operating units on policy content, broker selection and which market to consult. These are called "high-frequency" risks, for which claims are monitored internally and appropriate action taken. The 2018 policies were renewed as 2019 policies.

The captive insurance company set up to cover property risks was highly successful and delivered real benefits for the Group.

Companies acquired during the year have been integrated into existing insurance programs.

1.5.1 Property and business interruption insurance

The Group's non-excluded property and casualty risks and business interruption risks arising from accidental damage to insured assets are covered by a worldwide insurance program.

The programs meet the insurance criteria laid down by the department, specifically:

- all policies are "all risks" policies with named exclusions;
- claims limits of liability are based on worst-case scenarios where safety systems operate effectively;
- deductibles are proportionate to the size of the site concerned and cannot be qualified as self-insurance.

These criteria take into account current insurance offerings, which exclude certain risks and cover natural disasters like floods, storms, earthquakes or tsunamis only up to a certain amount.

In extreme scenarios, such events could have a substantial uninsured financial impact in terms of both reconstruction costs and lost production costs.

The Risks and Insurance Department's policy is based on the findings of the annual audits carried out by independent prevention experts recognized by the Group's insurers. These audits give a clear picture of the risk exposure of the main sites in the event of a fire or other incident, and provide an estimate of the financial consequences in a worst-case scenario.

Individual claims in excess of €12.5 million are transferred to the insurance market for all Group subsidiaries.

Claims up to this amount are self-insured through the Group's captive insurance company, which purchases reinsurance coverage against increases in frequency and/or severity rates.

1.5.2 Liability insurance

A program provides coverage for third-party personal injury and property damage claims for which the Group would be legally held liable. This program comprises several programs for the lower tranches of coverage.

The first program covers all subsidiaries and has a coverage limit of €100 million. Those located in North America are subject to a deductible of US$50 million. The program's exclusions are consistent with market practice and concern in particular potentially carcinogenic substances and gradual pollution.

In order to satisfy local regulatory requirements, a policy is taken out in each country in which the Group has a significant presence. Local policies are backed up by the master policy issued in Paris, which can be activated when local coverage proves inadequate.

The second program, with a cover limit of US$50 million, concerns the subsidiaries located in North America. This program is structured differently to deal with the specific nature of liability risks in the United States. It is divided into several lines of coverage, requiring it to be placed, if needed, on the London insurance market. Exclusions are in line with current market practice in the United States and primarily concern contractual liability, pollution and third-party consequential loss.

In addition to the two programs described above, a number of supplementary programs have been set up in order to bring the total coverage limit to a level considered compatible with the Group's businesses.

Within the operating units, action is taken to raise awareness of civil liability risks, and the units are motivated to control costs by assuming a deductible that does not, however, constitute self-insurance. The Group also runs a risk prevention program at its operating units with the support of the Environment, Health and Safety Department.

Furthermore, to meet the environmental requirements set out in Directive 2004/35/EC of April 21, 2004 on environmental liability with regard to the prevention and remedying of environmental damage, the Group has since 2017 had a specific policy with a limit of €25 million per year. This policy offers worldwide cover, excluding the United States, for the Group's civil environmental liability arising in relation to damage affecting natural resources (protected natural species and habitats, soil and water) as a result of its activities.

1.5.3 Exceptions

Joint ventures not controlled by the Group and minority interests are excluded from the scope of the above policies. These insurance policies are taken out separately.

2. Internal control

Each of the Group's companies evaluates the main risks affecting the shaping of its strategy, the smooth running of its operations, compliance with laws and regulations and resilience to external events.

As such, the general aims of internal control include:

- management of the company's operational risks;
- proper implementation of processes and reliable financial information;
- compliance, in accordance with the Group's programs, particularly on antitrust law, laws on embargoes and trade sanctions and the fight against corruption (in accordance with the recommendations of the Agence Française Anticorruption (AFA), the French Anticorruption Agency);
- anti-fraud.

Each level of the organization plays a role in internal control, as internal control and risk management affect all Group employees. The three lines of defense model is therefore adopted by Saint-Gobain:

- in the first line of defense, companies employ an internal control and risk management system tailored to their situation, at the initiative of the Chief Executive Officers and local managerial structures (Regions, countries and activities). The companies have access to Shared Services Centers (Finance, Payroll) and IT expertise. It is essential that there is a segregation of tasks between these organizations for successful skills optimization and transaction security;
- in the second line, Group Internal Control establishes an internal control reference framework applicable to all, in addition to specific guidelines prepared by the Group's corporate departments;
- and in the third line involves verification of the proper application of the internal control principles which is carried out in-house by the Audit Department and externally by the Statutory Auditors.

2.1 Compagnie de Saint-Gobain's internal control and risk management system

2.1.1 The aims of internal control and risk management

The Saint-Gobain internal control and risk management system is part of the legal framework applicable to companies listed on the Euronext Paris regulated market, and is inspired by the reference framework on the internal control and risk management system of the AMF (French Financial Markets Authority) and the "Committee of Sponsoring Organizations of the Treadway Commission" (COSO).

Saint-Gobain Group's internal control and risk management system is supported by a continuous improvement process and an Internal Control Reference Framework. This is a whole set of resources, behaviors, procedures and actions tailored to each company's specific characteristics which:

- enables it to appropriately address material operational, financial or compliance risks;
- helps it to manage its operations and meet its objectives;
- improves the efficiency of its operations and ensure that its resources are used to best effect.

It is more specifically designed to provide assurance concerning:

- application of General Management's instructions and orientations;
- compliance with the laws and regulations applicable to the company;
- the efficiency and effectiveness of internal operating, industrial, marketing, financial and other processes;
- the protection of tangible and intangible assets, in particular the prevention of fraud;
- the reliability of financial information.

By promoting constant improvement in all entities, internal control creates value and accentuates the companies' performance.

2.1.2 The internal control and risk management environment

a) The Group's core values

Internal control is based on values and rules of conduct which are formalized in:

- the Saint-Gobain Group Principles of Conduct and Action: professional commitment, respect for others, integrity, loyalty, solidarity, compliance with the law, respect for the environment, protection of health and safety at work and employee rights (see Chapter 1 – Saint-Gobain Today). The Principles of Conduct and Action are distributed to all Group employees;
- the Group Human Rights policy (see Section 1, Chapter 3);
- the Saint-Gobain Attitudes: being close to customers, acting as an entrepreneur, innovating, being flexible, building an open and engaging culture;

- the Group's compliance program: law on antitrust, embargoes and trade sanctions, the fight against corruption, influence peddling and fraud, professional associations, conflicts of interest, gifts policy, etc. (see Section 2.5.6, Chapter 6 – Tools of the Group's culture of compliance).

Executives leading by example, and control at all levels in implementing the Principles is essential in disseminating these values, which all Group employees must adhere to.

b) The organizational model

The implementation of an internal control system requires:

- appropriate organization which provides a framework for the planning, execution, monitoring and management of operations;
- clearly defined roles and responsibilities, according to a human resources management policy which recruits people with the knowledge and skills necessary to perform their jobs, providing them with training to develop employees' knowledge;
- rotation and succession plans for key positions and replacement solutions during temporary absences;
- powers of attorney granted to suitable people in line with the principle of task segregation.

c) The dissemination of policies and programs

The policies and programs devised by the Group's General Management are disseminated within each corporate department. The Regions, countries and activities formalize guidelines and directives within their scope of responsibility in line with the Group's own guidelines and directives, ensuring that they are applied when conducting operations.

d) Information systems

The Group's organizations and their operations rely to a large extent on information systems, information-sharing and the digitization of processes. Information systems must therefore be efficiently protected in terms of both physical and logical security. The Saint-Gobain Group companies thus comply with the safety rules set out by the Group Information Systems Department and Internal Control (automated controls described in detail in the "ITAC" reference base).

2.1.3 Internal control and risk management process

Within Saint-Gobain, internal control is a continuous and ongoing process that integrates risk management procedures.

Due to the constantly changing environment and the regulatory context, the companies must take steps to identify, evaluate, process and monitor any risks which may affect them.

a) At Group-entity level

The risk management process can be summarized in four stages:

- analysis of the main identifiable risks. The company analyzes its main risks, and thus identifies what could hinder it meeting its objectives, as well as dangers that could harm its interests or have a major impact on its internal control situation;
- developing controls that are proportionate to the risks involved in each process;
- communicating the objectives of internal control to employees and implementing controls;
- permanent oversight of and regular checks on the effectiveness of internal control: a compliance declaration is signed each year by the Chief Executive Officers according to the perimeter defined for each annual campaign.

This process is outlined in the Internal Control Reference Framework (see Section 2.5.1 of Chapter 6 – Internal Control Reference Framework) and all Group entities are expected to follow it.

b) At Compagnie de Saint-Gobain level

The Internal Audit and Business Control Department updates the Group's risk mapping every year. These updates draw on the contributions of the various management levels, and the results are submitted to the Audit and Risk Committee and the Board of Directors.

Oversight controls and effectiveness checks may lead to corrective action being taken, and to changes, as needed, to the internal control and risk management system.

2.2 Parties involved in internal control and risk management

Everyone within the organization has some responsibility for internal control and risk management, from General Management down to the employees of the individual entities.

2.2.1 The Board of Directors of Compagnie de Saint-Gobain and the Audit and Risks Committee

The Audit and Risk Committee periodically reviews the organization of the Group's internal control and risk management (see Section 1.2.3 of Chapter 5 "Corporate governance").

The Audit and Risks Committee is specifically tasked with monitoring the process of preparing financial information and the effectiveness of the internal control and risk management system.

It also reviews the risks map prepared by the Internal Audit and Business Control Department.

It analyzes significant internal control incidents, results of significant audits and oversees the corrective actions necessary to address failures.

Finally, it reports regularly to the Board of Directors on its work and notifies the Board promptly of any issues encountered (see Section 1.2.3 of Chapter 5 "Corporate governance").

2.2.2 Group General Management

Saint-Gobain's General Management oversees implementation of the Group's internal control process and the existence and effectiveness of appropriate internal control monitoring systems within the Group's subsidiaries.

On May 29, 2012, General Management signed a charter with Internal Audit and Business Control Department covering the principles to be followed by the Group's teams.

2.2.3 Internal Audit and Business Control Department

The general remit of the Internal Audit and Business Control Department is to provide systematic, methodical assurance that the internal control systems are relevant and effective, and to make recommendations for reinforcing them. It also promotes the pursuit of added value and enhanced performance, in line with the Group's focus areas and programs (notably in anticipation of the digitization of company processes).

Therefore, the Internal Audit and Business Control Department is involved in the Group's compliance program and is primarily responsible for the following:

- designing the Group's internal control and risk management system;
- coordinating the implementation of this system, in liaison with the company's corporate departments and operational management structures. To do this, the Internal Audit and Business Control Department relies on the issuing and checking of the compliance statements signed by the General Managers for the applicable management levels;
- carrying out audits in line with the audit plan approved by the Audit and Risks Committee.

At the end of 2019, the Audit and Internal Control Department had 72 staff, split between audit and internal control.

Audit and Internal Control Department	Main responsibilities	Reference standards and/or measures	2019 key figures
Internal control	■ Draw up and maintain the Internal Control Reference Framework in line with the Group's risk priorities ■ Lead the annual compliance statement process ■ Analyze incidents, self-assessments and audit results to suggest changes ■ Monitor the implementation of the action plans decided upon as a result of these exercises ■ Communicate and provide training on internal control and risk management	■ Internal Control Reference Framework Standard (ICRF), ■ Internal Control Reference Framework for Information systems (ITAC) ■ Internal Control Reference Framework for companies with annual sales below €20 million (ICRF MINI) ■ Associated practical data sheets or Group memos ■ New mobile app "MY ICRF" available for all employees ■ Internal Control briefs ■ Webinars and training sessions by region/country (Business Control Forums) (1) ■ Intranet and Internal Control Community (My SG) ■ "INTERACT" (2) ■ Internal control data analysis tool with "TABLEAU" software (3)	■ 2,489 action plans open in the "INTERACT" database at the end of 2019 ■ 2019 Compliance Statement update (221 questionnaires sent) ■ More than 1,300 corporate leaders and managers trained during 21 Business Control Forums in 16 countries ■ 9 webinars delivered and 28 newsletters published ■ Network of 90 internal control officers ■ Approximately 1,191 members of the Internal Control community
Risk management	■ Define and maintain the Group's risk universe ■ Update risk mapping at the different Group levels ■ Produce and maintain the risk management methodology ■ Analyze responses to risks and the action plans for the different risks	■ Risks universe ■ Risks cartography ■ Methodological tool for Group companies ■ "AVANTEAM" risk mapping tool, containing the risk database ■ Management of action plans in the "INTERACT" tool	■ 53 maps updated in 2019
Internal Audit	■ Conduct audits and monitor the implementation of the mandatory controls required by the Internal Control Reference Framework ■ Check the consistency of compliance statements ■ Carry out cross-cutting studies on the operational benefit for the Group ■ Identify and share best practices	■ Audit plan ■ Audit methodology ■ Specific "Essential Controls" anti-fraud methodology ■ Best practices library ■ "TABLEAU" data analysis tool ■ "CELONIS" process analysis tool ■ Management of action plans in the "INTERACT" tool ■ Auditor training Program	■ Entities audited every 3 to 5 years depending on company size ■ 154 audits completed. ■ 69% of the audits launched in 2019 used the process and/or data analysis tools ("Tableau" and/or "Celonis") ■ 137 best practice briefs published ■ 16 training sessions in 2019 devoted to all auditors and corresponding to a total of 24 hours of methodology training per auditor

(1) *The Business Control Forums are local training sessions delivered over one or two days for executives and managers. The topics such as the fundamentals of internal control and the fight against fraud, audit results and compliance statements, as well as case studies on various processes.*

(2) *Integrated audit and internal control tool used for the management of compliance statements, action plans and audits.*

(3) *Data analysis and feedback tool.*

2.2.4 Corporate departments

Compagnie de Saint-Gobain's corporate Directors are responsible for setting up an internal control structure and defining internal control strategies and procedures in their area.

They assist the Internal Audit and Business Control Department in leading and conducting the internal control process in their area, notably:

- identify and analyze the main risks associated with their internal processes;
- define effective and relevant controls formalized in the Internal Control Reference Framework;
- inform and train the employees responsible for internal controls within their area;
- analyze any internal control weaknesses or incidents and the results of internal audits.

The corporate Directors are also responsible for the internal control system within the Company entities, notably to establish the Group's procedures.

Corporate departments	Main responsibilities	Reference standards and/or measures	2019 key figures
Environment, Health and Safety (EHS) Department and Medical Department	■ Promote and coordinate Group EHS policy ■ Monitor the application of EHS reference framework principles	■ EHS reference framework and standards ■ OHSAS 18001/ISO 45001, ISO 14001 and ISO 50001 standards ■ EHS Saint-Gobain audits	■ Industry audits: ▪ 17 "12-stage" audits ▪ 3 "20-stage" audits (1) ▪ 42 "ISA" audits (2) ■ Distribution audits: ▪ 328 "ESPR" audits (3)
Information Systems Department	■ Define Group policy for information systems and computer network security ■ Promote and coordinate an annual self-assessment plan ■ Control the implementation of rules and best practices	■ Minimum security rules ■ Technical standards ■ Development standard for secure web applications ■ Note on the Cloud ■ Datacenter security rules and public Cloud security rules ■ ITAC reference bases ■ SAP users control tool ■ SAP systems security monitoring and checking tool (SAP4SG)	■ See Chapter 6, Section 2.5.4 "General doctrine on information systems security"
Purchasing Department	■ Manage the World Class Purchasing program, an approach focused on purchasing performance, department professionalization and supplier innovation, with a view to creating a competitive advantage for Saint-Gobain ■ Exploit all centralized multi-business and multi-country purchasing synergies ■ Coordinate the Purchasing function ■ Develop the culture of Responsible purchasing, in line with the Group's commitments ■ Execute the Digital transformation of the Purchasing function, in collaboration with the countries and businesses.	■ ISO 9001 standard with certification in Raw Materials, Precious Metals and Energy for Saint-Gobain Purchasing ■ Purchasing Process within the Internal Control Reference Framework	■ Completion of more than 12,000 individual purchaser actions in 2019 ■ 4 specific local Purchasing internal audits ■ 24 Buy/Techs executed in 15 countries
Risk and Insurance Department	■ Define Group policy for property damage at industrial or distribution sites ■ Define Group policy for insurance and monitoring its implementation ■ Steering centralized insurance programs	■ Prevention/protection reference base ■ "Risks Grading" self-assessment tool ■ Doctrine memos ■ Risks and Insurance Intranet	■ 441 site visits by prevention engineers ■ 1,354 sites that have performed their Risk Grading self-assessment ■ 974 evaluations of sales outlets ■ 26 prevention/PCA training sessions ■ Regular plants inspections
Treasury and Financing Department	■ Define policy for financing, market risk control and banking relationships for the entire Group	■ Procedural reference base ▪ for DTF activities ▪ for subsidiary activities ■ Daily reports (DTF) and monthly reports (subsidiaries and DTF)	■ 142,390 internal/external foreign exchange transactions in 2019 ■ 29,368 internal/external transfers issued in 2019

(1) Audits following a 12- and 20-step schedule for the Group's industrial activities.

(2) Audits according to a grid in 13 sections, covering the requirements of international standards ISO 14001: 2015 and ISO 45001: 2018 and the additional internal requirements, for the Group's manufacturing activities.

(3) ESPR (Environment, Safety, Prevention of Risks) audit: specific to the Building Distribution.

Corporate departments	Main responsibilities	Reference standards and/or measures	2019 key figures
Financial Control Department	▪ Implement continuous control of the Group's results and operating performance ▪ Participate in drawing up the budget and quarterly budget reviews ▪ Oversee monthly results figures at all levels of the organization ▪ Closely analyze and validate the financial consequences of investment, acquisition, divestment, merger and capital expenditure plans and restructurings	▪ Dashboards ▪ Permanent relationship with the Regions/HPS ▪ Oversight of the network of Group controllers ▪ Implementation of common analysis tools ▪ Group reference base and opinion of the corporate departments	▪ Over 150 meetings per year with the Regions/HPS and 3 training sessions with the participation of 36 employees ▪ 196 DAC (Credit Authorization Requests) ▪ 35 planned acquisitions, 26 of which have been completed ▪ 35 divestments and mergers completed
Accounting Standards and Pension Liabilities Department (1)	▪ Manage, update and distribute all financial, administrative and management procedures applicable to the Group's companies ▪ Coordination and review of the valuation of the Group's pension obligations ▪ Monitoring of "IFRS 16" leases	▪ Group organization and procedures ▪ Financial and accounting standards (IFRS) ▪ Group Intranet	▪ 598 documents available on the Accounting Standards intranet ▪ 432 questions addressed *via* the hotline ▪ 1,475 employees subscribed to the Accounting Standards Department newsletter
Legal Department	▪ Identify the main legal risks ▪ Define and implement relevant policies and controls ▪ Advise operational staff, through the network of ethics and compliance and/or embargo managers of the Region/Country/Activity & Business	▪ Group Doctrine on adherence to legislation in force (particularly in relation to competition law, corruption prevention, trade sanctions and embargoes, policy on gifts and invitations, conflicts of interest, workplace alert system, etc.) ▪ Employee training related to legislation in force and Group policy adopted on the subject (online and in person trainings) ▪ Questions on the compliance statement on compliance-related topics	▪ At the end of 2019, 90.8% of managers had completed the "Comply" online training on antitrust law ▪ At the end of 2019, 94.8% of managers had completed the "ACT" online anti-corruption training ▪ At the end of 2019, over 12,000 employees had completed the "Saint-Gobain Economic Sanctions and Embargoes" online training on economic sanctions and embargoes ▪ Specialized legal counsel performed competition audits on 160 sites (since 2007) ▪ Almost 565 in-person training sessions on compliance (competition law, anti-corruption rules, trade sanctions and embargoes) have been held since 2017
Safety Department	▪ **Protection of people**: ▪ Ensure the safety of travelers and expatriates ▪ Country and site safety audits ▪ **Safety of Assets**: ▪ Develop anti-fraud policies ▪ Ensure fraud prevention ▪ Investigate fraud incidents ▪ **Security of sensitive information**: ▪ Ensure the protection of national defense secrets	▪ Group travel policy ▪ Group safety policy ▪ Training and awareness ▪ Fraud incident reports ▪ Safety Officer function ▪ Audit of sensitive sites subject to authorization	▪ 14,123 international travelers ▪ 60 Directors and managers trained ▪ 2 sites audited

(1) *Formerly Doctrine.*

2.2.5 Operational departments

The Heads of the Regions, countries, BUs and companies' CEOs are crucial in rolling out the internal control and risk management system in the Group; their main roles include:

- analyzing major risks faced by the companies;
- carrying out appropriate controls based on the Internal Control Reference Framework;
- gradually implementing the Group's programs;
- making self-assessments on the internal control system, in the form of an annual compliance statement, for the applicable management levels, that includes a letter of commitment confirming the Managing Director's personal commitment as regards the fairness and accuracy of the self-assessment;
- active, constructive and transparent involvement in the various assessment exercises: internal, specialized and external audits.

2.3 The internal control and risk management system in the Group entities

Each entity is responsible for implementing an internal control system that is appropriate to its needs and aligned with the Group's internal control system. Each Managing Director is responsible for:

- the relevance and effectiveness of the internal control system in place within their entity;
- its compliance with the Group's internal control system;
- appropriate management of the risks faced by their entity.

This responsibility cannot be delegated. Management exercises this by relying on the company's functional Directors, operational staff and the site Directors.

To build an internal control system adapted to their activity, the Chief Executive Officers of the companies aim to:

- establish the fundamental bases for internal control and risk management, and in particular the controls described in the Internal Control Reference Framework;
- adapt the internal control and risk management system by analyzing specific risks and enhancing the internal control system to include checks tailored to the management of identified risks;
- roll out the internal control and risk management system on all of the sites;
- oversee the internal control and risk management system.

2.4 The procedure for monitoring the internal control and risk management system

The Internal Audit and Business Control Department monitors the internal control and risk management systems using four main factors:

- compliance statement;
- internal audits;
- action plan monitoring;
- monitoring of fraud and incidents.

The results of this oversight are reported to the Audit and Risks Committee.

2.4.1 Compliance statement

The Managing Directors, for the applicable management levels report to the Group's General Management on their levels of internal control *via* an annual compliance statement.

The form includes a certain number of key checks extracted from the Internal Control Reference Framework.

The Managing Director must provide assurances that:

- s/he has carried out the selected checks properly and efficiently;
- the action plans arising from the self-assessment have been activated and implemented within the given time frames;
- major internal control events, fraud and violations of the Principles of Conduct and Action have been reported to the Internal Audit and Business Control Department.

Finally, the Managing Directors make a personal commitment to the accuracy of the self-assessment by signing a letter of commitment at the end of the form.

The declarations of compliance and the action plans are gathered, summarized and monitored by the Audit and Internal Control Department. They are covered in an annual report to the Group's Management team and the Audit and Risk Committee.

2.4.2 Internal audits

Internal audits are centralized at Compagnie de Saint-Gobain level. The Internal Audit and Business Control Department's Director reports to the Chairman of the Group. Internal auditors, whether they are located at the Group's headquarters or in the countries, report directly to the Internal Audit and Business Control Department and work under its authority.

The audits are scheduled based on long-term, pre-determined criteria, in line with a yearly audit plan which is designed taking into account the requirements of the company's General Management, corporate departments and operational departments. The audit plan prepared by the Internal Audit and Business Control Department is approved by the Audit and Risks Committee.

The aim of the audits is to evaluate the relevance and effectiveness of the internal control systems of the Group and its subsidiaries and to carry out cross-business missions with an operational benefit. Generally, they include an examination of the internal control environment, risk analysis system, internal control organization and procedures and information systems of one or more processes.

The auditors use IT tools provided to them to analyze the data systematically ("data analytics") and share the results operationally with the entities:

- a performance-oriented tool for process analysis that can be used to analyze and represent an entity's organizational structure and its processes, to identify bottlenecks and irregularities in process flows;
- a compliance-oriented data analysis tool that is useful in targeted searches for inconsistencies with the internal control rules in place.

These two highly complementary tools thoroughly analyze the populations concerned (transactions, master files, access rights, etc.), so that anomalies can be detected and the most reliable conclusions reached.

At the end of the work, the internal auditors design a priority action plan in conjunction with the entity which should improve the coverage of the risks identified; they also produce a report setting out their main observations and recommendations. The report is then sent to the Group's General Management and the operational department to which the entity reports.

2.4.3 Action plans follow-up

An action plan management and monitoring database is used to centralize information about the measures implemented to remedy any non-compliance issues identified during the compliance statement campaign, and about the action plans drawn up following audits performed by the internal audit. Since 2019, the audit tool also enables the entities to launch action plans autonomously, as part of the dynamic management of their internal control.

This means that each Group company has access to a centralized operational platform it can use to manage its action plans by reporting the corrective measures taken and the progress made compared with the predefined implementation schedule. The corporate departments can also use the system to monitor these action plans.

Furthermore, a dashboard circulated at the Group's different management levels makes it possible to monitor the results of the compliance statements, internal audit grades and the progress of the related action plans.

2.4.4 Monitoring of fraud and internal control incidents

Fraud and other major internal control incidents are closely monitored by the Audit and Risks Committee.

a) Events that must be declared to the Group

- accounting anomalies and alterations which damage the integrity of the financial information, irrespective of whether they are favorable or unfavorable to the entity or the Group;
- misappropriation or jeopardizing of assets, whether tangible or intangible;
- events likely to be construed as acts of passive or active corruption, or influence peddling;
- violations of laws and regulations;
- other violations of the Principles of Conduct and Action.

b) Alerts procedure

All incidents must be reported immediately using a standard form available on the company's (Fraud and Security) intranet. These reports are then passed on to the members of the Audit and Risks Committee, and the relevant functional and operational departments. The Group's Fraud Officer ensures monitoring by applying a single, centralized procedure which all of the Group's subsidiaries must follow.

No employee may be punished, dismissed or subject to any direct or indirect discrimination for reporting events presumed in good faith to be fraudulent.

2.5 Reference standards and procedures

Compagnie de Saint-Gobain has developed internal control and risk management procedures for its own needs and those of its subsidiaries.

2.5.1 Internal Control Reference Framework

The Internal Control Reference Framework has also been reviewed as part of the Group's transformation and led to the publication in January 2019 of the following manuals:

- **ICRF**: Internal Control Reference Framework, in its standard format, applicable to companies with annual sales in excess of €20 million and the support units (Finance, HR/Payroll and SGTS Shared Services Centers, IT Expertise Centers, R&D Centers);
- **MINI ICRF**: New Internal Control Reference Framework, published for the first time in 2019, applicable to companies with annual sales below €20 million;
- **ITAC**: Internal Control Reference Framework applicable to all of the Group's business applications and ERP.

ICRF

ITAC

ICRF MINI

a) The ICRF

The ICRF was relaunched in 2019 with an entirely redesigned Section 1 which better reflects the Group's new internal control and risk management system, as part of Transform & Grow, notably featuring:

- the new structure of the Group;
- a simple and agile organization designed to streamline the decision-making process;
- a new managerial approach and collaboration methods promoting:
  - the principles of confidence, responsibility and collaboration,
  - operational priorities and the support role of the central functions,
  - the "One Boss" principle (all controls are subject to a single validation),
  - the due consideration of the fact that internal control needs to be adapted to the specific context of each entity/operation;
- the digital transformation program.

Section 1 of the Internal Control Reference Framework therefore highlights the role of each person in the perpetuation of the internal control and risk management system.

Section 2 of the Internal Control Reference Framework presents the Group's risk universe. Each ICRF control is referenced against the relevant risk sub-categories. Each process contains a control/risk matrix used to refer specifically to risk types by control and contributing to understanding the control system.

Section 3 of the Internal Control Reference Framework presents the list of mandatory controls to be implemented by all Group subsidiaries.

The 2019 version represents a drastic change in this respect, with:

- a reduction in the number of controls, from 558 in 2018 to **250** in 2019 (-55%);
- new definitions of the controls: the objective of each control has been added, as has a more concise description of each control, restricted to the priority elements to be put in place;
- a clarification of the "Essential" controls, defined as "critical controls within the internal control system of an entity or a BU, made compulsory by the Group for security or efficiency purposes". There are 22 essential controls;
- an overhaul of the processes, of which there are now 17.

b) The Mini ICRF

In accordance with the "No one size fits all" principle of Transform & Grow, the Audit and Internal Control Department issued for the first time in 2019 an internal control manual for companies whose annual sales are below €20 million. This framework has the same structure as the standard ICRF with 17 chapters. It sets out 100 controls, which have been carefully selected and developed for small entities. The Mini ICRF also presents a practical tool for the consolidation of newly-acquired companies.

c) The ITAC

The Automated Control Reference Framework (ITAC) supplements the Group's Internal Control Reference Framework (ICRF) and lists the controls that are wholly or partially automatable, the implementation of which is mandatory. The Group companies are responsible for the implementation of this reference framework in the business applications within their scope (e.g. SAP) in order to guarantee the perpetuation of the control, limit its recurring costs and minimize the risk of human error or fraud.

The reference framework covers 5 processes and constitutes a minimum list of 63 ITAC covering 37 ICRF controls.

The three reference frameworks are available on the IABC (Internal Audit and Business Control) Intranet and from the My SG collaborative room (My Business Control).

Other tools are also available on the Intranet site to help entities implement the controls (tool box: typical procedures, flow diagrams, library of controls) and best practices.

The best practices are compiled by:

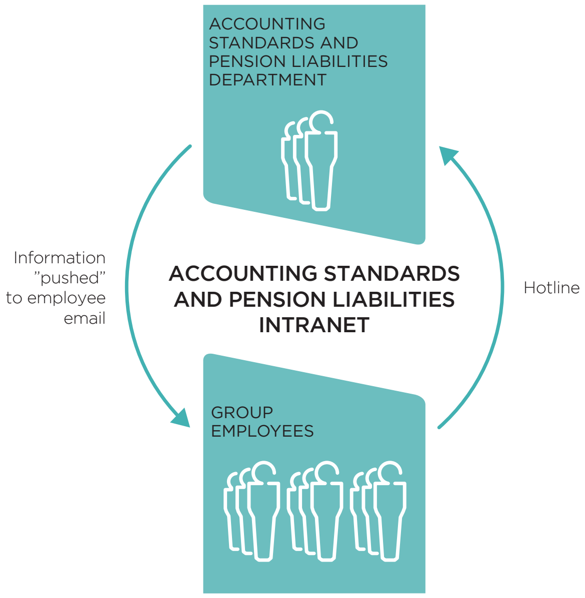
- the Internal Audit Department – auditors gather best practices during their audit missions;
- the Internal Control Department, using a system of external monitoring (notably the Institut Français de l'Audit et du Contrôle Interne, "IFACI");
- entities that agree to share their tools;

2.5.2 The Accounting Standards and Pension Liabilities Department

The Accounting Standards and Pension Liabilities [(1)] Department presents all financial, administrative and management procedures applicable to Group companies.

These procedures, accessible *via* the Group Intranet, are based on two main themes:

- Group organization and procedures;
- financial and accounting standards.



This Department is also in charge of coordinating the work to calculate the Group's pension provisions and carries out a detailed review of the commitments of French companies in collaboration with the actuaries.

Since 2019, it has also been responsible for the monitoring of "IFRS 16" leases using a global database of all of the Group's leases.

The work of the Accounting Standards and Pension Liabilities Department is the subject of a report presented biannually to the Audit and Risks Committee.

(1) Formerly Doctrine

2.5.3 Environment, Health and Safety (EHS) Reference Manual

The EHS Reference Manual (2012 version) is accessible on the Group Intranet and is distributed to all sites. Its updated version, which aims to align it with the most recent international standards, ISO 14001: 2015 and ISO 45001: 2018, is currently being finalized and will be available in early 2020. The text has been reorganized into 13 sections and details the progress of the implementation and the minimum requirements for each one. It serves as a reference for the audit of the EHS management systems (ESPR audit on the Distribution scope and the new ISA (Integrated System Assessment 1) audit launched in 2018 for the industrial scope).

The work carried out in 2019 was enhanced by the results of a study of 44 sites audited by the ISA audit which led to the compilation of a list of improvement actions to be introduced. One of the conclusions of the study concerns the relevance of having 2 types of audit for the industrial scope, depending on whether or not the entities are certified in accordance with international standards. Consequently, an “ISA-MINI” audit for non-certified sites, based on the minimum requirements described in each section of the EHS Reference Framework – version 2020, will be launched in 2020, whereas the already-available ISA audit will be further developed and focus solely on certified sites. Another conclusion of the study concerns the agenda of the EHS ISA audits which will now be managed annually and centrally by the EHS team, so as to standardize the approaches used by the different countries and reduce audit-related costs.

The EHS Saint-Gobain audits of the Distribution sites will be reviewed in 2020. Furthermore, the EHS Department works with its network to develop and update Group EHS standards, which describe the minimum applicable requirements and/or methodologies. These standards help to ensure that risks are assessed and controlled on the same basis in all Group entities, irrespective of the country and the local laws and regulations (see Section 1 of Chapter 3). Implementation guides, procedures, training packs, assessment questionnaires, and cross-audits of standards implementation and computer tools have been developed to support the application of the standards at the sites. The work carried out in 2019 has helped simplify not only the approach but also the format of the standards. As a result, the number of standards will be reduced, their texts will be updated and they will focus on the minimum requirements. In 2019, the revised versions of the “Assessment and control of Health & Safety risks” standard and the “Management of Subcontractors” standard were made available. The standards are complemented by implementation guides which give examples of best practices on how to implement the minimum requirements, and which may also be used as training tools by the EHS network of the various countries and businesses.

2.5.4 General doctrine on information systems security

The Information Systems Department compiles security rules and policies concerning the information systems and networks, based on four sets of compulsory minimum security rules in the following areas:

- infrastructure, with 23 minimum security rules (31 control points, 94 entities) and SGTS Security Reporting (34 control points, 15 SGTS covering 557 entities);
- applications and websites, with the 25 minimum security rules (50 control points, 30 expertise centers);
- industrial information technology systems, with at least 28 security rules (48 control points, 173 entities with critical or large industrial IT systems);
- Research and Development Centers, with at least 7 security rules (13 control points, 16 R&D centers);
- the hosting of resources in the Datacenters or Cloud solutions operated by partners led by the Group DSI or SGTS (99 control points, 17 Datacenters/private Cloud solutions, 1 Cloud Public Azure solution).

These rules are the operational application by area of another two key high-level documents in the new IT security document reference system:

- the General IT Security policy letter, ensuring the importance of this issue and its “sponsorship” by top management;
- the Group IT Security Doctrine, the essential standards that form the Information Systems Security policy;
- the reference framework for short and medium-term actions to strengthen Saint-Gobain’s cyber-defense against new cyber-attacks. This framework is divided into four specific operational cyber-defense v3 action plans covering global infrastructure, local infrastructure, applications and websites, and industrial systems.

Lower-level technical standards are also issued as a supplement to these rules, and are updated periodically (22 new documents in 2019) to keep pace with technological advances and control infrastructure services.

The Information Systems Department has notably defined and rolled out:

- a tool (RMT, Rights Management Tool) for controlling SAP user rights and managing conflicting segregations of duties. This tool will be gradually integrated into all the Group's SAP systems;
- a technical standard (SAP4SG) to improve the security of SAP environments. A tool (SAP4SG) is being rolled out across 47 SAP environments hosted in the IBM (P1) Datacenter to monitor and check the points covered by this standard:
  - the implementation of security patches in the SA Production environments,
  - the technical configuration of the environments to improve security,
  - monitoring of technical roles, profiles and accounts, as well as high privilege accounts;
- a technical standard to manage technical and business accounts that access to applications (ATA/ABA, Application Technical Accounts/Application Business Accounts);
- a Web Application Secured Development (3.2) standard (WASD);
- a technical standard to Secure the Hosting of Internet Applications (SHIA);
- a technical standard for SaaS systems which defines responsibilities and security measures for implementation;
- a series of security rules for the annual security control of the central and regional datacenters (Datacenter Security Rules 4 SG) and the Public Cloud Security Rules;
- a technical standard for the security of applications hosted by Saint-Gobain partners for publication on the internet;
- the methodology for the assessment of Cybersecurity risks used to assess the measures to be implemented to integrate security into all projects from the first stage, and into contracts with suppliers.

Moreover, the ITAC reference guide was published in 2012. As an addition to the Internal Control Reference Framework. It describes the automated and semi-automated controls used for five key processes: Purchasing, Sales, Inventory, Cash Management and Accounting. It covers the Group's main ERP software and includes:

- a reference guide for SAP: ITAC4SAP with 143 control points;
- a reference guide for MOVEX M3: ITAC4M3 with 96 control points;
- a reference guide for EXACT: ITAC4EXACT with 85 control points.

The ITAC4SAP reference guide has been updated to ensure consistency with the updated Internal Control Reference Framework (143 control points including controls for the segregation of tasks).

The controls are being gradually integrated into the Group's information systems as follows:

- ITAC100 ITAC4SAP for SAP systems (deployed in 47 SAP systems covering 323 Group companies) including specific updates for the Building Distribution activity;
- ITAC96 ITAC4M3 for MOVEX M3 systems (deployed in 4 M3 systems covering 37 Group companies);
- ITAC85 ITAC4EXACT for EXACT systems (deployed in 1 EXACT system covering 24 Group companies);
- the main ITACs deployed in 1 MS Dynamics system covering 1 Group company, and the SAP Business One systems, covering 23 companies.

2.5.5 Industrial and distribution risk prevention manual

The Group's policy for prevention of property damage and the resulting operating losses, compiled as part of an internal collection of standards and best practices, is defined by the Risk and Insurance Department (DRA). The DRA coordinates the implementation of the policy by the Group's operational entities in its different businesses.

Within the business and regional entities, Prevention Coordinators manage the application of Group policy within the scope of their activities.

At site level, those in charge of Prevention Management perform an annual self-assessment of risks at their sites using a risk rating software package. This tool assesses risks as well as the corresponding levels of protection and prevention. This self-assessment is updated annually by the industrial sites, the Research and Development Centers and logistical sites. A special assessment is carried out for the points of sale.

Furthermore, regular inspections of the Group's most important sites are carried out by prevention engineers, who are auditors external to the Group (approximately 450 inspections per year). The sites update their action plans with a view to improving their level of prevention and protection based on recommendations prepared by these prevention engineers.

2.5.6 Tools of the Group's culture of compliance

The culture of compliance that drives the Group has developed through its values, which are formally stated in the Principles of Conduct and Action.

The compliance program currently focuses on the following main themes: compliance with rules relating to competition law, preventing corruption, and compliance with economic sanctions and embargos.

The tools used in implementing the program include:

- a dedicated intranet, called Compliance, on which key messages are posted and tools made available;
- online training modules such as Comply (competition law), ACT (preventing corruption) and Saint-Gobain Economic Sanctions and Embargos (rules relating to economic sanctions and embargos);
- in-person training;
- distribution of practical and technical guides:
  - the Thread of Competition,
  - 20 best practices in competition law for purchasers,
  - the Thread of Anti-Corruption,
  - the practical Guide on workplace alerts at Saint-Gobain;
- the dissemination and implementation of internal policies such as:
  - the policy on the workplace alert system in place at the Saint-Gobain Group,
  - anti-corruption policy,
  - gifts and invitations policy,
  - conflicts of interest policy,
  - policy on economic sanctions and control of exports,
  - sales agents and intermediaries policy,
  - membership of professional associations policy,
  - the Group policy on management of the corruption risk by Human Resources,
  - acquisition and joint venture policies;
- frequent dissemination of messages by Saint-Gobain's Chairman & CEO and the Chief Executive Officers of the Saint-Gobain Group's countries and activities;
- a network of locally-present Ethics and Compliance Managers and Embargo Managers.

2.6 Organization of internal control in preparing and processing financial and accounting information to the shareholders

2.6.1 Compagnie de Saint-Gobain (parent company) financial statements

The Accounting Department is responsible for producing financial information for shareholders, partners and other third parties in accordance with French legal requirements. This information is prepared using standards and principles in force. These are generally accepted principles such as the going concern principle, the principles of consistent application of accounting policies, alignment of the opening balance sheet with the prior-period closing balance sheet, recognition of expenses in the same period as the income to which they relate, segregation of accounting periods and substance over form.

2.6.2 Accounting organization

The accounting organization is based on the rules, methods and procedures set out in the Group's Accounting Standards memos. It enables the monthly reconciliation and substantiation of the accounts and the true and fair view of the events which are represented. The organization also has an advisory role and works upstream to anticipate the accounting impacts of events and the regulatory changes that are likely to have a material impact on the Company's financial statements.

The chart of accounts is aligned with the Company's needs in terms of classification of transactions, and complies with the materiality principle. It is linked to the Group's Financial Information system.

2.6.3 Internal control

Internal control is based on periodic assessments of the process for preparing accounting and financial information.

In addition to controlling compliance with payment authorization procedures and the double signature rule for secure payment means, the Accounting Department contributes to internal control by acting as guarantor in respect of responsibilities defined by General Management and formalized through a cost accounting system organized by cost center. Specifically, cost center managers receive monthly schedules listing the expenses incurred under their signature, allowing them to check these expenses and also to compare actual and year-to-date expenses with the initial budget.

A summary of these cost accounting reports is sent to the Finance Department and the Group's General Management at the end of each month.

Measures are implemented to strengthen the arrangements for managing accounting risks and contributing to the reliability of the financial statements.

For this purpose, since 2016, Group units have been subject to a Balance Sheet Review (BSR) procedure under the direction of the Group Financial Control Department, to increase the level of accounting control by the Finance Department of each entity.

2.6.4 Group consolidated financial statements

The consolidated financial statements are prepared by the Group Consolidation and Reporting Department. This department is also responsible for updating consolidation procedures, training, and integrating the subsidiaries into the consolidation process, processing information, and utilizing, maintaining and developing consolidation systems and the Financial Information System for the Group and all Regions, countries and Activities.

2.6.5 Group standards

The Consolidation Department is responsible for providing information and periodic training to subsidiaries in conjunction with the Regions. Using the consolidation manual, a number of data input manuals, an intranet site and an online training application in French and English. New consolidation instructions are issued for each monthly closing, describing the changes compared with the previous period-end and enhancements to reporting systems, standards and procedures, in collaboration with the Group's Accounting Standards and Pension Liabilities Department [(1)].

Each year, the Consolidation Department offers training sessions.

(1) Formerly Doctrine.

2.6.6 Organization of the Group's consolidation process

For 2019, the Group's consolidation was organized by consolidation levels and falling under the Group Consolidation and Reporting Department. To comply with the new "Transform & Grow" organizational structure, a new single consolidation base was developed and implemented as part of the 2020 Budgets. It will be used for the monthly reports from January 2020.

2.6.7 Processing information and control of the financial statements

Each subsidiary submits its accounts in accordance with the timetable set by the Company. The financial statements are checked and processed at Regional level, then transmitted to the Consolidation Department, which performs an overall review of the Group's financial statements and records the necessary consolidation adjustments. These consolidated accounts are submitted to General Management every month.

The consolidated financial statements are then examined by the external auditors in accordance with professional auditing standards.

2.6.8 Consolidation tools

The consolidated financial statements are prepared using consolidation software equipped with a powerful, efficient and highly secure database that is aligned with the Group's matrix management structure. The software is regularly updated to guarantee the financial information system's sustainability. A tightly controlled access procedure has also been put in place to ensure that the overall system is secure, and a comprehensive access review is performed every quarter.

This tool is capable of managing a database with several levels of consolidation and transparently centralizing data in the Group database.

It feeds data into a secure reporting system accessible on the Group's Intranet, for the Group's General Management and the Regional Management, contributing to the internal control of information output.

2.6.9 A reporting process that makes the financial statements more reliable

The monthly reporting process ensures that the annual and interim consolidated financial statements are reliable. Hard closes are performed at May 31 and October 31, to reduce the workload at June 30 and December 31. Hard close results and balance sheets are thoroughly reviewed in accordance with the same principles as the annual and interim financial statements. At this time, the main financial managers from the Company and Regions analyze in detail the net income and the hard close balance sheet. The entity's accounts are then analyzed before the final closing dates of June 30 and December 31 and are reviewed by the external auditors. This procedure helps to ensure early detection of any errors and their adjustment during the actual close.

A consolidated report is prepared each month for the Company's General Management, with supporting comments and analyses of material events over the period.

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Capital and ownership structure

1. Capital stock

1.1 Share capital

1.1.1 Share capital at December 31, 2019

At December 31, 2019, Compagnie de Saint-Gobain's share capital amounted to €2,178,733,804, represented by 544,683,451 common shares with par value of €4 (compared with 546,585,004 shares at the previous year-end) fully paid up and all of the same category.

At December 31, 2019, the Company had issued no shares not representing its share capital and had issued no securities giving access to its share capital other than stock options and performance shares (see Chapter 5, Sections 2.4.2 and 2.4.3).

1.1.2 Changes in share capital over the last three fiscal years

Since December 31, 2016, Saint-Gobain's share capital has changed as follows:

Date	Type of transaction	Share capital after transaction	Number of shares after transaction
12/2019	Issuance of 310,204 shares upon exercise of the same number of subscription options	€2,178,733,804	544,683,451
11/2019	Capital reduction: cancellation of 2,211,754 shares	€2,177,492,988	544,373,247
06/2019	Capital reduction: cancellation of 6,000,000 shares	€2,186,340,004	546,585,001
05/2019	Group Savings Plan: issuance of 5,999,997 shares (at €25.69)	€2,210,340,004	552,585,001
12/2018	Issuance of 556,595 shares upon exercise of the same number of subscription options	€2,186,340,016	546,585,004
11/2018	Capital reduction: cancellation of 6,461,449 shares	€2,184,113,636	546,028,409
06/2018	Capital reduction: cancellation of 6,000,000 shares	€2,209,959,432	552,489,858
05/2018	Group Savings Plan: issuance of 4,932,767 shares (at €36.31)	€2,233,959,432	558,489,858
12/2017	Issuance of 200,241 shares upon exercise of the same number of subscription options	€2,214,228,364	553,557,091
11/2017	Capital reduction: cancellation of 2,000,000 shares	€2,213,427,400	553,356,850
09/2017	Capital reduction: cancellation of 5,000,000 shares	€2,221,427,400	555,356,850
08/2017	Issuance of 482,685 shares upon exercise of the same number of subscription options	€2,241,427,400	560,356,850
05/2017	Group Savings Plan: issuance of 4,593,807 shares (at €36.72)	€2,239,496,660	559,874,165

1.1.3 Liens, guarantees and pledges

At December 31, 2019, to the best of the Company's knowledge, there were no significant liens, guarantees or pledges applying to Saint-Gobain shares.

1.2 Financial authorizations currently in force

The following table shows the status of delegations of authority and authorizations granted by the General Shareholders' Meeting of June 6, 2019 to the Board of Directors and the use made of these delegations during the 2019 fiscal year.

Purpose of the Resolution and types of securities concerned	Source (Resolution number)	Authorization duration and expiration	Maximum par value of the capital increase
Issuances with preferential subscription right			
Capital increase (ordinary shares or securities giving access to shares in the Company or its subsidiaries) (A)	GSM 2019 15th Resolution	26 months (August 2021)	€437 million, excluding adjustments, *i.e.* approximately 20% of the share capital (1) (A)+(B)+(C)+(D)+(E)+(I) being limited to €437 million (the "**Global Cap**") (2)
Capital increase by incorporation of premiums, reserves, profits and free allocation of shares to shareholders (B)	GSM 2019 20th Resolution	26 months (August 2021)	€109 million, excluding adjustments, *i.e.* approximately 5% of the share capital Included in the Global Cap (2)
Issuance without preferential subscription right			
Capital increase, by public offer, with the option to grant a priority period for shareholders, through issuance of ordinary shares or securities giving access to shares in the Company or its subsidiaries, or shares in the Company to which securities to be issued where applicable by subsidiaries would grant entitlement (C)	GSM 2019 16th Resolution	26 months (August 2021)	€218 million (shares), excluding adjustments, *i.e.* approximately 10% of the share capital (1) Included in the Global Cap (C)+(D)+(E)+(I) being limited to €218 million (2)
Capital increase, by private placement, through issuance of ordinary shares or securities giving access to shares in the Company or its subsidiaries, or where applicable shares in the Company to which securities to be issued by subsidiaries would grant entitlement (D)	GSM 2019 17th Resolution	26 months (August 2021)	€218 million (shares), excluding adjustments, *i.e.* approximately 10% of the share capital (1) Allocation to the cap of (C), included in the Global Cap (2)
Capital increase (ordinary shares or securities giving access to shares in the Company shares with shares as primary securities) in compensation for contributions in kind (E)	GSM 2019 19th Resolution	26 months (August 2021)	10% of the share capital, *i.e.* approximately €218 million excluding adjustments Allocation to the cap of (C), included in the Global Cap (2)
Issuances reserved for Group employees and Directors			
Capital increase (equity securities) through the Group Savings Plan (F)	GSM 2019 22nd Resolution	26 months (August 2021)	€48 million, excluding adjustments, *i.e.* approximately 2.2% of the share capital (3)
Allocation of stock options for new or existing shares (G)	GSM 2019 23rd Resolution	38 months (August 2022)	1.5% of the share capital on the date of the 2019 General Shareholders' Meeting, *i.e.* approximately €33 million with a sub-cap of 10% of this limit of 1.5% for executive corporate officers (G) + (H) being limited to 1.5% of the share capital
Allocation of existing performance shares (H)	GSM 2019 24th Resolution	38 months (August 2019)	1.2% of the share capital on the date of the 2016 General Shareholders' Meeting, *i.e.* approximately €26 million with a sub-cap of 10% of this limit of 1.2% for executive corporate officers (4) Allocation to the cap of (G)

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Purpose of the Resolution and types of securities concerned	Source (Resolution number)	Authorization duration and expiration	Maximum par value of the capital increase
Other			
Option for complementary issuance in case of oversubscription of an issuance of ordinary shares or securities giving access to the share capital with or without preferential subscription right (I)	GSM 2019 18th Resolution	26 months (August 2021)	For each issuance, legal limit of 15% of the initial issuance (1) Allocation to the cap of (C) and/or included in the Global Cap depending on the initial issuance (2)
Fixing of the issue price in the event of a capital increase without preferential subscription right by takeover bid or private placement (J)	GSM 2019 21st Resolution	26 months (August 2021)	10% of the share capital per 12-month period (1) Issuances completed pursuant to (C) or (D) depending on the type of capital increase Allocation to the cap of (C), included in the Global Cap (2)
Share buyback program			**Features**
Share buyback (5)	GSM 2019 14th Resolution	18 months (December 2020)	10% of the total number of shares making up the share capital at the date of the General Shareholders' Meeting (6) Maximum purchase price per share: €80
Cancellation of shares	GSM 2019 25th Resolution	26 months (August 2021)	10% of the share capital per 24-month period

(1) *Maximum aggregate face value of debt securities giving access to the share capital that may be issued capped at €1.5 billion. Global cap applicable to Resolutions (A), (C), (D) and (I).*

(2) *No use of the delegation of authority in 2019.*

(3) *Confirmation of the issuance of 5,999,997 shares in May 2019 by the Chairman and Chief Executive Officer acting pursuant to the delegation of authority granted by the Board of Directors on November 22, 2018 based on the seventeenth Resolution of the Shareholders' Meeting of June 8, 2017 to implement a capital increase via the Group Savings Plan.*

(4) *Allocation of 1,251,770 existing performance shares by the Board of Directors on November 21, 2019.*

(5) *The objectives of the program are as follows: cancellation, delivery of shares upon exercise of the rights attached to securities giving access in any way to the allocation of shares in the Company or in the context of external growth, merger, demerger and contribution transactions, market animation under a liquidity agreement, allocation of free shares, granting of stock options, or sale of shares as part of an Employee Group Savings Plan or other similar schemes, hedging against the potential dilutive impact of free share allocations, the granting of stock options and employee share subscriptions under the Group Savings Plan or other similar schemes, the implementation of any market practice that may become authorized by the French Financial Markets Authority (Autorité des marchés financiers) and, more generally, for any other transaction authorized under the relevant laws and regulations.*

(6) *See Section 1.3 of Chapter 7 for a description of the implementation of the share buyback program in 2019.*

(7) *Cancellation of (i) six million shares resulting in a reduction of the share capital by an aggregate face value of €24,000,000, decided by the Board of Directors on June 6, 2019, effective on June 14, 2019, and (ii) 2,211,754 shares resulting in a reduction of the share capital by an aggregate face value €8,847,016, decided by the Board of Directors of November 21, 2019, effective November 29, 2019 (see Section 1.3.1 of Chapter 7).*

1.3 Saint-Gobain treasury shares and acquisition of own shares

1.3.1 Treasury shares and own stock

At December 31, 2019, Compagnie de Saint-Gobain directly held a total of 1,934,484 treasury shares, *i.e.* 0.36% of its share capital, with a par value of €4, acquired at an average purchase price of €43.30. The gross book value of treasury shares as at December 31, 2019 was €83,755,675. At that date, it was not holding any treasury shares indirectly.

The following table shows, at December 31, 2019, the allocation of treasury shares held directly by Compagnie de Saint-Gobain for purposes of the program authorized by the General Shareholders' Meeting of June 6, 2019:

Objective	Number of shares and percentage of share capital	Average purchase price *(in EUR)*	Gross book value
Coverage of performance share plans and other allocations to employees (including stock options for existing shares)	1,907,384 shares (0.35% of share capital)	€43.38	€82,737,371
Liquidity agreement	27,000 shares (0.1005% of share capital)	€37.72	€1,018,316
Cancellation	-	-	-

During the 2019 fiscal year, 341,150 treasury shares were remitted as part of existing performance share plans and 0 treasury shares were remitted as part of stock option plans.

Pursuant to decisions of the Board of Directors, 6,000,000 shares were cancelled on June 14, 2019 and 2,211,754 shares were cancelled on November 29, 2019. These share cancellations resulted in share capital reductions of an aggregate face value of €24,000,000 and €8,847,016 respectively.

1.3.2 Information on transactions involving treasury shares during the 2019 fiscal year (excluding liquidity agreement)

In 2019, as part of the authorizations granted by the General Shareholders' Meetings of June 7, 2018 and June 6, 2019 to the Board of Directors, the Company purchased, excluding the liquidity agreement, 8,532,449 shares, at an average price of €32.51, and did not sell any of its treasury shares. Total trading expenses, fees and taxes incurred by the Company in 2019 in connection with all transactions on its treasury shares (including the liquidity agreement) amounted to €1,084,000.

It made no use of derivative products in connection with these transactions. Further, the Company was holding no open purchase or sale positions at December 31, 2019.

1.3.3 Liquidity agreement

In November 2007, Compagnie de Saint-Gobain entered into an agreement with Exane BNP Paribas to provide liquidity for Saint-Gobain shares, in accordance with the code of ethics issued by the *Association française des marchés financiers* (AMAFI).

To comply with current regulations (in particular AMF decision No. 2018-01 of July 2, 2018 on the establishment of liquidity contracts on equity securities as an accepted market practice), a new liquidity contract was entered into on June 20, 2019 between Compagnie de Saint-Gobain and the company Exane BNP Paribas with retroactive effect from January 1, 2019, which replaces the previous one.

Under the terms of the agreement, Exane is mandated to maintain a liquid market in Compagnie de Saint-Gobain shares and ensure that prices are regularly quoted for the shares, so as to avoid price fluctuations not justified by market trends.

The resources provided by Compagnie de Saint-Gobain under this contract entered into in June 2019 and applied to the credit of the liquidity account amounted to €4,002,006.22 and to 21,000 Compagnie de Saint-Gobain shares (compared to €5 million under the previous contract). At December 31, 2019, the liquidity account held 27,000 shares and had a credit balance of €3,825 million.

Cumulative purchases during the 2019 fiscal year under the liquidity agreement involved 1,245,520 shares at an average price of €34.20, while 1,335,079 shares were sold at an average price of €34.07. No shares allocated to the liquidity agreement were reallocated to another purpose of the share buyback program in 2019.

2. Ownership structure

2.1 Major shareholders

At December 31, 2019, the share capital of Compagnie de Saint-Gobain was €2,178,733,804, divided into 544,683,451 ordinary shares, to which 595,993,872 theoretical voting rights are attached.

The following table presents, to the best of the Company's knowledge, changes in the distribution of the Company's share capital and voting rights over the last three years.

	At December 31, 2019			At December 31, 2018			At December 31, 2017		
	Number of shares	% of share capital (1)	% of voting rights (2)	Number of shares	% of share capital (1)	% of voting rights (2)	Number of shares	% of share capital (1)	% of voting rights (2)
Group Savings Plan Funds	47,193,986	8.7	14.6	43,948,473	8.0	13.4	40,898,426	7.4	12.8
BlackRock Inc.	24,514,914 (3)	4.5	4.1	26,820,586 (4)	4.9	4.3	31,494,449 (5)	5.7	5.1
Wendel	30,000	0.0	0.0	14,153,490	2.6	4.6	14,153,490	2.5	4.5
Treasury shares	1,934,484	0.4	0.0	2,044,498	0.4	0.0	2,110,133	0.4	0.0
Other shareholders (6)	471,010,067	86.4	81.3	459,617,957	84.1	77.6	464,900,593	84.0	77.6
TOTAL		**100**	**100**		**100**	**100**		**100**	**100**

(1) The percentages of share capital are calculated with reference to the total number of shares comprising the Company's share capital, including treasury shares. See Section 2.4 of Chapter 5 for more details on stock options not yet exercised and performance shares allocated. At December 31, 2019, the maximum percentage of dilution was 0.16%.

(2) The percentages of voting rights are calculated with reference to the number of voting rights exercisable at General Shareholders' Meetings. Since 1987, registered shares in the name of a single shareholder for at least two years benefit from a double voting right. For further information, see Chapter 9, Section 1.1.1.

(3) To the best of the Company's knowledge, based on the disclosure threshold statement prepared by BlackRock, Inc. on March 15, 2019. For further information, see Chapter 7, Section 2.2.1.

(4) To the best of the Company's knowledge, based on the disclosure threshold statement prepared by BlackRock, Inc. on November 6, 2018. For further information, see Chapter 7, Section 2.2.1.

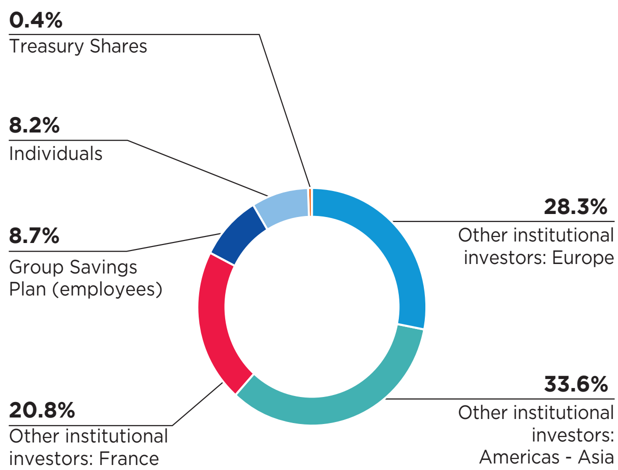
(5) To the best of the Company's knowledge, based on the disclosure threshold statement prepared by BlackRock, Inc. on August 29, 2017. For further information, see Chapter 7, Section 2.2.1.

(6) The percentage of share capital and voting rights held by all Directors and members of the Group's Senior Management is less than 0.5%. The number of shares held by each Director is shown in Chapter 5, Section 1.1.1.

To the best of the Company's knowledge, at December 31, 2019, no other shareholder directly or indirectly, acting alone or in concert, held more than 5% of the Company's share capital or voting rights.

According to the latest study of identifiable bearer shares, at December 31, 2019, the number of shareholders was estimated at approximately 210,000.

The following chart presents the ownership structure of Compagnie de Saint-Gobain as at December 31, 2019 by major shareholder category.



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2.2 Disclosure thresholds in 2019

2.2.1 BlackRock

During the 2019 fiscal year, BlackRock, Inc., acting on behalf of customers and funds it manages, made several threshold disclosures stating that it had exceeded or dropped below the 5% legal threshold. Most recently, on March 15, 2019, BlackRock Inc., acting on behalf of customers and funds it manages, disclosed to the French Financial Markets Authority (*Autorité des marchés financiers* – AMF) that on March 14, 2019, it had dropped below the threshold of 5% of the share capital of Compagnie de Saint-Gobain, holding 4.90% of the share capital and 4.40% of the voting rights on behalf of those customers and funds.

BlackRock Inc. specified that this threshold crossing took into account the holding of 1,204,112 "contracts for differences" (cash unwinding derivatives), without established maturity, involving an equivalent number of Saint-Gobain shares, paid exclusively in cash.

In addition, BlackRock Inc. disclosed that it also holds 3,519,247 Saint-Gobain shares on behalf of customers who have retained the exercise of voting rights.

2.2.2 Wendel

On March 22, 2019, Wendel declared to the French Financial Markets Authority (*Autorité des marchés financiers* – AMF) that it had, on March 15, 2019, directly and indirectly through a company it controls, dropped below the threshold of 5% of the voting rights of Compagnie de Saint-Gobain and that it directly and indirectly held 3.50% of the share capital and 4.71% of the voting rights in the company. This threshold crossing was the result of a sale of Saint-Gobain shares on the market.

At December 31, 2019, Wendel held only 0.01% of the share capital and voting rights of Compagnie de Saint-Gobain.

2.2.3 Statutory disclosure thresholds

In addition, the Company received several notifications during the year in respect of the obligation set out in the Company's bylaws to disclose any and all changes in interest to above or below 0.5% of the share capital or voting rights, or any multiple thereof. Those disclosure notifications, upwards or downwards, were received following the sale of shares or changes in Compagnie de Saint-Gobain's shares and voting rights.

2.3 Employee ownership structure

At December 31, 2019, Group employees held 8.7% of the capital and 14.6% of the voting rights attached to Compagnie Saint-Gobain shares through the Group Savings Plan. The Funds of the Group Savings Plan are thus the Group's main shareholder.

The Group Savings Plan (*Plan d'Épargne Groupe*, PEG) is a key feature of Saint-Gobain's social contract. It represents an excellent means of giving employees a stake in the Group's success and profits.

In 2019, 5,999,997 shares were issued under a standard PEG offering Group employees two classic formulae with a five- or ten-year lock-up, for a total of €154.1 million (compared with 4,932,767 shares and €179.1 million in 2018).

In France, 60.5% of employees invested in the PEG through Employee Mutual Funds (F*onds Communs de Placement d'Entreprise*, "FCPE"). Employees in 27 other European countries and 19 countries outside Europe were also given the opportunity to take part in the PEG. In total, 43,868 Group employees participated in the PEG during 2019.

A new plan will be launched in 2020. It will give employees the opportunity to acquire up to six million one hundred thousand shares, *i.e.* just over 1% of the share capital, with a five- or ten-year lock-up.

2.4 Shareholder pacts or agreements involving Compagnie de Saint-Gobain shares

The Company has no knowledge of shareholder pacts or agreements, nor of shareholders acting in concert with regard to the shares comprising its share capital.

Since the agreements signed with Wendel on March 20, 2008 expired upon completion of the General Shareholders' Meeting of June 9, 2011, new agreements between Wendel and Compagnie de Saint-Gobain setting the principles and objectives of the long-term cooperation were entered into and announced on May 26, 2011 (see the press release available at www.saint-gobain.com and pages 58 to 60 of the Registration Document prepared for the 2011 fiscal year). On that occasion, Wendel and Saint-Gobain reiterated their adherence to the following principles:

- support for the strategy approved by the Board of Directors and implemented by its Senior Management, primarily organized around three priorities: construction products, Building Distribution and Innovative Materials, each of which contributes specific factors to the Group and which, together, will serve as growth drivers, particularly through targeted acquisitions;
- respect for the independence of the Saint-Gobain Group and equal treatment of all shareholders; and
- stability in share ownership, Wendel's contribution to the Group's projects, and its long-term commitment.

These agreements specifically provide for the following:

- a cap on Wendel's stake, either direct or indirect, alone or in concert, up to 21.5% of the Company's share capital, except in the case of passive accretion by Wendel. This cap will cease to apply in the event that another shareholder, acting alone or in concert, comes to own more than 11% of Saint-Gobain's share capital or in case of filing of a takeover bid targeting Saint-Gobain's shares;
- a right of first offer in favor of Saint-Gobain in the event that Wendel seeks, on one or more occasions, to transfer securities representing at least 5% of Saint-Gobain's share capital to a limited number of buyers;
- with regard to governance, three seats on the Board of Directors appointed at Wendel's proposal, unless Wendel's stake falls under 10% of the voting rights, in which case the number shall be reduced to one seat, and participation on the Board Committees; and
- coordination on any draft Resolutions to be presented to the Saint-Gobain General Shareholders' Meetings.

Finally, Wendel agrees not to participate in a takeover bid whose terms are not approved by the Saint-Gobain Board of Directors, to abstain from any measure that would provoke, encourage or favor the success of such a takeover bid, and to abstain from publicly recommending it, being provided that Wendel will remain free to contribute all or part of its shares if such an offering were nevertheless to occur.

The commitments provided for under these agreements will remain in force for a 10-year period after the General Shareholders' Meeting of June 9, 2011 and were approved as related-party transactions by the General Shareholders' Meeting of June 7, 2012.

The term of office of Mr. Frédéric Lemoine as Director and sole representative of Wendel on the Board of Directors, will come to an end upon completion of the General Shareholders' Meeting held on June 4, 2020. With effect from this date, no Wendel representatives will sit on the Board of Directors of Compagnie de Saint-Gobain given Wendel's withdrawal from the share capital of Compagnie de Saint-Gobain (see Section 2.2.2 above).

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2.5 Control of the Company

At December 31, 2019, to the best of its knowledge, the Company was not controlled and has not been subject to any agreement binding on one or more shareholders or any other individual or legal entity, acting alone or in concert, concerning the direct or indirect holding of its capital or its control, or for which the implementation thereof might subsequently involve a change in the Company's control.

2.6 Aspects that could have an impact in the event of a takeover bid

2.6.1 Agreements that could result in restrictions on share transfers and the exercise of voting rights

See Chapter 7, Section 2.4 for a summary of the agreements entered into with Wendel on May 26, 2011. These may also be consulted at www.saint-gobain.com.

2.6.2 Impact of a change of control on certain Company operations

Company bonds issued since 2006 by Compagnie de Saint-Gobain contain a bearer protection clause in the event of change of control, allowing bearers to apply to Compagnie de Saint-Gobain (at its discretion) for either their early redemption, or their purchase at par (plus accrued interest). This option is provided for only in the following cases: (i) the rating of the bonds concerned is lowered from investment grade to non investment grade by an appointed rating agency; (ii) the rating of the bonds concerned which was non investment grade has been lowered by one notch (e.g. from BB+ to BB) by an appointed rating agency; (iii) the rating is withdrawn; – and, in all cases (i) to (iii), the action taken by the rating agency is expressly linked to a change of control – or (iv) at the time of the change of control, the bonds concerned were not rated. Total outstanding borrowings concerned at December 31, 2019 were €11,024 million.

In addition, the agreements relating to the syndicated lines of credit for general corporate purposes (made available in December 2017 for €1,520 million and €2,480 million respectively) also contain change of control clauses.

Finally, certain deferred compensation and defined benefit pension plans of the Group's U.S. subsidiaries would be immediately terminated in case of change of control with the rights of the beneficiaries to become due within twelve months. The total potential cost was US$160 million at December 31, 2019.

3. Stock market/ Securities market information

3.1 The Saint-Gobain share

Compagnie de Saint-Gobain shares are traded on Compartment A of the Euronext market in Paris (ISIN FR 0000 125007). As of December 31, 2019, the Company represented the 28th largest market capitalization of the CAC 40 (€19,881 million), and the 23rd most actively traded stock on this market, with average daily trading volume of 1,729,742 shares during 2019. Saint-Gobain shares are also traded on the London and Zurich stock exchanges (since 1987) and on the Amsterdam and Brussels stock exchanges (since 1988).

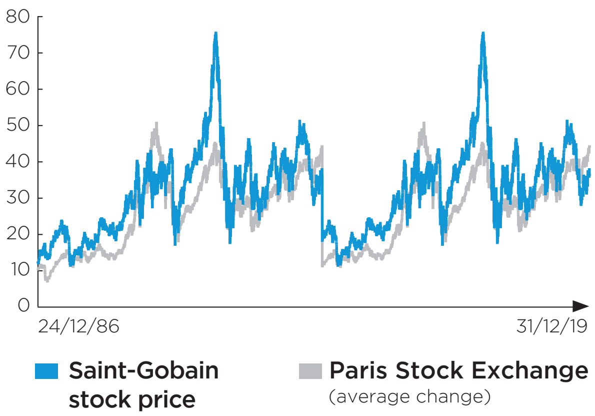
In addition, Saint-Gobain shares are part of the world index "The Global Dow", an index including 150 companies from traditional and innovative sectors.

With regard to sustainable development and corporate social responsibility, Saint-Gobain is also included on the MSCI World ESG Leaders, STOXX® Global ESG Leaders, Ethibel's ESI Excellence Global, Ethibel's ESI Excellence Europe and FTSE4Good indices and the Dow Jones Sustainability Index.

Saint-Gobain equity options are also traded on the options markets in Paris (MONEP) and on the London Stock Exchange. MONEP trading volumes on the Saint-Gobain options represented 293,536 contracts in 2019, versus 558,971 in 2018.

The LEI Code of Compagnie de Saint-Gobain is NFONVGN05Z0FMN5PEC35.

› SAINT-GOB AIN SHARE PRICE (IN EUR) (1)

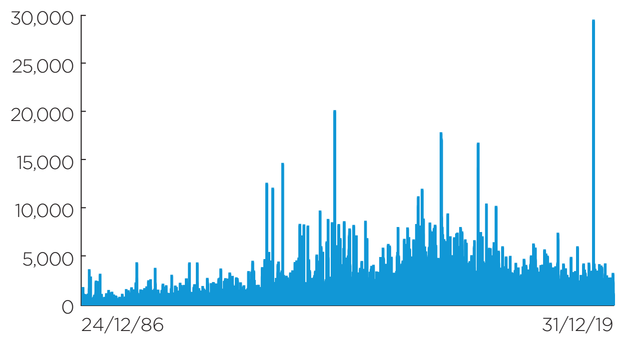


(Source: Euronext Paris)

(1) *Data adjusted for the effects of the March 1994 and February 2009 capital increases, and the four-for-one stock split in June 2002.*

› NUMBER OF SHARES TRADED (in thousands) AT END-2019 (1)

Historical data of the number of shares traded per day (in thousands) until the end of 2019



(Source: Euronext Paris)

(1) *Data adjusted for the effects of the March 1994 and February 2009 capital increases, and the four-for-one stock split in June 2002.*

› HIGHEST AND LOWEST SHARE PRICES (IN EUR)

Year	Highest	Lowest	Year-end price
2017	52,400	43,395	45,980
2018	48,600	27,985	29,165
2019	39,565	28,275	36,500

(Source: Euronext Paris)

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3.2 Total shareholder return

The total shareholder return on Saint-Gobain shares amounts to:

- 7.4% per annum over the period from December 22, 1986 (date of privatization of Saint-Gobain) to December 31, 2019;
- 3.9% per annum over the last five years (from December 31, 2014 to December 31, 2019).

The total shareholder return is the effective profitability rate for the shareholder: it includes the variation in the share price, the dividends received over the period and deemed to be reinvested in shares and securities transactions (share capital increases).

It is calculated based on the "Total Return" published by Datastream for all listed companies.

Trading volume since January 2018

Paris Stock Exchange ISIN Code FR0000125007	In number of securities	In capital *(in EUR)*	Highest *(in EUR)*	Lowest *(in EUR)*
2018				
January	31,536,398	1,500,223,114	48,600	45.480
February	49,399,013	2,194,627,928	47,275	42,050
March	43,878,473	1,969,654,080	46,910	41,795
April	32,781,687	1,423,946,978	44,635	41,975
May	37,320,886	1,657,219,342	46,000	42,605
June	50,131,833	2,056,859,164	44,620	37,630
July	45,179,512	1,698,586,971	39,175	36,635
August	38,766,564	1,419,443,938	38,170	35,190
September	71,353,713	2,676,728,487	38,915	35,145
October	52,918,354	1,776,880,164	37,135	30,525
November	43,579,554	1,404,768,897	33,950	30,660
December	39,907,265	1,217,868,874	33,575	27,985
TOTAL	**536,753,252**	**20,996,807,938**		
2019				
January	37,837,158	1,120,684,590	31.200	28.275
February	39,669,647	1,262,285,328	33.370	29.735
March	47,823,045	1,525,498,816	33.195	30.175
April	37,774,175	1,338,482,292	37.200	32.540
May	36,732,382	1,246,881,552	36.800	32.095
June	39,917,505	1,344,975,969	34.945	31.975
July	35,008,952	1,212,710,512	36.705	33.200
August	33,465,571	1,085,952,175	35.145	31.055
September	30,094,199	1,046,058,698	36.275	32.215
October	42,479,977	1,546,100,293	38.500	33.495
November	28,576,861	1,059,776,418	38.350	36.040
December	31,704,770	1,190,499,387	39.565	35.820
TOTAL	**441,084,242**	**14,979,906,031**		

(Source: Euronext Paris)

In 2019, 125,223,100 shares were traded on the London Stock Exchange (Source: Datastream).

The only other Group companies, excluding Compagnie de Saint-Gobain, whose shares are currently traded on a regulated market are Grindwell Norton and Saint-Gobain Sekurit India (Mumbai Stock Exchange) and Compañía Industrial El Volcan in Chile (Santiago Stock Exchange).

3.3 Bonds

The majority of bonds issued by the Company are traded on a regulated market (See Note 9 to the Consolidated Financial Statements, Chapter 8, Section 1).

3.4 Participating securities

3.4.1 Non-voting participating securities (titres participatifs) issued in June 1983

In June 1983, Compagnie de Saint-Gobain issued 1,288,299 non-voting participating securities (*titres participatifs*) with a face value of FRF 1000. Their face value is now €152.45, following their conversion to euros in 1999.

A certain number of those securities have been repurchased over the years. At December 31, 2019, 606,883 securities were outstanding with an aggregate face value of €92.5 million.

Interest on the securities ranges from 75% to 125% of the average corporate bond rate (TMO), based on the Group's consolidated income. The amount paid per security in 2019 was €1.92.

Trading volume since January 2018 (1st tranche)

Paris Stock Exchange ISIN Code FR0000140030	In number of securities	In capital *(in EUR)*	Highest *(in EUR)*	Lowest *(in EUR)*
2018				
January	3,348	469,411	141.000	137.130
February	2,026	285,466	141.000	140.000
March	1,701	238,851	141.000	133.000
April	10,719	1,479,865	140.000	134.000
May	972	134,499	140.000	133.000
June	16,068	2,233,554	140.000	138.010
July	3,015	420,239	141.000	135.300
August	5,680	791,515	139.900	138.000
September	368	50,452	140.000	135.000
October	1,513	208,667	139.990	132.340
November	1,242	171,384	139.980	135.000
December	935	125,992	138.000	131.800
TOTAL	**47,587**	**6,609,894**		
2019				
January	2,405	319,209	135.990	125.730
February	1,032	137,941	135.000	130.000
March	4,455	589,595	139.000	126.000
April	4,003	539,482	139.000	131.110
May	2,037	273,650	139.000	131.680
June	1,136	158,316	146.000	132.200
July	12,635	1,786,417	146.000	132.100
August	5,362	747,325	145.800	135.260
September	10,134	1,394,238	138.000	128.500
October	1,507	203,660	137.000	131.200
November	2,028	273,579	138.000	129.110
December	2,753	381,108	140.000	135.000
TOTAL	**49,487**	**6,804,524**		

(Source: Euronext Paris)

Trading volume since January 2018 (2nd tranche)

Paris Stock Exchange ISIN Code FR0000047607	In number of securities	In capital *(in EUR)*	Highest *(in EUR)*	Lowest *(in EUR)*
2018				
January	90	10,885	124.510	115.010
February	225	28,352	126.010	126.000
March	44	5,544	126.000	126.000
April	454	57,204	126.000	126.000
May				
June	249	31,319	126.000	123 500
July	232	27,384	120.000	118 000
August	150	18,636	125.580	116 000
September	36	4,351	121.200	120 000
October	194	23,204	121.200	119 000
November	175	20,948	121.000	118 000
December	0	-	-	-
TOTAL	**1,849**	**227,827**		
2019				
January	180	21,955	121.970	121.970
February	60	7,295	121.900	120.000
March	548	65,411	122.000	113.500
April	105	12,095	116.040	113.500
May	49	5,483	114.000	111.190
June	300	35,868	121.000	118.840
July	10,044	1,204,995	120.000	116.450
August	144	16,513	115.000	113.820
September	15	1,650	110.000	110.000
October	75	8,308	115.000	110.000
November	5	550	110.000	110.000
December	722	82,553	119.000	106.000
TOTAL	**12,247**	**1,462,674**		

(Source: Euronext Paris)

3.4.2 Non-voting participating securities (titres participatifs) issued in April 1984

In April 1984, 194,633 non-voting participating securities were issued by Compagnie de Saint-Gobain with a face value of ECU 1,000 (€1,000 today).

A certain number of those securities have been repurchased over the years. At December 31, 2019, 77,516 securities were outstanding with an aggregate face value of €77.5 million.

Interest comprises a fixed portion of 7.5% paid per year applicable to 60% of the nominal amount of the security, and a variable portion applicable to the remaining 40% of the nominal amount of the participating security, which is linked to consolidated net income of the previous year and to the reference six-month Libor EUR rate +7/8%. The amount paid per security in 2019 totaled €60.78 paid in two installments (€33.53 +€27.25).

Trading volume since March 2013

Luxembourg Stock Exchange ISIN Code LU0002804531	In number of securities	In capital *(in EUR)*	Highest *(in EUR)*	Lowest *(in EUR)*
2013				
March	16	13,753	875.00	847.50
April	12	9,810	830.00	815.00
May	56	42,050	800.00	750.00
June	4,001	2,920,730	730.00	730.00
December	51	33,200	700.00	700.00
TOTAL	**4,136**	**3,019,543**		
2014				
April	1,545	817,500	530.00	500.00
June	11	6,600	600.00	600.00
July	4,002	2,401,100	600.00	550.00
September	12	7,800	650.00	612.00
December	2	1,400	700.00	700.00
TOTAL	**5,572**	**3,234,400**		
2015				**No transaction**
2016				
February	55	41,250	750.00	750.00
April	2	1,420	720.00	700.00
TOTAL	**57**	**42,670**		
2017				**No transaction**
2018				
November	1	700	700.00	700.00
TOTAL	**1**	**700**		
2019				
September	5	3,500	700.00	700.00
TOTAL	**5**	**3,500**		

(Source: Luxembourg Stock Exchange)

These participating securities are not redeemable and the interest paid on them is reported under borrowing costs.

No securities issued by Compagnie de Saint-Gobain were traded on a stock market in 2019, other than shares, bonds and non-voting participating securities (*titres participatifs*).

4. Information policy and financial calendar

Information policy

The Investor Relations Department is responsible for implementing the Group's information policy with the financial community, investors and shareholders. The head of Investor Relations is Mr. Vivien Dardel.

This department is available to answer questions and address requests for information about the Group:

Saint-Gobain

Financial Communication Department

Tour Saint-Gobain

12, place de l'Iris
92400 Courbevoie Cedex (France)

Tel. +33 (0)1 88 54 05 05 – Fax: +33 (0)1 47 62 50 62

TOLL-FREE NUMBER 0800 32 33 33

Numerous meetings were organized throughout 2019 with various members of the international financial community (including analysts, institutional investors and journalists.) In addition to the annual and interim results presentations held in Paris, London, New York and Boston following the publication of its annual and interim results in February and July, Compagnie de Saint-Gobain held several dozen road shows in various financial centers.

Compagnie de Saint-Gobain offered its individual shareholders a diverse program of visits to places of cultural interest (including the Hall of Mirrors in the Palace of Versailles, the first floor of the Eiffel Tower), manufacturing site visits, and meetings with the Group's executives. Individual shareholder meetings were organized in the regions (Lille and Marseille). A conference also took place during the Salon Actionaria, in which Compagnie de Saint-Gobain participated for the twenty-first time. The Investor Relations Department also provides regular communication with the Group's shareholders, including *via* shareholder newsletters.

The Compagnie de Saint-Gobain website (www.saint-gobain.com) gives information about the Group and its businesses, including downloadable information documents and webcasts of General Shareholders' Meetings and meetings with analysts.

The Saint-Gobain Shareholder app, which is free to download from the Apple Store and Google for Android, lets investors follow the Saint-Gobain Group's financial news, and provides essential and useful investor information (share prices, financial calendar dates, important investors' club dates, press releases, etc.).

In order to ensure privileged contact, the Investor Relations team can be contacted by email at the following address:

actionnaires@saint-gobain.com

Compagnie de Saint-Gobain also makes additional services available to holders of registered shares through BNP Paribas, to improve the management of their fully registered shares. For more information, contact the Compagnie de Saint-Gobain Investor Relations Department or:

BNP Paribas Securities Services

BP2S/GCT – Émetteur Adhérents Euroclear 30

Immeuble GMP – Europe

9 rue du Débarcadère – 93761 Pantin Cedex (France)

By telephone: TOLL-FREE NUMBER IN FRANCE
0 800 03 33 33

By fax: +33 (0)1 55 77 34 17

Online, on the PlanetShares website:
www.planetshares.bnpparibas.com

2020 financial calendar

2019 final results: February 27, 2020, after the market closes

First quarter 2020 sales: April 23, 2020 after the market closes

General Shareholders' Meeting: June 4, 2020 at 3pm, Salle Pleyel in Paris, 8th arr.

Dividend:

- ex-dividend date: June 8, 2020;
- dividend payment date: June 10, 2020;

First-half 2020 final results: July 30, 2020, after the market closes.

Sales for the first nine months of 2019: October 29, 2020, after the market closes.

2021 financial calendar

General Shareholders' Meeting: June 3, 2021.

5. Dividends

Year	Number of shares with dividend rights	Net dividend per share *(in EUR)*	Adjusted yield based on year-end share price
2017	544,211,604 shares (1)	1.30	2.83%
2018	538,631,594 shares (2)	1.33	4.6%
2019	542,749,217 shares (3)	1.38	3.8%

(1) *Based on 553,557,091 shares granting entitlement to dividends in respect of the 2017 fiscal year, less 9,345,487 treasury shares held on the ex-dividend date.*

(2) *Based on 546,585,333 shares granting entitlement to dividends in respect of the 2018 financial year, less 7,953,739 treasury shares held on the ex-dividend date.*

(3) *Estimated amount based on 544,683,451 shares entitled to dividend in respect of 2019 financial year, at January 31, 2020, less 1,934,234 treasury shares held at January 31, 2020.*

Dividends not claimed within five years are time-barred and are paid over to the French State.

At its meeting of February 27, 2020, the Board of Directors of Compagnie de Saint-Gobain decided to recommend to the General Shareholders' Meeting of June 4, 2020, a dividend of €1.38 per share.


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8

Financial and accounting information

1. 2019 Consolidated Financial Statements

Consolidated balance sheet

Assets

(in EUR million)	Notes	Dec. 31, 2019	Dec. 31, 2018 restated*	January 1, 2018, restated*
Goodwill	(6.1)	10,029	9,990	10,575
Other intangible assets	(6.2)	2,709	2,526	2,603
Property, plant and equipment	(6.3)	11,707	11,253	11,516
Right-of-use assets	(6.4)	2,954	2,803	3,000
Investments in equity-accounted companies	(7.1) (7.2)	437	412	379
Deferred tax assets	(11.2)	833	860	976
Other non-current assets	(7.3)	3,511	2,527	774
NON-CURRENT ASSETS		**32,180**	**30,371**	**29,823**
Inventories	(4.4)	6,200	6,252	6,050
Trade accounts receivable	(4.4)	4,813	4,967	5,107
Current tax receivable	(4.4) (11.1)	194	286	204
Other receivables	(4.4)	1,609	1,608	1,401
Assets held for sale	(2.3)	0	788	0
Cash and cash equivalents	(9.3)	4,987	2,688	3,284
CURRENT ASSETS		**17,803**	**16,589**	**16,046**
TOTAL ASSETS		**49,983**	**46,960**	**45,869**

* *The restatements are explained in note 3 "Impact of new standards".*

Equity and liabilities

(in EUR million)	Notes	Dec. 31, 2019	Dec. 31, 2018 restated*	January 1, 2018, restated*
Capital stock	(10.1)	2,179	2,186	2,214
Additional paid-in capital and legal reserve	(10.1)	5,551	5,646	5,944
Retained earnings and consolidated net income	(10.1)	12,518	11,864	11,925
Cumulative translation adjustments		(1,467)	(1,775)	(1,756)
Fair value reserves		743	(124)	22
Treasury stock	(10.1)	(108)	(106)	(123)
SHAREHOLDERS' EQUITY		**19,416**	**17,691**	**18,226**
Minority interests		364	330	383
TOTAL EQUITY		**19,780**	**18,021**	**18,609**
Non-current portion of long-term debt	(9.3)	10,286	9,156	7,599
Non-current portion of long-term lease liabilities	(9.3)	2,552	2,392	2,570
Provisions for pensions and other employee benefits	(5.3)	2,648	2,525	2,927
Deferred tax liabilities	(11.2)	448	449	406
Other non-current liabilities and provisions	(8.1)	1,126	1,034	1,047
NON-CURRENT LIABILITIES		**17,060**	**15,556**	**14,549**
Current portion of long-term debt	(9.3)	1,751	1,167	1,049
Current portion of long-term lease liabilities	(9.3)	665	683	698
Current portion of other liabilities and provisions	(8.1)	343	455	401
Trade accounts payable	(4.4)	6,000	6,150	6,062
Current tax liabilities	(4.4) (11.1)	156	104	157
Other payables	(4.4)	4,004	3,842	3,824
Liabilities held for sale	(2.3)	0	503	0
Short-term debt and bank overdrafts	(9.3)	224	479	520
CURRENT LIABILITIES		**13,143**	**13,383**	**12,711**
TOTAL EQUITY AND LIABILITIES		**49,983**	**46,960**	**45,869**

* *The restatements are explained in note 3 "Impact of new standards".*

The accompanying notes are an integral part of the consolidated financial statements.

Consolidated income statement

(in EUR million)	Notes	2019	2018 restated*
Net sales	(4.1)	42,573	41,774
Cost of sales	(4.1)	(31,717)	(31,157)
General expenses including research	(4.1)	(7,490)	(7,440)
Share in net income of core business equity-accounted companies	(7.1)	24	30
OPERATING INCOME		**3,390**	**3,207**
Other business income	(4.1)	196	437
Other business expense	(4.1)	(1,033)	(2,793)
BUSINESS INCOME		**2,553**	**851**
Borrowing costs, gross		(300)	(297)
Income from cash and cash equivalents		27	22
Borrowing costs, net, excluding lease liabilities		(273)	(275)
Interest on lease liabilities		(71)	(77)
Borrowing costs, net, including lease liabilities		(344)	(352)
Other financial income and expense		(124)	467
NET FINANCIAL INCOME (EXPENSE)	**(9.2)**	**(468)**	**115**
Share in net income of non-core business equity-accounted companies	(7.1)	0	0
Income taxes	(11.1) (11.2) (11.3)	(631)	(492)
NET INCOME		**1,454**	**474**
GROUP SHARE OF NET INCOME		**1,406**	**397**
Minority interests		48	77

* *The restatements are explained in note 3 "Impact of new standards".*

	Notes	2019	2018 restated*
EARNINGS PER SHARE, GROUP SHARE *(in EUR)*	**(10.2)**	**2.59**	**0.73**
Weighted average number of shares in issue		542,079,771	547,105,985
DILUTED EARNINGS PER SHARE, GROUP SHARE *(in EUR)*	**(10.2)**	**2.58**	**0.72**
Weighted average number of shares assuming full dilution		545,159,839	550,016,438

* *The restatements are explained in note 3 "Impact of new standards".*

The accompanying notes are an integral part of the consolidated financial statements.

Consolidated statement of recognized income and expense

(in EUR million)	Notes	2019	2018 restated*
NET INCOME		**1,454**	**474**
Items that may be subsequently reclassified to profit or loss			
Translation adjustments		309	(98)
Changes in fair value of financial instruments	(9.4)	(4)	(77)
Tax on items that may be subsequently reclassified to profit or loss		0	24
Items that will not be reclassified to profit or loss			
Changes in actuarial gains and losses	(5.3)	(80)	307
Tax on items that will not be reclassified to profit or loss	(11.1) (11.2)	27	(69)
Changes in assets at fair value through equity	(7.3)	871	(69)
Liability method on items that will not be reclassified to profit or loss	(11.1) (11.2)	0	(1)
Other		0	(2)
INCOME AND EXPENSE RECOGNIZED DIRECTLY IN EQUITY		**1,123**	**15**
TOTAL RECOGNIZED INCOME AND EXPENSE FOR THE YEAR		**2,577**	**489**
Group share		2,528	430
Minority interests		49	59

* *The restatements are explained in note 3 "Impact of new standards".*

The accompanying notes are an integral part of the consolidated financial statements.

Consolidated statement of cash flows

(in EUR million)	Notes	2019	2018 restated*
GROUP SHARE OF NET INCOME		**1,406**	**397**
Minority interests in net income	(a)	48	77
Share in net income of equity-accounted companies, net of dividends received	(7.1)	(8)	(19)
Depreciation, amortization and impairment of assets	(4.1)	1,525	3,187
Depreciation and impairment of right-of-use assets	(6.4)	718	756
Gains (losses) on disposals of assets	(4.1)	2	(21)
Non-recurring SWH/Sika net income			(781)
Unrealized gains and losses arising from changes in fair value and share-based payments		31	23
Restatement for hyperinflation		20	(4)
Changes in inventory	(4.4)	(55)	(418)
Changes in trade accounts receivable and payable, and other accounts receivable and payable	(4.4)	25	99
Changes in tax receivable and payable	(4.4)	108	(133)
Changes in deferred taxes and provisions for other liabilities and charges	(5.3) (8.1) (11.2) (11.3)	(16)	48
NET CASH FROM OPERATING ACTIVITIES		**3,804**	**3,211**
Acquisitions of property, plant and equipment [2019: (1,656), 2018: (1,666)] and intangible assets	(6.2) (6.3)	(1,818)	(1,855)
Increase (decrease) in amounts due to suppliers of fixed assets	(4.4)	(30)	(19)
Acquisitions of shares in consolidated companies [2019: (200), 2018: (669)], net of cash acquired		(187)	(626)
Acquisitions of other investments	(7.3)	(88)	(937)
Increase in investment-related liabilities	(8.1)	11	39
Decrease in investment-related liabilities	(8.1)	(18)	(25)
Investments		**(2,130)**	**(3,423)**
Disposals of property, plant and equipment and intangible assets	(6.2) (6.3)	157	66
Disposals of shares in consolidated companies, net of cash divested		267	192
Disposals of other investments	(7.3)	1	3
(Increase) decrease in amounts receivable on sales of fixed assets	(4.4)	74	(108)
Divestments		**499**	**153**
Increase in loans, deposits and short-term loans	(7.3)	(99)	(268)
Decrease in loans, deposits and short-term loans	(7.3)	157	155
Changes in loans, deposits and short-term loans		**58**	**(113)**
NET CASH FROM (USED IN) INVESTMENT AND DIVESTMENT ACTIVITIES		**(1,573)**	**(3,383)**

(in EUR million)	Notes	2019	2018 restated*
Issues of capital stock	(a)	165	193
(Increase) decrease in treasury stock	(a)	(273)	(532)
Dividends paid	(a)	(716)	(707)
Transactions with shareholders of the parent company		**(824)**	**(1,046)**
Minority interests' share in capital increases of subsidiaries	(a)	35	16
Acquisitions of minority interests without gain of control		(9)	(93)
Changes in investment-related liabilities following the exercise of put options of minority shareholders	(8.1)	(3)	0
Dividends paid to minority shareholders of consolidated subsidiaries	(a)	(37)	(55)
Change in dividends payable		(13)	11
Transactions with minority interests		**(27)**	**(121)**
Increase (decrease) in bank overdrafts and other short-term debt		62	(4)
Increase in long-term debt	(b) (9.3)	2,708	2,512
Decrease in long-term debt	(b) (9.3)	(1,045)	(942)
Changes in gross debt		**1,725**	**1,566**
Decrease in lease liabilities	(b) (9.3)	(815)	(775)
Changes in gross debt including lease liabilities		**910**	**791**
NET CASH FROM (USED IN) FINANCING ACTIVITIES		**59**	**(376)**
INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS		**2,290**	**(548)**
Net effect of exchange rate changes on cash and cash equivalents		7	(39)
Net effect of changes in fair value on cash and cash equivalents		2	0
Cash and cash equivalents classified within assets held for sale		0	(9)
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR		**2,688**	**3,284**
CASH AND CASH EQUIVALENTS AT END OF YEAR		**4,987**	**2,688**

* *The restatements are explained in note 3 "Impact of new standards".*

(a) *Please refer to the consolidated statement of changes in equity.*

(b) *Including bond premiums, prepaid interest, issue costs and interest on lease liabilities.*

In 2019, income tax paid represented €493 million (€538 million in 2018), IFRS 16 rental expenses paid €809 million (€815 million in 2018), including €71 million in interest paid on lease liabilities (€77 million in 2018), and interest paid net of interest received €258 million (€267 million in 2018).

The accompanying notes are an integral part of the consolidated financial statements.

Consolidated Statement of Changes in Equity

(number of shares) *(in EUR million)*

Issued	Outstanding		Capital stock	Additional paid-in capital and legal reserve	Retained earnings and consolidated net income	Cumulative translation adjustments	Fair value reserves	Treasury stock	Shareholders' equity	Minority interests	Total equity
553,557,091	**550,785,719**	**AT DECEMBER 31, 2017**	**2,214**	**5,944**	**12,167**	**(1,756)**	**22**	**(123)**	**18,468**	**384**	**18,852**
		IFRS 9 and IFRS 15 (1) restatements			(24)				(24)		(24)
		IFRS 16 restatements (2)			(218)				(218)	(1)	(219)
553,557,091	**550,785,719**	**RESTATED AT JANUARY 1, 2018 FOR THE APPLICATION OF NEW STANDARDS**	**2,214**	**5,944**	**11,925**	**(1,756)**	**22**	**(123)**	**18,226**	**383**	**18,609**
		Hyperinflation in Argentina				61			61		61
553,557,091	**550,785,719**	**RESTATED AT JANUARY 1, 2018**	**2,214**	**5,944**	**11,925**	**(1,695)**	**22**	**(123)**	**18,287**	**383**	**18,670**
		Income and expenses recognized directly in equity	0	0	259	(80)	(146)	0	33	(18)	15
		Net income for the year (2)			397				397	77	474
		Total income and expense for the year	**0**	**0**	**656**	**(80)**	**(146)**	**0**	**430**	**59**	**489**
		Issues of *capital* stock									
4,932,767	4,932,767	Group Savings Plan	20	159					179		179
556,595	556,595	Stock option plans	2	12					14		14
		Dividends paid in shares							0		0
		Other							0	16	16
		Dividends paid (€1.30 per share)			(707)				(707)	(55)	(762)
	(14,050,245)	Shares purchased			(30)			(583)	(613)		(613)
	1,654,431	Shares sold			0			81	81		81
(12,461,449)		Shares canceled	(50)	(469)				519	0		0
		Share-based payments			28				28		28
		Changes in Group structure and other			(8)				(8)	(73)	(81)

Issued	Outstanding	(number of shares)	Capital stock	Additional paid-in capital and legal reserve	Retained earnings and consolidated net income	Cumulative translation adjustments	Fair value reserves	Treasury stock	Share-holders' equity	Minority interests	Total equity
546,585,004	**543,879,267**	**RESTATED AT DECEMBER 31, 2018**	**2,186**	**5,646**	**11,864**	**(1,775)**	**(124)**	**(106)**	**17,691**	**330**	**18,021**
		Income and expenses recognized directly in equity	0	0	(53)	308	867	0	1,122	1	1,123
		Net income for the year			1,406				1,406	48	1,454
		Total income and expense for the year	**0**	**0**	**1,353**	**308**	**867**	**0**	**2,528**	**49**	**2,577**
		Issues of capital stock									
5,999,997	5,999,997	Group Savings Plan	25	128					153		153
310,204	310,204	Stock option plans	1	11					12		12
		Dividends paid in shares							0		0
		Other							0	35	35
		Dividends paid (€1.33 per share)			(716)				(716)	(37)	(753)
	(9,777,969)	Shares purchased			(4)			(321)	(325)		(325)
	1,676,229	Shares sold						52	52		52
(8,211,754)		Shares canceled	(33)	(234)				267	0		0
		Share-based payments			28				28		28
		Changes in Group structure and other			(7)				(7)	(13)	(20)
544,683,451	**542,087,728**	**AT DECEMBER 31, 2019**	**2,179**	**5,551**	**12,518**	**(1,467)**	**743**	**(108)**	**19,416**	**364**	**19,780**

(in EUR million)

(1) Restatements in respect of IFRS 9 and IFRS 15 are explained in note 3 "Impact of new standards" to the 2018 consolidated financial statements.

(2) Restatements in respect of IFRS 16 are explained in note 3 "Impact of new standards".

The accompanying notes are an integral part of the consolidated financial statements.

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Notes to the consolidated financial statements

The consolidated financial statements reflect the accounting position of Compagnie de Saint-Gobain and its subsidiaries ("the Group"), as well as the Group's interests in associate companies and joint ventures. They are expressed in euros rounded to the nearest million.

These consolidated financial statements were adopted on February 27, 2020 by the Board of Directors and will be submitted to the Shareholders' Meeting of June 4, 2020 for approval.

Accounting principles and policies are highlighted in a distinct color.

NOTE 1 Accounting principles and policies

The accounting policies applied are consistent with those used to prepare the financial statements for the year ended December 31, 2018, except for the application of the new standards and interpretations described below. The consolidated financial statements have been prepared using the historical cost convention, except for certain assets and liabilities that have been measured using the fair value model as explained in these notes.

1.1 Standards applied

The consolidated financial statements have been prepared in accordance with the International Financial Reporting Standards (IFRS) and interpretations adopted for use in the European Union at December 31, 2019. These consolidated financial statements have also been prepared in accordance with the IFRS issued by the International Accounting Standards Board (IASB). Standards adopted by the European Union may be consulted on the European Commission website, at https://ec.europa.eu/info/law/international-accounting-standards-regulation-ec-no-1606-2002/.

1.1.1 Standards, interpretations and amendments to existing standards applicable for reporting periods beginning on or after January 1, 2019

The following standards, interpretations and amendments, effective since January 1, 2019, were applied to the consolidated financial statements for the year ended December 31, 2019:

- IFRS 16, "Leases"

  The main quantitative and qualitative impacts of applying IFRS 16 are described in note 3 "Impact of new standards".

- IFRIC 23, "Uncertainty over Income Tax Treatments"

  IFRIC 23 clarifies that IAS 12, "Income Taxes" is applicable to provisions for tax-related contingencies. IFRIC 23 also provides clarification concerning the basis for assessing, recognizing and measuring tax-related contingencies.

  Saint-Gobain has chosen to apply IFRIC 23 using the simplified retrospective method. IFRIC 23 has no material impact on the Group's consolidated financial statements.

  The following amendments to existing standards are applicable in the period:

  - amendments to IFRS 9, "Prepayment Features with Negative Compensation";
  - amendments to IAS 28, "Long-term Interests in Associates and Joint Ventures";
  - amendments to IAS 19, "Plan Amendment, Curtailment or Settlement".

  These amendments have no material impact on the Group consolidated financial statements.

  Annual improvements to IFRSs – 2015-2017 cycle concern:

  - IFRS 3, "Business Combinations";
  - IFRS 11, "Joint Arrangements";
  - IAS 12, "Income tax";
  - IAS 23, "Borrowing Costs".

  These amendments have no impact on the Group consolidated financial statements.

1.1.2 Standards, interpretations and amendments to existing standards available for early adoption in reporting periods beginning on or after January 1, 2019

The new standards, interpretations and amendments to existing standards applicable to accounting periods starting on or after January 1, 2020 were not early adopted by the Group at December 31, 2019. These are:

- amendments to IAS 1 and IAS 8, "Definition of Material";
- amendments to References to the Conceptual Framework in IFRS Standards;
- amendments to IFRS 9, IAS 39 and IFRS 7, "Interest Rate Benchmark Reform" – Phase 1;
- amendments to IFRS 3, "Definition of a Business".

1.2 Estimates and assumptions

The preparation of consolidated financial statements in compliance with IFRS requires management to make estimates and assumptions that affect the amounts of assets and liabilities reported in the balance sheet and the disclosure of contingent assets and liabilities in the notes to the financial statements, as well as the reported amounts of income and expenses during the period. These estimates and assumptions are based on past experience and on various other factors, in the prevailing economic and financial environment which makes it difficult to predict future business performance. Actual amounts may differ from those obtained through the use of these estimates and assumptions.

The main estimates and assumptions described in these notes concern the measurement of employee benefit obligations and share-based payment (note 5 "Employees, personnel expenses and employee benefit obligations"), asset impairment tests (note 6 "Intangible assets, property, plant and equipment, and right-of-use assets"), provisions for other liabilities and charges (note 8 "Other current and non-current liabilities and provisions, contingent liabilities and litigation"), the measurement of financial instruments and the determination of lease terms (note 9 "Financing and financial instruments"), and taxes (note 11 "Tax").

NOTE 2 Scope of consolidation

2.1 Accounting principles related to consolidation

The Group's consolidated financial statements include the accounts of Compagnie de Saint-Gobain and of all companies controlled by the Group, as well as those of jointly controlled companies and companies over which the Group exercises significant influence.

2.1.1 Consolidation methods

Full consolidation

Companies over which the Group exercises exclusive control, either directly or indirectly, are fully consolidated.

Joint arrangements

Joint arrangements that meet the definition of joint ventures are accounted for by the equity method. Balance sheet and income statement items relating to joint arrangements that meet the definition of joint operations are consolidated line-by-line based on the amount actually contributed by the Group.

Equity accounting

Companies over which the Group directly or indirectly exercises significant influence are accounted for by the equity method.

The Group's share of the income of equity-accounted companies is shown on two separate lines of the income statement. The income of equity-accounted companies whose main business activity is in keeping with the Group's core operational business is presented in business income under "Share in net income of core business equity-accounted companies" while the income of other equity-accounted companies is shown under "Share in net income of non-core business equity-accounted companies" in pre-tax income.

2.1.2 Business combinations

Step acquisitions and partial disposals

When the Group acquires control of an entity in which it already holds an equity interest, the transaction is treated as a step acquisition (an acquisition in stages), as follows: (i) as a disposal of all the previously-held interest, with recognition of any resulting gain or loss in the consolidated financial statements, and (ii) as an acquisition of all of the shares, with recognition of the corresponding goodwill on the entire interest (previous and new acquisitions).

When the Group disposes of a portion of an equity interest leading to the loss of control (but retains a minority interest), the transaction is also treated as both a disposal and an acquisition, as follows: (i) as a disposal of the entire interest, with recognition of any resulting gain or loss in the consolidated financial statements, and (ii) as an acquisition of a minority interest, measured at fair value.

Potential voting rights and share purchase commitments

Potential voting rights conferred by call options on minority interests are taken into account in determining whether the Group exclusively controls an entity only when the Group has control.

When calculating its percentage interest in controlled companies, the Group considers the impact of cross put and call options on minority interests in the companies concerned. This approach gives rise to the recognition in the financial statements of an investment-related liability, included within other provisions and non-current liabilities, corresponding to the present value of the estimated exercise price of the put option, with a corresponding reduction in minority interests and equity attributable to equity holders of the parent. Any subsequent changes in the fair value of the liability are recognized by adjusting equity.

Minority interests

Under IFRS 10, minority interests (referred to as "non-controlling interests" in IFRS 3R) are considered as a shareholder category (single economic entity approach). As a result, changes in minority interests with no loss of control continue to be recorded in the statement of changes in equity and have no impact on the income statement or balance sheet, except for changes in cash and cash equivalents.

2.1.3 Non-current assets and liabilities held for sale – Discontinued operations

Assets and liabilities that are immediately available for sale, and for which a sale is highly probable within the next 12 months, are classified as non-current assets and liabilities held for sale. When several assets are held for sale in a single transaction, they are accounted for as a disposal group, which also includes any liabilities directly associated with those assets. The assets or disposal groups held for sale are measured at the lower of carrying amount and fair value less costs to sell. Depreciation/amortization ceases when non-current assets are classified as held for sale. Non-current assets and liabilities held for sale are presented separately on two lines of the consolidated balance sheet, and income and expenses continue to be recognized in the consolidated income statement on a line-by-line basis. The reclassified assets are carried at the lower of their fair value less costs to sell and their net book value. At the end of each reporting period, the value of the assets and liabilities held for sale is reviewed to determine whether any provision adjustments should be recorded due to a change in their fair value less costs to sell.

An operation is classified as discontinued when it represents a separate major line of business for the Group, and when the criteria for classification as an asset held for sale have been met, or when the Group has sold the asset. Discontinued operations are reported on a single line in the Group's income statement. This line shows the after-tax net income from discontinued operations until the date of disposal and the gains or losses net of taxes realized on the disposals of these operations. In addition, cash flows generated by the discontinued operations are reported, by type of operation, on a separate line in the consolidated statement of cash flows for the relevant periods.

2.1.4 Intragroup transactions

All intragroup transactions in the balance sheet and income statement are eliminated in consolidation.

2.1.5 Translation of the financial statements of foreign companies

The consolidated financial statements are presented in euros, which is Compagnie de Saint-Gobain's functional and presentation currency.

Assets and liabilities of subsidiaries outside the Eurozone are translated into euros at the closing exchange rate, while income and expense items are translated using the average exchange rate for the period. In the event of significant volatility in exchange rates or in the exchange rates of hyperinflationary economies, the financial statements of the subsidiaries concerned are translated at the exchange rates prevailing at year-end.

The Group's share of any translation gains or losses is included in equity under "Cumulative translation adjustments" until the assets or liabilities and all foreign operations to which they relate are sold, liquidated or deconsolidated. In this case, these translation differences are either taken to the income statement, if the transaction results in a loss of control, or recognized directly in the statement of changes in equity, if the change in minority interests does not result in a loss of control.

2.1.6 Foreign currency transactions

Expenses and income from operations in currencies other than the Company's functional currency are translated at the exchange rates prevailing at the transaction date. Assets and liabilities denominated in foreign currencies are translated at the closing rate, and any exchange differences are recorded in the income statement. However, exchange differences relating to loans and borrowings between consolidated Group companies are recorded in equity, net of tax, under "Cumulative translation adjustments", as they are in substance an integral part of the net investment in a foreign subsidiary.

2.1.7 Hyperinflation in Argentina

Argentina has been classified as a hyperinflationary economy since July 1, 2018. IAS 29, "Financial Reporting in Hyperinflationary Economies", is therefore applicable to entities using the Argentine peso as their functional currency. Under IAS 29, financial statements prepared based on historical cost must be restated. This involves applying a general price index that enables the financial statements to be presented in the measuring unit in force at the reporting date. All non-monetary assets and liabilities must therefore be adjusted for inflation in order to reflect changes in purchasing power at the reporting date. Similarly, the income statement is adjusted for inflation during the period. Monetary items do not need to be restated as they already reflect purchasing power at the reporting date.

Following the IFRIC's tentative decision regarding the classification of translation reserves and restatements for hyperinflation, these equity items have been restated within the translation reserves with retroactive effect from January 1, 2018.

2.2 Changes in Group structure

Significant changes in the Group's structure during 2019 and 2018 are presented below and a list of the main consolidated companies at December 31, 2019 is provided in note 14 "Principal consolidated companies".

2.2.1 Transactions carried out in 2019

Saint-Gobain is pursuing a portfolio optimization strategy. Various acquisitions were completed in order to strengthen the Group's profile in high added-value businesses and in growing markets. In 2019, 18 acquisitions of consolidated companies or of companies in the process of being consolidated were completed for a total amount of around €260 million. Saint-Gobain also sold 15 consolidated companies for a total amount of €370 million.

The main transactions are summarized below:

- on January 11, 2019, Saint-Gobain sold its regional glass business Glassolutions Norway and Sweden to Mimir Invest AB, a Swedish investment firm;
- on February 1, 2019, Saint-Gobain completed the acquisition of American Seal and Engineering Co., a leader in technical sealing solutions;
- on April 24, 2019, Saint-Gobain completed the acquisition of the entire share capital of Knauf Mexico, a company specializing in the manufacture and distribution of plasterboard;
- on May 14, 2019, Saint-Gobain completed the sale of its silicon carbide grains and powders business to the private equity firm OpenGate Capital;
- on May 28, 2019, Saint-Gobain acquired UK-based Pritex, a key player in acoustic and thermal insulation solutions made from polymer-based composite materials and intended for the mobility market;
- on September 30, 2019, Saint-Gobain completed the sale of Saint-Gobain Building Distribution Deutschland to the Stark group;
- on October 1, 2019, Saint-Gobain completed the sale of K par K, specializing mainly in the door-to-door sale of customized woodwork and windows on the French market;
- on October 7, 2019, Saint-Gobain announced that it had completed the sale of its Optimera construction materials distribution business in Denmark to Davidsens Tommerhandel;
- on October 16, 2019, Saint-Gobain announced that it had acquired 100% of the mortars division of the Celima group in Peru. The mortars division leads the country's tiling adhesives market;
- on November 4, 2019, Saint-Gobain sold its regional glass transformation business Glassolutions in the Netherlands to the German family office Aequita;
- on November 29, 2019, Saint-Gobain completed the sale of Distribution Matériaux pour les Travaux Publics (DMTP) to the Frans Bonhomme group;
- on December 19, 2019, Saint-Gobain sold Hankuk Glass Industries, its construction glass activity in South Korea, to Glenwood Private Equity, a leading investment management company in South Korea specialized in industrial activities and the construction sector;

- on December 26, 2019, Saint-Gobain acquired Sonex, a Brazilian company specialized in the manufacture and supply of acoustic ceiling systems, marketed in particular under the Sonex, Nexacustic and Fiberwood brands;
- on December 31, 2019, Saint-Gobain acquired Belgium-based High Tech Metal Seals (HTMS), a designer and manufacturer of metal seals for the industrial, energy and aerospace markets;
- on December 31, 2019, Saint-Gobain entered into an agreement with Hirsch Servo and BEWiSynbra, through its subsidiary Placoplatre, to sell its expanded polystyrene (EPS) business in France.

Acquisitions in 2019 represent full-year sales of around €189 million and €36 million in Ebitda. Disposals in 2019 represent full-year sales of around €2.9 billion.

2.2.2 Transactions carried out in 2018

The main transactions are summarized below:

- on January 11, 2018, Saint-Gobain and the Kuwait-based company Alghanim Industries, who are already partners in insulation manufacturing joint ventures in Turkey (Izocam) and Saudi Arabia (SIIMCO), decided to extend their partnership in Kuwait with the KIMMCO joint venture;
- on March 1, 2018, Saint-Gobain acquired all of the shares of Per Strand. With 12 outlets in northern Norway, Per Strand is the leading Building Distribution generalist in its region;
- on March 1, 2018, Saint-Gobain acquired HyComp, a leading supplier of composite components made with proprietary carbon fibers and thermoplastic materials, used in high-temperature and long-life applications in the aerospace industry;
- on April 13, 2018, Saint-Gobain acquired the pharmaceutical business of Micro Hydraulics, an Ireland-based supplier and manufacturer of single-use fluid handling components and systems in high-performance plastics;
- on July 3, 2018, Saint-Gobain signed an agreement to purchase Hunter Douglas' North American ceilings business. A leading manufacturer of architectural ceilings, this business has two production sites in Norcross (Georgia) and Denver (Colorado);
- on August 1, 2018, Saint-Gobain acquired the German company HKO, which designs, produces and distributes a complete range of very high temperature thermal insulation and fire protection solutions;
- on September 20, 2018, Hankuk Glass Industries (HGI), a South Korean subsidiary of Saint-Gobain on the Seoul stock exchange, launched a tender offer to acquire the 23% of shares owned by minority shareholders. As a result of this successful offer, Saint-Gobain and HGI now hold 96.8% of the company's share capital, with a delisting planned;
- on October 5, 2018, Saint-Gobain signed an agreement to acquire all of the capital of Kaimann, one of Europe's leading manufacturers of elastomeric insulation products.

The Group's acquisitions in 2018 represented full-year sales of around €570 million.

On May 11, 2018, Saint-Gobain, through Schenker-Winkler Holding AG (SWH), became the largest shareholder of Sika, holding 10.75% of the share capital and voting rights (see the 2018 Registration Document for more details). Saint-Gobain and Sika agreed on lock-up (two years) and stand-still obligations (up to 10.75% for four years, and up to 12.875% for the following two years) with regard to this stake. In the event of an intended sale by SWH, these shares would first be offered to Sika, within the limit of 10.75% of Sika's capital.

In Saint-Gobain's 2018 consolidated financial statements, the transaction resulted in total income of €781 million, which includes a financial gain of €601 million (*i.e.*, the difference between the fair value of the shares at the date of the transaction and the value of the call entered into in December 2014), and a compensatory indemnity of €180 million recorded in other business income. The Group has elected to recognize the subsequent changes in the fair value of the Sika shares held by SWH in income and expenses recognized directly in equity.

The Group's Venezuelan subsidiaries were deconsolidated in 2018: operational oversight of the businesses has become increasingly difficult owing to (i) the country's worsening political and economic climate, (ii) exchange rate volatility, as a result of which our Venezuelan operations are not material, and (iii) increasing difficulties in obtaining reliable financial information within the appropriate time frames.

The Group stepped up restructuring measures in China aimed at restoring the profitability of its Pipe business. Following the decision of the Xuzhou city council on April 8 to request operations at the local plant to be suspended in light of new environmental regulations, the Group concluded that it was unable to profitably operate the facility and that it would definitively shut down operations, with a portion of production being transferred to the other Chinese factory in Ma'anshan.

In parallel with the immediate launch of a process to close down the plant, the Group entered into talks with several investors with a view to selling the shares of the three legal entities concerned. On November 23, 2018, the Group completed the sale of the entities operating at the Xuzhou plant along with their industrial and real estate assets, to Nanjing Manyuan Technology Co., Ltd. (NMT).

2.3 Assets and liabilities held for sale

The Group announced the following disposals in the first half of 2019:

- building materials distribution business in Denmark (Optimera): on June 19, 2019, Saint-Gobain entered into an agreement to sell the business to Davidsens Tommerhandel;
- public works business: Saint-Gobain has begun the process of divesting Distribution Matériaux Travaux Publics (DMTP) a subsidiary of Point.P. DMTP is France's leading supplier of building materials for civil engineering and public works.

Optimera Denmark was sold on October 7, 2019, while DMTP was sold on November 29, 2019.

Accordingly, at December 31, 2019, the Group had no discontinued operations and no assets and liabilities held for sale shown on its consolidated balance sheet.

At December 31, 2018, Saint-Gobain had launched a process to divest the following businesses, the assets and liabilities of which were classified as held for sale at that date:

- silicon carbide business: Saint-Gobain entered into negotiations with the OpenGate Capital private equity firm to sell its silicon carbide operations (part of the High-Performance Materials business). This sale was effective on May 14, 2019;
- distribution business in Germany: Saint-Gobain entered into an agreement to sell all of its shares in Saint-Gobain Building Distribution Deutschland (SGBDD) to the Stark group, an important player in building materials distribution in Scandinavia. The sale was completed on September 30, 2019.

Since these businesses meet the qualifying criteria set out in IFRS 5, the balance sheet accounts of the entities concerned were combined and measured within assets and liabilities held for sale in the consolidated balance sheet at December 31, 2018.

(in EUR million)	**Dec. 31, 2018 restated**
Intangible assets, property, plant and equipment and goodwill, net	159
Right-of-use assets, net	176
Inventories, trade accounts receivable, other receivables and other non-current assets	444
Cash and cash equivalents	9
ASSETS HELD FOR SALE	**788**
Provisions for pensions and other employee benefits	82
Other current and non-current liabilities and provisions	18
Trade accounts payable, other payables and other current liabilities	196
Debt and bank overdrafts	207
LIABILITIES HELD FOR SALE	**503**
NET ASSETS (LIABILITIES) HELD FOR SALE	**285**

2.4 Changes in the number of consolidated companies

At December 31, 2019, the number of consolidated companies was as follows:

	France	**Outside France**	**Total**
Fully consolidated companies			
At December 31, 2018	**140**	**628**	**768**
Newly consolidated companies	2	42	44
Merged companies	(4)	(15)	(19)
Deconsolidated companies	(5)	(37)	(42)
Change in consolidation method			0
At December 31, 2019	**133**	**618**	**751**
Equity-accounted companies and joint arrangements			
At December 31, 2018	**4**	**97**	**101**
Newly consolidated companies		3	3
Merged companies			0
Deconsolidated companies	(2)	(3)	(5)
Change in consolidation method			0
AT DECEMBER 31, 2019	**2**	**97**	**99**
TOTAL AT DECEMBER 31, 2018	**144**	**725**	**869**
TOTAL AT DECEMBER 31, 2019	**135**	**715**	**850**

2.5 Off-balance sheet commitments related to companies within the scope of consolidation

At December 31, 2019, non-cancelable purchase commitments include the commitment regarding shares in Continental Building Products. A forward purchase of US$1.3 billion was carried out on January 14, 2020 in respect of this commitment (see note 12 "Subsequent events").

NOTE 3 Impact of new standards

This note sets out the new accounting policies applied with effect from January 1, 2019 and explains the impact on the consolidated financial statements of adopting IFRS 16, "Leases".

3.1 Accounting policies applied since January 1, 2019

IFRS 16, "Leases" eliminates the distinction between operating leases and finance leases that existed under IAS 17, introduces a single lessee accounting model and requires lessees to account for virtually all leases on their balance sheet by recognizing:

- an asset representing the right to use the leased asset over the lease term ("right-of-use asset");
- a liability representing the obligation to make lease payments ("lease liability");
- an equity impact net of deferred taxes.

In the income statement, rental expense is replaced by:

- depreciation of the right-of-use asset;
- interest on the lease liability.

The Saint-Gobain Group has chosen to apply IFRS 16 using the full retrospective method at January 1, 2019 (*i.e.*, with effect from January 1, 2018) and has restated all of its leases that were identified ahead of first-time application of the standard. Entities' historical lease contracts were restated with effect from the date on which the entities were first consolidated by the Group.

The following recognition exemptions proposed by IFRS 16 have been used by the Group:

- leases with a lease term of 12 months or less;
- leases where the underlying asset has a value of less than US$5,000 when new.

Property leases

The lease term corresponds to the non-cancelable period of the lease, plus any renewal (or termination) options that the Group is reasonably certain to exercise (or not to exercise). The Group determined whether or not lease renewal (or termination) options were reasonably certain to be exercised based on the location of, and any improvements inseparable from, the leased asset. The Group has adopted the position of the French accounting standard-setter (*Autorité des normes comptables* – ANC), *i.e.*, assuming an enforceable period of up to nine years (including for automatically renewable leases) as the lease term for "3/6/9-year" commercial lease arrangements in France. The Group did not identify any material leases with similar characteristics in other countries.

At December 31, 2019 and with retroactive effect from January 1, 2018, Saint-Gobain took account of the IFRIC's November 2019 agenda decision in reviewing the terms of its automatically renewable leases, considering the importance of the underlying assets to its operations.

The discount rate used to calculate the lease liability is the incremental borrowing rate. This rate is applied at the commencement of the lease or at the date of the decision to renew the lease. The Group calculated the rate applicable to each lease contract on the basis of its duration, which reflects the payment profile of the lease liability.

The useful life of non-movable leasehold improvements cannot exceed the useful life of the right-of-use assets to which they relate.

Leases other than property leases

The main leases identified correspond to leases of vehicles, machinery and production equipment.

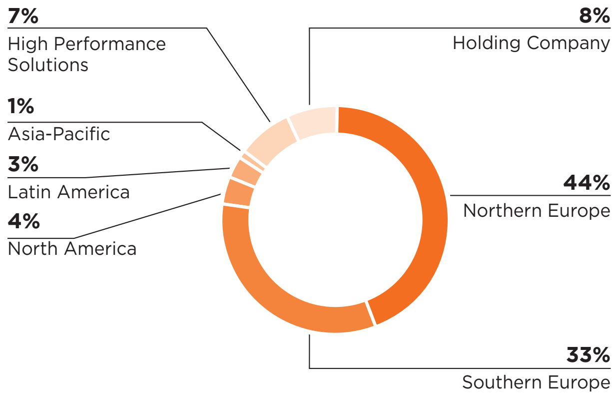
The lease capitalization period (lease term) represents the non-cancelable period of the lease. Where leases provide for a renewal (or termination) option, the Group determined whether or not that option was reasonably certain to be exercised based on the ease with which the leased asset could be replaced and its criticality.

The discount rate used to determine the lease liability is calculated using the same approach as for property leases.

The implicit interest rate of the lease is used as discount rate only in the case of non-property lease contract and only if the legal documentation of the contract stipulates it explicitly.

Although leases can generally incorporate indexation clauses, lease liabilities are measured based solely on indexes known at the end of the reporting period.

Lease liabilities can be analyzed as follows by segment:



Distribution entities account for 88% of lease liabilities in Northern Europe and 86% of lease liabilities in Southern Europe – Middle East & Africa.

3.2 Impact on the consolidated financial statements

In accordance with the approach adopted by the Group, the consolidated financial statements for the year ended December 31, 2018 have been restated. The Group presents the balance sheet as restated at January 1 and December 31, 2018. Balance sheet amounts include assets and liabilities held for sale and any gains and losses on those items.

3.2.1 Impact on the consolidated balance sheet

The table below shows the impacts of applying IFRS 16 for the first time:

(in EUR million)	Dec. 31, 2018 published	IFRS 16 impact	Dec. 31, 2018 restated	January 1, 2018 published	First-time application of IFRS 16	January 1, 2018 restated for new standards
ASSETS						
Intangible assets and property, plant and equipment	23,849	(80)	23,769	24,768	(74)	24,694
Right-of-use assets	0	2,803	2,803	0	3,000	3,000
Current and non-current financial and other assets	18,742	(2)	18,740	17,199	0	17,199
Deferred tax assets	837	23	860	947	29	976
Assets held for sale	614	174	788	0	0	0
TOTAL ASSETS	**44,042**	**2,918**	**46,960**	**42,914**	**2,955**	**45,869**
EQUITY AND LIABILITIES						
TOTAL EQUITY	**18,262**	**(241)**	**18,021**	**18,828**	**(219)**	**18,609**
Non-current portion of long-term debt	9,218	(62)	9,156	7,659	(60)	7,599
Non-current portion of long-term lease liabilities	0	2,392	2,392	0	2,570	2,570
Deferred tax liabilities	472	(23)	449	427	(21)	406
Non-current liabilities and provisions	3,561	(2)	3,559	3,980	(6)	3,974
NON-CURRENT LIABILITIES	**13,251**	**2,305**	**15,556**	**12,066**	**2,483**	**14,549**
Current portion of long-term debt	1,184	(17)	1,167	1,064	(15)	1,049
Current portion of long-term lease liabilities	0	683	683	0	698	698
Current liabilities and provisions	11,023	7	11,030	10,956	8	10,964
Liabilities held for sale	322	181	503	0	0	0
CURRENT LIABILITIES	**12,529**	**854**	**13,383**	**12,020**	**691**	**12,711**
TOTAL EQUITY AND LIABILITIES	**44,042**	**2,918**	**46,960**	**42,914**	**2,955**	**45,869**

Applying IFRS 16 (after restatement for the impacts of IAS 17) at the transition date notably led to the recognition of lease liabilities for €3,193 million (including €182 million relating to liabilities under automatically renewable leases – see section 3.1) and of right-of-use assets for €3,000 million (including €74 million relating to finance leases already recognized at December 31, 2018 in accordance with IAS 17).

3.2.2 Impact on the consolidated income statement

(in EUR million)	2018 published	IFRS 16 impact	2018 restated
Net sales	41,774	0	41,774
Cost of sales	(31,172)	15	(31,157)
General expenses including research	(7,510)	70	(7,440)
Share in net income of core business equity-accounted companies	30	0	30
OPERATING INCOME	**3,122**	**85**	**3,207**
Other business income	435	2	437
Other business expense	(2,759)	(34)	(2,793)
BUSINESS INCOME	**798**	**53**	**851**
Borrowing costs, gross	(300)	3	(297)
Income from cash and cash equivalents	22	0	22
Borrowing costs, net, excluding lease liabilities	(278)	3	(275)
Interest on lease liabilities	0	(77)	(77)
Borrowing costs, net, including lease liabilities	(278)	(74)	(352)
Other financial income and expense	467	0	467
NET FINANCIAL INCOME (EXPENSE)	**189**	**(74)**	**115**
Share in net income of non-core business equity-accounted companies	0	0	0
Income taxes	(490)	(2)	(492)
NET INCOME	**497**	**(23)**	**474**
GROUP SHARE OF NET INCOME	**420**	**(23)**	**397**
Minority interests	77	0	77

(in EUR million)	2018 published	IFRS 16 impact	2018 restated
EARNINGS PER SHARE, GROUP SHARE *(in EUR)*	**0.77**	**(0.04)**	**0.73**
Weighted average number of shares in issue	547,105,985	547,105,985	547,105,985
DILUTED EARNINGS PER SHARE, GROUP SHARE *(in EUR)*	**0.76**	**(0.04)**	**0.72**
Weighted average number of shares assuming full dilution	550,016,438	550,016,438	550,016,438

Applying IFRS 16 led to an estimated increase in 2018 Ebitda of €789 million (including a €702 million increase in depreciation of right-of-use assets net of finance leases) and an estimated increase of €85 million in 2018 operating income.

3.2.3 Impact on the consolidated statement of cash flows

(in EUR million)	2018 published	IFRS 16 impact	2018 restated
GROUP SHARE OF NET INCOME	**420**	**(23)**	**397**
Minority interests in net income	77	0	77
Depreciation, amortization and impairment of assets	3,205	(18)	3,187
Depreciation and impairment of right-of-use assets	0	756	756
Non-recurring SWH/Sika net income and other	(801)	(1)	(802)
Changes in operating working capital requirement	(453)	1	(452)
Changes in deferred taxes and provisions for other liabilities and charges	44	4	48
NET CASH FROM OPERATING ACTIVITIES	**2,492**	**719**	**3,211**
Investments	(3,423)	0	(3,423)
Divestments	117	36	153
Changes in loans, deposits and short-term loans	(113)	0	(113)
NET CASH FROM (USED IN) INVESTMENT AND DIVESTMENT ACTIVITIES	**(3,419)**	**36**	**(3,383)**
Transactions with shareholders of the parent company	(1,046)	0	(1,046)
Transactions with minority interests	(121)	0	(121)
Changes in gross debt	1,546	20	1,566
Changes in lease liabilities	0	(775)	(775)
NET CASH FROM (USED IN) FINANCING ACTIVITIES	**379**	**(755)**	**(376)**
INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	**(548)**	**0**	**(548)**
Net effect of changes in exchange rates, fair value and assets held for sale on cash and cash equivalents	(48)	0	(48)
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR	**3,284**	**0**	**3,284**
CASH AND CASH EQUIVALENTS AT END OF YEAR	**2,688**	**0**	**2,688**

NOTE 4 Information concerning the Group's operating activities

4.1 Income statement items

4.1.1 Revenue recognition

Revenue generated by the sale of goods or services is recognized net of rebates, discounts and sales taxes when control of the goods or services has been transferred to the customer. Revenue generated by the sale of goods is primarily recognized at the time the goods are delivered. Revenue generated by the sale of services is recognized when the services have been rendered, or based on the stage of completion of the services, as calculated based on costs incurred. Similarly, within the Distribution entities, estimated returns are recognized as a deduction from revenue (net sales) and reclassified within inventories for their net carrying amount, since there is a possibility that goods will be returned within the allotted timeframe. A liability relating to future refunds for goods returned is also recognized.

Revenue generated under construction contracts is accounted for by the Group's companies on a percentage-of-completion basis, as calculated based on costs incurred. The related costs are expensed as incurred. When the outcome of a construction contract cannot be estimated reliably, contract revenue is recognized to the extent of contract costs incurred that it is probable will be recovered. When it is probable that total contract costs will exceed total contract revenue, the expected loss is recognized as an expense immediately.

Construction contract revenues are not material in relation to total consolidated net sales.

4.1.2 Operating income

Operating income is a measure of the performance of the Group's different reporting segments and has been used by the Group as its key external and internal management indicator for many years. Foreign exchange gains and losses are included in operating income, as are changes in the fair value of financial instruments that do not qualify for hedge accounting when they relate to operating items. The share of income of core business equity-accounted companies is also posted under operating income.

Supplier discounts granted to entities in the Distribution business are included in operating income as a reduction of cost of sales. Contractual supplier discounts are customary practice in the industrial goods distribution sector. These discounts are mostly calculated by applying a contractually guaranteed rate by product type to volumes purchased. The calculation is made automatically, based on the supplier invoices. Consequently, little judgment is needed when determining the amounts to be recognized in the income statement for these discounts. Other discounts are calculated based on a step mechanism linked to specified targets, whereby the percentage discount increases as the entity achieves the various targets over a given period. In this case, judgment is required based on historical data, past performance and future trends in order to determine the discount to be recognized in the income statement. Such judgment is exercised in a prudent manner and consistently from one period to the next.

Business income is detailed by type below:

4.1.3 Business income

Business income includes all income and expenses other than financial income and expense, the Group's share in net income of non-core business equity-accounted companies, and income taxes.

(in EUR million)	**2019**	**2018 restated**
NET SALES	**42,573**	**41,774**
Personnel expenses:		
Salaries and payroll taxes	(8,336)	(8,243)
Share-based payments [(1)]	(33)	(35)
Pensions and employee benefit obligations [(1)]	(158)	(180)
Depreciation and amortization of property, plant and equipment, intangible assets and right-of-use assets	(1,901)	(1,904)
Share in net income of core business equity-accounted companies	24	30
Other [(2)]	(28,779)	(28,235)
OPERATING INCOME	**3,390**	**3,207**
Other business income [(3)]	196	437
Other business expense	(1,033)	(2,793)
OTHER BUSINESS INCOME AND EXPENSE	**(837)**	**(2,356)**
BUSINESS INCOME	**2,553**	**851**

(1) Share-based payments (IFRS 2 expense) and changes in employee benefit expense are detailed in note 5 "Employees, personnel expenses and employee benefit obligations";

(2) The "Other" operating income line relates to cost of sales, supplier discounts and selling expenses for Distribution entities, and to transport costs, raw materials costs, and other production costs for the other entities. This item also includes research and development costs recorded under operating expenses, amounting to €466 million in 2019 (2018: €454 million);

(3) In 2018, "Other operating income" mainly included the compensatory indemnity of €180 million in connection with SWH/Sika and the gain on the disposal of entities operating at the Group's Xuzhou plant in China (see note 2 to the 2018 consolidated financial statements).

4.1.4 Other business income and expense

Other business income and expense mainly include changes in provisions for claims and litigation (excluding those arising in the ordinary course of operations) and environmental matters, disposal gains and losses, asset impairment, restructuring costs incurred upon the disposal or discontinuation of operations and the costs of workforce reduction measures.

Other business income and expense can be analyzed as follows:

(in EUR million)	**2019**	**2018 restated**
Restructuring costs (1)	(248)	(308)
Provisions and expenses relating to claims and litigation (2)	(89)	(116)
Other (3)	(84)	143
NON-OPERATING INCOME AND EXPENSE	**(421)**	**(281)**
Impairment of assets and other (4)	(414)	(2,096)
Other business expense (5)	(198)	(235)
IMPAIRMENT OF ASSETS AND OTHER BUSINESS EXPENSES	**(612)**	**(2,331)**
GAINS ON DISPOSALS OF NON-CURRENT ASSETS	**196**	**256**
GAINS (LOSSES) ON DISPOSALS, ASSET IMPAIRMENT, ACQUISITION FEES AND CONTINGENT CONSIDERATION	**(416)**	**(2,075)**
OTHER BUSINESS INCOME AND EXPENSE	**(837)**	**(2,356)**

(1) *Restructuring costs in 2019 mainly consist of severance payments totaling €59 million (2018: €127 million);*

(2) *In both 2019 and 2018, changes in provisions and expenses relating to litigation as detailed and explained in note 8 "Other current and non-current liabilities and provisions, contingent liabilities and litigation" chiefly concern asbestos-related litigation;*

(3) *"Other" in 2018 mainly included the €180 million compensatory indemnity in respect of SWH/Sika;*

(4) *The "Impairment of assets and other" line essentially includes (i) the impairment of goodwill, other intangible assets, property, plant and equipment and right-of-use assets relating to assets held for sale for €342 million in 2019 (2018: €2,039 million), (ii) the impairment of other assets for €61 million (2018: €34 million), and (iii) acquisition fees and contingent consideration incurred in connection with business combinations, representing a net expense of €11 million in 2019 (2018: net expense of €23 million);*

(5) *Other business expense in 2019 as in 2018, mainly include capital losses on assets divested or scrapped.*

4.2 Segment information

In accordance with IFRS 8, segment information reflects the Group's internal organization as presented to management. The Group has chosen to present segment information in line with its internal reporting.

Segment assets and liabilities include net property, plant and equipment, working capital, goodwill and net other intangible assets, after deducting deferred taxes on brands and land.

Capital expenditure corresponds to acquisitions of property, plant and equipment and does not include right-of-use assets.

A new organizational and management structure began to be put in place from January 1, 2019. The new structure intends to align the Group more closely with its end markets, taking into account the regional dimension of the majority of its markets and the global nature of its most innovative businesses.

The new structure consists of five reporting units: four regional businesses and a global High Performance Solutions unit. Segment information is presented for:

- High Performance Solutions (HPS), which is organized by market for global customers, *i.e.*, Mobility, Life Sciences, Construction Industry and Industry;
- And for four regions, plus the holding companies:
  - Northern Europe, comprising the Nordic countries, United Kingdom, Ireland, Switzerland, Germany, Austria, Eastern Europe and Russia,
  - Southern Europe – Middle East (ME) - Africa, comprising France, Benelux, Mediterranean, Middle East and Africa,
  - Americas, comprising North America and Latin America,
  - Asia-Pacific,, comprising the Asia region and India,
  - Other, comprising the Group's various holding companies.

These five reporting units replace the three former business Sectors. Segment information for 2018 has been restated to take into account the aforementioned business reorganization.

8

Segment information for 2019 and 2018 is as follows:

2019

(in EUR million)	High Performance Solutions**	Northern Europe	Southern Europe** – Middle East - Africa	Americas	Asia-Pacific	Other*	Group Total
Net sales	7,584	15,058	13,624	5,555	1,888	(1,136)	42,573
Operating income	966	946	736	562	200	(20)	3,390
Business income	794	574	537	410	260	(22)	2,553
Share in net income of equity-accounted companies	1	9	(3)	15	4	(2)	24
Depreciation and amortization	345	610	582	238	99	27	1,901
Impairment of assets	0	224	86	7	23	2	342
EBITDA	1,211	1,455	1,244	666	292	2	4,870
Acquisitions of property, plant and equipment and intangible assets	424	475	418	316	139	46	1,818
Goodwill, net	1,937	4,331	2,120	1,337	304	0	10,029
Non-amortizable brands	0	1,462	491	11	0	0	1,964
Total segment assets and liabilities	5,805	10,368	7,835	4,115	1,529	304	29,956

* *"Other" corresponds to the elimination of intragroup transactions for internal sales, and holding company transactions for the other captions.*

** *France net sales and segment assets represent €10,684 million and €6,615 million, respectively.*

2018 restated

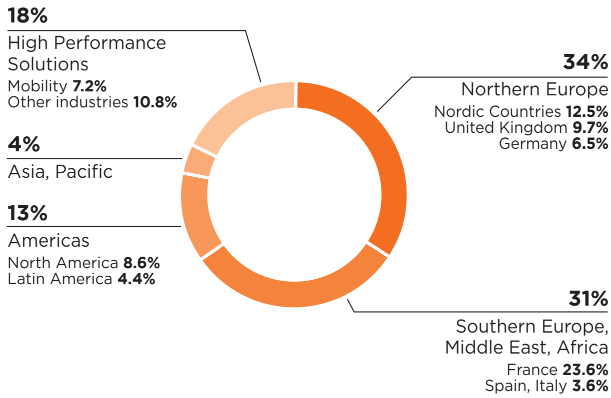
(in EUR million)	High Performance Solutions**	Northern Europe	Southern Europe** – Middle East - Africa	Americas	Asia-Pacific	Other*	Group Total
Net sales	7,369	15,297	13,237	5,175	1,869	(1,173)	41,774
Operating income (expense)	986	856	603	578	194	(10)	3,207
Business income (expense)	701	(326)	(262)	386	204	148	851
Share in net income of equity-accounted companies	0	8	3	17	2	0	30
Depreciation and amortization	325	628	614	218	94	25	1,904
Impairment of assets	68	1,037	759	55	120	0	2,039
EBITDA	1,245	1,382	1,134	687	204	(3)	4,649
Acquisitions of property, plant and equipment and intangible assets	399	494	466	279	166	51	1,855
Goodwill, net	1,873	4,402	2,140	1,292	283	0	9,990
Non-amortizable brands	0	1,399	491	11	0	0	1,901
Total segment assets and liabilities	5,614	10,434	8,050	3,994	1,708	(34)	29,766

* *"Other" corresponds to the elimination of intragroup transactions for internal sales, and holding company transactions for the other captions.*

** *France net sales and segment assets represent €10,412 million and €6,460 million, respectively.*

In 2019, sales made in Europe by entities in the industry segment totaled €10,115 million (2018: €9,923 million), while sales made in Europe by Distribution entities totaled €19,006 million (2018: €19,034 million).

In 2019, the breakdown of net sales by segment and for the Group's main countries is as follows:



4.3 Performance indicators

In the context of its new organization in place since January 1, 2019, Saint-Gobain reviewed its alternative performance indicators and revised its definition of EBITDA. The Group also replaced cash flow from operations with free cash flow (FCF), so as to provide the market with a more typical cash-oriented viewpoint. Saint-Gobain intends to use these new performance indicators over the long term.

4.3.1 EBITDA

The former definition of EBITDA, corresponding to operating income plus operating depreciation and amortization of property, plant and equipment and intangible assets, has been revised to include the depreciation of right-of-use assets, as well as non-operating income and expense.

EBITDA amounted to €4,870 million in 2019 (2018: €4,649 million), calculated as follows:

(in EUR million)	**2019**	**2018 restated**
Operating income	3,390	3,207
Depreciation and amortization of property, plant and equipment and intangible assets	1,219	1,184
Depreciation of right-of-use assets	682	720
Non-operating income and expense*	(421)	(462)
EBITDA	**4,870**	**4,649**

* *Excluding the €180 million compensatory indemnity in respect of SWH/Sika in 2018.*

4.3.2 Free cash flow

Free cash flow (FCF) represents the surplus cash generated from the entity's operations. Free cash flow represents EBITDA plus net financial income/(expense), income tax and changes in working capital, less depreciation of right-of-use assets and investments in property, plant and equipment and intangible assets excluding additional capacity investments.

4.3.3 Operating free cash flow

Operating free cash flow (OFCF) represents the surplus cash generated from the entity's operations and is calculated as operating income plus non-operating income and expense and changes in working capital, less operating depreciation and amortization, investments in property, plant and equipment and intangible assets, and right-of-use assets.

4.3.4 Return on capital employed

Return on capital employed (ROCE) corresponds to annualized operating income adjusted for changes in the scope of consolidation (based on 12 months' of operating income for acquired companies and with no operating income taken into account for divested companies), expressed as a percentage of total assets at year-end. Total assets include net property, plant and equipment, working capital, net goodwill and other intangible assets, but exclude deferred tax assets arising on non-amortizable brands and land.

4.3.5 Recurring net income

Recurring net income corresponds to income after tax and minority interests but before disposal gains or losses, asset impairment, material non-recurring provisions and the related tax and minority interests.

Recurring net income totaled €1,915 million in 2019 (2018: €1,741 million). Based on the weighted average number of shares outstanding at December 31 (542,079,771 shares in 2019 and 547,105,985 shares in 2018), recurring earnings per share amounted to €3.53 in 2019 and €3.18 in 2018.

The difference between net income and recurring net income corresponds to the following items:

(in EUR million)	2019	2018 restated
GROUP SHARE OF NET INCOME	**1,406**	**397**
Less:		
Gains (losses) on disposals of assets	(2)	21
Impairment of assets and other*	(414)	(2,096)
Non-recurring SWH/Sika net income	0	781
Changes in provisions for non-recurring items	(128)	(139)
Impact of minority interests	(1)	2
Tax on disposal gains (losses), asset impairment and non-recurring provisions	36	87
GROUP SHARE OF RECURRING NET INCOME	**1,915**	**1,741**

* *See note 4.1.4.*

4.4 Working capital

Working capital can be analyzed as follows:

(in EUR million)	Dec. 31, 2019	Dec. 31, 2018 restated
INVENTORIES, NET	**6,200**	**6,252**
TRADE ACCOUNTS RECEIVABLE, NET	**4,813**	**4,967**
Other operating receivables	1,471	1,407
Other non-operating receivables	138	201
OTHER RECEIVABLES, NET	**1,609**	**1,608**
CURRENT TAX RECEIVABLE	**194**	**286**
TRADE ACCOUNTS PAYABLE	**6,000**	**6,150**
Other operating payables	3,457	3,284
Other non-operating payables	547	558
OTHER PAYABLES	**4,004**	**3,842**
CURRENT TAX LIABILITIES	**156**	**104**
Operating working capital	3,027	3,192
Non-operating working capital (including current tax receivables and liabilities)	(371)	(175)
WORKING CAPITAL	**2,656**	**3,017**

4.4.1 Inventories

Inventories are stated at the lower of cost and net realizable value. The cost of inventories includes purchase costs (net of supplier discounts), processing costs and other costs incurred in bringing the inventories to their present location and condition. Cost is generally determined using the weighted-average cost method, and in some cases the First-In-First-Out (FIFO) method. Inventory costs may also include the transfer from equity of any gains/losses on qualifying cash flow hedges of foreign currency purchases of raw materials. Net realizable value is the selling price in the ordinary course of business, less estimated completion and selling costs. No account is taken in the inventory valuation process of the impact of below-normal capacity utilization rates.

At December 31, 2019 and 2018, inventories were as follows:

(in EUR million)	Dec. 31, 2019	Dec. 31, 2018
Gross value		
Raw materials	1,494	1,494
Work in progress	344	363
Finished goods	4,856	4,849
GROSS INVENTORIES	**6,694**	**6,706**
Provisions for impairment		
Raw materials	(191)	(149)
Work in progress	(16)	(13)
Finished goods	(287)	(292)
TOTAL PROVISIONS FOR IMPAIRMENT	**(494)**	**(454)**
NET	**6,200**	**6,252**

The net value of inventories was €6,200 million at December 31, 2019 compared with €6,252 million at December 31, 2018. Impairment losses on inventories recorded in the 2019 income statement totaled €229 million (2018: €179 million). Reversals of impairment losses on inventories amounted to €198 million in 2019 (2018: €159 million).

4.4.2 Operating and non-operating receivables and payables

Trade accounts receivable and payable and other receivables and payables are stated at their carrying amount, which approximates their fair value as they generally have maturities of less than three months. Provisions for impairment are booked to cover the risk of total or partial non-recovery, within the limit of expected credit losses.

The Group deems that its exposure to concentrations of credit risk is limited due to its diversified business line-up, broad customer base and global presence. Past-due trade receivables are regularly monitored and analyzed, and impairment losses recognized are adjusted where appropriate.

The Group has various securitization and factoring programs for its trade receivables. Receivables transferred under some of these programs continue to be shown on the balance sheet with a corresponding liability in short-term debt if, based on an analysis of the contracts, the risks associated with the receivables are not transferred in substance to the financing institutions (further information is provided in notes 9.3.8 and 9.3.11).

Trade and other accounts receivable

Trade and other accounts receivable can be analyzed as follows:

(in EUR million)	Dec. 31, 2019	Dec. 31, 2018
Gross value	5,177	5,347
Provision for impairment	(364)	(380)
TRADE ACCOUNTS RECEIVABLE, NET	**4,813**	**4,967**
Discounts and advances to suppliers	660	633
Prepaid payroll taxes	35	36
Other prepaid and recoverable taxes (other than income tax)	476	478
Miscellaneous operating receivables	301	269
Other non-operating receivables and provisions	139	203
Provision for impairment of other operating receivables	(1)	(9)
Provision for impairment of other non-operating receivables	(1)	(2)
OTHER RECEIVABLES, NET	**1,609**	**1,608**

Changes in impairment provisions for trade accounts receivable in 2019 primarily reflect €99 million in additions (2018: €87 million) and €113 million in reversals (2018: €114 million), resulting from recoveries as well as write-offs. Write-offs of doubtful and bad debts are also reported under this caption for €92 million (2018: €76 million).

Trade accounts receivable at December 31, 2019 and 2018 are analyzed below by maturity:

	Gross value		Impairment		Net value	
(in EUR million)	Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2019	Dec. 31, 2018
TRADE ACCOUNTS RECEIVABLE NOT YET DUE	**4,046**	**4,172**	**(34)**	**(32)**	**4,012**	**4,140**
Less than 3 months	471	478	(21)	(22)	450	456
1-3 months	184	206	(20)	(25)	164	181
More than 3 months	476	491	(289)	(301)	187	190
TRADE ACCOUNTS RECEIVABLE PAST DUE	**1,131**	**1,175**	**(330)**	**(348)**	**801**	**827**
TRADE ACCOUNTS RECEIVABLE	**5,177**	**5,347**	**(364)**	**(380)**	**4,813**	**4,967**

Trade and other accounts payable

Trade and other accounts payable and accrued expenses can be analyzed as follows:

(in EUR million)	Dec. 31, 2019	Dec. 31, 2018 restated
TRADE ACCOUNTS PAYABLE	**6,000**	**6,150**
Downpayments received and rebates granted to customers	1,338	1,161
Payables to suppliers of non-current assets	346	372
Grants received	108	87
Accrued personnel expenses	1,242	1,242
Accrued taxes other than on income	418	416
Other operating payables	459	465
Other non-operating payables	93	99
OTHER PAYABLES	**4,004**	**3,842**

4.5 Off-balance sheet commitments related to operating activities

4.5.1 Non-cancelable purchase commitments

Non-cancelable purchase commitments include contractual commitments to purchase raw materials and services along with firm orders for property, plant and equipment and intangible assets.

		Payments due by period			
(in EUR million)	Total 2019	Due within 1 year	Due in 1 to 5 years	Due beyond 5 years	Total 2018
Property, plant and equipment and intangible assets	45	44	1	0	43
Raw materials and energy	1,491	489	770	232	1,501
Services	276	85	174	17	128
TOTAL	**1,812**	**618**	**945**	**249**	**1,672**

Changes in non-cancelable purchase commitments (raw materials and services) essentially result from a shipping, road and rail transport agreement signed by the Gypsum business in the United Kingdom.

4.5.2 Guarantee commitments

In some cases, the Group grants seller's warranties to the buyers of divested businesses. A provision is recognized whenever a risk is identified and the related cost can be estimated reliably.

The Group also receives guarantees, amounting to €93 million at December 31, 2019 (December 31, 2018: €83 million).

4.5.3 Commercial commitments

The Group's commercial commitments are shown below:

		Commitment amounts by period			
(in EUR million)	Total 2019	Due within 1 year	Due in 1 to 5 years	Due beyond 5 years	Total 2018
Security for borrowings	44	20	17	7	48
Other commitments given	157	78	24	55	217
TOTAL	**201**	**98**	**41**	**62**	**265**

Guarantees given to the Group in respect of receivables totaled €83 million at December 31, 2019 (December 31, 2018: €107 million). At December 31, 2019, pledged assets represented €714 million (December 31, 2018: €577 million) and chiefly concerned fixed assets pledged in the United Kingdom.

4.5.4 Other commitments

A provision for greenhouse gas emissions allowances is recorded in the consolidated financial statements to cover any difference between the Group's emissions and the allowances granted.

Greenhouse gas emissions allowances allocated to Group companies by the European Union in 2019 represented approximately 2.8 million metric tons of CO_2. The new 2020 allowances will be added to the residual inventory of prior allocations and will cover the level of greenhouse gas emissions for the year. As a result, no provision has been recorded in this respect in the Group's financial statements.

It should be noted that following the fire at Notre-Dame cathedral in Paris on April 15, 2019, the Group indicated that Saint-Just glassworks would lend its expertise to help restore the monument's stained-glass windows. The precise arrangement for this assistance will be defined at a later stage of the reconstruction work.

NOTE 5 Employees, personnel expenses and employee benefit obligations

5.1 Employees of fully consolidated companies

Average headcount

	2019	2018
Managerial-grade employees	30,555	30,292
Administrative employees	77,341	77,416
Other employees	73,045	73,828
TOTAL AVERAGE NUMBER OF EMPLOYEES	**180,941**	**181,536**

Closing headcount

The total number of Group employees for fully consolidated companies was 170,643 at December 31, 2019 and 181,001 at December 31, 2018. The number of employees at the end of the reporting period takes account of the disposals carried out in the second half of 2019.

5.2 Management compensation

Direct and indirect compensation and benefits paid to the members of the Board of Directors and to the Group's senior management were as follows in 2019 and 2018:

(in EUR million)	2019	2018
Remuneration paid to members of the Board of Directors	1.1	1.1
Direct and indirect compensation (gross)		
fixed portion	7.7	9.7
variable portion	3.7	5.7
Estimated cost of pensions and other employee benefit obligations (IAS 19)*	(2.0)	2.5
Share-based payment expense (IFRS 2)	7.6	9.2
Termination, retirement and other benefits	0.0	2.7
TOTAL	**18.1**	**30.9**

* *The 2019 gain takes into account the impact of settling certain plans (see the note dealing with provisions for pensions and other employee benefits).*

Total gross compensation and benefits paid in 2019 to Saint-Gobain management by the French and foreign companies in the Group amounted to €11.4 million (2018: €18.1 million), including €3.7 million in gross variable compensation (2018: €5.7 million) and nil in termination benefits (2018: €2.7 million).

Provisions for pensions and other post-employment benefit obligations (defined benefit obligations [DBO] in respect of length-of-service awards and pensions) accruing to Group management totaled €41.5 million at December 31, 2019 (December 31, 2018: €50.9 million).

5.3 Provisions for pensions and other employee benefits

5.3.1 Description of defined benefit plans

After retirement, some of the Group's former employees are eligible for pension benefits in accordance with the applicable laws and regulations in the respective countries in which the Group operates. There are also additional pension obligations in certain Group companies, both in France and in other countries.

The Group's obligation for the payment of pensions and length-of-service awards is determined at the end of the reporting period by independent actuaries using the projected unit credit method (taking into account changes in salaries until retirement) and the economic conditions in each country. These obligations may be financed by pension funds, with a provision recognized in the balance sheet for the unfunded portion.

When plan assets exceed the defined benefit obligation, the excess is recognized in other non-current assets under "Net pension assets". The asset ceiling corresponds to the maximum future economic benefit. Changes in the asset ceiling are recognized in equity.

Actuarial gains and losses result from changes in actuarial assumptions, experience adjustments and the difference between the funds' actual and estimated (calculated) rates of return. They are recognized against equity as and when they arise.

The interest cost of these obligations and the return on the related plan assets are measured by the Group using the discount rate applied to estimate the obligation at the beginning of the period, and are recognized as financial income or expense.

The Group's main defined benefit plans are as follows:

In France, employees receive length-of-service awards on retirement based on years of service and the calculation methods prescribed in the applicable collective bargaining agreements.

In addition to length-of-service awards, there are three defined benefit plans, all of which are final salary plans. These plans were closed to new entrants by the companies concerned between 1969 and 1997. Effective March 1, 2012, a defined benefit plan complying with Article L.137-11 of France's Social Security Code (*Code de la sécurité sociale*) was set up by Compagnie de Saint-Gobain. Pursuant to an order of July 4, 2019 issued in the wake of France's "PACTE" law setting out an action plan for business growth and transformation, this plan was closed and any vested rights frozen at December 31, 2019.

In Germany, retirement plans provide pensions and death and disability benefits for employees. These plans have been closed to new entrants since 1996. Since January 1997, new employees have been offered pension plans based on contributions financed jointly by employer and employee.

On January 1, 2019, the main pension plan in the Netherlands covering 80% of employees was converted into a defined contribution plan with a residual defined benefit plan for a transitional period of up to 12 years.

In the United Kingdom, retirement plans provide pensions as well as death and permanent disability benefits. These defined benefit plans – which are based on employees' average salaries over their final years of employment – have been closed to new entrants since 2001.

In the United States and Canada, the Group's defined benefit plans are final salary plans. Since January 1, 2001, new employees have been offered a defined contribution plan.

In the United States and Spain, retired employees receive benefits other than pensions, mainly concerning healthcare benefits. The Group's obligation under these plans is determined using the actuarial method and is covered by a provision recorded in the balance sheet.

Provisions for other long-term employee benefits cover all other employee benefits. These benefits primarily include long-service awards in France, jubilee awards in Germany, deferred compensation, provisions for social security benefits in the United States, and termination benefits in different countries. The related defined benefit obligation is generally calculated on an actuarial basis using the same rules as for pension obligations. Actuarial gains and losses relating to these benefits are recognized immediately in the income statement.

5.3.2 Actuarial assumptions used to measure defined benefit obligations and plan assets

5.3.2.1 Interest rate assumptions

Assumptions related to mortality, employee turnover and future salary increases take into account the economic conditions specific to each country and Group company. The discount rates are established by region or country based on observed bond rates at December 31, 2019.

For the Eurozone, two discount rates were calculated based on the term of the plans using a yield curve model developed by the consultants Mercer: one rate for plans with a term of 14 years or less and one for plans with a term of over 14 years.

The rates used in 2019 for the Group's main plans were the following:

	France		Eurozone		United Kingdom	United States
(in %)	Short-term plans	Long-term plans	Short-term plans	Long-term plans		
Discount rate	1.01%	1.39%	1.01%	1.39%	2.00%	3.20%
Salary increases		2.50%		1.80% to 2.40%	2.00%*	3.00%
Inflation rate		1.50%		1.00% to 1.70%	1.90%	2.20%

* *A cap applies to the reference salaries used to calculate benefit entitlements.*

The rates used in 2018 for the Group's main plans were the following:

	France		Eurozone		United Kingdom	United States
(in %)	Short-term plans	Long-term plans	Short-term plans	Long-term plans		
Discount rate	1.80%	2.15%	1.80%	2.15%	2.80%	4.20%
Salary increases		2.50%		1.60% to 2.80%	2.10%*	3.00%
Inflation rate		1.50%		1.40% to 1.80%	2.10%	2.50%

* *A cap applies to the reference salaries used to calculate benefit entitlements.*

As the above three regions account for substantially all of the pension obligation, the revised actuarial assumptions, notably the discount and inflation rates, contributed to an increase in the obligation, and therefore the provision, in an amount of €1,160 million.

The actual return on plan assets for almost all plans amount to €1,344 million. It is €1,078 million higher than the expected return, leading to a decrease in the provision of the same amount.

5.3.2.2 Sensitivity of assumptions

A 0.5-point decrease (increase) in the discount rate would lead to an increase (decrease) in defined benefit obligations of around €210 million for the US plans, €220 million for the Eurozone plans and €470 million for the UK plans. A 0.5-point increase in the inflation rate would lead to an overall increase in defined benefit obligations of around €620 million.

The same assumptions concerning mortality, employee turnover and interest rates are used to determine the Group's defined benefit obligations for other long-term employee benefits. In the United States, retirees' healthcare costs are projected to rise between 4.50% and 5.96% per year, depending on the age of the beneficiary. A 1-point increase in this rate would lead to an increase of around €30 million in the related projected benefit obligation.

5.3.3 Breakdown of and changes in pensions and other post-employment benefit obligations

5.3.3.1 Carrying amount of provisions

Provisions for pensions and other employee benefit obligations consist of the following:

(in EUR million)	Dec. 31, 2019	Dec. 31, 2018
Pension obligations	1,824	1,732
Length-of-service awards	396	378
Post-employment healthcare benefits	287	276
TOTAL PROVISIONS FOR PENSIONS AND OTHER POST-EMPLOYMENT BENEFIT OBLIGATIONS	**2,507**	**2,386**
Healthcare benefits	26	27
Long-term disability benefits	12	11
Other long-term benefits	103	101
PROVISIONS FOR PENSIONS AND OTHER EMPLOYEE BENEFITS	**2,648**	**2,525**

Provisions for all other long-term benefits totaled €141 million at December 31, 2019 (€139 million at December 31, 2018).

The following table shows net obligations under pensions and other post-employment benefit plans, excluding other long-term benefits:

(in EUR million)	Dec. 31, 2019	Dec. 31, 2018
Provisions for pensions and other post-employment benefit obligations – liabilities	2,507	2,386
Pension plan surpluses – assets	(288)	(193)
NET PENSION AND OTHER POST-EMPLOYMENT BENEFIT OBLIGATIONS	**2,219**	**2,193**

5.3.3.2 Analysis of obligations

At December 31, 2019, pension obligations and provisions for other post-employment benefit obligations break down by major geographic region as follows:

(in EUR million)	France	Eurozone	United Kingdom	United States	Rest of the World	Net total
AVERAGE DURATION *(IN YEARS)*	**14**	**16**	**20**	**12**	**17**	**17**
Defined benefit obligations – funded plans	659	1,443	5,244	2,955	1,050	11,351
Defined benefit obligations – unfunded plans	314	144		250	176	884
Fair value of plan assets	(231)	(505)	(5,452)	(2,876)	(960)	(10,024)
DEFICIT/(SURPLUS)	**742**	**1,082**	**(208)**	**329**	**266**	**2,211**
Asset ceiling			2		6	8
NET PENSION AND OTHER POST-EMPLOYMENT BENEFIT OBLIGATIONS	**742**	**1,082**	**(206)**	**329**	**272**	**2,219**

At December 31, 2018, pension obligations and provisions for other post-employment benefit obligations break down by major geographic region as follows:

(in EUR million)	France	Eurozone	United Kingdom	United States	Rest of the World	Net total
AVERAGE DURATION *(IN YEARS)*	**15**	**16**	**20**	**12**	**16**	**16**
Defined benefit obligations – funded plans	628	1,337	4,526	2,606	920	10,017
Defined benefit obligations – unfunded plans	313	134		244	152	843
Fair value of plan assets	(235)	(503)	(4,605)	(2,473)	(861)	(8,677)
DEFICIT/(SURPLUS)	**706**	**968**	**(79)**	**377**	**211**	**2,183**
Asset ceiling			2		8	10
NET PENSION AND OTHER POST-EMPLOYMENT BENEFIT OBLIGATIONS	**706**	**968**	**(77)**	**377**	**219**	**2,193**

5.3.3.3 Changes in provisions

Changes in pensions and other post-employment benefit obligations are as follows:

(in EUR million)	Pension obligations	Fair value of plan assets	Asset ceiling	Net pension and other post-employment benefit obligations
AT DECEMBER 31, 2017	11,897	(9,274)	3	2,626
Changes during the year				
Service cost	197			197
Interest cost/return on plan assets as per calculations	299	(244)		55
Employee contributions and plan administration costs		(1)		(1)
Past service cost	(33)			(33)
Plan curtailments/settlements	(199)	199		0
Pension contributions		(205)		(205)
Benefit payments	(497)	413		(84)
Actuarial gains and losses and asset ceiling	(816)	502	7	(307)
Translation adjustments	98	(86)		12
Changes in Group structure and reclassifications	20	(9)		11
Liabilities held for sale	(106)	28		(78)
TOTAL CHANGES	**(1,037)**	**597**	**7**	**(433)**
AT DECEMBER 31, 2018	**10,860**	**(8,677)**	**10**	**2,193**
Changes during the year				
Service cost	184			184
Interest cost/return on plan assets as per calculations	317	(266)		51
Employee contributions and plan administration costs		(2)		(2)
Past service cost				0
Plan curtailments/settlements	(51)	2		(49)
Pension contributions		(124)		(124)
Benefit payments	(535)	445		(90)
Actuarial gains and losses and asset ceiling	1,160	(1,078)	(2)	80
Translation adjustments	334	(335)		(1)
Changes in Group structure and reclassifications	(23)	12		(11)
Liabilities held for sale	(11)	(1)		(12)
TOTAL CHANGES	**1,375**	**(1,347)**	**(2)**	**26**
AT DECEMBER 31, 2019	**12,235**	**(10,024)**	**8**	**2,219**

In the United States and France, plan amendments led to a reduction of around €50 million in pension obligations in 2019, shown on the "Plan curtailments/settlements" line.

5.3.3.4 Actuarial gains and losses

Actuarial gains and losses on provisions result from the following items:

(in EUR million)	2019	2018
Pension obligations	1,160	(816)
Fair value of plan assets	(1,078)	502
Asset ceiling	(2)	7
TOTAL CHANGES	**80**	**(307)**

5.3.3.5 Plan assets

Plan assets have been progressively built up by contributions, primarily in the United Kingdom and the United States. Contributions paid by the Group in 2019 totaled €124 million (2018: €205 million).

A 0.5-point increase or decrease in the actual return on plan assets would have an impact of approximately €50 million on equity.

Plan assets mainly comprise:

	Dec. 31, 2019	Dec. 31, 2018
Equities	22%	23%
Bonds	61%	58%
Other	17%	19%

Contributions to pension plans for 2020 are estimated at around €110 million.

5.3.4 Defined contribution plans

Contributions to defined contribution plans are expensed as incurred.

Contributions to defined contribution plans for 2019 represented an estimated €653 million (2018: €667 million), including €428 million for government-sponsored basic pension schemes (2018: €442 million), €127 million for government-sponsored supplementary pension schemes, mainly in France (2018: €137 million), and €98 million for corporate-sponsored supplementary pension plans (2018: €88 million).

5.4 Share-based payments

5.4.1 Group Savings Plan

The Group Savings Plan (*Plan Epargne Group* – PEG) is an employee stock purchase plan open to all Group employees in France and most other countries where the Group is present. Eligible employees must have completed a minimum of three months' service with the Group. Eligible employees are able to invest in Saint-Gobain shares at a preferential subscription price. These shares are held either directly or through the employee saving plan's mutual funds, depending on local legislation, and are subject to a mandatory five- or ten-year lock-up, except following the occurrence of certain events. The Board of Directors delegates authorization for setting the subscription price to the Chief Executive Officer of Compagnie de Saint-Gobain. It corresponds to the average of the opening prices for the Saint-Gobain share on Euronext Paris over the 20 trading days preceding the date of the decision, subject to a 20% discount, in accordance with applicable laws, the Shareholders' Meeting resolutions and the deliberations of the Board of Directors.

The compensation cost recorded in accordance with IFRS 2 is measured by reference to the fair value of a discount offered on restricted stock (*i.e.*, stock subject to a lock-up). The cost of the lock-up for the employee is defined as the cost of a two-step strategy that involves first selling the restricted stock forward five or ten years and then purchasing the same number of shares on the spot market and financing the purchase with debt. The borrowing cost is estimated at the rate that would be charged by a bank to an individual with an average risk profile for a general-purpose, five- or ten-year consumer loan repayable at maturity. The cost of the plans is recognized in full at the end of the subscription period.

In 2019, Saint-Gobain implemented a new PEG (*Plan Epargne Groupe*). The terms of the 2019 PEG are identical to the 2018 PEG and are described in this note.

In 2019, 5,999,997 new shares with a par value of €4 were issued to employees under the PEG at an average subscription price of €25.69 (2018: 4,932,767 shares at an average price of €36.31), representing a share capital increase of €153 million (€179 million in 2018), net of transaction fees.

No amount was expensed in respect of the plans in 2019 or 2018 owing to the lock-up cost.

The following table shows the main features of the standard plans, the amounts invested in the plans and the valuation assumptions applied in 2019 and 2018:

	2019	2018
Plan characteristics		
Date of Shareholders' Meeting	June 7, 2018 (17th Resolution)	June 8, 2017 (17th Resolution)
Date of the Chief Executive Officer's decision fixing the subscription price	March 18	March 19
Plan duration (in years)	5 or 10	5 or 10
Reference price *(in EUR)*	32.11	45.38
Subscription price *(in EUR)*	25.69	36.31
Discount (in %)	20.00%	20.00%
Total discount on the date of the Chief Executive Officer's decision (in %) **(a)**	22.02%	20.76%
Employee investments *(in EUR million)*	154.1	179.1
Total number of shares subscribed	5,999,997	4,932,767
Valuation assumptions (5-year maturity)		
Interest rate applicable to employees*	4.85%	4.80%
Risk-free interest rate	-0.17%	0.09%
Repo rate	0.48%	0.34%
Lock-up discount (in %) **(b)**	22.11%	20.93%
Total cost to the Group (in %) **(a-b)**	-0.09%	-0.17%

* *A 0.5-point decline in borrowing costs for the employee would have no material impact on the 2019 share-based payment expense as calculated in accordance with IFRS 2.*

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5.4.2 Stock option plans

Until 2018, Compagnie de Saint-Gobain operated stock option plans for certain employees.

Under these plans, the Board of Directors granted options allowing beneficiaries to obtain Saint-Gobain shares at a price set, at no discount, by reference to the average of the opening prices for the Saint-Gobain share over the 20 stock market trading days preceding the date of the decision by the Board of Directors.

For all of the plans, options may only be exercised after four years of the grant date. During this period, none of the options received may be exercised. Options must be exercised within 10 years of the grant date. Except in specified circumstances, grantees forfeit these options if they leave the Group.

Among the plans outstanding at December 31, 2019, the 2012 plan offers subscription options, while the 2013 and 2015 plans offer purchase options. For plans launched between 2016 and 2018, the Board of Directors has decided that it would determine the type of option (subscription or purchase) at the latest on the day before the start of the exercise period, with any options exercised prior to such decision considered as subscription options.

Since 2009, a performance condition has applied for all grantees in plans.

No new stock option plans were launched in 2019.

The following table presents changes in the number of outstanding options:

	€4 par value shares	Average exercise price *(in EUR)*
OPTIONS OUTSTANDING AT DECEMBER 31, 2017	**3,015,623**	**33.97**
Options granted	290,500	32.24
Options exercised	(568,380)	26.64
Options forfeited	(889,736)	28.05
OPTIONS OUTSTANDING AT DECEMBER 31, 2018	**1,848,007**	**38.78**
Options granted	0	0.00
Options exercised	(310,204)	36.33
Options forfeited*	(480,281)	37.40
OPTIONS OUTSTANDING AT DECEMBER 31, 2019	**1,057,522**	**24.09**

* *Including 317,873 options under the 2009 stock subscription plan that remained unexercised upon expiry of the plan, 160,974 options under the 2015 plan that had lapsed because the performance condition had only been partly met, and 1,434 options under the 2015 plan that had lapsed after the service condition was considered.*

The cost of stock option plans is calculated using the Black & Scholes option pricing model.

The following inputs were used:

- volatility assumptions that take into account the historical volatility of the share price over a rolling 10-year period, as well as implied volatility from traded share options. Periods of extreme share price volatility are disregarded;
- assumptions relating to the average holding period of options, based on observed behavior of option holders;
- expected dividends, as estimated on the basis of historical dividend information dating back to 1988;
- a risk-free interest rate corresponding to the yield on long-term government bonds;
- the effect of any stock market performance conditions, which is taken into account in the initial measurement of IFRS 2 share-based payment expense.

The cost calculated using this method is recognized in the income statement over the vesting period of the options, which is a maximum of four years.

Stock option expense recorded in the income statement amounted to €1 million in 2019 (2018: €2 million).

The table below summarizes information about stock options outstanding at December 31, 2019, after taking into account partial fulfillment of the performance criteria attached to certain plans.

	Exercisable options			Non-exercisable options		Total options outstanding	
	Exercise price *(in EUR)*	Number of options	Weighted average contractual life *(in months)*	Exercise price *(in EUR)*	Number of options	Number of options	Type of options
2010	35.19	0	11			0	Subscription
2011	31.22	0	23			0	Subscription
2012	27.71	19,633	35			19,633	Subscription
2013	38.80	120,347	47			120,347	Purchase
2014	34.13		59			0	Purchase
2015	39.47	62,542	71			62,542	Purchase
2016			83	40.43	280,000	280,000	Subscription or purchase*
2017			95	49.38	284,500	284,500	Subscription or purchase*
2018			107	32.24	290,500	290,500	Subscription or purchase*
TOTAL		**202,522**			**855,000**	**1,057,522**	

* *2016, 2017 and 2018 plans: see above.*

At December 31, 2019, 202,522 stock options were exercisable (at an average exercise price of €37.93) and 855,000 options (with an average exercise price of €40.63) had not yet vested.

5.4.3 Performance shares and performance unit grants

Since 2009, performance share plans have also been set up for certain categories of employees. These plans are subject to eligibility criteria based on the grantee's period of service (service conditions) with the Group as well as performance criteria (performance conditions), which are described below. The IFRS 2 share-based payment expense takes into account these criteria as well as the lock-up feature. It is recognized over the vesting period, which covers a maximum of four years.

Since 2012, performance unit plans have been set up for certain employees in France. These plans are also subject to service and performance conditions. The IFRS 2 share-based payment expense therefore takes into account these factors, as well as the fact that the units are cash-settled. IFRS 2 stipulates that for cash-settled share-based payment transactions, the granted instruments are initially measured at fair value at the grant date, then remeasured at the end of each reporting period, with the expense adjusted accordingly pro rata to the rights that have vested at the reporting date. The expense is recognized over the vesting period of the rights.

5.4.3.1 Performance share plans

At December 31, 2019, there were four outstanding performance share plans, approved by the Board of Directors in 2016, 2017, 2018 and on November 21, 2019. These plans concern both managerial-grade employees and senior managers of the Group both within and outside France.

All plans are subject to service and performance conditions. The vesting period for the plans is four years and the shares will be delivered the day after the end of the vesting period for the 2016-2017 plans, and respectively on the third and fourth day after the end of the vesting period for the 2018 and 2019 plans.

The table below shows changes in the number of performance share rights:

	Number of rights
NUMBER OF PERFORMANCE SHARE RIGHTS AT DECEMBER 31, 2017	**3,487,440**
Performance share rights granted in November 2018	1,219,619
Shares issued/delivered	(438,468)
Lapsed and canceled rights	(91,602)
NUMBER OF PERFORMANCE SHARE RIGHTS AT DECEMBER 31, 2018	**4,176,989**
Performance share rights granted in November 2019	1,251,770
Shares issued/delivered	(341,150)
Lapsed and canceled rights*	(159,740)
NUMBER OF PERFORMANCE SHARE RIGHTS AT DECEMBER 31, 2019	**4,927,869**

* *Rights granted under the 2015 plan including 134,598 rights that lapsed because the performance condition had only been partly met, and 25,142 rights that lapsed after the service condition was considered.*

The fair value of the performance shares corresponds to the Saint-Gobain share price on the grant date less the value of dividends not payable on the shares during the vesting period and, as for the Group Savings Plan, minus the discount on restricted stock (*i.e.*, stock subject to a four-year lock-up), which has been estimated at around 30% of the share price. The expense is recognized over the vesting period, which covers a maximum of four years.

The expense recorded in the income statement in 2019 for these plans amounted to €27 million (2018: €26 million).

The following table shows the expected dates when shares under the four performance share plans outstanding at December 31, 2019 will be delivered (except in the case of early release following the grantee's death or disability, along with the service and performance conditions remaining to be fulfilled):

Grant date	Number of rights at December 31, 2019*	End of vesting and lock-up period	Type of shares
November 24, 2016	1,230,450	November 24, 2020	existing
November 23, 2017	1,226,230	November 23, 2021	existing
November 22, 2018	1,219,419	November 25, 2022	existing
November 21, 2019	1,251,770	November 24, 2023	existing
TOTAL	**4,927,869**		

* *Subject to fulfillment of the service and performance conditions applicable to each plan.*

5.4.3.2 Performance unit plans

Performance unit plans subject to service and performance conditions were set up every year between 2012 and 2015 for certain management-grade employees and senior managers of the Group in France. These plans do not give rise to the delivery of shares but entitle grantees to receive cash compensation deferred over the long-term (exercise period between four and ten years after the grant date), the amount of which will be determined by reference to Saint-Gobain's share price.

No long-term payment plan in the form of performance units has been set up since 2016, as all beneficiaries received rights to performance shares.

In 2019, 352,372 performance units under the 2015 plan vested, while 203,968 performance units under the same plan lapsed, including 187,153 units because the performance condition had only been partly met and 16,815 units due to the application of the service condition.

There were no unvested performance unit plans at December 31, 2019.

The expense recorded in the income statement in 2019 for these plans amounted to €5 million (2018: €11 million).

NOTE 6 Intangible assets, property, plant and equipment, and right-of-use assets

6.1 Goodwill

When an entity is acquired by the Group, its identifiable assets and assumed liabilities are recognized at their fair value. IFRS allows a 12-month period after the acquisition date ("measurement period") to identify the assets and liabilities of the acquired entity that were not recognized in the initial accounting for the combination, and to retroactively modify the amounts initially allocated.

The final acquisition price ("consideration transferred" in IFRS 3R), including, as appropriate, the estimated fair value of any earn-out payments or other deferred consideration ("contingent consideration" in IFRS 3R), is determined in the 12 months following the acquisition. Under IFRS 3R, any adjustments to the acquisition price beyond this 12-month period are recorded in the income statement. Directly attributable acquisition costs are expensed as incurred.

In addition, goodwill is recognized only at the date that control is achieved. Any subsequent increase in ownership interest (without change of control) is recorded as a change in equity without adjusting goodwill.

Goodwill is recorded in the consolidated balance sheet as the difference between (i) the acquisition-date fair value plus the amount of any minority interests in the acquisition – measured either at fair value (full goodwill method) or at the proportionate interest in the fair value of the net identifiable assets acquired (partial goodwill method) – and (ii) the net amount of assets and liabilities acquired at their fair value at the acquisition date. The Group generally applies the partial goodwill method and the amount of goodwill calculated under the full goodwill method is not therefore material.

Any excess of the cost of an acquisition over the fair value of the Group's share of the assets and liabilities of the acquired entity is recorded as goodwill. Any negative difference between the cost of the acquisition and the fair value of the net assets and liabilities acquired is recognized in the income statement during the year of acquisition.

Changes in goodwill in 2019 and 2018 are detailed below:

(in EUR million)	2019	2018 restated
At January 1		
Gross value	12,396	12,023
Accumulated impairment	(2,406)	(1,448)
NET VALUE	**9,990**	**10,575**
Movements during the year		
Impairment	(104)	(1,116)
Translation adjustments and restatement for hyperinflation	138	57
Changes in Group structure	5	478
Assets held for sale	0	(4)
TOTAL MOVEMENTS	**39**	**(585)**
At December 31		
Gross value	12,495	12,396
Accumulated impairment	(2,466)	(2,406)
NET VALUE	**10,029**	**9,990**

In 2019, changes in Group structure relate mainly to newly consolidated companies and deconsolidated divested companies, and concern all segments (see note 2.2.). Impairment was essentially recognized on assets sold in the year. Brexit-related developments did not lead the Group to change the position it adopted at December 31, 2018. The 2019 translation adjustments and restatements for hyperinflation primarily reflect the impacts of fluctuations in the pound sterling, US dollar, Thai baht, Argentine peso, Norwegian krone and Swedish krona.

In 2018, changes in Group structure related mainly to newly consolidated companies in all segments (see note 2.2.). Impairment losses essentially concerned distribution businesses in the United Kingdom (€750 million) facing an uncertain context with Brexit, Pipe entities (€224 million) following the CGU impairment test and the valuation of distribution operations in Germany which were adjusted in connection with the sale of the business (€130 million). The 2018 translation adjustments and restatements for hyperinflation primarily reflected the impacts of fluctuations in the US dollar, Brazilian real, pound sterling, Argentine peso and Turkish lira.

6.2 Other intangible assets

Other intangible assets primarily include patents, brands, software and development costs. They are measured at historical cost less accumulated amortization and impairment.

Certain retail or manufacturing brands acquired are treated as intangible assets with indefinite useful lives as they have a strong national and/or international reputation. These brands are not amortized but are tested systematically for impairment on an annual basis. Other brands are amortized over their useful lives, not exceeding 40 years.

Costs incurred to develop software in-house – primarily configuration, programming and testing costs – are recognized as intangible assets. Patents and purchased computer software are amortized over their estimated useful lives, not exceeding 20 years for patents and three to five years for software.

Research costs are expensed as incurred. Development costs meeting the recognition criteria under IAS 38 are included in intangible assets and amortized over their estimated useful lives (not exceeding five years) from the date when the products to which they relate are first marketed.

Changes in other intangible assets during 2019 and 2018 are analyzed below:

(in EUR million)	Patents	Non-amortizable brands	Software	Development costs	Other	Total intangible assets
At December 31, 2017						
Gross value	149	2,682	1,093	119	505	4,548
Accumulated amortization and impairment	(129)	(667)	(854)	(88)	(207)	(1,945)
NET VALUE	**20**	**2,015**	**239**	**31**	**298**	**2,603**
Changes during the year						
Acquisitions	1	0	48	6	134	189
Disposals	(1)	0	(5)	(2)	(16)	(24)
Translation adjustments and restatement for hyperinflation	0	(8)	(1)	0	(1)	(10)
Amortization and impairment	(4)	(109)	(108)	(12)	(90)	(323)
Transfers	1	0	94	3	(98)	0
Changes in Group structure and other	2	3	8	(2)	81	92
Assets held for sale	0	0	(1)	0	0	(1)
TOTAL CHANGES	**(1)**	**(114)**	**35**	**(7)**	**10**	**(77)**
At December 31, 2018						
Gross value	148	2,649	1,170	121	568	4,656
Accumulated amortization and impairment	(129)	(748)	(896)	(97)	(260)	(2,130)
NET VALUE	**19**	**1,901**	**274**	**24**	**308**	**2,526**
Changes during the year						
Acquisitions	0	0	47	7	108	162
Disposals	0	0	(2)	(1)	(11)	(14)
Translation adjustments and restatement for hyperinflation	0	46	3	0	5	54
Amortization and impairment	(4)	0	(104)	(11)	(37)	(156)
Transfers	0	0	172	(2)	(170)	0
Changes in Group structure and other	4	17	4	1	113	139
Assets held for sale	0	0	(1)	0	(1)	(2)
TOTAL CHANGES	**0**	**63**	**119**	**(6)**	**7**	**183**
At December 31, 2019						
Gross value	152	2,712	1,365	122	612	4,963
Accumulated amortization and impairment	(133)	(748)	(972)	(104)	(297)	(2,254)
NET VALUE	**19**	**1,964**	**393**	**18**	**315**	**2,709**

The breakdown of non-amortizable brands by segment is provided in the segment information tables in note 4 “Information concerning the Group’s operating activities”.

In 2018, impairment was primarily recognized against Lapeyre entities.

6.3 Property, plant and equipment

Land, buildings and equipment are carried at historical cost less accumulated depreciation and impairment.

Cost may also include incidental expenses directly attributable to the acquisition, as well as the impact of transfers from equity of any gains/losses on qualifying cash flow hedges of property, plant and equipment purchases.

Expenses incurred in exploring and evaluating mineral resources are included in property, plant and equipment when it is probable that associated future economic benefits will flow to the Group. They include mainly the costs of topographical or geological studies, drilling costs, sampling costs and all costs incurred in assessing the technical feasibility and commercial viability of extracting the mineral resource.

Material borrowing costs incurred for the construction and acquisition of property, plant and equipment are included in the cost of the related asset if they are significant.

Property, plant and equipment are considered as having no residual value, as they chiefly consist of industrial assets that are intended to be used until the end of their useful lives.

Property, plant and equipment other than land are depreciated using the components approach on a straight-line basis over the following estimated useful lives, which are regularly reviewed:

- Major factories and offices 30-40 years
- Other buildings 15-25 years
- Production machinery and equipment 5-16 years
- Vehicles 3-5 years
- Furniture, fixtures, office and computer equipment 4-16 years

Gypsum quarries are depreciated over their estimated useful lives, based on the quantity of gypsum extracted during the year compared with extraction capacity.

Provisions for site restoration are recognized as components of assets whenever the Group has a legal or constructive obligation to restore a site in accordance with contractually determined conditions or in the event of a sudden deterioration in site conditions. These provisions are reviewed periodically and may be discounted over the expected useful lives of the assets concerned. The component is depreciated over the same useful life as that used for mines and quarries.

Government grants for purchases of property plant and equipment are recorded under "Other payables" and taken to the income statement over the estimated useful lives of the relevant assets. They are included within operating items on the line corresponding to the nature of the asset.

Changes in property, plant and equipment in 2019 and 2018 are analyzed below:

(in EUR million)	Land and quarries	Buildings	Machinery and equipment	Assets under construction	Total property, plant and equipment
At December 31, 2017					
Gross value	2,454	8,558	19,575	1,335	31,922
Accumulated amortization and impairment	(577)	(5,116)	(14,583)	(56)	(20,332)
NET VALUE	**1,877**	**3,442**	**4,992**	**1,279**	**11,590**
IFRS 16 restatements	(5)	(15)	(54)	0	(74)
At January 1, 2018 restated					
Gross value	2,449	8,471	19,442	1,335	31,697
Accumulated depreciation and impairment	(577)	(5,044)	(14,504)	(56)	(20,181)
NET VALUE	**1,872**	**3,427**	**4,938**	**1,279**	**11,516**
Changes during the year					
Acquisitions	12	72	286	1,296	1,666
Disposals	(29)	(13)	(25)	(7)	(74)
Translation adjustments and restatement for hyperinflation	4	(20)	(30)	(6)	(52)
Depreciation and impairment	(145)	(498)	(1,067)	(38)	(1,748)
Transfers	0	255	862	(1,117)	0
Changes in Group structure and other	71	(13)	44	(3)	99
Assets held for sale	(56)	(24)	(45)	(29)	(154)
TOTAL CHANGES	**(143)**	**(241)**	**25**	**96**	**(263)**
At December 31, 2018 restated					
Gross value	2,458	8,294	19,651	1,421	31,824
Accumulated depreciation and impairment	(729)	(5,108)	(14,688)	(46)	(20,571)
NET VALUE	**1,729**	**3,186**	**4,963**	**1,375**	**11,253**
Changes during the year					
Acquisitions	16	70	303	1,267	1,656
Disposals	(29)	(26)	(31)	(5)	(91)
Translation adjustments and restatement for hyperinflation	22	42	58	16	138
Depreciation and impairment	(80)	(269)	(907)	(9)	(1,265)
Transfers	0	239	914	(1,153)	0
Changes in Group structure and other	54	(2)	(108)	(5)	(61)
Assets held for sale	54	(28)	30	21	77
TOTAL CHANGES	**37**	**26**	**259**	**132**	**454**
At December 31, 2019					
Gross value	2,485	8,444	20,031	1,552	32,512
Accumulated depreciation and impairment	(719)	(5,232)	(14,809)	(45)	(20,805)
NET VALUE	**1,766**	**3,212**	**5,222**	**1,507**	**11,707**

In 2019, changes in Group structure relate to newly consolidated companies and deconsolidated divested companies, and concern all segments (see note 2.2.). Impairment was essentially recognized on assets sold in the year. The 2019 translation adjustments and restatements for hyperinflation primarily reflect the impacts of fluctuations in the pound sterling, US dollar, Argentine peso, Mexican peso and Russian ruble.

In 2018, changes in Group structure related mainly to newly consolidated companies in all segments (see note 2.2.). Impairment losses in 2018 essentially related to the restructuring at Pipe, the start of restructuring measures at the Lapeyre entities, and distribution operations in Germany in connection with the intended sale of the business. The 2018 translation adjustments and restatements for hyperinflation primarily reflected the impacts of fluctuations in the US dollar, Brazilian real, pound sterling, Argentine peso and Turkish lira.

6.4 Right-of-use assets linked to leases

The table below presents right-of-use assets for lease contracts by category:

(in EUR million)	Land and buildings	Machinery and equipment	Total
At January 1, 2018 restated			
Gross value	5,361	1,173	6,534
Accumulated depreciation and impairment	(2,972)	(562)	(3,534)
NET VALUE	**2,389**	**611**	**3,000**
Changes during the year			
New leases	495	235	730
Lease modifications	25	0	25
Disposals	(29)	(6)	(35)
Translation adjustments and restatement for hyperinflation	(16)	(3)	(19)
Depreciation and impairment	(508)	(248)	(756)
Assets held for sale	(148)	(27)	(175)
Changes in Group structure and other	32	1	33
TOTAL CHANGES	**(149)**	**(48)**	**(197)**
At December 31, 2018 restated			
Gross value	5,389	1,153	6,542
Accumulated depreciation and impairment	(3,149)	(590)	(3,739)
NET VALUE	**2,240**	**563**	**2,803**
Changes during the year			
New leases	718	242	960
Lease modifications	9	1	10
Disposals	(56)	(14)	(70)
Translation adjustments and restatement for hyperinflation	21	8	29
Depreciation and impairment	(491)	(227)	(718)
Changes in Group structure and other	(3)	(1)	(4)
Assets held for sale	(41)	(15)	(56)
TOTAL CHANGES	**157**	**(6)**	**151**
At December 31, 2019			
Gross value	5,786	1,118	6,904
Accumulated depreciation and impairment	(3,389)	(561)	(3,950)
NET VALUE	**2,397**	**557**	**2,954**

6.5 Impairment review

6.5.1 Impairment of property, plant and equipment, intangible assets, goodwill and right-of-use assets

Property, plant and equipment, goodwill, right-of-use assets and other intangible assets are tested for impairment on a regular basis. These tests consist of comparing the asset's carrying amount to its recoverable amount. The recoverable amount is the higher of the asset's fair value less costs to sell and its value in use, calculated by reference to the net present value of the future cash flows expected to be derived from the asset.

For property, plant and equipment, amortizable intangible assets and right-of-use assets, an impairment test is performed whenever revenues from the asset decline or the asset generates operating losses due to either internal or external factors, and no material improvement is forecast in the annual budget or the relevant business plan.

For goodwill and other unamortized intangible assets (including brands with indefinite useful lives), an impairment test is performed at least annually based on financial forecasts. Goodwill is reviewed systematically and exhaustively at the level of each cash-generating unit (CGU).

The Group's new organization in place since January 1, 2019 led to changes in its segment reporting. In accordance with IFRS 8, which states that segment reporting must reflect an entity's internal organization and decision-making structure, the Group now has five reporting segments: four regional entities and a global High Performance Solutions unit. A new CGU structure was also defined to reflect these organizational changes. The new structure comprises 28 CGUs (compared to 30 CGUs at December 31, 2018), in accordance with IAS 36 criteria and the new basis for segment reporting.

The method used for these impairment tests is consistent with that employed by the Group for the valuation of companies acquired in business combinations or acquisitions of equity interests. The carrying amount of the CGUs is compared to their value in use, corresponding to the net present value of future cash flows excluding interest but including tax. It is determined using assumptions made by senior management based on estimates and judgments including future changes in net sales, profitability, investments and other cash flows arising from the use of the corresponding assets, as well as the discount rate applied to future cash flows. Cash flows for the last year of the business plan are rolled forward over the following two years. For impairment tests of goodwill, normative cash flows (corresponding to cash flows at the mid-point in the business cycle) are then projected to perpetuity using a low annual growth rate (between 1.5% and 2% barring exceptional cases). Growth data are supported by external data issued by prominent organizations. The average cost of capital remains unchanged at 6.85% for 2019. It had been reduced to 6.85% in 2018 from 7.25% in 2017 to reflect the continuing downward trend in the interest rates payable by the Group on its debt. This rate corresponds to the Group's average cost of capital, plus a country risk premium where applicable depending on the geographic area concerned. The discount rates applied in 2019 were 6.85% for Western Europe and North America, 7.85% for Eastern Europe and emerging Asia-Pacific and 8.75% for South America, Russia and the Middle East.

The recoverable amount calculated using a post-tax discount rate gives the same result as a pre-tax rate applied to pre-tax cash flows.

6.5.2 CGU impairment tests

When the annual impairment test reveals that the recoverable amount of an asset is less than its carrying amount, an impairment loss is recorded.

Impairment losses on goodwill can never be reversed through income. For property, plant and equipment and other intangible assets, an impairment loss recognized in prior periods may be reversed, taking into account depreciation/amortization adjustments, if there is an indication that the impairment no longer exists and that the recoverable amount of the asset concerned exceeds its carrying amount.

During the impairment tests, different assumptions measuring the method's sensitivity are systematically tested using the following inputs:

- 0.5-point increase or decrease in the discount rate applied to cash flows;
- 0.5-point increase or decrease in the annual average rate of growth in cash flows projected to perpetuity;
- 1-point decrease in the operating income rate for industrial activities and 0.5-point decrease for distribution activities.

At December 31, 2019, a 0.5-point increase in the discount rate for all CGUs would have led to approximately €18 million in additional impairment of non-current assets, while a 0.5-point decrease in the average annual cash flow growth rate projected to perpetuity for all CGUs would have resulted in additional non-current asset impairment of around €12 million. The impact of a 1-point decrease in the operating income rate for all industrial CGUs would have generated additional non-current asset impairment of roughly €126 million, primarily relating to entities in the Pipe business. A 0.5-point decrease in the rate for distribution activities would not have generated additional impairment.

	Impact of			
(in EUR million)	**0.5% increase in the discount rate**	**0.5% decrease in the growth rate**	**1 point decrease in the operating income rate**	**0.5 point decrease in the operating income rate**
High Performance Solutions	0	0	0	0
Northern Europe	0	0	0	0
Southern Europe – ME & Africa	(16)	(10)	(103)	0
Americas	0	0	(13)	0
Asia-Pacific	(2)	(2)	(10)	0
TOTAL	**(18)**	**(12)**	**(126)**	**0**

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NOTE 7 Investments in equity-accounted companies and other non-current assets

A joint venture is a joint arrangement whereby the parties have joint control of the arrangement, and decisions about the relevant activities require the unanimous consent of the parties sharing control. The parties that have joint control of the arrangement have rights to the net assets of the arrangement. By contrast, an associate is an entity over which a partner has significant influence over the power to participate in decisions, but not control.

Under IAS 28, investments in both associates and joint ventures must be recognized using the same equity-accounting consolidation method.

7.1 Changes in investments in equity-accounted companies

Changes in investments in equity-accounted companies in 2019 and 2018 can be analyzed as follows:

(in EUR million)	**2019**	**2018 restated**
At January 1		
Group share in:		
Associates	185	173
Joint ventures	207	187
TOTAL	**392**	**360**
Goodwill	20	19
INVESTMENTS IN EQUITY-ACCOUNTED COMPANIES	**412**	**379**
Changes during the year		
Group share in net income of:		
Associates	11	11
Joint ventures	13	19
TOTAL	**24**	**30**
Dividends paid	(16)	(11)
Translation adjustments and restatement for hyperinflation	(2)	(2)
Transfers, share issues and other changes	32	16
Changes in Group structure	(13)	0
TOTAL CHANGES	**25**	**33**
At December 31		
Group share in:		
Associates	182	185
Joint ventures	236	207
TOTAL	**418**	**392**
Goodwill	19	20
INVESTMENTS IN EQUITY-ACCOUNTED COMPANIES	**437**	**412**

The principal financial aggregates of equity-accounted companies are as follows:

	2019			**2018**		
(in EUR million)	**Associates**	**Joint ventures**	**Total**	**Associates**	**Joint ventures**	**Total**
Net sales	802	647	1,449	774	670	1,444
Net income	24	29	53	52	41	93
Non-current assets	535	420	955	480	372	852
Current assets	498	292	790	528	305	833
Non-current liabilities	763	610	1,373	783	561	1,344
Current liabilities	270	102	372	225	116	341
Shareholders' equity	631	499	1,130	622	444	1,066

7.2 Transactions with equity-accounted companies – related parties

The consolidated financial statements include transactions conducted by the Group in the normal course of its businesses with associates and joint ventures. These transactions are carried out on an arm's length basis.

The assets and liabilities of equity-accounted companies at December 31 are as follows:

(in EUR million)	Dec. 31, 2019	Dec. 31, 2018
Financial receivables	4	2
Inventories	0	0
Short-term receivables	10	9
Cash and cash equivalents	0	0
Provisions for asset impairment	0	0
Short-term debt	3	5
Cash advances	0	0

Purchases and sales with equity-accounted companies are as follows:

(in EUR million)	2019	2018
Purchases	11	2
Sales	36	33

7.3 Other non-current assets

Changes in other non-current assets in 2019 and 2018 are analyzed below:

(in EUR million)	Equity investments and other	Loans, deposits and surety	Pension plan surpluses	Total
At December 31, 2017				
Gross value	111	516	161	788
Provision for impairment	(10)	(4)		(14)
NET VALUE	**101**	**512**	**161**	**774**
Changes during the year				
Increases/(decreases)	1,756	113	34	1,903
Provisions for impairment	(1)	(7)		(8)
Translation adjustments and restatement for hyperinflation	(5)	(1)	(2)	(8)
Transfers and other movements	0	(2)		(2)
Changes in Group structure	(68)	5		(63)
Change in fair value	(69)	0		(69)
TOTAL CHANGES	**1,613**	**108**	**32**	**1,753**
At December 31, 2018				
Gross value	1,742	625	193	2,560
Provision for impairment	(28)	(5)		(33)
NET VALUE	**1,714**	**620**	**193**	**2,527**
Changes during the year				
Increases/(decreases)	72	(58)	83	97
Provisions for impairment	1	(2)		(1)
Translation adjustments and restatement for hyperinflation	0	2	12	14
Transfers and other movements	0	2		2
Changes in Group structure	0	1		1
Change in fair value	871	0		871
TOTAL CHANGES	**944**	**(55)**	**95**	**984**
At December 31, 2019				
Gross value	2,685	574	288	3,547
Provision for impairment	(27)	(9)		(36)
NET VALUE	**2,658**	**565**	**288**	**3,511**

Changes in the fair value of equity investments in both 2019 and 2018 relate mainly to Sika shares.

NOTE 8 Other current and non-current liabilities and provisions, contingent liabilities and litigation

A provision is booked when (i) the Group has a present legal or constructive obligation towards a third party as a result of a past event, (ii) it is probable that an outflow of resources will be required to settle the obligation, and (iii) the amount of the obligation can be estimated reliably.

If the amount or due date of the obligation cannot be estimated reliably, it is classified as a contingent liability and reported as an off-balance sheet commitment.

Provisions for other material liabilities and charges whose timing can be estimated reliably are discounted to present value.

8.1 Provisions for other liabilities and charges

The table below provides a breakdown by type along with details of changes in other provisions and current and non-current liabilities:

(in EUR million)	Provisions for claims and litigation	Provisions for environmental risks	Provisions for restructuring costs	Provisions for personnel expenses	Provisions for customer warranties	Provisions for other contingencies	Total provisions for other liabilities	Investment-related liabilities	Total provisions for other liabilities and investment-related liabilities
At December 31, 2017									
Current portion	137	30	38	21	102	71	399	13	412
Non-current portion	409	124	41	94	96	164	928	125	1,053
TOTAL PROVISIONS FOR OTHER LIABILITIES AND INVESTMENT-RELATED LIABILITIES	**546**	**154**	**79**	**115**	**198**	**235**	**1,327**	**138**	**1,465**
IFRS 16 restatement	0	1	(18)	0	0	0	(17)		(17)
At January 1, 2018 restated									
Current portion	137	30	27	21	102	71	388	13	401
Non-current portion	409	125	34	94	96	164	922	125	1,047
TOTAL PROVISIONS FOR OTHER LIABILITIES AND INVESTMENT-RELATED LIABILITIES	**546**	**155**	**61**	**115**	**198**	**235**	**1,310**	**138**	**1,448**
Changes during the year									
Additions	122	11	148	35	71	51	438		438
Reversals	(3)	(2)	(8)	(14)	(23)	(53)	(103)		(103)
Utilizations	(126)	(13)	(42)	(31)	(54)	(49)	(315)		(315)
Changes in Group structure	0	2	(32)	0	0	1	(29)		(29)
Other changes (reclassifications and translation adjustments)	25	0	(4)	(2)	2	(6)	15	35	50
TOTAL CHANGES	**18**	**(2)**	**62**	**(12)**	**(4)**	**(56)**	**6**	**35**	**41**
At December 31, 2018 restated									
Current portion	127	28	95	19	102	73	444	11	455
Non-current portion	437	125	28	84	92	106	872	162	1,034
TOTAL PROVISIONS FOR OTHER LIABILITIES AND INVESTMENT-RELATED LIABILITIES	**564**	**153**	**123**	**103**	**194**	**179**	**1,316**	**173**	**1,489**
Changes during the year									
Additions	128	20	85	31	63	70	397		397
Reversals	(8)	(6)	(18)	(10)	(21)	(18)	(81)		(81)
Utilizations	(122)	(9)	(112)	(21)	(37)	(44)	(345)		(345)
Changes in Group structure	0	(7)	18	(1)	(3)	(10)	(3)		(3)
Other changes (reclassifications and translation adjustments)	11	7	4	(1)	6	(16)	11	3	14
Liabilities held for sale	0	0	(2)	0	(1)	1	(2)		(2)
TOTAL CHANGES	**9**	**5**	**(25)**	**(2)**	**7**	**(17)**	**(23)**	**3**	**(20)**
At December 31, 2019									
Current portion	56	32	54	18	106	65	331	12	343
Non-current portion	517	126	44	83	95	97	962	164	1,126
TOTAL PROVISIONS FOR OTHER LIABILITIES AND INVESTMENT-RELATED LIABILITIES	**573**	**158**	**98**	**101**	**201**	**162**	**1,293**	**176**	**1,469**

* *At December 31, 2019, the provision for claims and litigation in the United States mainly covered lawsuits relating to asbestos (€513 million versus €496 million at December 31, 2018) and PFOA (€21 million versus €30 million at December 31, 2018).*

8.1.1 Provisions for claims and litigation

At December 31, 2019 and 2018, provisions for claims and litigation mainly covered asbestos- and PFOA-related lawsuits filed against the Group. These provisions are described in further detail in note 8.2 “Contingent liabilities and litigation”.

8.1.2 Provisions for environmental risks

These provisions cover costs relating to environmental protection measures, as well as site rehabilitation and clean-up costs.

8.1.3 Provisions for restructuring costs

Provisions for restructuring costs amounted to €98 million at December 31, 2019 (December 31, 2018: €123 million), including net additions of €67 million during the year.

8.1.4 Provisions for personnel expenses

These provisions primarily cover indemnities due to employees that are unrelated to the Group’s reorganization plans.

8.1.5 Provisions for customer warranties

These provisions cover the Group’s commitments under warranties granted to customers mainly in the United States. They are determined on a statistical basis using a range of criteria and take into account contractual warranty payments made in prior years in the business and region concerned. In addition, specific provisions may be set aside for identified contingencies in the context of a specific claim.

8.1.6 Provisions for other contingencies

At December 31, 2019, provisions for other contingencies amounted to €162 million (December 31, 2018: €179 million) and mainly concerned France (€43 million), Brazil (€41 million), the United States (€38 million), and Italy (€12 million).

8.1.7 Investment-related liabilities

Investment-related liabilities correspond to commitments to purchase minority interests, liabilities relating to the acquisition of shares in Group companies, and minority shareholder puts.

In 2019, changes in investment-related liabilities primarily concerned minority shareholder puts.

8.2 Contingent liabilities and litigation

8.2.1 Antitrust law and related proceedings

Legal provisions covering competition apply to the Group companies in countries in which it operates. Violation of competition law exposes the Group to fines and, in certain countries, potential criminal sanctions on the Group and its employees involved. Any litigation filed by a competition authority could, in the event of conviction, give rise to the payment of fines and potentially damages, which is likely to have significant impact on the Group’s reputation, financial situation and operating results.

The Saint-Gobain Group is firmly committed to opposing any practice that might violate competition rules and has long applied the principle of zero tolerance. A plan for compliance with competition law (the “Competition Plan”) has been in place within the Group since 2007.

8.2.1.1 Investigation by the Swiss Competition Commission in the sanitary products wholesale industry

In November 2011, the Swiss Competition Commission (Commission Suisse de la Concurrence) opened an investigation into anti-competitive practices in the sanitary products wholesale industry. In May 2014, the Commission Secretariat issued a notice of complaints against Sanitas Troesch and other wholesalers in the industry alleging that Sanitas Troesch and some of its competitors had, among other things, agreed in 2005 and 2012 to lower gross prices.

The total fine imposed on all companies involved is CHF 80 million. For Sanitas Troesch, the fine is CHF 28.5 million. Sanitas Troesch appealed this decision on May 2, 2016 and continues to firmly refute the claims made. The hearing took place before the Federal Administrative Court in January 2020 and the date on which the Federal Administrative Court will issue its decision is not yet known. However, a provision for claims and litigation was recognized at December 31, 2015 in an amount equivalent to the fine (unchanged at December 31, 2019).

8.2.1.2 Investigation by the French Competition Authority in the building insulation products industry

On August 6, 2014, the French Competition Authority sent a statement of objections to Saint-Gobain Isover and Compagnie de Saint-Gobain (as parent company of the Saint-Gobain Group). A hearing took place on May 11, 2016, whereupon the Competition Authority sent the case back for further investigation in light of the arguments put forward by Saint-Gobain Isover and Compagnie de Saint-Gobain. In October 2018, Saint-Gobain Isover and Compagnie de Saint-Gobain received a second statement of objections, in which the Competition Authority alleges anti-competitive practices in the building insulation products market, between 2001 and 2013.

Saint-Gobain Isover and Compagnie de Saint-Gobain reject the allegations in their response to the second statement of objections which was filed in January 2019.

A new report was sent by the Authority at the end of 2019, which gave rise to comments in response from Saint-Gobain Isover and Compagnie de Saint-Gobain on February 11, 2020.

To date, no decision of the French Competition Authority has been issued on the merits.

On the civil law front, Actis served in March 2013 a damages claim on Saint-Gobain Isover, the Centre Scientifique et Technique du Bâtiment, and the FILMM before the Paris Civil Court (*Tribunal de grande instance*) based on the facts being investigated by the Competition Authority. In an order dated December 16, 2014, the pre-trial judge declared a stay of proceedings while waiting for the decision from the Competition Authority.

8.2.2 Asbestos-related litigation

Current legal actions related to asbestos are described below.

8.2.2.1 Asbestos-related litigation in France

Inexcusable fault lawsuits

In France, eight further individual lawsuits were filed in 2019 by former employees (or persons claiming through them) of Everite and Saint-Gobain PAM – which in the past had carried out fiber-cement operations – for asbestos-related occupational diseases that affect or have affected them. As of December 31, 2019, a total of 830 such lawsuits had been issued against the two companies since 1996 with the aim of obtaining supplementary compensation over and above the amounts paid by the French Social Security authorities in this respect.

As of December 31, 2019, 794 of these 830 lawsuits had been completed in terms of both liability and quantum. In all these cases, the employers were held liable on the grounds of "inexcusable fault".

Compensation paid by Everite and Saint-Gobain PAM in settlement of these lawsuits totaled approximately €5 million.

Concerning the 36 lawsuits outstanding against Everite and Saint-Gobain PAM at December 31, 2019, one has been completed in terms of both liability and quantum, but is still pending on the determination of who will pay the compensation due.

Out of the 35 remaining lawsuits, at December 31, 2019, the procedures relating to the merits of 33 cases were at different stages, with five in the process of being investigated by the French Social Security authorities and 28 pending before the Civil Courts (*Tribunaux de Grande Instance*), which since January 1st, 2019 have been substituted to the social security courts as competent courts. The last two actions have been cancelled but the plaintiffs may request their restoration at any time within a two-year period following their cancellation.

In addition, as of December 31, 2019, 249 similar suits had been filed since the outset of the litigation by current or former employees, or persons claiming through them, of 13 French companies of the Group (excluding suits against companies that are no longer part of the Group), in particular by current or former employees who used equipment containing asbestos to protect themselves against heat from furnaces.

As of December 31, 2019, 221 lawsuits had been completed. In 138 of these cases, the employer was held liable for "inexcusable fault".

At the same date, compensation paid by these companies totaled approximately €8 million.

As regards the 28 suits outstanding at December 31, 2019, three cases were still being investigated by the French Social Security authorities and 22 were being tried – including 18 pending before the Civil Courts (*Tribunaux de Grande Instance*) and four before the Appeal Courts. Lastly, three actions have been cancelled but the plaintiffs may request their restoration at any time within a two-year period following their cancellation.

Anxiety claims

Eight of the Group's French subsidiaries, including six that operate or have operated facilities in France classified as containing asbestos, are the subject of damages claims that are different from those described above.

"Facilities classified as containing asbestos" are defined as industrial facilities that have been closed or are still operating, which previously manufactured materials containing asbestos or used protection and insulation equipment containing asbestos and that are included by ministerial decree on the official list of facilities whose current or former employees are entitled to the early-retirement benefit paid to asbestos workers (ACAATA).

As of December 31, 2019, a total of 824 suits had been brought by current or former employees claiming compensation for prejudice of anxiety suffered as a result of their alleged exposure to asbestos. None of these plaintiffs were suffering from an asbestos-related disease and some of them were not receiving the ACAATA benefit. Of these 824 lawsuits, 720 have been finally disposed of, representing total amount of compensation of €7.6 million at December 31, 2019. The remaining 104 lawsuits are pending before the competent labor tribunals or appeal courts.

It should be clarified that the above figures do not take into account suits filed against companies that are no longer part of the Group.

The provision related to the asbestos-related litigation in France amounted to €4.1 million as of December 31, 2019 (€4.2 million as of December 31, 2018).

8.2.2.2 Asbestos-related litigation in the United States

In the United States, several companies that once manufactured products containing asbestos such as asbestos-cement pipes, roofing products and specialized insulation, have been facing legal action from persons other than their employees or former employees. These claims for compensatory – and in some cases punitive damages – are based on alleged exposure to these products, although in many instances the claimants cannot demonstrate any specific exposure to one or more products, or any specific illness or physical disability. The vast majority of these claims are made simultaneously against many other non-Group entities that have been manufacturers, distributors, installers or users of products containing asbestos.

Developments in 2019

Approximately 2,600 new asbestos-related claims were filed against CertainTeed Corporation in the United States in 2019, stable compared to 2018.

Virtually all lawsuits involving CertainTeed have either been settled out of court or dismissed. Around 2,500 of the pending claims were settled in 2019, compared to 4,300 in 2018 and 3,900 in 2017. Taking into account the number of claims outstanding at the end of 2018 (32,600), new claims arising during the year and settled claims, some 32,700 claims remain outstanding on active court dockets at December 31, 2019. A large number of these pending claims were filed more than five years ago and many of these claims were likely abandoned or otherwise lack merit.

Compensation paid in respect of these claims against CertainTeed Corporation (including claims settled prior to 2019 but only paid out in 2019 as well as claims fully settled and paid out in 2019), as well as compensation paid in 2019 by other Group businesses in the United States in connection with asbestos litigation, amounted to US$59 million (compared to US$67 million in 2018 and US$76 million in 2017).

Action taken to achieve equitable and permanent Resolution of the former CertainTeed Corporation's legacy asbestos liabilities in the United States

DBMP LLC, an affiliate of CertainTeed LLC based in North Carolina, that holds the legacy asbestos liabilities of the former CertainTeed Corporation, announced that it filed, on January 23, 2020, a voluntary petition for relief under Chapter 11 of the U.S. Bankruptcy Code in the U.S. Bankruptcy Court for the Western District of North Carolina in Charlotte in an effort to achieve a certain, final and equitable Resolution of all current and future claims arising from the asbestos-related liabilities of the former CertainTeed Corporation.

DBMP LLC intends to seek court authority to establish a trust under Section 524 (g) of the U.S. Bankruptcy Code – a specific provision that is applicable to companies that face substantial numbers of asbestos-related claims – to achieve a fair and equitable Resolution of its asbestos-related liabilities. Upon establishment of the trust, current and future plaintiffs with qualifying claims will be able to receive faster payment of their claims without the delay, stress and uncertainty of litigation in the tort system; at the same time, the creation and funding of such a trust will permanently resolve DBMP LLC's liabilities.

During the course of this bankruptcy process, which can take 3 to 8 years, all asbestos litigation will be stayed and all related costs suspended, allowing DBMP LLC the time and protection to negotiate an agreement to be approved on behalf of all claimants and by the court.

This action has been taken as a result of the increasing risks presented in the US tort system. Despite the aging of the population and lessening opportunity for claimants to assert legitimate claims of exposure to the former CertainTeed Corporation asbestos-containing products, naming practices in the tort system continued to result in a steady volume of claims against DBMP LLC, with no foreseeable end in sight and, in general, an escalation of settlement demands and verdicts.

Impact on the Group's financial statements

The Group has recorded the estimated costs related to the Resolution of the DBMP LLC bankruptcy proceedings. This amount, determined with the assistance of external experts and advisors, amounts to $576 million as of December 31, 2019. The provision for asbestos-related litigation recorded in the accounts of the former CertainTeed Corporation in the United States amounted to $568 million as of December 31, 2018.

At this stage of the proceedings, the stay of litigation as of January 23, 2020 results in all legal costs and indemnity payments related to DBMP LLC's numerous asbestos tort claims being suspended, and no more annual charges in relation to such claims ($99 million, corresponding to €88 million, in 2019).

8.2.2.3 Situation in Brazil

In Brazil, former employees of Brasilit, that once manufactured fiber cement containing asbestos, suffering from asbestos-related occupational illnesses are offered, depending on the case, either financial compensation alone or lifetime medical assistance combined with financial compensation. Around 1,200 contractual instruments have accordingly been signed to date.

Two class actions were initiated against Brasilit in 2017 by two associations defending former employees exposed to asbestos at the São Caetano (São Paulo state) and Recife (Pernambouc state) plants, asking for their medical assistance and compensation to be revised. These suits are currently at an early stage and first court decisions have not yet been made.

A third class action was initiated against Brasilit in 2019 in Capivari (State of São Paulo) by the Labor prosecutor asking for health insurance, as well as collective moral damages, in favor of employees, former employees and their respective families, as well as subcontractors who were exposed to asbestos. This suit is at an early stage.

Brasilit is subject to controls by the Ministry of Labor and continues to comply with all of its legal obligations with regard to medical assistance for its current and former employees.

In November 2017, the Supreme Court of Brazil decided to ban asbestos definitively across the country. Brasilit stopped using asbestos voluntarily as early as 2002.

8.2.3 Environmental disputes

PFOA matters in the United States

Levels of PFOA (perfluorooctanoic acid) in excess of U.S. Environmental Protection Agency (EPA) health advisories or state maximum contaminent levels for drinking water have been found in municipal water systems and private wells near current Saint-Gobain Performance Plastics (SG PPL) facilities in Hoosick Falls (New York) and Merrimack (New Hampshire), and two former facilities in North Bennington (Vermont) in the United States. PFOA and PTFE (polytetrafluorethylene) have never been manufactured by these plants. SG PPL is a processor of PTFE which it purchases from third party suppliers and which in the past contained traces of PFOA.

SG PPL has voluntarily provided bottled water in all three communities, installed point-of-entry treatment systems to residents and businesses in the Hoosick Falls and North Bennington areas, installed carbon filtration systems on the municipal water supply in Hoosick Falls and agreed to fund the installation of a carbon filtration system on the Merrimack Valley District's municipal water supply. In addition, it has voluntarily funded both completed and on-going construction of water line extensions in certain communities in the Merrimack and Bennington areas. The investigations are on-going and the scope of responsibility for SG PPL arising from environmental remediation and clean-up obligations at these sites has not yet been established. Without admitting liability, SGPPL has signed consent orders with the environmental regulators in New York in 2016, in Vermont in 2017, and in New Hampshire in 2018, pursuant to which SGPPL has agreed to complete investigations, implement interim or final remediation measures at its current and former facilities and in the case of Vermont and New Hampshire, fund construction of water lines. Responsibility, if any, is expected to be shared with other parties as regards in particular the Hoosick Falls site.

PFOA-related lawsuits alleging both health-related and economic damages claims have been filed in civil courts in New York, New Hampshire and Vermont, some of which are in the form of proposed class actions. It is difficult to predict the timing or outcome of any such litigation, or whether any additional litigation will be brought against SG PPL.

On December 31, 2019, the provision recorded by the Company in respect of this matter amounts to €21 million.

8.2.4 Other contingent liabilities

Grenfell Tower fire in the United Kingdom

Celotex provides insulation materials for specific applications for the building and construction industry.

Insulation materials from two Celotex ranges were purchased *via* distributors and used in refurbishing Grenfell Tower, London in 2015/2016, including as one component of the rainscreen cladding system designed and installed (by third parties) on the tower's external facade.

Following the Grenfell Tower fire on June 14, 2017, a Public Inquiry is underway, which will consider, among other things, the modifications made to the building as part of the refurbishment, the role played by the various construction professionals, and the information provided by the manufacturers of the products used. A criminal investigation into the circumstances of the fire is also in progress.

There are a large number of issues and circumstances that need to be explored and the implications for Celotex are unlikely to be known for some time. The extent to which Celotex may incur civil or criminal liability in connection with the production, marketing, supply or use of its products is currently unclear.

8.2.5 Other proceedings and disputes

Some of the Group's companies may also be the subject of other claims made by their employees or by the tax authorities, or in the context of the enforcement of seller's warranties granted by the Group to the buyers of divested businesses. Apart from the proceedings and litigation described above, to the best of the Company's knowledge, no other government, court or arbitration proceedings exist (including pending proceedings or proceedings where the Company and/or the Group might be threatened) which could have or have had, in the last 12 months, a significant impact on the financial position or profitability of the Company and/or Group.

NOTE 9 Financing and financial instruments

9.1 Financial risks

9.1.1 Liquidity risk

9.1.1.1 Liquidity risk on financing

In a crisis environment, the Group might be unable to raise the financing or refinancing needed to cover its investment plans on the credit or capital markets, or to obtain such financing or refinancing on acceptable terms.

The Group's overall exposure to liquidity risk on its net debt is managed by the Treasury and Financing Department of Compagnie de Saint-Gobain, the Group's parent company. The subsidiaries generally enter into short- or long-term financing arrangements with Compagnie de Saint-Gobain or with the regional cash pools.

The Group's policy is to ensure that the Group's financing will be rolled over at maturity and to optimize borrowing costs. Long-term debt therefore systematically represents a high percentage of overall debt. At the same time, the maturity schedules of long-term debt are set in such a way that replacement capital market issues are spread over time.

The Group's main source of long-term financing is constituted by bond issues which generally are issued under the Medium Term Notes program. The Group also uses lease financing, perpetual bonds, participating securities, long-term securitization program, a factoring program and bank borrowings.

Short-term debt is composed of borrowings under Negotiable European Commercial Paper (NEU CP), and occasionally Euro Commercial Paper and US Commercial Paper, but also includes receivables securitization programs and bank financing. Financial assets comprise marketable securities and cash and cash equivalents.

Compagnie de Saint-Gobain's liquidity position is secured by confirmed syndicated lines of credit.

A breakdown of long- and short-term debt by type and maturity is provided in note 9.3, which also details the main characteristics of the Group's financing programs and confirmed credit lines.

Saint-Gobain's long-term debt issues have been rated BBB with a stable outlook by Standard & Poor's since April 30, 2014 and Baa2 with a stable outlook by Moody's since June 2, 2014.

There is no guarantee that the Company will be in a position to maintain its credit risk ratings at current levels. Any deterioration in the Group's credit risk rating could limit its capacity to raise funds and could lead to higher rates of interest on future borrowings.

9.1.1.2 Liquidity risk on investments

Short-term investments consist of bank deposits and mutual fund units. To reduce liquidity and high volatility risks, whenever possible, the Group invests in money market and/or bond funds.

9.1.2 Financial counterparty credit risk

The Group is exposed to the risk of default by the financial institutions that manage its cash or other financial instruments, since such default could lead to losses for the Group.

The Group limits its exposure to risk of default by its counterparties by dealing solely with reputable financial institutions and regularly monitoring their credit ratings. However, the credit quality of a financial counterparty can change rapidly, and a high credit rating cannot eliminate the risk of a rapid deterioration of its financial position. As a result, the Group's policy in relation to the selection and monitoring of its counterparties is unable to entirely eliminate exposure to a risk of default.

To limit the Group's exposure to counterparty credit risk, the Treasury and Financing Department deals primarily with counterparties with a long-term rating of A- or above from Standard & Poor's or A3 or above from Moody's. Concentrations of credit risk are also closely monitored to ensure that they remain at reasonable levels, taking into account the relative CDS (Credit Default Swap) level of each counterparty.

9.1.3 Market risks

9.1.3.1 Energy and commodity risk

The Group is exposed to changes in the price of the energy it consumes and the raw materials used in its activities. Its energy and commodity hedging programs may be insufficient to protect the Group against significant or unforeseen price swings that could result from the prevailing financial and economic environment.

The Group may limit its exposure to energy price fluctuations by using swaps and options to hedge part of its fuel oil, natural gas and electricity purchases. The swaps and options are mainly contracted in the functional currency of the entities concerned. Hedges of fuel oil, gas and electricity purchases are contracted in accordance with the Group's purchasing policy.

These hedges (excluding fixed-price purchases negotiated directly with suppliers by the Purchasing Department) are generally arranged by the Group Treasury and Financing Department (or with regional treasury departments) in accordance with instructions received from the Purchasing Department.

From time to time, the Group may enter into contracts to hedge purchases of certain commodities or engage in the CO_2 emissions market, in accordance with the same principles as those outlined above for energy purchases.

Note 9.4 provides a breakdown of instruments used to hedge energy and commodity risks.

9.1.3.2 Interest rate risk

The Group's overall exposure to interest rate risk on consolidated debt is managed by the Treasury and Financing Department of Compagnie de Saint-Gobain.

The Group's policy is aimed at fixing the cost of its medium-term debt against interest rate risk and optimizing borrowing costs. According to Group policy, the derivative financial instruments used to hedge these risks can include interest rate swaps, cross-currency swaps, options – including caps, floors and swaptions – and forward rate agreements.

The table below shows the sensitivity at December 31, 2019 of pre-tax income and pre-tax equity to fluctuations in the interest rate on the Group's net debt after hedging:

(in EUR million)	**Impact on pre-tax income**	**Impact on pre-tax equity**
Interest rate increase of 50 basis points	13	11
Interest rate decrease of 50 basis points	(13)	(11)

Note 9.4 to the consolidated financial statements provides a breakdown of interest rate risk hedging instruments and of gross debt by type of interest (fixed or variable) after hedging.

9.1.3.3 Foreign exchange risk

The currency hedging policies described below could be insufficient to protect the Group against unexpected or sharper than expected fluctuations in exchange rates resulting from economic and financial market conditions.

Foreign exchange risks are managed by hedging virtually all transactions entered into by Group entities in currencies other than the functional currency of the particular entity. Compagnie de Saint-Gobain and its subsidiaries may use forward contracts and options to hedge exposures arising from current and forecast transactions.

The subsidiaries set up contracts generally through the Group's parent company, Compagnie de Saint-Gobain, which then carries out the corresponding forex hedging transaction on their behalf, or through the regional cash pools. Failing this, contracts are taken out with one of the subsidiary's banks.

Most forward contracts have short maturities of around three months. However, forward contracts taken out to hedge firm orders may have longer terms.

The Group monitors its exposure to foreign exchange risk using a monthly reporting system that captures the foreign exchange positions taken by its subsidiaries. At December 31, 2019, 98% of the Group's foreign exchange exposure eligible for hedging was hedged.

The residual net foreign exchange exposure of subsidiaries for the currencies presented below was as follows at December 31, 2019:

(in EUR millions equivalent)	Long	Short
EUR	2	11
USD	7	9
Other currencies	0	2
TOTAL	**9**	**22**

The table below gives an analysis, as of December 31, 2019, of the sensitivity of the Group's pre-tax income to a 10% increase in the exchange rates of the following currencies given the subsidiaries' residual net foreign exchange exposure:

Currency of exposure (in EUR millions equivalent)	Impact on pre-tax income
EUR	(0.9)
USD	(0.2)
Other currencies	(0.2)
TOTAL	**(1.3)**

Assuming that all other variables remained unchanged, a 10% fall in the exchange rates for these currencies at December 31, 2019 would have the opposite impact.

Note 9.4 provides a breakdown of foreign exchange risk hedging instruments.

9.1.3.4 Saint-Gobain share price risk

The Group is exposed to changes in the Saint-Gobain share price as a result of its performance unit incentive plans. To reduce its exposure to fluctuations in the share price, the Group uses hedging instruments such as equity swaps.

As a result, if the price of the Saint-Gobain share changes, any changes in the expense recorded in the income statement will be fully offset by the hedges in place.

Note 9.4 provides a breakdown of these share price risk hedging instruments.

9.2 Net financial income (expense)

Net financial income (expense) includes borrowing and other financing costs, income from cash and cash equivalents, interest on lease liabilities, interest cost for pensions and other post-employment benefit plans net of the return on plan assets, and other financial income and expense.

Net financial income (expense) in 2019 and 2018 includes:

(in EUR million)	2019	2018 restated
Borrowing costs, gross	(300)	(297)
Income from cash and cash equivalents	27	22
BORROWING COSTS, NET, EXCLUDING LEASE LIABILITIES	**(273)**	**(275)**
Interest on lease liabilities	(71)	(77)
TOTAL BORROWING COSTS, NET	**(344)**	**(352)**
Interest cost – pension and other post-employment benefit obligations	(321)	(303)
Return on plan assets	266	244
INTEREST COST – PENSION AND OTHER POST-EMPLOYMENT BENEFIT OBLIGATIONS, NET	**(55)**	**(59)**
Other financial expense	(109)	(107)
Other financial income*	40	633
OTHER FINANCIAL INCOME AND EXPENSE	**(69)**	**526**
NET FINANCIAL INCOME (EXPENSE)	**(468)**	**115**

* *Including €601 million in 2018 for the SWH/Sika transaction and €28 million in 2019 in dividends received from Sika.*

9.3 Net debt

9.3.1 Long- and short-term debt

9.3.1.1 Long-term debt

Long-term debt includes bonds, perpetual bonds, participating securities, long-term securitization and all other types of long-term financial liabilities, including the fair value of interest rate hedging derivatives.

Under IAS 32, the distinction between financial liabilities and equity is based on the substance of the contracts concerned rather than their legal form. As a result, participating securities are classified as debt.

At the end of the reporting period, long-term debt (excluding interest rate derivatives) is measured at amortized cost. Premiums and issuance costs are amortized using the effective interest method.

9.3.1.2 Short-term debt

Besides the current portion of long-term debt described above, short-term debt includes financing programs such as commercial paper, short-term securitization, bank overdrafts and other short-term financial liabilities including the fair value of derivatives related to debt and accrued interest on borrowings.

Short-term debt, excluding derivatives related to debt, is measured at amortized cost at the end of the reporting period. Premiums and issuance costs are amortized using the effective interest rate method.

9.3.1.3 Lease liabilities

Lease liabilities represent obligations to make lease payments in accordance with IFRS 16.

9.3.1.4 Cash and cash equivalents

Cash and cash equivalents mainly consist of bank accounts and marketable securities that are short-term (i.e., generally with maturities of less than three months), highly liquid investments readily convertible into known amounts of cash and subject to an insignificant risk of changes in value.

Marketable securities are measured at fair value through profit or loss.

Long- and short-term debt consists of the following:

(in EUR million)	Dec. 31, 2019	Dec. 31, 2018 restated*
Bond issues	9,505	8,309
Perpetual bonds and participating securities	203	203
Long-term securitization	350	400
Other long-term financial liabilities	228	244
NON-CURRENT PORTION OF LONG-TERM DEBT	**10,286**	**9,156**
Bond issues	1,480	949
Long-term securitization	150	100
Other long-term financial liabilities	121	118
CURRENT PORTION OF LONG-TERM DEBT	**1,751**	**1,167**
Short-term financing programs (*NEU CP, US CP, Euro CP*)	0	0
Short-term securitization	0	160
Bank overdrafts and other short-term financial liabilities	224	319
SHORT-TERM DEBT	**224**	**479**
TOTAL GROSS DEBT EXCLUDING LEASE LIABILITIES	**12,261**	**10,802**
Lease liabilities	3,217	3,075
TOTAL GROSS DEBT	**15,478**	**13,877**
Cash at banks	(2,052)	(1,551)
Mutual funds and other marketable securities	(2,935)	(1,137)
CASH AND CASH EQUIVALENTS	**(4,987)**	**(2,688)**
TOTAL NET DEBT	**10,491**	**11,189**

* *Figures have been restated for lease liabilities.*

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Changes in the Group's long-term debt (excluding lease liabilities) can be analyzed as follows:

	Dec. 31, 2018 restated*	Cash impact		No cash impact			Dec. 31, 2019
(in EUR million)		Increases	Decreases	Changes in Group structure	Translation adjustments	Other	
Non-current portion of long-term debt	9,156	2,704	(91)	4	53	(1,540)	10,286
Current portion of long-term debt	1,167	4	(954)	0	0	1,534	1,751
TOTAL LONG-TERM DEBT	**10,323**	**2,708**	**(1,045)**	**4**	**53**	**(6)**	**12,037**

* *Figures have been restated for lease liabilities.*

The main changes with an impact on cash are described in note 9.3.3. The main change with no cash impact in the “Other” column relates to the reclassification of debt maturing within 12 months in the current portion of long-term debt.

The fair value of gross long-term debt (including the current portion), excluding lease liabilities, managed by Compagnie de Saint-Gobain amounts to €12 billion at December 31, 2019 (for a carrying amount of €11.2 billion).

The fair value of bonds corresponds to the market price on the last day of the year. For other borrowings, fair value is considered as equal to the amount repayable.

9.3.2 Gross debt repayment schedule

The schedule of the Group’s total gross debt as of December 31, 2019 is as follows:

(in EUR million)	Currency	Within 1 year	1 to 5 years	Beyond 5 years	Total
Bond issues	EUR	1,480	4,196	4,666	10,342
	GBP		352	291	643
Perpetual bonds and participating securities	EUR			203	203
Long-term securitization	EUR	150	350		500
Other long-term financial liabilities	All currencies	16	71	157	244
Accrued interest on long-term debt	All currencies	105			105
TOTAL LONG-TERM DEBT		**1,751**	**4,969**	**5,317**	**12,037**
SHORT-TERM DEBT	**All currencies**	**224**	**0**	**0**	**224**
TOTAL GROSS DEBT EXCLUDING LEASE LIABILITIES		**1,975**	**4,969**	**5,317**	**12,261**
Lease liabilities	All currencies	665	1,489	1,063	3,217
TOTAL GROSS DEBT		**2,640**	**6,458**	**6,380**	**15,478**

At December 31, 2019, future interest payments on gross long-term debt (excluding lease liabilities) managed by Compagnie de Saint-Gobain (short and long-term) can be broken down as follows:

(in EUR million)	Within 1 year	1 to 5 years	Beyond 5 years	Total
Future interest payments on gross long-term debt	207	608	603	1,418

Interest on perpetual bonds and on participating securities is calculated up to 2049.

9.3.3 Bonds

Compagnie de Saint-Gobain issued:

- on March 15, 2019:
  - €750 million worth of 0.625% fixed-interest bonds, maturing on March 15, 2024,
  - €750 million worth of 1.875% fixed-interest bonds, maturing on March 15, 2031. The nominal amount of this bond issue was increased to €1,044 million through three additions on March 26 (€124 million), on April 5 (€70 million) and on May 15, 2019 (€100 million);
- on March 22, 2019: a €750 million private placement paying floating-rate interest at 3-month Euribor +0.35%, maturing on March 22, 2021;
- on May 3, 2019: a €100 million private placement paying fixed-rate interest of 1.875%, maturing on May 3, 2035.

On September 30, 2019, Compagnie de Saint-Gobain redeemed a bond that had been increased to €950 million with a coupon of 4.5%.

These issues extended the average maturity of Saint-Gobain’s debt while also optimizing average borrowing costs.

9.3.4 Perpetual bonds

In 1985, Compagnie de Saint-Gobain issued 25,000 perpetual bonds with a face value of ECU 5,000 (€5,000 today).

A total of 18,496 perpetual bonds have since been bought back and canceled, and 6,504 perpetual bonds were outstanding at December 31, 2019, representing a total face value of €33 million.

The bonds bear interest at a variable rate (average of interbank rates offered by the five reference banks for six-month euro deposits). The amount paid out per bond in 2019 was €1.6.

The bonds are not redeemable and interest on the bonds is classified as a component of finance costs.

9.3.5 Participating securities

In June 1983, Compagnie de Saint-Gobain issued 1,288,299 non-voting participating securities with a face value of FRF 1,000. Their face value is now €152.45, following their translation into euros in 1999.

A certain number of these participating securities have been bought back over the years. At December 31, 2019, 606,883 securities were still outstanding, with an aggregate face value of €92.5 million.

Interest on the securities ranges from 75% to 125% of the average corporate bond yield (TMO), based on the Group’s consolidated income. The amount paid out per security in 2019 was €1.92.

In April 1984, 194,633 non-voting participating securities were issued with a face value of ECU 1,000 (€1,000 today).

A certain number of these securities have been bought back over the years. At December 31, 2019, 77,516 securities were still outstanding with an aggregate face value of €77.5 million.

Interest comprises (i) a fixed portion of 7.5% paid per year applicable to 60% of the nominal amount of the security, and (ii) a variable portion applicable to the remaining 40% of the nominal amount of the participating security, which is linked to consolidated net income of the previous year and to the reference six-month Libor EUR rate +7/8%. The amount paid per security in 2019 was €60.78, paid in two installments (€33.53 and €27.25).

These participating securities are not redeemable and the interest paid on them is reported under borrowing costs.

9.3.6 Financing programs

The Group has a number of medium- and long-term financing programs (Medium-Term Notes) and short-term financing programs (commercial paper).

At December 31, 2019, issuance under these programs was as follows:

(in EUR million)	Authorized drawings	Authorized limits at Dec. 31, 2019	Balance outstanding at Dec. 31, 2019	Balance outstanding at Dec. 31, 2018
Medium Term Notes	1 to 30 years	15,000	11,129	9,435
NEU CP	up to 12 months	3,000		0
US Commercial Paper	up to 12 months	890*		0
Euro Commercial Paper	up to 12 months	890*		0

* *Equivalent to US$1,000 million based on the exchange rate at December 31, 2019.*

In accordance with market practices, Negotiable European Commercial Paper (NEU CP), US Commercial Paper and Euro Commercial Paper are generally issued with maturities of one to six months. They are treated as variable-rate debt since they are rolled over at frequent intervals.

9.3.7 Syndicated lines of credit

Compagnie de Saint-Gobain has two syndicated lines of credit that are intended to provide a secure source of financing for the Group (including as additional backing for its NEU CP, US Commercial Paper and Euro Commercial Paper programs):

- a €2.5 billion syndicated line of credit, maturing in December 2024, after the exercise of the two one-year rollover options;
- a second €1.5 billion syndicated line of credit also maturing in December 2024 after the exercise of two one-year rollover options.

Based on the Group's current credit rating for long-term debt issues, the two facilities are not subject to any hard covenants.

Neither of these two lines of credit had been drawn down at December 31, 2019.

9.3.8 Receivables securitization programs

The Group has set up a receivables securitization program for up to €500 million through its French subsidiary Point.P Finances GIE.

An amount of €500 million had been drawn under this program at both December 31, 2019 and December 31, 2018. Based on past seasonal fluctuations in receivables included in the program and on the contract's features, €350 million of this amount was classified as non-current and the balance as current.

At December 31, 2018, the Group had another securitization program through its US subsidiary Saint-Gobain Receivables Corporation.

The US program, covering an amount of up to US$400 million, expired on October 16, 2019. It had an equivalent euro value of €160 million at December 31, 2018.

9.3.9 Collateral

At December 31, 2019, €9 million of Group debt was secured by various non-current assets (real estate and securities).

9.3.10 Factoring

The Group has set up several trade receivables factoring programs. Based on an analysis of the risks and rewards within the meaning of IFRS 9, the Group has derecognized virtually all of the receivables sold under these programs. A total of €471 million factored receivables were derecognized at December 31, 2019, compared to €517 million at December 31, 2018.

9.4 Financial instruments

The Group uses interest rate, foreign exchange, energy, commodity and equity derivatives to hedge its exposure to changes in interest rates, exchange rates, and energy, commodity and equity prices that may arise in the normal course of business.

In accordance with IAS 32 and IFRS 9, all such instruments are recognized in the balance sheet and measured at fair value, irrespective of whether or not they are part of a hedging relationship that qualifies for hedge accounting under IFRS 9.

Changes in the fair value of both derivatives that are designated and qualified as fair value hedges and derivatives that do not qualify for hedge accounting during the period are taken to the income statement (in business income and expense for operational foreign exchange derivatives and commodity derivatives not qualifying for hedge accounting, and in net financial income and expense for all other derivatives). However, in the case of derivatives that qualify as cash flow hedges, the effective portion of the gain or loss arising from changes in fair value is recognized directly in equity, and only the ineffective portion is recognized in the income statement.

■ Fair value hedges

Fair value hedge accounting is applied by the Group mainly for derivative instruments which swap fixed rates against variable rates (fixed-for-floating interest rate swaps). These derivatives hedge fixed-rate debts exposed to a fair value risk. In accordance with hedge accounting principles, debt included in a designated fair value hedging relationship is remeasured at fair value and to the extent of the risk hedged. As the loss or gain on the underlying hedged item offsets the effective portion of the gain or loss on the fair value hedge, the income statement is only impacted by the ineffective portion of the hedge.

■ Cash flow hedges

Cash flow hedge accounting is applied by the Group mainly for derivative instruments which fix the cost of future investments (financial assets or property, plant and equipment) and the price of future purchases, mostly gas and fuel oil (commodity swaps) or foreign currencies (foreign exchange forwards). Transactions hedged by these instruments are qualified as highly probable. The application of cash flow hedge accounting allows the Group to defer the impact on the income statement of the effective portion of changes in the fair value of these derivatives by recording them in a hedging reserve in equity. This reserve is reclassified to the income statement when the hedged transaction occurs and the hedged item itself affects income. In the same way as for fair value hedges, cash flow hedging limits the Group's exposure to changes in the fair value of these derivatives to the ineffective portion of the hedge.

■ Derivatives that do not qualify for hedge accounting

Changes in the fair value of derivatives that do not qualify for hedge accounting are recognized in the income statement. Instruments concerned are primarily foreign exchange swaps and foreign exchange forwards.

■ Fair value of financial instruments

The fair value of financial assets and financial liabilities corresponds to their quoted price on an active market (if any): this represents level 1 in the fair value hierarchy defined in IFRS 7 and IFRS 13. The fair value of instruments not quoted in an active market, such as derivatives or financial assets and liabilities, is determined by reference to commonly used valuation techniques such as the fair value of another recent and similar transaction, or discounted cash flow analysis based on observable market inputs. This represents level 2 in the fair value hierarchy defined in IFRS 7 and IFRS 13.

The fair value of short-term financial assets and liabilities is considered as being the same as their carrying amount due to their short maturities.

The following table presents a breakdown of the principal derivatives used by the Group:

	Fair value				Nominal amount by maturity			
(in EUR million)	Derivatives recorded in assets	Derivatives recorded in liabilities	Dec. 31, 2019	Dec. 31, 2018	Within 1 year	1 to 5 years	Beyond 5 years	Dec. 31, 2019
FAIR VALUE HEDGES	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Cash flow hedges								
Currency	1	(1)	0	2	203	0	0	203
Interest rate	0	(78)	(78)	(85)	0	95	374	469
Energy and commodities	1	(5)	(4)	(7)	23	4	0	27
Other risks: equities	0	(2)	(2)	(13)	2	45	0	47
CASH FLOW HEDGES – TOTAL	**2**	**(86)**	**(84)**	**(103)**	**228**	**144**	**374**	**746**
Derivatives not qualifying for hedge accounting mainly contracted by Compagnie de Saint-Gobain								
Currency	5	(5)	0	(2)	2,148	0	0	2,148
Interest rate	0	0	0	0	0	0	0	0
Energy and commodities	0	0	0	0	0	0	0	0
DERIVATIVES NOT QUALIFYING FOR HEDGE ACCOUNTING – TOTAL	**5**	**(5)**	**0**	**(2)**	**2,148**	**0**	**0**	**2,148**
TOTAL	**7**	**(91)**	**(84)**	**(105)**	**2,376**	**144**	**374**	**2,894**

9.4.1 Currency instruments

Currency swaps

The Group uses currency swaps mainly to convert euro-denominated funds into foreign currencies for cash management purposes.

Forward foreign exchange contracts and currency options

Forward foreign exchange contracts and currency options are used to hedge foreign currency transactions, particularly commercial transactions (purchases and sales) and investments.

9.4.2 Interest rate instruments

Interest rate swaps

The Group uses interest rate swaps to convert part of its fixed (variable) rate bank debt and bond debt to variable (fixed) rates.

Cross-currency swaps

The Group uses cross-currency swaps to convert foreign currency debt (euro debt) into euro debt (foreign currency debt).

9.4.3 Energy and commodities

Energy and commodity swaps

Energy and commodity swaps are used to hedge the risk of changes in the price of certain purchases used in Group subsidiaries' operating activities, particularly energy (fuel oil, natural gas and electricity) purchases.

9.4.4 Other risks

Equity derivatives

Equity derivatives are used to hedge the risk of changes in the Saint-Gobain share price in connection with the performance units long-term incentive plan.

9.4.5 Credit value adjustments to derivative instruments

Credit value adjustments to derivative instruments are calculated in accordance with IFRS 13 based on historical probabilities of default derived from calculations performed by a leading rating agency and on the estimated loss given default. At December 31, 2019, credit value adjustments were not material.

9.4.6 Impact on equity of financial instruments qualifying for cash flow hedge accounting

At December 31, 2019, the cash flow hedging reserve carried in equity in accordance with IFRS had a debit balance of €61 million, consisting mainly of:

- a debit balance of €35 million in relation to cross-currency swaps designated as cash flow hedges that are used to convert a GBP bond issue into euros;
- a debit balance of €22 million corresponding to the changes in fair value of interest rate swaps qualified as cash flow hedges;
- a debit balance of €4 million corresponding to changes in the value of energy and raw materials hedges classified as cash flow hedges.

The ineffective portion of cash flow hedging derivatives is not material.

9.4.7 Impact on income of financial instruments not qualifying for hedge accounting

The fair value of derivatives classified as "Financial assets and liabilities at fair value through profit or loss" was zero at December 31, 2019 compared to a loss of €2 million taken to income at December 31, 2018.

9.4.8 Embedded derivatives

The Saint-Gobain Group regularly analyzes its contracts in order to separately identify financial instruments classified as embedded derivatives under IFRS.

At December 31, 2019, no embedded derivatives deemed to be material at Group level were identified.

9.4.9 Group debt structure (excluding lease liabilities)

The weighted average interest rate on total gross debt under IFRS and after hedging (interest rate swaps, currency swaps and cross-currency swaps) was 1.8% at December 31, 2019, compared with 2.3% at December 31, 2018.

The average internal rate of return for the main component of long-term debt before hedging (bonds) was 2.1% at December 31, 2019, compared with 2.4% at December 31, 2018.

The table below presents the breakdown by interest rate (fixed or variable) of the Group's gross debt at December 31, 2019, taking into account interest rate, currency and cross-currency swaps.

	Gross debt, excluding lease liabilities, after hedging		
(in EUR million)	**Variable rate**	**Fixed rate**	**Total**
EUR	1,812	9,438	11,250
Other currencies	473	348	821
TOTAL	**2,285**	**9,786**	**12,071**
(in %)	19%	81%	100%
Accrued interest and other			190
TOTAL GROSS DEBT EXCLUDING LEASE LIABILITIES			**12,261**

9.5 Financial assets and liabilities

Financial assets and liabilities are classified as follows in accordance with IFRS 9:

At December 31, 2019

(in EUR million)	Notes	Financial instruments: Fair value through profit or loss	Fair value through the statement of recognized income and expense	Amortized cost	Total financial instruments	Financial instruments at fair value: Level 1 inputs	Level 2 inputs	Level 3 inputs	Total financial instruments measured at fair value
Trade and other accounts receivable				6,419	6,419				0
Loans, deposits and surety	(7.3)			565	565				0
Equity investments and other	(7.3)		2,658		2,658	2,554		104	2,658
Derivatives recorded in assets		5	2		7		7		7
Cash and cash equivalents		2,935		2,052	4,987	2,935			2,935
TOTAL FINANCIAL ASSETS		**2,940**	**2,660**	**9,036**	**14,636**	**5,489**	**7**	**104**	**5,600**
Trade and other accounts payable				(9,995)	(9,995)				0
Long- and short-term debt				(12,183)	(12,183)				0
Long- and short-term lease liabilities	(3.1) (3.2)			(3,217)	(3,217)				0
Derivatives recorded in liabilities		(5)	(86)		(91)		(91)		(91)
TOTAL FINANCIAL LIABILITIES		**(5)**	**(86)**	**(25,395)**	**(25,486)**	**0**	**(91)**	**0**	**(91)**
FINANCIAL ASSETS AND LIABILITIES – NET		**2,935**	**2,574**	**(16,359)**	**(10,850)**	**5,489**	**(84)**	**104**	**5,509**

At December 31, 2018 restated

(in EUR million)	Notes	Financial instruments: Fair value through profit or loss	Fair value through the statement of recognized income and expense	Amortized cost	Total financial instruments	Financial instruments at fair value: Level 1 inputs	Level 2 inputs	Level 3 inputs	Total financial instruments measured at fair value
Trade and other accounts receivable				6,570	6,570				0
Loans, deposits and surety	(7.3)			620	620				0
Equity investments and other	(7.3)		1,714		1,714	1,685		29	1,714
Derivatives recorded in assets		3	4		7		7		7
Cash and cash equivalents		1,137		1,551	2,688	1,137			1,137
TOTAL FINANCIAL ASSETS		**1,140**	**1,718**	**8,741**	**11,599**	**2,822**	**7**	**29**	**2,858**
Trade and other accounts payable				(9,969)	(9,969)				0
Long- and short-term debt				(10,715)	(10,715)				0
Long- and short-term lease liabilities	(3.1) (3.2)			(3,075)	(3,075)				0
Derivatives recorded in liabilities		(5)	(107)		(112)		(112)		(112)
TOTAL FINANCIAL LIABILITIES		**(5)**	**(107)**	**(23,759)**	**(23,871)**	**0**	**(112)**	**0**	**(112)**
FINANCIAL ASSETS AND LIABILITIES – NET		**1,135**	**1,611**	**(15,018)**	**(12,272)**	**2,822**	**(105)**	**29**	**2,746**

IFRS 13 ranks the inputs used to determine fair value:

- level 1: inputs resulting from quoted prices on an active market for identical instruments;
- level 2: inputs other than Level 1 inputs that can be observed directly or indirectly;
- level 3: all other non-observable inputs.

NOTE 10 Shareholders' equity and earnings per share

10.1 Equity

10.1.1 Equity

As of December 31, 2019, the number of shares composing the capital stock of Saint-Gobain was 544,683,451 shares with a par value of €4 (546,585,004 shares at December 31, 2018).

10.1.2 Additional paid-in capital and legal reserve

This item includes capital contributions in excess of the par value of capital stock as well as the legal reserve, which corresponds to a cumulative portion of the yearly net income of Compagnie de Saint-Gobain.

10.1.3 Retained earnings and consolidated net income

Retained earnings and consolidated net income correspond to the Group's share in the undistributed earnings of all consolidated companies.

10.1.4 Treasury stock

Treasury stock is measured at cost and recorded as a deduction from equity. Gains and losses on disposals of treasury stock are recognized directly in equity and have no impact on net income for the period.

Forward purchases of treasury stock are treated in the same way. When a fixed number of shares is purchased forward at a fixed price, this amount is recorded in "Other liabilities" against a deduction from equity under "Retained earnings and net income for the year".

Saint-Gobain shares held or controlled by Compagnie de Saint-Gobain and Saint-Gobain Corporation are shown as a deduction from equity under "Treasury stock" at acquisition cost.

The liquidity agreement signed with Exane BNP Paribas on November 16, 2007 and implemented on December 3, 2007 for a period up to December 31, 2007 has been automatically renewed since that date.

At December 31, 2019, 2,595,723 shares were held in treasury (December 31, 2018: 2,705,737 shares). In 2019, the Group acquired 9,777,969 shares (2018: 14,050,245 shares) directly on the market and 1,676,229 shares were sold (2018: 1,654,431 shares). Lastly, 8,211,754 shares were canceled in 2019 and 12,461,449 shares in 2018.

For the purposes of a compensation plan set up in January 2008 for certain employees in the United States, Compagnie de Saint-Gobain shares are held by the trustee, Wachovia Bank, National Association. In the consolidated financial statements, these shares are treated as being controlled by Saint-Gobain Corporation.

10.1.5 Dividends

The Annual Shareholders' Meeting of June 6, 2019 approved the recommended dividend payout for 2018 representing €1.33 per share.

10.2 Earnings per share

10.2.1 Basic earnings per share

Basic earnings per share are calculated by dividing net income by the weighted average number of shares of the Group outstanding during the period.

Basic earnings per share are as follows:

	2019	2018 restated
Group share of net income *(in EUR million)*	1,406	397
Weighted average number of shares in issue	542,079,771	547,105,985
BASIC EARNINGS PER SHARE, GROUP SHARE *(in EUR)*	**2.59**	**0.73**

10.2.2 Diluted earnings per share

Diluted earnings per share are calculated by adjusting earnings per share and the average number of shares outstanding for the effects of all potential dilutive common shares, such as stock options and performance shares.

Diluted earnings per share are as follows:

	2019	2018 restated
Group share of net income *(in EUR million)*	1,406	397
Weighted average number of shares assuming full dilution	545,159,839	550,016,438
DILUTED EARNINGS PER SHARE, GROUP SHARE *(in EUR)*	**2.58**	**0.72**

The weighted average number of shares assuming full dilution is calculated based on the weighted average number of shares outstanding, assuming conversion of all dilutive instruments. The Group's dilutive instruments include stock options and performance share grants corresponding to a weighted average of 8,287 and 3,071,782 shares, respectively, at December 31, 2019.

NOTE 11 Tax

11.1 Income taxes

Current income tax is the estimated amount of tax payable in respect of income for a given period, calculated by reference to the tax rates that have been enacted or substantively enacted at the end of the reporting period, plus any adjustments to current taxes recorded in previous financial periods.

Income tax expense breaks down as follows:

(in EUR million)	2019	2018 restated
CURRENT TAXES	**(601)**	**(405)**
France	(83)	(36)
Outside France	(518)	(369)
DEFERRED TAXES	**(30)**	**(87)**
France	(32)	24
Outside France	2	(111)
TOTAL INCOME TAX EXPENSE	**(631)**	**(492)**

Theoretical tax expense was reconciled with current tax expense using a tax rate of 34.43% in 2019 and 2018, and can be analyzed as follows:

(in EUR million)	2019	2018 restated
Net income	1,454	474
Less:		
Share in net income of equity-accounted companies	24	30
Income taxes	(631)	(492)
PRE-TAX INCOME OF CONSOLIDATED COMPANIES	**2,061**	**936**
French tax rate	34.43%	34.43%
Theoretical tax expense at French tax rate	(709)	(322)
Impact of different tax rates	219	136
Asset impairment, capital gains and losses on asset disposals	(117)	(311)
Deferred tax assets not recognized	(30)	(57)
Liability method	24	(7)
Research tax credit, tax credit for competitiveness and employment (Cice) and value-added contribution for businesses (CVAE)	(16)	6
Costs related to dividends	(2)	(10)
Other taxes and provision writebacks	0	73
TOTAL INCOME TAX EXPENSE	**(631)**	**(492)**

The contribution of countries with low tax rates explains the impact of the different tax rates applicable outside France. The main contributors are South Korea, Spain, the United States, India, Norway, Poland, the Czech Republic, the United Kingdom, Sweden and Switzerland.

11.2 Deferred tax

Deferred tax assets and liabilities are recorded using the balance sheet method for temporary differences between the carrying amount of assets and liabilities and their tax basis. Deferred tax assets and liabilities are measured at the tax rates expected to apply to the period when the asset is realized or the liability settled, based on the tax laws that have been enacted or substantively enacted at the end of the reporting period.

No deferred tax liability is recognized in respect of undistributed earnings of subsidiaries that are not intended to be distributed.

For investments in subsidiaries, deferred tax is recognized on the difference between the consolidated carrying amount of the investments and their tax basis when it is probable that the temporary difference will reverse in the foreseeable future.

Deferred taxes are recognized as income or expense in the income statement, unless they relate to items that are recognized directly in equity, in which case the deferred tax is also recognized in equity. Income tax resulting from changes in tax rates is recognized in income, except where it relates to items initially recognized in equity.

In the balance sheet, changes in the net deferred tax liability break down as follows:

(in EUR million)	Net deferred tax asset/(liability)
At December 31, 2017	
NET VALUE	**511**
At January 1, 2018 restated	
IFRS 9 and IFRS 15 restatements	9
IFRS 16 restatements	50
NET VALUE	**570**
At December 31, 2018 restated	
Deferred tax (expense)/benefit	(88)
Changes in deferred taxes relating to actuarial gains and losses (IAS 19)	(69)
Liability method on actuarial gains and losses	(1)
Translation adjustments and restatement for hyperinflation	9
Assets and liabilities held for sale	(20)
Changes in Group structure and other	10
NET VALUE	**411**
At December 31, 2019	
Deferred tax (expense)/benefit	(53)
Changes in deferred taxes relating to actuarial gains and losses (IAS 19)	27
Liability method	23
Translation adjustments and restatement for hyperinflation	(15)
Assets and liabilities held for sale	(1)
Changes in Group structure and other	(7)
NET VALUE	**385**

The table below shows the main deferred tax components:

(in EUR million)	Dec. 31, 2019	Dec. 31, 2018 restated
Pensions	474	460
Brands	(411)	(397)
Depreciation and amortization, accelerated capital allowances and tax-driven provisions	(689)	(659)
Tax loss carry-forwards	546	562
Other	465	445
NET DEFERRED TAX	**385**	**411**
Of which:		
Deferred tax assets	833	860
Deferred tax liabilities	(448)	(449)

Deferred taxes are offset at the level of each tax entity, *i.e.*, by tax group where applicable (mainly in France, the United Kingdom, Spain, Germany, the United States and the Netherlands).

Deferred tax assets of €833 million were recognized at December 31, 2019 (€860 million at December 31, 2018), primarily in France (€207 million), the United States (€166 million), Germany (€166 million) and Italy (€60 million). Deferred tax liabilities of €448 million were recognized at December 31, 2019 (€449 million at December 31, 2018), including €190 million in the United Kingdom, €51 million in Switzerland, €48 million in India, and €41 million in Denmark. Deferred tax liabilities in other countries were not material.

11.3 Tax loss carry-forwards

Deferred tax assets are recognized only if it is considered probable that there will be sufficient future taxable income against which the temporary difference can be utilized. They are reviewed at the end of each reporting period and written down to the extent that it is no longer probable that there will be sufficient taxable income against which the temporary difference can be utilized. In determining whether to recognize deferred tax assets for tax loss carry-forwards, the Group applies a range of criteria that take into account the probable recovery period based on business plans and the strategy for the long-term recovery of tax losses applied in each country.

The Group recognized deferred tax assets for tax loss carry-forwards for a net amount of €546 million at December 31, 2019 and €562 million at December 31, 2018. This principally relates to the United States, for which the recovery period is shorter than the maximum utilization period of 20 years, and to France, Germany and Spain, where tax consolidation generally ensures that deferred tax can be recovered. In these countries, tax losses may be carried forward indefinitely. Nevertheless, after analyzing each situation, the Group may decide not to recognize them.

At December 31, 2019, deferred tax assets whose recovery is not considered probable totaled €412 million (December 31, 2018: €451 million) and a provision had been accrued for the full amount. Unrecognized deferred tax assets chiefly relate to France, China, Germany, Spain and the United States.

NOTE 12 Subsequent events

On January 30, 2020, Saint-Gobain announced that Continental Building Products (NYSE: CBPX) had obtained shareholder approval to be acquired by Saint-Gobain and that the US Competition Authority had authorized the transaction. The deal closed on February 3, 2020. Upon completion of the transaction, Saint-Gobain will have acquired all of the shares of Continental Building Products for US$37.00 per share in a transaction valued at approximately US$1.4 billion (around €1.3 billion). Continental Building Products presents strong geographic complementarity with Saint-Gobain's North American operations.

DBMP LLC, an affiliate of CertainTeed LLC based in North Carolina (United States), that holds the legacy asbestos liabilities of the former CertainTeed Corporation, announced that on January 23, 2020 it had filed a voluntary petition for Chapter 11 relief in the US Bankruptcy Court for the Western District of North Carolina in Charlotte Pursuant to Chapter 11 relief under US bankruptcy law, even though the Group remains the legal owner of the shares comprising the entire share capital of DBMP LLC, its assets are frozen and placed under the control of the competent court of the city of Charlotte. Accordingly, the assets and liabilities of the entity and its wholly-owned subsidiary M&P LLC (operating income estimated at €12 million on an annual basis) have been removed from the consolidated financial statements with effect from January 23, 2020.

NOTE 13 Fees paid to the Statutory Auditors

Total fees paid to the Statutory Auditors and recognized in the income statement in 2019 and 2018 are detailed in the "Additional information and cross-reference tables" section of the Registration Document.

NOTE 14 Principal consolidated companies

The table below shows the Group's principal consolidated companies, typically those with annual sales of over €100 million.

High Performance Solutions	Country	Consolidation method	Percentage held directly and indirectly
Saint-Gobain Diamantwerkzeuge GmbH, Norderstedt*	Germany	Full consolidation	100.00%
Saint-Gobain Abrasives GmbH, Wesseling*	Germany	Full consolidation	100.00%
Supercut Europe GmbH, Baesweiler*	Germany	Full consolidation	100.00%
Ernst Winter & Sohn Norderstedt GmbH & Co. KG, Norderstedt*	Germany	Full consolidation	100.00%
Saint-Gobain Performance Plastics Isofluor GmbH, Neuss*	Germany	Full consolidation	100.00%
Saint-Gobain Performance Plastics MG Silikon GmbH, Lindau*	Germany	Full consolidation	100.00%
Saint-Gobain Performance Plastics Pampus GmbH, Willich*	Germany	Full consolidation	100.00%
Saint-Gobain Performance Plastics L+S GmbH, Wertheim*	Germany	Full consolidation	100.00%
Saint-Gobain Performance Plastics Biolink GmbH, Waakirchen*	Germany	Full consolidation	100.00%
Saint-Gobain Adfors Deutschland GmbH, Neustadt an der Donau*	Germany	Full consolidation	100.00%
H.K.O. Isolier- und Textiltechnik GmbH, Oberhausen*	Germany	Full consolidation	100.00%
BEUHKO Fasertechnik GmbH, Leinefelde-Worbis*	Germany	Full consolidation	100.00%
SEPR Keramik GmbH & Co. KG, Aachen*	Germany	Full consolidation	100.00%
Freudenberger Autoglas GmbH, München*	Germany	Full consolidation	99.99%
Freeglass GmbH & Co. KG, Schwaikheim*	Germany	Full consolidation	99.99%
Saint-Gobain Autoglas GmbH, Herzogenrath*	Germany	Full consolidation	99.99%
Saint-Gobain Sekurit Deutschland Beteiligungen GmbH, Herzogenrath*	Germany	Full consolidation	99.99%
Saint-Gobain Sekurit Deutschland GmbH & CO Kg, Herzogenrath*	Germany	Full consolidation	99.99%
FABA Autoglas Technik GmbH & Co. Betriebs-KG, Berlin*	Germany	Full consolidation	99.99%
Saint-Gobain Autover Deutschland GmbH, Kerpen*	Germany	Full consolidation	99.99%
Saint-Gobain Innovative Materials Belgium	Belgium	Full consolidation	100.00%
Saint-Gobain Do Brasil Ltda	Brazil	Full consolidation	100.00%
Saint-Gobain Canada, Inc.	Canada	Full consolidation	100.00%
Saint-Gobain Performance Plastics (Shanghaï) Co., LTD	China	Full consolidation	100.00%
Saint-Gobain Abrasives (Shanghaï) Co., LTD	China	Full consolidation	100.00%
SG Hanglas Sekurit (Shanghaï) Co., Ltd	China	Full consolidation	98.99%
Hankuk Sekurit Limited	South Korea	Full consolidation	97.87%
Saint-Gobain Cristaleria S.L	Spain	Full consolidation	99.83%
Saint-Gobain Adfors America, Inc.	United States	Full consolidation	100.00%
Saint-Gobain Performance Plastics Corporation	United States	Full consolidation	100.00%
Saint-Gobain Abrasives, Inc.	United States	Full consolidation	100.00%
Saint-Gobain Ceramics & Plastics, Inc.	United States	Full consolidation	100.00%
Saint-Gobain Abrasifs	France	Full consolidation	99.98%
Société Européenne des Produits Réfractaires – SEPR	France	Full consolidation	100.00%
Saint-Gobain Sekurit France	France	Full consolidation	100.00%
Grindwell Norton Ltd	India	Full consolidation	51.59%
Saint-Gobain K.K.	Japan	Full consolidation	100.00%
Saint-Gobain America S.A De C.V	Mexico	Full consolidation	99.83%
Saint-Gobain Mexico	Mexico	Full consolidation	99.83%
Saint-Gobain Abrasives BV	Netherlands	Full consolidation	100.00%
Saint-Gobain HPM Polska Sp Zoo	Poland	Full consolidation	100.00%
Saint-Gobain Innovative Materials Polska Sp Zoo	Poland	Full consolidation	99.85%
Saint-Gobain Adfors CZ S.R.O.	Czech Republic	Full consolidation	100.00%
Saint-Gobain Sekurit CZ, Spol S.R.O	Czech Republic	Full consolidation	100.00%

Northern Europe	Country	Consolidation method	Percentage held directly and indirectly
Saint-Gobain Glass Deutschland GmbH, Stolberg*	Germany	Full consolidation	99.99%
Flachglas Torgau GmbH, Torgau*	Germany	Full consolidation	99.99%
Saint-Gobain Weisswasser GmbH, Aachen*	Germany	Full consolidation	99.99%
Saint-Gobain Deutsche Glas GmbH, Stolberg*	Germany	Full consolidation	99.99%
Glasverarbeitungs-Gesellschaft Bremen mbH, Bremen*	Germany	Full consolidation	99.99%
Saint-Gobain Glassolutions Nord GmbH, Melsdorf*	Germany	Full consolidation	99.99%
Saint-Gobain Glassolutions Süd GmbH, Tuttlingen*	Germany	Full consolidation	99.99%
Glas-Funke GmbH, Kall*	Germany	Full consolidation	99.99%
Glasverarbeitungs-Gesellschaft Deggendorf mbH, Deggendorf*	Germany	Full consolidation	99.99%
Vetrotech Saint-Gobain Kinon GmbH, Aachen*	Germany	Full consolidation	99.99%
Saint-Gobain Glassolutions Objekt-Center GmbH, Radeburg*	Germany	Full consolidation	99.99%
Saint-Gobain Isover G+H Aktiengesellschaft	Germany	Full consolidation	99.91%
Saint-Gobain Rigips GmbH*	Germany	Full consolidation	100.00%
Saint-Gobain Weber GmbH	Germany	Full consolidation	100.00%
Saint-Gobain PAM Deutschland GmbH	Germany	Full consolidation	100.00%
Saint-Gobain Construction Products Belgium	Belgium	Full consolidation	100.00%
Saint-Gobain Denmark A/S	Denmark	Full consolidation	99.97%
Saint-Gobain Distribution Denmark	Denmark	Full consolidation	100.00%
Saint-Gobain Finland OY	Finland	Full consolidation	100.00%
Saint-Gobain Construction Products (Ireland) Limited	Ireland	Full consolidation	100.00%
Glava As	Norway	Full consolidation	100.00%
Saint-Gobain Byggevarer AS	Norway	Full consolidation	100.00%
Optimera As	Norway	Full consolidation	100.00%
Saint-Gobain Polska Sp Zoo	Poland	Full consolidation	99.90%
Saint-Gobain Construction Products Polska Sp Zoo	Poland	Full consolidation	100.00%
Saint-Gobain Construction Products CZ AS	Czech Republic	Full consolidation	100.00%
Saint-Gobain Glass (United Kingdom) Limited	United Kingdom	Full consolidation	100.00%
Saint-Gobain Construction Products United Kingdom Ltd	United Kingdom	Full consolidation	100.00%
Saint-Gobain Building Distribution Ltd	United Kingdom	Full consolidation	100.00%
Saint-Gobain Construction Products Russia ooo	Russia	Full consolidation	100.00%
Saint-Gobain Ecophon AB	Sweden	Full consolidation	100.00%
Saint-Gobain Sweden AB	Sweden	Full consolidation	100.00%
Saint-Gobain Distribution Nordic Ab	Sweden	Full consolidation	100.00%
Vetrotech Saint-Gobain International	Switzerland	Full consolidation	100.00%
Saint-Gobain Weber AG	Switzerland	Full consolidation	100.00%
Sanitas Troesch Ag	Switzerland	Full consolidation	100.00%

Southern Europe – ME & Africa	Country	Consolidation method	Percentage held directly and indirectly
Saint-Gobain Construction Products South Africa Ltd	South Africa	Full consolidation	100.00%
Saint-Gobain Cristaleria S.L	Spain	Full consolidation	99.83%
Saint-Gobain Placo Iberica	Spain	Full consolidation	99.83%
Saint-Gobain Idaplac, S.L.	Spain	Full consolidation	99.83%
Saint-Gobain Distribucion Construccion, S.L	Spain	Full consolidation	99.83%
Saint-Gobain Glass Solutions Menuisiers Industriels	France	Full consolidation	100.00%
Saint-Gobain Glass France	France	Full consolidation	100.00%
Eurofloat	France	Full consolidation	100.00%
Placoplatre SA	France	Full consolidation	99.80%
Saint-Gobain Isover	France	Full consolidation	100.00%
Saint-Gobain Weber	France	Full consolidation	100.00%
Saint-Gobain PAM	France	Full consolidation	100.00%
Distribution Sanitaire Chauffage	France	Full consolidation	100.00%
Lapeyre	France	Full consolidation	100.00%
Saint-Gobain Distribution Bâtiment France	France	Full consolidation	100.00%
Saint-Gobain Glass Italia S.p.a	Italy	Full consolidation	100.00%
Saint-Gobain PPC Italia S.p.a	Italy	Full consolidation	100.00%
Saint-Gobain Construction Products Nederland BV	Netherlands	Full consolidation	100.00%
Saint-Gobain Distribution The Netherlands B.V	Netherlands	Full consolidation	100.00%
Izocam Ticaret VE Sanayi A.S.	Turkey	Full consolidation	47.53%

Asia-Pacific	Country	Consolidation method	Percentage held directly and indirectly
Saint-Gobain Pipelines Co., Ltd	China	Full consolidation	100.00%
Saint-Gobain India Private Limited	India	Full consolidation	99.03%
Mag-Isover K.K.	Japan	Full consolidation	99.98%
Vinh Tuong Industrial Corporation	Vietnam	Full consolidation	98.65%

Americas	Country	Consolidation method	Percentage held directly and indirectly
Saint-Gobain Argentina S.A	Argentina	Full consolidation	100.00%
Cebrace Cristal Plano Ltda	Brazil	Full consolidation	50.00%
Saint-Gobain Do Brasil Ltda	Brazil	Full consolidation	100.00%
Saint-Gobain Canalizaçao Ltda	Brazil	Full consolidation	100.00%
Saint-Gobain Distribuiçao Brasil Ltda	Brazil	Full consolidation	100.00%
CertainTeed Gypsum Canada, Inc.	Canada	Full consolidation	100.00%
CertainTeed Corporation	United States	Full consolidation	100.00%
CertainTeed Gypsum & Ceillings USA, Inc.	United States	Full consolidation	100.00%
CertainTeed Ceilings Corporation	United States	Full consolidation	100.00%
DBMP LLC	United States	Full consolidation	100.00%

* *German consolidated subsidiary or sub-group with corporate or limited liability status and meeting the criteria under Articles 264 paragraph 3, 264b and 291 of the German Commercial Code (HGB) exempting the relevant entities and sub-groups from publishing their statutory and consolidated financial statements or notes to the financial statements and management reports (entities or sub-groups above or below the €100 million threshold).*

2. Statutory Auditors' report on the consolidated financial statements

For the year ended December 31, 2019

This is a free translation into English of the Statutory Auditors' report issued in French and is provided solely for the convenience of English-speaking readers. This report includes information specifically required by European regulations or French law, such as information about the appointment of Statutory Auditors. This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

COMPAGNIE DE SAINT-GOBAIN SA

Les Miroirs

18, avenue d'Alsace

92400 Courbevoie, France

To the Shareholders,

1. Opinion

In compliance with the engagement entrusted to us by your Shareholders' Meeting, we have audited the accompanying consolidated financial statements of Compagnie de Saint-Gobain for the year ended December 31, 2019.

In our opinion, the consolidated financial statements give a true and fair view of the assets and liabilities and of the financial position of the Group at December 31, 2019 and of the results of its operations for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union.

The audit opinion expressed above is consistent with our report to the Audit and Risk Committee.

2. Basis for opinion

Audit framework

We conducted our audit in accordance with professional standards applicable in France. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our responsibilities under these standards are further described in the "Responsibilities of the Statutory Auditors relating to the audit of the consolidated financial statements" section of our report.

Independence

We conducted our audit engagement in compliance with the independence rules applicable to us, for the period from January 1, 2019 to the date of our report, and, in particular, we did not provide any non-audit services prohibited by Article 5(1) of Regulation (EU) No 537/2014 or the French Code of Ethics (*Code de déontologie*) for Statutory Auditors.

3. Emphasis of matter

Without qualifying our opinion, we draw your attention to Note 3 "Impact of new standards" to the consolidated financial statements, which describes the consequences of the adoption as from January 1, 2019 of IFRS 16, "Leases".

4. Justification of assessments – Key audit matters

In accordance with the requirements of Articles L.823-9 and R.823-7 of the French Commercial Code (*Code de commerce*) relating to the justification of our assessments, we inform you of the key audit matters relating to the risks of material misstatement that, in our professional judgment, were the most significant in our audit of the consolidated financial statements, as well as how we addressed those risks.

These matters were addressed as part of our audit of the consolidated financial statements as a whole, and therefore contributed to the opinion we formed as expressed above. We do not provide a separate opinion on specific items of the consolidated financial statements.

Measurement of goodwill, intangible assets and property, plant & equipment

Description of risk

The carrying amounts of goodwill, intangible assets and property, plant & equipment were significant at December 31, 2019, representing €10,029 million, €2,709 million and €11,707 million, respectively. These assets may be impaired due to internal or external factors, including decisions to change the Group's strategy in certain markets, a decline in Group performance, changes in competition, unfavorable market conditions and changes in legislation or regulations. These changes are likely to have an impact on the Group's forecast cash flow and, consequently, the assets' recoverable amounts.

The impairment tests performed by Management using the method described in Note 6.5 to the consolidated financial statements led to the recognition of impairment losses of €342 million in the year ended December 31, 2019, as indicated in Note 4 to the consolidated financial statements.

Determining the assets' recoverable amounts is a key audit matter given the potentially significant nature of any impairment and the high degree of estimation and judgment required by Management in assessing impairment losses. Management exercises judgment when making assumptions regarding future changes in sales (in both volume and value terms), profitability, investments and the other cash flows required to operate the assets, and when determining an appropriate discount rate to apply to future cash flows.

How our audit addressed this risk

We familiarized ourselves with the procedures implemented within the Group for impairment testing purposes as well as Management's analysis of the impact of IFRS 16 on these tests, at the transition date and the reporting date, and we exercised our professional judgment in order to assess the position taken by Management.

We verified the consistency of the method used, particularly in the context of the first-time adoption of IFRS 16, "Leases", and tested the effectiveness of the controls implemented by the Group to ensure the quality and reliability of the aforementioned procedures and their consistency with data from the budget and the medium-term business plan prepared by Management.

We also assessed the consistency and relevance of Management's approach to determine the cash-generating units for asset impairment testing, particularly with regard to the new organization implemented at January 1, 2019. We adapted our audit approach to the risk of impairment, which varies depending on the cash-generating unit.

Our valuation specialists performed an independent analysis of certain key assumptions used by Management for impairment testing purposes, in particular the discount rate, by referring to both external market data and comparable company analyses.

For a selection of cash-generating units, we analyzed the consistency of future cash flow projections with regard to past performance and our knowledge of the business, confirmed by interviews with the Heads of the relevant Segments and Businesses. We carefully examined the calculation of the normalized amount of the terminal cash flows projected to perpetuity. We performed our own sensitivity analyses of certain key variables of the measurement model to assess the materiality of their potential impact on the recoverable amounts of the most high-risk assets.

We verified that the disclosures provided in the notes to the consolidated financial statements on the measurement of goodwill, intangible assets and property, plant & equipment, the underlying assumptions and sensitivity analyses were appropriate.

Measurement of provisions for liabilities and litigation related to asbestos

Description of risk

The Group is exposed to various legal risks, including asbestos-related litigation in the United States and Brazil.

As indicated in Note 8 to the consolidated financial statements, provisions amounting to €1,293 million were recognized at December 31, 2019 for contingent liabilities and litigation. Significant contingent liabilities, whose amount or timing cannot be estimated with sufficient reliability, are disclosed in the notes to the consolidated financial statements.

With regard to asbestos-related risks in the United States and Brazil, determining and measuring the provisions recognized for contingent liabilities and litigation and assessing the appropriateness of the related disclosures in the notes to the consolidated financial statements are a key audit matter given the amounts involved and the high degree of estimation and judgment required by Management in determining those provisions. Judgment is required, in particular, to assess the status and resolution of the ongoing legal proceedings (in particular the voluntary petition for relief under Chapter 11 in the United States and class actions in Brazil): duration, cost, estimation of the number of current and future cases covered, definition of the damages by the judicial authority, etc.

How our audit addressed this risk

To obtain an understanding of contingent liabilities and litigation regarding asbestos in the United States and Brazil and the related judgments made, we held discussions with Management at the Group and country level as well as at the main subsidiaries concerned. We also contacted certain law firms and external experts chosen by Management to assist them with measuring these provisions.

We:

- examined the minutes of the Board of Directors' meetings and the Group's risk mapping prepared by Management and presented to the Audit and Risk Committee;
- familiarized ourselves with the procedures implemented by Management when measuring the provisions for asbestos-related risks in the United States and Brazil and determining the disclosures thereon in the notes to the consolidated financial statements while taking due account of events after the reporting date;
- assessed the proficiency of the law firms or external experts chosen by Management to assist them with measuring these provisions and, where appropriate, brought in our own experts to assess the position of the latter parties;
- carried out a critical review of internal analyses relating to the probability and possible impact of these contingent liabilities and items of litigation by examining the available information relating to the proceedings (correspondence, judgments, notifications, etc.). We also reviewed the external legal or technical opinions and the responses to the confirmation letters of the law firms or external experts chosen by Management, particularly in terms of their experience at resolving comparable situations in the past. We also used our professional judgment to assess the positions adopted by Management, to see where they fell within risk assessment ranges and the consistency of those positions over time;
- assessed the adequacy of the method used to measure the asbestos-related provisions, based on a statistical model, and the relevance and reliability of the source data.

We verified the appropriateness of the disclosures provided in the notes to the consolidated financial statements regarding these items of litigation and contingent liabilities identified.

Measurement of supplier discounts in Distribution

Description of risk

The Distribution entities in Europe accounted for 45% of the Group's sales for the fiscal year 2019. The profitability of these entities varies depending on supplier discounts received, which lower the cost price of negotiated goods. As indicated in Notes 4.1.2, 4.4.1 and 4.4.2 to the consolidated financial statements, the recognition of supplier discounts specifically affects "Cost of sales" in the consolidated income statement as well as "Inventories" and "Other receivables" in the consolidated balance sheet.

Given the diversity of products and suppliers in the Distribution business, supplier contracts are numerous, complex and varied. They give rise to several supplier discounts, some of which are subject to volume conditions or targets, granted at various levels (local, regional, national and international). Measuring accrued supplier discounts is a key audit matter as the monitoring thereof is complex and requires estimates to be made by Management. Determining the amounts of supplier discounts to be taken into account when measuring inventories held by the Distribution entities is also a significant audit matter.

How our audit addressed this risk

We gained an understanding of the process used by Management to estimate accrued supplier discounts at the reporting date and performed tests on the effectiveness of the controls performed by Management.

We also assessed, on a multi-year basis, the consistency of the supplier discount rates obtained per entity and country, confirmed by interviews with Management. Using a sample, we remeasured the supplier discounts obtained based on the terms and conditions of the relevant agreements and volumes purchased. We also retrospectively cross-checked cash and credit notes received after the reporting date against the receivables recognized and asked a sample of suppliers to directly confirm the discount amounts due for the fiscal year.

With regard to the accuracy of the supplier discounts taken into account when measuring inventories held by the Distribution entities, we verified that the accounting methods were applied consistently across all the entities. Using sampling techniques, we cross-checked the measurement of certain inventory items against supplier invoices, estimating supplier discounts granted subsequently.

We verified that the disclosures provided in the notes to the consolidated financial statements regarding supplier discounts were appropriate.

First-time adoption of IFRS 16, "Leases"

Description of risk

As indicated in Note 3 to the consolidated financial statements for the year ended December 31, 2019, the Group adopted IFRS 16, "Leases" with effect from January 1, 2019 using the full retrospective method. The new standard provides a single lessee accounting model, under which a "right-of-use asset" and a corresponding "lease liability" are recognized in the balance sheet for all leases. The cumulative impact of the first-time adoption was therefore recognized at January 1, 2018 by identifying and analyzing all existing leases since their inception and notably by taking into account, for each lease, the term, the type of payments and the incremental borrowing rate.

The first-time adoption of IFRS 16 resulted in the recognition, at January 1, 2018, of right-of-use assets for a net carrying amount of €3,000 million and lease liabilities of €3,268 million. In addition, EBITDA and operating income for the year ended December 31, 2018 increased by €789 million and €85 million, respectively, as a result of the first-time adoption of IFRS 16.

Given the high volume of data to collect, analyze and restate, the significant amount of right-of-use assets and lease liabilities in the consolidated financial statements and the degree of judgment required by Management to determine the lease term and the incremental borrowing rate, we deemed the first-time adoption of the new standard to be a key audit matter.

How our audit addressed this risk

We assessed the compliance with the accounting principles of the approach taken by Management (particularly the transition method, simplification measures, determination of the discount rate, useful life of leasehold improvements and treatment of deferred taxes and charges).

We gained an understanding of the organization, information systems and key controls implemented by Management for the adoption of the new standard as well as the instructions and procedures provided to the subsidiaries.

In order to test the completeness and accuracy of the measurement of right-of-use assets and lease liabilities, we:

- tested the design, implementation and operational effectiveness of the automatic or manual controls for ensuring the accuracy of the inputs used and the completeness of the accounting restatements, in particular with regard to the identification of leases;
- tested the settings, particularly the calculation module of the centralized information system set up by Management to collect the data on the leases and calculate the accounting impacts of IFRS 16;
- for a sample of leases, corroborated the information collected to measure the right-of-use assets and the lease liabilities with the data in the leases and assessed the relevance of the lease terms used;
- assessed the consistency with the market data provided by our experts of the discount rates provided in the IFRS 16 centralized information system;
- tested the accuracy of the reconciliations performed between the published consolidated financial statements at December 31, 2017 and December 31, 2018 in accordance with IAS 17 and the restated consolidated financial statements at January 1, 2018 and December 31, 2018 following the adoption of IFRS 16.

We also assessed the appropriateness of the disclosures provided in Note 3 to the consolidated financial statements.

5. Specific verifications

As required by legal and regulatory provisions and in accordance with professional standards applicable in France, we have also verified the information pertaining to the Group presented in the Board of Directors' management report.

We have no matters to report as to its fair presentation and its consistency with the consolidated financial statements.

We attest that the information pertaining to the Group presented in the management report includes the consolidated non-financial information statement required under Article L.225-102-1 of the French Commercial Code. However, in accordance with Article L.823-10 of the French Commercial Code, we have not verified the fair presentation and consistency with the consolidated financial statements of the information given in that statement, which will be the subject of a report by an independent third party.

6. Report on other legal and regulatory requirements

Appointment of the Statutory Auditors

We were appointed Statutory Auditors of Compagnie de Saint-Gobain by the Shareholders' Meeting held on June 26, 1986 for Petiteau Scacchi and subsequently PricewaterhouseCoopers Audit and on June 10, 2004 for KPMG Audit.

At December 31, 2019, PricewaterhouseCoopers Audit and KPMG Audit were in the thirty-fourth and sixteenth consecutive year of their engagement, respectively.

7. Responsibilities of Management and those charged with governance for the consolidated financial statements

Management is responsible for preparing consolidated financial statements giving a true and fair view in accordance with International Financial Reporting Standards as adopted by the European Union and for implementing the internal control procedures it deems necessary for the preparation of consolidated financial statements that are free of material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, Management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern, and using the going concern basis of accounting, unless it expects to liquidate the Company or to cease operations.

The Audit and Risk Committee is responsible for monitoring the financial reporting process and the effectiveness of internal control and risk management systems, as well as, where applicable, any internal audit systems, relating to accounting and financial reporting procedures.

The consolidated financial statements were approved by the Board of Directors.

8. Responsibilities of the Statutory Auditors relating to the audit of the consolidated financial statements

Objective and audit approach

Our role is to issue a report on the consolidated financial statements. Our objective is to obtain reasonable assurance about whether the consolidated financial statements as a whole are free of material misstatement. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with professional standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions taken by users on the basis of these consolidated financial statements.

As specified in Article L.823-10-1 of the French Commercial Code, our audit does not include assurance on the viability or quality of the Company's management.

As part of an audit conducted in accordance with professional standards applicable in France, the Statutory Auditors exercise professional judgment throughout the audit. They also:

- identify and assess the risks of material misstatement in the consolidated financial statements, whether due to fraud or error, design and perform audit procedures in response to those risks, and obtain audit evidence considered to be sufficient and appropriate to provide a basis for their opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;
- obtain an understanding of the internal control procedures relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control;
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates made by Management and the related disclosures in the notes to the consolidated financial statements;
- assess the appropriateness of Management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. This assessment is based on the audit evidence obtained up to the date of the audit report. However, future events or conditions may cause the Company to cease to continue as a going concern. If the Statutory Auditors conclude that a material uncertainty exists, they are required to draw attention in the audit report to the related disclosures in the consolidated financial statements or, if such disclosures are not provided or are inadequate, to issue a qualified opinion or a disclaimer of opinion;
- evaluate the overall presentation of the consolidated financial statements and assess whether these statements represent the underlying transactions and events in a manner that achieves fair presentation;
- obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. The Statutory Auditors are responsible for the management, supervision and performance of the audit of the consolidated financial statements and for the opinion expressed thereon.

Report to the Audit and Risk Committee

We submit a report to the Audit and Risk Committee which includes, in particular, a description of the scope of the audit and the audit program implemented, as well as the results of our audit. We also report any significant deficiencies in internal control that we have identified regarding the accounting and financial reporting procedures.

Our report to the Audit and Risk Committee includes the risks of material misstatement that, in our professional judgment, were the most significant for the audit of the consolidated financial statements and which constitute the key audit matters that we are required to describe in this report.

We also provide the Audit and Risk Committee with the declaration provided for in Article 6 of Regulation (EU) No 537/2014, confirming our independence within the meaning of the rules applicable in France, as defined in particular in Articles L.822-10 to L.822-14 of the French Commercial Code and in the French Code of Ethics for Statutory Auditors. Where appropriate, we discuss any risks to our independence and the related safeguard measures with the Audit and Risk Committee.

Neuilly-sur-Seine and Paris La Défense, February 27, 2020

The Statutory Auditors

PricewaterhouseCoopers Audit		KPMG Audit Department of KPMG SA	
Edouard Sattler	Cécile Saint-Martin	Pierre-Antoine Duffaud	Bertrand Pruvost

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3. Compagnie de Saint-Gobain 2019 annual financial statements (parent company)

Income statement

(in EUR thousand)		Dec. 31, 2019	Dec. 31, 2018
Operating revenue			
Royalties and license fees		221,526	109,057
Other services		75,371	79,552
NET SALES		**296,897**	**188,609**
Write-backs of depreciation, amortization, impairment and provisions		26,790	9,164
Expense transfers		27,274	8,458
Other operating income		1,486	1,663
	TOTAL I	**352,447**	**207,894**
Operating expenses			
Other purchases and external charges		(266,040)	(131,034)
Taxes other than on income		(6,607)	(7,510)
Wages and salaries		(56,656)	(49,375)
Payroll taxes		(19,734)	(17,124)
Depreciation, amortization, impairment and provisions		(60,431)	(19,401)
Other operating expenses		(2,213)	(2,097)
	TOTAL II	**(411,681)**	**(226,541)**
OPERATING INCOME/(LOSS) (NOTE 2)		**(59,234)**	**(18,647)**
Share in profits/(losses) of joint ventures			
PROFITS	**TOTAL III**		
LOSSES	**TOTAL IV**		
Financial income			
Income from investments in subsidiaries and affiliates		813,814	894,948
Income from loans and other investments		319,321	296,228
Income from other non-current investment securities		12	11
Other interest income		20,785	2,398
Write-backs of impairment and provisions, expense transfers		1,062	33
Foreign exchange gains		4,647	7,642
Net income from sales of marketable securities		870	556
	TOTAL V	**1,160,511**	**1,201,817**
Financial expense			
Depreciation, amortization, impairment and provisions		(4,721)	(389,272)
Interest expense		(279,028)	(259,744)
Foreign exchange losses		(33)	(16)
Net losses on sales of marketable securities		(3,297)	(3,336)
	TOTAL VI	**(287,079)**	**(652,369)**
NET FINANCIAL INCOME (NOTE 3)		**873,432**	**549,448**
INCOME BEFORE TAX AND EXCEPTIONAL ITEMS		**814,199**	**530,801**
Exceptional income			
On revenue transactions		32,211	16,912
On capital transactions		30,961	3,081
Write-backs of depreciation, amortization, impairment and provisions		25,315	41,611
	TOTAL VII	**88,487**	**61,604**
Exceptional expense			
On revenue transactions		(31,221)	(30,589)
On capital transactions		(206,327)	(5,933)
Depreciation, amortization, impairment and provisions		(42,573)	(40,912)
	TOTAL VIII	**(280,121)**	**(77,434)**
NET EXCEPTIONAL INCOME/(EXPENSE (NOTE 4)		**(191,634)**	**(15,830)**
INCOME TAXES (NOTE 5)	**TOTAL IX**	**226,402**	**154,213**
TOTAL INCOME		**1,601,445**	**1,471,315**
TOTAL EXPENSES		**(752,479)**	**(802,131)**
NET INCOME		**848,966**	**669,184**

Balance sheet

Assets

		déc. 31, 2019			
(in EUR thousand)		GROSS	Depreciation, amortization, and impairment	NET	déc. 31, 2018
NON-CURRENT ASSETS					
Intangible assets (Note 6)					
Goodwill [(1)]		567	(567)	-	-
Other intangible assets		52,451	(47,718)	4,733	6,935
Intangible assets in progress		5,083		5,083	3,376
Property, plant and equipment (Note 7)					
Land		51		51	51
Buildings		1,400	(805)	595	660
Other		14,914	(10,057)	4,857	5,179
Assets under construction		73,813		73,813	36,288
Financial investments [(2)] (Note 8)					
Investments in subsidiaries and affiliates		13,003,137	(401,068)	12,602,069	12,704,001
Loans and advances to subsidiaries and affiliates		14,958,665		14,958,665	14,359,317
Other investment securities		8,265	(1,454)	6,811	3,596
Loans		1,471,401		1,471,401	1,328,907
Other financial investments		1,382		1,382	1,587
	TOTAL I	**29,591,129**	**(461,669)**	**29,129,460**	**28,449,897**
CURRENT ASSETS (Note 9)					
Other receivables [(3)]		1,158,007		1,158,007	1,717,857
Marketable securities		2,617,088		2,617,088	974,442
Cash and cash equivalents		1,153,027		1,153,027	857,658
Accruals					
Prepayments [(3)]		19,376		19,376	2,326
	TOTAL II	**4,947,498**	**-**	**4,947,498**	**3,552,283**
Deferred charges	TOTAL III	44,816	-	44,816	48,281
Translation losses	TOTAL IV	-	-	-	-
TOTAL ASSETS		**34,583,443**	**(461,669)**	**34,121,774**	**32,050,461**
(1) including leasehold rights				-	-
(2) of which due within one year				3,968,696	3,768,770
(3) of which due beyond one year				16,172	309

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Shareholders' equity and liabilities

(in EUR thousand)		Dec. 31, 2019	Dec. 31, 2018
SHAREHOLDERS' EQUITY (NOTE 10)			
Capital stock		2,178,734	2,186,340
Additional paid-in capital		5,333,634	5,427,333
Revaluation reserve		45,023	45,023
Other reserves:			
Legal reserve [a]		217,873	218,634
Untaxed reserves		2,617,758	2,617,758
Other reserves		301,428	301,428
Unappropriated retained earnings		5,533,185	5,580,381
Net income for the year		848,966	669,184
Untaxed provisions (Note 12)		3,247	3,247
	TOTAL I	**17,079,848**	**17,049,328**
OTHER EQUITY (NOTE 11)			
Non-voting participating securities	Total I *bis*	170,035	170,035
PROVISIONS (NOTE 12)			
Provisions for contingencies		25,004	20,120
Provisions for charges		301,404	258,392
	TOTAL II	**326,408**	**278,512**
DEBT AND PAYABLES [1] (NOTE 13)			
Bonds		11,159,296	9,424,470
Bank borrowings [2]		9,198	8,034
Other borrowings		5,136,134	4,970,017
Tax and social charges payable		28,399	60,931
Other payables		200,559	88,830
Accruals			
Deferred income		11,897	304
	TOTAL III	**16,545,483**	**14,552,586**
Translation gains	TOTAL IV	0	0
TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES		**34,121,774**	**32,050,461**
(a) of which long-term capital gains reserve		14,225	14,225
(1) of which due beyond one year		9,587,876	8,381,073
of which due within one year		6,957,606	6,171,513
(2) of which short-term bank loans and overdrafts		9,198	8,034

Statement of cash flows

(in EUR thousand)	2019	2018
NET INCOME	**848,966**	**669,184**
Depreciation and amortization	10,060	22,320
Changes in provisions	32,162	378,010
Gains and losses on disposals of assets, net	174,743	23,774
CASH FLOW FROM OPERATIONS	**1,065,931**	**1,093,288**
(Increase) decrease in other receivables	559,850	(481,248)
(Increase) decrease in deferred charges and prepaid income/expenses	(1,992)	4,093
Increase (decrease) in taxes and social charges payable	(32,532)	(131,750)
Increase (decrease) in other payables	111,729	(43,845)
NET CHANGE IN WORKING CAPITAL	**637,055**	**(652,750)**
NET CASH FROM OPERATING ACTIVITIES	**1,702,986**	**440,538**
Acquisition of intangible assets	(2,651)	(2,698)
Acquisition of property, plant and equipment	(39,462)	(30,127)
Acquisition of investments in subsidiaries and affiliates and other investment securities	(92,653)	3
Acquisition of treasury stock	(277,413)	(531,855)
Proceeds from disposals of property, plant and equipment and intangible assets	30,961	3,834
(Increase) decrease in loans and advances to subsidiaries and affiliates	(599,348)	(897,830)
(Increase) decrease in long-term loans	(142,494)	(950,177)
(Increase) decrease in other financial investments	205	(172)
NET CASH USED IN INVESTING ACTIVITIES	**(1,122,855)**	**(2,409,022)**
Issue of capital stock	164,562	192,914
Dividend paid	(716,380)	(707,475)
Increase (decrease) in provisions for contingencies and charges	(903)	509
Increase (decrease) in short- and long-term debt	1,735,989	1,673,843
Increase (decrease) in bank overdrafts and other short-term debt	166,117	745,835
Decrease (increase) in marketable securities	(1,634,146)	378,791
Increase (decrease) in translation adjustments		
NET CASH FROM/(USED IN) FINANCING ACTIVITIES	**(284,761)**	**2,284,417**
INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	**295,370**	**315,933**
Cash and cash equivalents at January 1	857,657	541,724
Cash and cash equivalents at December 31	1,153,027	857,657
Analysis of cash and cash equivalents at December 31		
Cash at bank	1,153,027	857,657
Cash on hand	0	0
Total	1,153,027	857,657

Notes to the 2019 annual financial statements

The financial statements cover the 12-month period from January 1 to December 31, 2019.

The following notes form an integral part of the annual financial statements.

These financial statements were approved by the Board of Directors on February 27, 2020.

NOTE 1 ACCOUNTING PRINCIPLES AND METHODS

The financial statements of Compagnie de Saint-Gobain have been drawn up in accordance with the French Chart of Accounts, French law, and accounting principles generally accepted in France.

The financial statements include the accounts of Compagnie de Saint-Gobain's German branch.

Intangible assets

Purchased goodwill that is not legally protected is amortized over 25 years. Other intangible assets, consisting of computer software, are measured at acquisition cost and amortized over periods of three, five or ten years.

Property, plant and equipment

Property, plant and equipment are stated at cost (purchase price plus incidental expenses), except for assets acquired prior to December 31, 1976, which have been revalued.

They are depreciated over their estimated useful lives using the straight-line or declining-balance method. The most commonly used useful lives are as follows:

■ Buildings	40 to 50 years	Straight-line
■ Improvements and additions	12 years	Straight-line
■ Fixtures and fittings	5 to 12 years	Straight-line
■ Office furniture	10 years	Straight-line
■ Office equipment	5 years	Straight-line
■ Vehicles	4 years	Straight-line
■ IT equipment	3 years	Straight-line or declining balance

Financial investments, investments in subsidiaries and affiliates and other investment securities

On initial recognition, investments in subsidiaries and affiliates are stated at cost including incidental expenses. They are then periodically measured at fair value, particularly when an inventory is performed. Fair value is estimated based on various criteria, including the Company's equity in the underlying net assets, the proportion of consolidated net assets, the net present value of future cash flows, excluding interest expense but after tax, based on business plans (or long-term budget projections), or a multiple of a normative performance basis.

When the fair value of the investments falls below their cost, a provision is set aside for impairment. No unrealized capital gain is recorded if fair value exceeds cost, and unrealized capital gains and losses are not offset.

Treasury shares held by the Company for allocation upon exercise of stock options are recorded in the balance sheet under "Other investment securities". They are carried at the lower of cost, market price or the option exercise price when it is probable that the options will be exercised.

Treasury shares held for cancellation are carried at cost and are not revalued or provisioned.

Receivables

Receivables are stated at nominal value. A provision is set aside for impairment when their realizable value is less than their book value.

Marketable securities

Marketable securities mainly include units in money market funds (OPCVM and FCP) and are stated at the lower of acquisition cost and market value at year-end.

This item also includes treasury shares held by the Company other than those classified as financial investments.

These securities are valued in accordance with the first in/first out (FIFO) method.

Foreign currency transactions

Income and expenses in foreign currencies are recorded at the euro exchange rate prevailing on the transaction date. Receivables, payables and bank balances in foreign currencies are translated at the year-end exchange rate, along with the related hedging instruments, and differences arising on translation are recorded under translation gains or losses. Provisions are booked for any exceptional unrealized translation losses that are not hedged.

Risk management/Financial instruments

Liquidity risk is managed with the main objective of ensuring the timely rollover of the Group's financing at an optimal cost. Long-term debt therefore systematically represents a high proportion of overall debt. At the same time, the maturity schedules of long-term debt are set in such a way that replacement capital market issues are spread over time.

Currency, interest rate, and commodity (energy and raw materials) price risks resulting from the Group's international activities are hedged by Compagnie de Saint-Gobain, mainly on behalf of subsidiaries. On its own behalf and for its subsidiaries, Compagnie de Saint-Gobain also hedges the risk of fluctuations in the Saint-Gobain share price that could affect the cost of performance unit plans.

Currency risks are hedged mainly by fixed-term forward purchase and sale contracts and currency options. Foreign currency receivables and payables hedged by forward purchase and sale contracts are recorded in the balance sheet at the hedging rate.

The portion of the unrealized gain or loss on currency options qualifying for hedge accounting that represents the extrinsic (time) value is taken to income, and the portion that represents the intrinsic value is recorded in the balance sheet. Only unrealized losses on currency options that do not qualify for hedge accounting are recognized in the income statement.

The Company uses mainly interest rate swaps and cross-currency swaps to hedge its exposure to fluctuations in interest rates. Financial income and expenses on interest rate swaps and cross-currency swaps are recognized in the income statement on a symmetrical basis against income and expenses on the hedged items.

The portion of the unrealized gain or loss on interest rate options qualifying for hedge accounting that represents the extrinsic (time) value is taken to income, and the portion that represents the intrinsic value is recorded in the balance sheet. Interest rate options that do not qualify for hedge accounting are recognized in the income statement at market value.

The commodity (energy and raw materials) price risks of subsidiaries are hedged by the Company, mainly using energy and raw materials swaps. Financial income and expenses on these swaps are recognized in the income statement on a symmetrical basis against the income and expenses on the hedged items.

The risk of fluctuations in the Saint-Gobain share price that could affect the cost of performance unit plans is hedged using cash-settled equity swaps, which qualify for hedge accounting.

Since January 1, 2017, Compagnie de Saint-Gobain has applied regulation no. 2015-05 of July 2, 2015 issued by the French accounting standards-setter (*Autorité des Normes Comptables* – ANC) on forward financial instruments and hedging operations to all outstanding operations.

Tax consolidation agreements

Compagnie de Saint-Gobain is the parent company of a tax consolidation group under the group relief regime provided for in Articles 223 A *et seq*. of the French Tax Code.

The tax consolidation agreements between Compagnie de Saint-Gobain and its subsidiaries provide for tax neutrality for consolidated subsidiaries. In their relationship with Compagnie de Saint-Gobain, the consolidating parent company, the subsidiaries discharge their taxes as if they had been taxed on a stand-alone basis. When loss-making companies leave the Group, they are not, in principle, entitled to any payments for losses transferred to the consolidating parent company during the consolidation period.

NOTE 2 OPERATING INCOME/(LOSS)

Operating revenue increased during the year owing to the change in the billing procedure for general assistance services within the Saint-Gobain Group. This follows the new organizational and management structure put in place as from January 1, 2019 as part of the "Transform & Grow" program. Up to 2018, Compagnie de Saint-Gobain only billed those central support services that were recorded in its books. As from January 1, 2019, Compagnie de Saint-Gobain also bears all costs relating to central and business support functions that were previously booked by the holding companies for the Group's business sectors and divisions. As a result, the sharp rise in general assistance services allows the Company to rebill all such costs to the Group subsidiary to which the services were provided. This change has a limited impact on operating income/loss.

The operating loss increased by €40.6 million compared to 2018 due to the higher cost of pensions and other employee benefits relating mainly to changes in the discount rates in 2019 for €28.2 million, and represented a loss of €59.2 million versus a loss of €18.6 million in 2018.

NOTE 3 NET FINANCIAL INCOME

Net financial income increased by €324.0 million to €873.4 million in 2019 from €549.4 million in 2018.

The increase chiefly reflects:

- an €81.1 million decrease in income from investments in subsidiaries and affiliates (dividends received from subsidiaries and 2019 profit transferred from the subsidiaries of the German branch);
- a €384.6 million decrease in depreciation, amortization, impairment and provisions (expense of €4.7 million in 2019 versus €389.3 million in 2018). The 2018 expense included a €371 million provision for impairment of investments in subsidiaries and affiliates, of which €333 million related to Saint-Gobain Materiaux de Construction, €8 million to Saint-Gobain Innovative Materials (Belgium) and €30 million to Saint-Gobain PAM.

NOTE 4 EXCEPTIONAL ITEMS

The Company recorded a net exceptional expense of €191.6 million in 2019 compared to a net exceptional expense of €15.8 million in 2018. This chiefly reflects losses on the September 30, 2019 disposal of shares in Saint-Gobain Building Distribution Deutschland to the Stark group and the expense relating to the Group's long-term compensation plans.

NOTE 5 INCOME TAXES

The Company recorded income tax benefit of €226.4 million, breaking down as:

- a net tax profit of €182.4 million under the tax consolidation regime (France);
- a net tax profit of €44.0 million for the German entity.

The French tax group generated a tax loss in 2019. The Group also has unused tax loss carry-forwards. At December 31, 2019, unused tax loss carry-forwards represented €995 million.

Compagnie de Saint-Gobain's permanent German establishment, which is the head of the Group's *Organschaft* local tax consolidation regime, reported a profit on tax consolidation in 2019.

At December 31, 2019, future tax savings corresponding to the branch's unused tax loss carry-forwards amounted to €25.2 million.

These future tax savings have been recorded in the consolidated financial statements, but not in the parent company financial statements.

NOTE 6 INTANGIBLE ASSETS

	Intangible assets				Amortization				Net
(in EUR thousand)	Gross at Jan. 1, 2019	Additions	Disposals	Gross at Dec. 31, 2019	Accumulated at Jan. 1, 2019	Increases	Decreases	Accumulated at Dec. 31, 2019	at Dec. 31, 2019
Purchased goodwill	567			567	567			567	0
Other intangible assets	51,578	873		52,451	44,643	3,075		47,718	4,733
Intangible assets in progress	3,376	1,778	(71)	5,083	0			0	5,083
TOTAL	**55,521**	**2,651**	**(71)**	**58,101**	**45,210**	**3,075**	**0**	**48,285**	**9,816**

NOTE 7 PROPERTY, PLANT AND EQUIPMENT

	Property, plant and equipment				Depreciation				Net
(in EUR thousand)	Gross at Jan. 1, 2019	Additions	Disposals	Gross at Dec. 31, 2019	Accumulated at Jan. 1, 2019	Increases	Decreases	Accumulated at Dec. 31, 2019	at Dec. 31, 2019
Land	51			51	0			0	51
Buildings	1,400			1,400	740	65		805	595
Other	13,936	1,937	(959)	14,914	8,757	2,199	(899)	10,057	4,857
Assets under construction	36,288	37,525		73,813	0			0	73,813
Prepayments	0			0	0			0	0
TOTAL	**51,675**	**39,462**	**(959)**	**90,178**	**9,497**	**2,264**	**(899)**	**10,862**	**79,316**

Additions to assets under construction mainly represent capitalized expenditures related to the construction of the new Compagnie de Saint-Gobain headquarters which are the responsibility of the lessee. These expenditures will be reclassified within other property, plant and equipment and depreciation will be charged as soon as employees beginning to move there in early 2020.

NOTE 8 FINANCIAL INVESTMENTS

	Financial investments			
(in EUR thousand)	Gross at Jan. 1, 2019	Additions	Disposals	Gross at Dec. 31, 2019
Investments in subsidiaries and affiliates	13,105,069	92,653	(194,609)	13,003,113
Loans and advances to subsidiaries and affiliates	14,359,317	1,777,794	(1,178,446)	14,958,665
Other investment securities	5,979	2,285	0	8,265
Loans	1,328,907	1,141,361	(998,868)	1,471,401
Other financial investments	1,587	700	(905)	1,382
TOTAL	**28,800,859**	**3,014,793**	**(2,372,828)**	**29,442,825**

Changes in investments in subsidiaries and affiliates

(in EUR thousand)	Additions	Disposals
Subscription to Saint-Gobain PAM capital increase	16,218	
Participation in Saint-Gobain Expertise et Service rights issue	10	
Purchase of Saint-Gobain Beteiligungen GmbH shares	76,425	
Disposal to a third party of Saint-Gobain Building Distribution Deutschland shares		194,609
TOTAL	**92,653**	**194,609**

No impairment was recognized against investments in subsidiaries and affiliates in 2019.

Analysis of loans, receivables and other financial investments by maturity

		Due	
(in EUR thousand)	Gross	Within 1 year	Beyond 1 year
Loans and advances to subsidiaries and affiliates	14,958,665	2,777,795	12,180,870
Loans	1,471,401	1,190,901	280,500
Other financial investments	1,382	0	1,382
TOTAL	**16,431,448**	**3,968,696**	**12,462,752**

Changes in other investment securities

(in EUR thousand)	Increases	Decreases
Purchase of treasury shares for cancellation	266,628	
Cancellation of treasury shares		(266,628)
Allocation of treasury shares to cover stock option plans	2,285	
Provision for treasury shares held under stock option plans		(930)
TOTAL	**268,913**	**(267,558)**

Changes in treasury shares classified as financial investments

(in EUR thousand)	No. of shares held	Gross value	Net value
AT DECEMBER 31, 2017	**286,418**	**13,895**	**12,600**
Shares purchased in 2018	12,307,163	511,392	511,392
Shares sold in 2018	(11,785)	(573)	(457)
Shares canceled in 2018	(12,461,449)	(518,865)	(518,865)
Additional provision for impairment			(1,086)
AT DECEMBER 31, 2018	**120,347**	**5,849**	**3,584**
Shares purchased in 2019	8,211,754	266,628	266,628
Shares canceled in 2019	(8,211,754)	(266,628)	(266,628)
Transfer of marketable securities in 2019	62,542	2,285	2,285
Adjustment to provision for impairment			930
AT DECEMBER 31, 2019	**182,889**	**8,134**	**6,799**

During 2019, Compagnie de Saint-Gobain bought back 8,532,449 treasury shares outside the scope of the liquidity agreement, each with a par value of €4, representing a total amount of €277.4 million (€34.1 million aggregate par value).

Of these 8,532,449 treasury shares:

- 8,211,754 shares bought for cancellation have been recorded under “Financial investments” for a gross amount of €266.6 million (€32.8 million aggregate par value);
- The balance of 320,695 shares, bought to cover employee performance share plans, was initially recorded under “Marketable securities” for an amount of €10.8 million (€1.3 million par value). A total of 62,542 shares intended to cover 2015 stock option plans were reclassified within “Financial investments” in November 2019 for a gross amount of €2.3 million.

A total of 6,000,000 and 2,211,754 shares were canceled on June 14 and November 29, 2019, respectively.

In 2019, 341,150 treasury shares were remitted as part of existing performance share plans and zero treasury shares were remitted as part of stock option plans (respectively 438,468 and 11,785 shares in 2018).

At December 31, 2019, Compagnie de Saint-Gobain held 1,934,484 treasury shares, of which:

- 27,000 treasury shares held in connection with a liquidity agreement (see Note 9 “Marketable securities”);
- 182,889 treasury shares held to cover stock option plans (see above);
- 1,724,595 treasury shares held to cover employee performance share plans (see Note 9 “Marketable securities”).

NOTE 9 CURRENT ASSETS

Maturities of receivables reported under “Current assets”

		Due	
(in EUR thousand)	Gross	Within 1 year	Beyond 1 year
Other receivables	1,158,007	1,157,783	224
Prepayments	19,419	3,471	15,948
TOTAL	**1,177,426**	**1,161,254**	**16,172**
Provision for doubtful receivables	-	-	-

Analysis of "Other receivables"

(in EUR thousand)	2019	2018
Current account advances to subsidiaries	936,844	1,653,199
Mark-to-market adjustments to swaps and options (1)	3,038	1,979
Accounts receivable – Group	92,483	34,098
Accruals for income and credit notes receivable	30,508	19,874
Tax receivables	33,438	1,638
Accruals for income and credit notes receivable – Group	2,512	1,168
Accounts receivable – External companies	1,428	1,229
Prepayments to suppliers	767	291
Income tax	10,639	570
Other	46,350	3,811
TOTAL	**1,158,007**	**1,717,857**

(1) *All mark-to-market adjustments to swaps and options that represent debit entries are recorded as assets on the balance sheet under "Other receivables" and those representing credit entries are recorded as liabilities on the balance sheet under "Other payables."*

Marketable securities

Marketable securities amounted to €2,617 million at December 31, 2019.

They consist mainly of €2,538 million worth of units in money market funds (OPCVM and FCP), representing the investment of funds held by the cash pool managed by the Company on behalf of the Group to yield a return on temporary cash surpluses.

The securities also include 1,724,595 treasury shares held to cover employee performance share plans.

Lastly, marketable securities include those held under a liquidity agreement the Company entered into on November 16, 2007 with Exane BNP Paribas. This agreement complies with the Code of Ethics adopted by the French financial markets association (*Association française des Marches Financiers* – AMAFI), which is recognized by the French financial markets authority (*Autorité des Marchés Financiers* – AMF). It came into effect on December 3, 2007 for an initial period ending on December 31, 2007, and has been automatically renewed since that date.

In compliance with applicable regulations (particularly AMF decision No. 2018-01 of July 2, 2018 establishing liquidity agreements on shares as an acceptable market practice), Compagnie de Saint-Gobain entered into a new liquidity agreement with Exane BNP Paribas on June 20, 2019, replacing their former liquidity agreement with retroactive effect from January 1, 2019.

Under this liquidity agreement, at December 31, 2019 the Company held:

- €3.8 million worth of units in a euro-denominated money-market fund (FCP);
- 27,000 treasury shares.

In 2019, 1,245,520 shares were purchased under this agreement (2018: 1,276,808 shares) and 1,335,079 shares were sold (2018: 1,203,749 shares).

Deferred charges

(in EUR thousand)	2019	2018
Bond issuance costs	38,497	40,173
Syndicated credit facility arrangement fees	6,276	8,108
Other deferred charges	43	
DEFERRED CHARGES	**44,816**	**48,281**

In 2019, new debt issuance costs recorded under "Deferred charges" totaled €7.1 million and amortization for the year amounted to €10.6 million.

The corresponding refinancing transactions are presented in Note 13.

NOTE 10 SHAREHOLDERS' EQUITY

10.1 Changes in capital stock

Par value at December 31, 2018: €4 Par value at December 31, 2019: €4	Number of shares	Amount (in EUR thousand)
CAPITAL STOCK AT JANUARY 1, 2019	**546,585,004**	**2,186,340**
Shares issued under the Group Savings Plan on May 15, 2019	5,999,997	24,000
Shares canceled on June 14, 2019	(6,000,000)	(24,000)
Shares canceled on November 29, 2019	(2,211,754)	(8,847)
Shares issued upon exercise of stock options on December 31, 2019	310,204	1,241
CAPITAL STOCK AT DECEMBER 31, 2019	**544,683,451**	**2,178,734**

At December 31, 2019, capital stock amounted to €2,178,734 thousand, represented by 544,683,451 shares of common stock with a par value of €4 each.

10.2 Statement of changes in shareholders' equity

(in EUR thousand)	Amount
SHAREHOLDERS' EQUITY AT DEC. 31, 2018 BEFORE APPROPRIATION OF 2018 NET INCOME	**17,049,328**
Shares issued under the Group Savings Plan on May 15, 2019	153,292
Payment of the 2018 dividend	(716,380)
Shares canceled on June 14, 2019	(194,063)
Shares canceled on November 29, 2019	(72,564)
Shares issued upon exercise of stock options on December 31, 2019	11,270
Net income for 2019	848,966
SHAREHOLDERS' EQUITY AT DEC. 31, 2019 BEFORE APPROPRIATION OF 2019 NET INCOME	**17,079,849**

10.3 Significant events

The principal events that contributed to changes in capital stock and shareholders' equity were as follows:

- **the May 2019 increase in capital stock through the subscription of 5,999,997 shares under the Group Savings Plan at a price of €25.69.** The issue proceeds amounted to €154,140 thousand (€153,292 thousand after deducting the issue costs, net of tax, from the premium);
- **the capital reductions of June 14 and November 29, 2019 through the cancellation of respectively 6,000,000 and 2,211,754 shares** for a total gross and net amount of €266,627 thousand;

lastly, the December issue of 310,204 shares at an average price of €36.33 upon exercise of stock options. Gross as well as net issue proceeds amounted to €11,270 thousand.

These various transactions had the effect of decreasing **capital stock** by €7,606 thousand, the **legal reserve** by €761 thousand and **additional paid-in capital** by €93,699 thousand.

Changes in **unappropriated retained earnings** during the year are shown below.

Changes pursuant to the third Resolution of the AGM of June 6, 2019 (appropriation of income):

(in EUR thousand)	
AT DECEMBER 31, 2018 (BEFORE APPROPRIATION OF 2018 NET INCOME)	**5,580,381**
Net income for 2018	669,184
Less final dividend taking into account the actual number of treasury shares held	(716,380)
AT DECEMBER 31, 2019 (BEFORE APPROPRIATION OF 2019 NET INCOME)	**5,533,185**

10.4 Stock option plans

Until 2018, Compagnie de Saint-Gobain operated stock option plans for certain employees.

Under these plans, the Board of Directors granted options allowing beneficiaries to obtain Saint-Gobain shares at a price set, at no discount, by reference to the average of the opening prices for the Saint-Gobain share over the 20 stock market trading days preceding the date of the decision by the Board of Directors.

For all of the plans, options may only be exercised as from four years after the grant date. Before this time, none of the options received may be exercised. Options must be exercised within 10 years of the grant date. Except in specified circumstances, grantees forfeit these options if they leave the Group.

Among the plans outstanding at December 31, 2019, the 2012 plan offers subscription options, while the 2013 and 2015 plans offer purchase options. For plans launched between 2016 and 2018, the Board of Directors has decided that it would determine the type of option (subscription or purchase) at the latest on the day before the start of the exercise period, with any options exercised prior to such decision considered as subscription options.

Since 2009, a performance condition has applied for all grantees in plans.

No new stock option plan was launched in 2019.

The following table presents changes in the number of outstanding options:

	€4 par value shares	Average exercise price *(in EUR)*
OPTIONS OUTSTANDING AT DECEMBER 31, 2017	**3,015,623**	**33.97**
Options granted	290,500	32.24
Options exercised	(568,380)	26.64
Options forfeited	(889,736)	28.05
OPTIONS OUTSTANDING AT DECEMBER 31, 2018	**1,848,007**	**38.78**
Options granted	0	-
Options exercised	(310,204)	36.33
Options forfeited*	(480,281)	37.40
OPTIONS OUTSTANDING AT DECEMBER 31, 2019	**1,057,522**	**24.09**

* *Including 317,873 options under the 2009 stock subscription plan that remained unexercised upon expiration of the plan, 160,974 options under the 2015 plan that had lapsed because the performance condition had only been partly met, and 1,434 options under the 2015 plan that had lapsed after the service condition was considered.*

The table below summarizes information about stock options outstanding at December 31, 2019, after taking into account partial fulfillment of the performance criteria attached to certain plans.

	Options exercisable			Options not yet exercisable		Total outstanding options	
Grant date	**Exercise price** *(in EUR)*	**Number of options**	**Weighted ave. residual life** *(in months)*	**Exercise price** *(in EUR)*	**Number of options**	**Number of options**	
2010	35.19	-	11	-	-	-	Subscription
2011	31.22	-	23	-	-	-	Subscription
2012	27.71	19,633	35	-	-	19,633	Subscription
2013	38.80	120,347	47	-	-	120,347	Purchase
2014	34.13	-	59	-	-	-	Purchase
2015	39.47	62,542	71	-	-	62,542	Purchase
2016	-	-	83	40.43	280,000	280,000	see 10.4 above
2017	-	-	95	49.38	284,500	284,500	see 10.4 above
2018	-	-	107	32.24	290,500	290,500	see 10.4 above
2019	-	-	119			0	
TOTAL	**-**	**202,522**	**-**	**-**	**855,000**	**1,057,522**	**-**

At December 31, 2019, 202,522 stock options were exercisable (at an average exercise price of €37.93) and 855,000 options with an average exercise price of €40.63 had not yet vested.

10.5 Performance share plans

Various performance share plans have been set up by Saint-Gobain since 2009.

At December 31, 2019, there were four outstanding performance share plans, approved by the Board of Directors in 2016, 2017, 2018 and on November 21, 2019. These plans concern both managerial-grade employees and senior managers of the Group both within and outside France.

All plans are subject to service and performance conditions. The vesting period for the plans is four years and the shares will be delivered the day after the end of the vesting period for the 2016-2017 plans, and respectively on the third and fourth day after the end of the vesting period for the 2018 and 2019 plans.

The table below shows changes in the number of performance share rights:

	Number of rights
NUMBER OF PERFORMANCE SHARE RIGHTS (NOT YET VESTED) AT DECEMBER 31, 2017	**3,487,440**
■ performance share rights granted in November 2018	1,219,619
■ shares issued/delivered	(438,468)
■ lapsed and canceled rights	(91,602)
NUMBER OF PERFORMANCE SHARE RIGHTS (NOT YET VESTED) AT DECEMBER 31, 2018	**4,176,989**
■ performance share rights granted in November 2019	1,251,770
■ shares issued/delivered	(341,150)
■ lapsed and canceled rights*	(159,740)
NUMBER OF PERFORMANCE SHARE RIGHTS (NOT YET VESTED) AT DECEMBER 31, 2019	**4,927,869**

* *Rights granted under the 2015 plan including 134,598 rights that lapsed because the performance condition had only been partly met, and 25,142 rights that lapsed after the service condition was considered.*

The following table shows the expected dates when shares under the four performance share plans outstanding at December 31, 2019 will be delivered (except in the case of early release following the grantee's death or disability), along with the service and performance conditions remaining to be fulfilled:

Grant date	Number of rights granted at inception of Plan	Early deliveries	Outstanding rights at Dec. 31, 2019*	Nov. 24, 2020	Nov. 23, 2021	Nov. 25, 2022	Nov. 24, 2023	Type of shares
nov. 24, 2016	1,231,320	870	1,230,450	1,230,450				existing
nov. 23, 2017	1,226,680	450	1,226,230		1,226,230			existing
nov. 22, 2018	1,219,619	200	1,219,419			1,219,419		existing
nov. 21, 2019	1,251,770	0	1,251,770				1,251,770	existing
TOTAL	**4,929,389**	**1,520**	**4,927,869**	**1,230,450**	**1,226,230**	**1,219,419**	**1,251,770**	

* *Subject to fulfillment of the service and performance conditions applicable to each plan.*

10.6 Performance unit plans

Performance unit plans subject to service and performance conditions were set up every year between 2012 and 2015 for certain managerial-grade employees and senior managers of the Group in France. These plans do not give rise to the delivery of shares, but entitle grantees to receive cash compensation deferred over the long term (exercise period between four and ten years after the grant date), the amount of which will be determined by reference to the Company's share price.

No long-term compensation plan in the form of performance units has been set up since 2016, as all beneficiaries received rights to performance shares (see above).

In 2019, 352,372 performance units under the 2015 plan vested, while 203,968 performance units under the same plan lapsed, including 187,153 units because the performance condition had only been partly met and 16,815 units after considering the service condition.

There were no unvested performance unit plans at December 31, 2019.

10.7 Compagnie de Saint-Gobain Group Savings Plan (PEG)

The Group Savings Plan (PEG) is an employee stock purchase plan open to all Group employees in France and most other countries where the Group is present. Eligible employees must have completed a minimum of three months' service with the Group. Eligible employees are able to invest in Saint-Gobain shares at a preferential subscription price. These shares are held either directly or through the employee saving plan's mutual funds, depending on local legislation, and are subject to a mandatory five- or ten-year lock-up, except following the occurrence of certain events. The Board of Directors delegates authorization for setting the subscription price to the Chief Executive Officer of Compagnie de Saint-Gobain. The price corresponds to the average of the opening prices for the Saint-Gobain share on Euronext Paris over the 20 trading days preceding the date of the decision, subject to a 20% discount, in accordance with applicable laws, the Resolutions of the Shareholders' Meeting and the deliberations of the Board of Directors.

In 2019, 5,999,997 new shares with a par value of €4 were issued to employees under the PEG at an average subscription price of €25.69 (2018: 4,932,767 shares at an average price of €36.31), representing a total share capital increase of €154 million (€179 million in 2018).

10.8 Potential number of shares

At the Annual General Meeting of June 6, 2019, shareholders authorized the Board of Directors of Compagnie de Saint-Gobain to:

- issue, on one or several occasions, up to 109,250,000 new shares or securities giving access to the share capital of the Company or its subsidiaries, with preferential subscription rights, or without preferential subscription rights but with a priority period for existing shareholders, by public offering, or without preferential subscription rights by private placement, or to issue new shares through the capitalization of share premiums, reserves, profits or other amounts, or without preferential subscription rights in consideration of contributions in kind (15th to 20th Resolutions/ 26-month authorization commencing June 6, 2019);
- grant stock purchase or subscription options exercisable for new or existing shares, subject in particular to performance conditions, representing up to 1.5% of capital stock on the date of the AGM, with a sub-limit of 10% of this limit for Executive Directors of Compagnie de Saint-Gobain, *i.e.*, 8,288,775 options, including a maximum of 828,878 options for Executive Directors (23rd Resolution/38-month authorization commencing June 6, 2019). It should be noted that this limit of 1.5% of the capital stock will be set off against the threshold set in the 24th Resolution for the performance share grant mentioned below, and that this 1.5% limit represents the aggregate limit for shares resulting from the exercise of options granted under and within the limit of the 23rd Resolution and shares granted under and within the limit of the 24th Resolution;
- grant free existing shares, subject in particular to performance conditions, representing up to 1.2% of the capital stock on the date of the AGM, with a sub-limit of 10% of this limit for Executive Directors of Compagnie de Saint-Gobain, *i.e.*, 6,631,020 free shares, including a maximum of 663,102 free shares for Executive Directors (24th Resolution/38-month authorization commencing June 6, 2019). The limit of 1.2% and sub-limit of 10% are being set off against the limits specified under the 23th Resolution of the AGM referred to above regarding stock options. The Board of Directors made partial use of this authorization on November 21, 2019, by granting 1,251,770 performance shares (including 135,000 for Executive Directors) (see section 10.5);
- issue, on one or several occasions, up to 12,022,500 new shares to members of the Group Savings Plan (22nd Resolution/26-month authorization commencing June 6, 2019).

If all outstanding stock options whose type has not yet been decided by the Board of Directors were to be exercised *via* the issue of new shares, this would potentially have the effect of increasing the number of shares outstanding to 545,558,084 shares. In addition, if the authorizations described above were to be used in full by the Board of Directors, this would potentially have the effect of increasing the number of shares outstanding to 673,867,589 shares.

NOTE 11 OTHER EQUITY

Non-voting participating securities

In June 1983, Compagnie de Saint-Gobain issued 1,288,299 non-voting participating securities with a face value of FRF 1,000. Their face value is now €152.45, following their translation into euros in 1999.

A certain number of these participating securities have been bought back over the years. At December 31, 2019, 606,883 securities were still outstanding, with an aggregate face value of €92.5 million.

Interest on the securities ranges from 75% to 125% of the average corporate bond yield (TMO), based on the Group's consolidated income. The amount paid out per security in 2019 was €1.92.

In April 1984, 194,633 non-voting participating securities were issued with a face value of ECU 1,000 (€1,000 today).

A certain number of these participating securities have been bought back over the years. At December 31, 2019, 77,516 securities were still outstanding with an aggregate face value of €77.5 million.

Interest comprises (i) a fixed portion of 7.5% paid per year applicable to 60% of the nominal amount of the security, and (ii) a variable portion applicable to the remaining 40% of the nominal amount of the participating security, which is linked to consolidated net income of the previous year and to the reference six-month Libor EUR rate +7/8%. The amount paid per security in 2019 was €60.78, paid in two installments (€33.53 and €27.25).

None of these securities are redeemable and the interest is classified as a component of finance costs.

NOTE 12 PROVISIONS

(in EUR thousand)	At Jan. 1, 2019	Charge for the year	Reversal of provisions	Other (transfers)	At Dec. 31, 2019
Untaxed provisions					
Reinvested capital gains	3,247				3,247
Other	0				0
	3,247	**0**	**0**	**0**	**3,247**
Provisions for contingencies					
Provisions for taxes	17,051	2,475	0	2,633	22,159
Provisions for other contingencies	3,069	916	(574)	(566)	2,845
	20,120	**3,391**	**(574)**	**2,067**	**25,004**
Provisions for charges					
Provisions for pensions and other post-employment benefit obligations (1)	143,415	36,935	(26,790)	(5)	153,555
Provisions for performance share and performance unit plan costs	105,664	38,599	(16,826)	415	127,851
Provisions for other charges	9,313	18,594	(7,915)	6	19,998
	258,392	**94,128**	**(51,531)**	**416**	**301,404**
Provisions for impairment					
Investments in subsidiaries and affiliates	401,068				401,068
Other investment securities	2,383		(930)		1,453
Doubtful receivables	0				0
Marketable securities	132		(132)		0
	403,583	**0**	**(1,062)**	**0**	**402,521**
Impact on operating income/(loss)		**54,946**	**(26,790)**	**0**	
Impact on net financial income		**0**	**(1,062)**	**0**	
Impact on exceptional items		**42,573**	**(25,315)**	**0**	

(1) The Company's obligations with respect to supplementary pension plans and other post-employment benefits are measured using the actuarial method of projected unit credits based on end-of-career salaries and employees' vested rights at the measurement date.

Actuarial gains and losses arising in the year under defined-benefit retirement plans are recognized immediately and in full in the income statement.

The discount rate used in 2019 was 1.01% for terms of 14 years or less (1.80% in 2018), and 1.39% for terms over 14 years (2.15% in 2018).

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NOTE 13 DEBT AND PAYABLES

Total debt and payables (€16,545 million) recorded a net increase of €1,993 million, which is largely explained by the net increase in bonds of €1,735 million and in other payables of €112 million.

Analysis of debt and payables

		Due	
(in EUR thousand)	**Gross**	**Within 1 year**	**Beyond 1 year**
Bonds [(1)]	11,159,295	1,582,825	9,576,470
Bank borrowings [(1) (2)]	9,198	9,198	
Other borrowings [(3)]	5,136,134	5,135,949	185
DEBT	**16,304,627**	**6,727,972**	**9,576,655**
Tax and social charges payable	28,399	28,399	
Other payables [(3)]	200,559	200,147	412
Deferred income	11,897	1,088	10,809
TOTAL DEBT AND PAYABLES [(4)]	**16,545,482**	**6,957,606**	**9,587,876**
(1) New borrowings and debt for the year – non-Group	2,644,000		
Borrowings and debt repaid during the year – non-Group	950,000		
(2) Of which:			
■ debt with original maturity of up to two years	9,198		
■ debt with original maturity of more than two years			
(3) Of which:			
■ shareholder loans	None		
■ new loans from subsidiaries*	518,534		
■ loans from subsidiaries repaid during the year	352,416		
(4) Debt due beyond five years	5,016,861		

* *Including the net change in current accounts with Group entities.*

Long- and short-term debt

(in EUR thousand)	**2019**	**2018**
1. Medium and long-term debt		
LONG-TERM PORTION		
Due between January 1 and December 31		
2020		1,480,000
2021	1,500,000	750,000
2022	1,000,000	1,000,000
2023	862,000	862,000
2024	1,197,609	430,372
2025 and beyond	4,984,342	3,825,976
No fixed maturity	32,705	32,725
Total long- and medium-term debt excluding short-term portion	**9,576,656**	**8,381,073**
Short-term portion	**1,582,825**	**1,043,602**
TOTAL	**11,159,481**	**9,424,675**
2. Short-term debt		
Borrowings from Group entities	5,133,651	4,966,497
Bank overdrafts and other short-term borrowings	9,198	8,034
Other	2,298	3,315
TOTAL	**5,145,147**	**4,977,846**
TOTAL LONG- AND SHORT-TERM DEBT	**16,304,628**	**14,402,521**

Long-term debt can be analyzed as follows by currency:

(in EUR thousand)	2019	2018
Euro	10,507,179	8,804,218
Pound sterling	652,116	620,252
TOTAL	**11,159,295**	**9,424,470**

The amortization of expenses incurred to set up borrowings is recognized on a pro rata basis over the term of the borrowings in question. These expenses are shown on the “Deferred charges” line of the balance sheet (see Note 9 “Deferred charges”).

13.1 Perpetual bonds

In 1985, Compagnie de Saint-Gobain issued 25,000 perpetual bonds with a face value of ECU 5,000 (€5,000 today).

A total of 18,496 perpetual bonds have since been bought back and canceled, and 6,504 perpetual bonds were outstanding at December 31, 2019, representing a total face value of €33 million.

The bonds bear interest at a variable rate (average of interbank rates offered by the five reference banks for six-month euro deposits). The amount paid out per bond in 2019 was €1.60.

The bonds are not redeemable and interest on the bonds is classified as a component of finance costs.

13.2 Main changes in bond debt in 2019

Compagnie de Saint-Gobain issued:

- March 15, 2019:
  - €750 million worth of 0.625% fixed-interest bonds, maturing March 15, 2024,
  - €750 million worth of 1.875% fixed-interest bonds, maturing March 15, 2031; the nominal amount of this bond issue was increased to €1,044 million through three additions on March 26 (€124 million), April 5 (€70 million) and May 15, 2019 (€100 million);
- March 22, 2019: a €750 million private placement paying floating-rate interest at 3-month Euribor +0.35%, maturing March 22, 2021;
- May 3, 2019: a €100 million private placement paying fixed-rate interest of 1.875%, maturing May 3, 2035.

On September 30, 2019, Compagnie de Saint-Gobain redeemed a bond that had been increased to €950 million with a coupon of 4.5%.

These issues extended the average maturity of Saint-Gobain’s debt while also optimizing average borrowing costs.

13.3 Financing programs

The Group has a number of medium- and long-term financing programs (Medium-Term Notes) and short-term financing programs (Commercial Paper).

At December 31, 2019, issuance under these programs was as follows:

(in EUR million)	Authorized drawings	Authorized limits at Dec. 31, 2019	Balance outstanding at Dec. 31, 2019	Balance outstanding at Dec. 31, 2018
Medium Term Notes	1 to 30 years	15,000	11,129	9,435
NEU CP	up to 12 months	3,000		0
US Commercial Paper	up to 12 months	890*		0
Euro Commercial Paper	up to 12 months	890*		0

* *Equivalent to US$1,000 million based on the exchange rate at December 31, 2019.*

In accordance with market practices, Negotiable European Commercial Paper (NEU CP), US Commercial Paper and Euro Commercial Paper are generally issued with maturities of one to six months. They are treated as variable-rate debt since they are rolled over at frequent intervals.

Syndicated lines of credit

Compagnie de Saint-Gobain has two syndicated lines of credit that are intended to provide a secure source of financing for the Group (including as additional backing for its NEU CP, US Commercial Paper and Euro Commercial Paper programs):

- a €2.5 billion syndicated line of credit, maturing in December 2024, after the exercise of the two one-year rollover options;
- a second €1.5 billion syndicated line of credit also maturing in December 2024 after the exercise of two one-year rollover options.

Based on the Group's current credit rating for long-term debt issues, the two facilities are not subject to any hard covenants.

Neither of these two lines of credit had been drawn down at December 31, 2019.

NOTE 14 RELATED-PARTY TRANSACTIONS

14.1 Transactions with related companies

(in EUR thousand)	Net amount concerning related companies: (1) Subsidiaries	(2) Other related companies		Net balance sheet amount at Dec. 31, 2019
Balance sheet items				
Investments in subsidiaries and affiliates	12,602,069			12,602,069
Loans and advances to subsidiaries and affiliates	14,958,665			14,958,665
Other investment securities	6,799	12		6,811
Loans	1,417,235		54,166	1,471,401
Other receivables	1,032,605		125,401	1,158,006
Marketable securities	75,621		2,541,467	2,617,088
Cash and cash equivalents			1,153,027	1,153,027
Bonds			11,159,296	11,159,296
Bank borrowings			9,198	9,198
Other borrowings	5,133,555	512	2,067	5,136,134
Tax and social charges payable			28,399	28,399
Other payables	138,478		62,080	200,558
Income statement items				
Income from investments in subsidiaries and affiliates	813,814			813,814
Income from loans and other investments	319,321			319,321
Other interest income	18,805		1,980	20,785
Interest expense	20,601		258,427	279,028

(1) Fully consolidated companies.

(2) Companies that are not fully consolidated.

14.2 Transactions with other related parties

There are no material transactions with other related parties that were not entered into under arm's length conditions.

NOTE 15 INVESTMENT PORTFOLIO

	Country	Net book value (in EUR thousand)	% interest	Number of shares
SPAFI	France	5,768,287	100.00	251,014,613
Partidis	France	2,065,919	100.00	58,597,751
Saint-Gobain Europe du Nord (formerly Saint-Gobain Matériaux de Construction)	France	1,790,712	100.00	112,145,608
Vertec	France	891,512	100.00	11,790,698
Saint-Gobain Benelux	Belgium	812,344	100.00	3,296,475
Saint-Gobain do Brasil	Brazil	259,292	55.31	93,891,494
Saint-Gobain Cristaleria	Spain	211,253	16.35	3,660,417
Saint-Gobain Isover G+H AG	Germany	153,815	99.91	3,197,111
Saint-Gobain PPL Isofluor GmbH	Germany	153,764	100.00	23,008,200
Saint-Gobain Innovative Materials	Belgium	124,080	15.00	1,667,698
Saint-Gobain Glass Deutschland GmbH	Germany	86,660	60.00	119,999,970
Saint-Gobain Beteiligungen GmbH	Germany	76,425	100.00	15,358,100
Saint-Gobain Autoglas GmbH	Germany	72,833	60.00	120,000,000
Saint-Gobain Diamant Werkzeuge GmbH	Germany	61,151	100.00	20,000,000
SEPR	France	53,310	25.73	407,600
Saint-Gobain PAM	France	16,950	8.10	360,255
SCI Île-de-France	France	3,428	94.00	22,560
Miscellaneous French companies		-	-	-
Miscellaneous foreign companies		333	-	-
INVESTMENTS IN SUBSIDIARIES AND AFFILIATES		**12,602,068**		
Cie de Saint-Gobain (treasury shares)	France	6,799	-	182,889
Cie de Saint-Gobain (treasury shares held for cancellation)	France		-	
Miscellaneous French companies		12	-	1,300
OTHER INVESTMENT SECURITIES		**6,811**		
TOTAL		**12,608,879**		

NOTE 16 INFORMATION ABOUT DIRECT INVESTMENTS IN SUBSIDIARIES AND AFFILIATES WHOSE BOOK VALUE EXCEEDS 1% OF CAPITAL

				Book value of shares held						
COMPANY *(in EUR thousand: EUR k or thousands of local currency units)*	**Capital stock**	**Reserves**	**% interest**	**Gross** *(in EUR thousand)*	**Net** *(in EUR thousand)*	**Loans and advances granted by the Company** *(in EUR thousand)*	**Guarantees given by the Company** *(in EUR thousand)*	**2019 net sales**	**2019 net income (loss)**	**Dividends received by the Company in 2019** *(in EUR thousand)*
1 – SUBSIDIARIES										**(1)**
At least 50%-owned										
by the Company										
SPAFI										
18, avenue d'Alsace	EUR k	EUR k						EUR k	EUR k	
92400 Courbevoie	3,012,175	3,541,500	100.00	5,768,287	5,768,287	1,545,000		0	448,665	376,522
Partidis										
18, avenue d'Alsace	EUR k	EUR k						EUR k	EUR k	
92400 Courbevoie	893,616	(1,225,180)	100.00	2,065,919	2,065,919	1,085,000		4,568	415,201	0
S-G Europe du Nord										
18, avenue d'Alsace	EUR k	EUR k						EUR k	EUR k	
92400 Courbevoie	476,619	200,797	100.00	2,123,712	1,790,712	4,371,500		17,279	557,035	0
Vertec										
18, avenue d'Alsace	EUR k	EUR k						EUR k	EUR k	
92400 Courbevoie	188,651	718,225	100.00	891,512	891,511	0		0	44,513	93,972
S. G. Benelux										
6, Avenue Einstein,	EUR k	EUR k						EUR k	EUR k	
1300 Wavre, Belgium	812,345	11,517	100.00	812,345	812,345	0		0	3,844	191,006
S. G. Isover G+H AG										
1 Burgermeister- Grünzweig Strasse	EUR k	EUR k						EUR k	EUR k	
D-67059 Ludwigshafen	82,000	11,426	99.91	153,815	153,815	0		353,267	(5,004)	(5,004)
S. G. PPL Isofluor GmbH										
Ziegeleistrasse 2/Kreitzweg	EUR k	EUR k						EUR k	EUR k	
D-41472, Neuss	23,008	139,936	100.00	153,764	153,764	0		13,347	91,637	91,637
S. G. Glass Deutschland GmbH										
Nikolausstrasse 1	EUR k	EUR k						EUR k	EUR k	
D-52222, Stolberg	102,258	32,889	60.00	87,197	86,660	0		387,383	21,125	21,125
S G Do Brasil										
482, avenida Santa Marina – Agua Branca	(BRLk)	(BRLk)						(BRLk)	(BRLk)	
05036-903 São Paulo-SP, Brésil	1,697,564	938,987	55.31	259,292	259,292	0		3,717,659	110,579	7,111
Saint-Gobain Autoglas GmbH										
Glasstrasse 1	EUR k	EUR k						EUR k	EUR k	
D-52134, Herzogenrath	102,258	19,130	60.00	72,833	72,833	0		0	(10,437)	(10,437)
Saint-Gobain Diamant Werkzeuge GmbH										
Schuetzenwall 13-17	EUR k	EUR k						EUR k	EUR k	
D-22844, Norderstedt	10,226	50,925	100.00	61,151	61,151	0		43,938	(13,076)	(13,075)
Saint-Gobain Beteiligungen GmbH										
Krefelder Straße 195	EUR k	EUR k						EUR k	EUR k	
D-52070, Aachen	15,358	0	100.00	76,425	76,425	0		0	0	0

COMPANY *(in EUR thousand: EUR k or thousands of local currency units)*	**Capital stock**	**Reserves**	**% interest**	**Book value of shares held** Gross *(in EUR thousand)*	Net *(in EUR thousand)*	**Loans and advances granted by the Company** *(in EUR thousand)*	**Guarantees given by the Company** *(in EUR thousand)*	**2019 net sales**	**2019 net income (loss)**	**Dividends received by the Company** *(in EUR thousand)* [1]
2 – AFFILIATES										
10%- to 50%-owned										
by the Company										
S. G. Cristaleria										
132, Principe de Vergara	EUR k	EUR k						EUR k	EUR k	
28002 Madrid, Espagne	134,512	750,040	16.35	211,253	211,253	630,000		366,743	100,216	43,632
S. G. Innovative Materials										
6, Avenue Einstein,	EUR k	EUR k						EUR k	EUR k	
1300 Wavre, Belgium	390,566	(227,411)	15.00	160,880	124,080	0		152,370	24,029	0
SEPR										
18, avenue d'Alsace	EUR k	EUR k						EUR k	EUR k	
92400 Courbevoie	63,361	7,245	25.73	53,310	53,310	10,000		180,617	4,774	4,614
OTHER COMPANIES										
Subsidiaries (over 50%-owned)										
Total French companies				3,428	3,428					62
Total foreign companies				210	209					
Affiliates (10%- to 50%-owned)										
Total French companies										
Total foreign companies										
Other investments				**47,935**	**17,086**					
Treasury stock				**8,134**	**6,799**					
Treasury stock held for cancellation				**0**	**0**					
TOTAL				**13,011,402**	**12,608,879**	**7,641,500**		**8,237,171**	**1,793,101**	**801,165**

(1) *The amounts shown for subsidiaries of the German branch corresponds to the 2019 profit or loss transferred under the tax consolidation system.*

NOTE 17 OFF-BALANCE SHEET COMMITMENTS

Off-balance sheet commitments given on behalf of consolidated companies

Off-balance sheet commitments given on behalf of consolidated companies	**Date**	**Counterparty**	**2019 amount** *(in EUR thousand)*	**2018 amount** *(in EUR thousand)*
Guarantee issued in connection with the lease of the new Saint-Gobain tower headquarters	06/04/2020	SCI Iris La Défense	0	77,507
Guarantee for new Saint-Gobain headquarters lease	09/01/2032	SCI Iris La Défense	6,459	0
Guarantee given on behalf of Saint-Gobain Isover (electricity purchases)	31/12/2025	Exeltium	16,060	17,950
Guarantee issued in connection with disputes between members of the tax group and the French tax authorities	indefinite	Tax authorities	0	10,466
Commitments given to other members of economic interest groupings (GIE)	indefinite	GIE counterparts	6,963	4,892
Rent guarantee (Les Miroirs headquarters building)	30/06/2023	Miroirs A & B	3,000	3,000
Commitment given to the Saint-Gobain Initiatives foundation	multiple	SG Initiatives counterparts	3,300	0
Commitment given to employees of the German companies in the Group (early retirement plan)	31/05/2022	Sparkasse Aachen	1,606	1,606
Other commitments given	multiple	multiple	33	33

At December 31, 2019, off-balance sheet commitments also include the binding put option granted in respect of shares in Continental Building Products. A forward purchase of $1.3 billion was taken out in respect of this put option on January 14, 2020 (see Note 21, "Subsequent events").

Financing-related off-balance sheet commitments

Financing-related off-balance sheet commitments given	Date	Counterparty	2019 amount *(in EUR thousand)*	2018 amount *(in eur thousand)*
Liquidity agreement guarantee	janv-20	Exane	642	
Euro equivalent of forward currency sale contracts	multiple	multiple	1,127,874	1,492,659
Euro equivalent of foreign currencies payable under currency swaps	multiple	multiple	3,128,388	1,428,575
Equity swaps acquired as hedges of performance units	multiple	multiple	1,519	11,936

Financing-related off-balance sheet commitments received	Date	Counterparty	2019 amount *(in EUR thousand)*	2018 amount *(in EUR thousand)*
Liquidity agreement guarantee	janv-20	Exane	280	172
Euro equivalent of forward currency purchase contracts	multiple	multiple	1,128,360	1,491,877
Euro equivalent of foreign currencies receivable under currency swaps	multiple	multiple	3,149,696	1,462,248
2013/2023 undrawn line of credit	20/12/2023	multiple	2,480,000	2,480,000
2017/2023 undrawn line of credit	20/12/2023	multiple	1,520,000	1,520,000

Financing-related off-balance sheet commitments given and received	Date	Counterparty	2019 amount *(in EUR thousand)*	2018 amount *(in EUR thousand)*
Interest-rate swaps: fixed-rate borrower/fixed-rate lender	multiple	multiple	293,841	279,476
Interest-rate swaps: variable-rate borrower/fixed-rate lender	multiple	multiple	175,000	175,000
Commodity swaps: fixed-price buyer/variable-price seller	multiple	multiple	(4,672)	1,038
Commodity swaps: variable-price buyer/fixed-price seller	multiple	multiple	(4,672)	1,038

Operations-related off-balance sheet commitments: none.

In the context of tax disputes, the French tax authorities have been granted liens on assets in their favor in an amount of €52 thousand. These liens were appealed on the grounds that the taxation in question has already been paid by the Group. The appeal is currently being examined by the tax authorities,

In some cases, Compagnie de Saint-Gobain, or other Group companies may grant seller's warranties to the buyers of divested businesses. A provision is recognized whenever a risk is identified and the related cost can be estimated reliably.

NOTE 18 INFORMATION ON FEES PAID TO THE STATUTORY AUDITORS

Total fees (excluding VAT) paid and payable to the Statutory Auditors in 2019, as reflected in the income statement for the year, may be broken down as follows:

- statutory audit fees: €1.8 million;
- fees for audit-related advice and services: €0.3 million.

Non-audit services provided by the Statutory Auditors to Compagnie de Saint-Gobain relate mainly to audit procedures carried out as an independent third party on the management report on CSR information, due diligence in the context of planned acquisitions or divestments, and procedures related to the issuance of comfort letters in the case of new bond issues.

NOTE 19 INFORMATION ON EMPLOYEES

Paris Head Office Les Miroirs à la Défense	2019	2018
Managers	173	165
Supervisors	22	27
Administrative staff	6	8
TOTAL	**201**	**200**
of which, employees under fixed-term contracts	6	5

German branch (Aix-la-Chapelle)	2019	2018
Managerial-grade employees	82	91
Supervisors	117	121
Administrative staff	0	1
TOTAL	**199**	**213**
of which employees under fixed-term contracts	15	15

Management compensation

Total gross compensation and benefits paid in 2019 to Saint-Gobain management by the French and foreign companies in the Group (excluding long-term cash-settled compensation) amounted to €11.4 million (2018: €18.1 million), including €3.7 million in gross variable compensation (2018: €5.7 million) and nil in severance payments (2018: €2.7 million).

Provisions for pensions and other post-employment benefit obligations (defined-benefit obligations [DBO] in respect of length-of-service awards and pensions) accruing to Group management totaled €41.5 million in 2019 (2018: €50.9 million).

Remuneration paid to members of the Board of Directors for 2019 totaled €1.1 million, the same as in the previous year.

NOTE 20 LITIGATION

The lawsuits described below involve Group subsidiaries and the related costs and provisions are recorded in the accounts of the subsidiaries concerned.

20.1 Antitrust law and related proceedings

Legal provisions covering competition apply to the Group companies in countries in which it operates. Violation of competition law exposes the Group to fines and, in certain countries, potential criminal sanctions on the Group and its employees involved. Any litigation filed by a competition authority could, in the event of conviction, give rise to the payment of fines and potentially damages, which is likely to have significant impact on the Group's reputation, financial situation and operating results.

The Saint-Gobain Group is firmly committed to opposing any practice that might violate competition rules and has long applied the principle of zero tolerance. A plan for compliance with competition law (the "Competition Plan") has been in place within the Group since 2007

Investigation by the Swiss Competition Commission in the sanitary products wholesale industry

In November 2011, the Swiss Competition Commission (*Commission Suisse de la Concurrence*) opened an investigation into anti-competitive practices in the sanitary products wholesale industry. In May 2014, the Commission Secretariat issued a notice of complaints against Sanitas Troesch and other wholesalers in the industry alleging that Sanitas Troesch and some of its competitors had, among other things, agreed in 2005 and 2012 to lower gross prices.

The total fine imposed on all companies involved is CHF 80 million. For Sanitas Troesch, the fine is CHF 28.5 million. Sanitas Troesch appealed this decision on May 2, 2016 and continues to firmly refute the claims made. The hearing took place before the Federal Administrative Court in January 2020 and the date on which the Federal Administrative Court will issue its decision is not yet known. However, a provision for claims and litigation was recognized at December 31, 2015 in an amount equivalent to the fine (unchanged at December 31, 2019).

Investigation by the French Competition Authority in the building insulation products industry

On August 6, 2014, the French Competition Authority sent a statement of objections to Saint-Gobain Isover and Compagnie de Saint-Gobain (as parent company of the Saint-Gobain Group). A hearing took place on May 11, 2016, whereupon the Competition Authority sent the case back for further investigation in light of the arguments put forward by Saint-Gobain Isover and Compagnie de Saint-Gobain. In October 2018, Saint-Gobain Isover and Compagnie de Saint-Gobain received a second statement of objections, in which the Competition Authority alleges anti-competitive practices in the building insulation products market, between 2001 and 2013.

Saint-Gobain Isover and Compagnie de Saint-Gobain reject the allegations in their response to the second statement of objections which was filed in January 2019.

A new report was sent by the Authority at the end of 2019, which gave rise to comments in response from Saint-Gobain Isover and Compagnie de Saint-Gobain on February 11, 2020.

To date, no decision of the French Competition Authority has been issued on the merits.

On the civil law front, Actis served in March 2013 a damages claim on Saint-Gobain Isover, the *Centre Scientifique et Technique du Bâtiment*, and the FILMM before the Paris Civil Court (*Tribunal de Grande Instance*) based on the facts being investigated by the Competition Authority. In an order dated December 16, 2014, the pre-trial judge declared a stay of proceedings while waiting for the decision from the Competition Authority.

20.2 Asbestos-related litigation

Current legal actions related to asbestos are described below.

Asbestos-related litigation in France

Inexcusable fault lawsuits

In France, eight further individual lawsuits were filed in 2019 by former employees (or persons claiming through them) of Everite and Saint-Gobain PAM – which in the past had carried out fiber-cement operations – for asbestos-related occupational diseases that affect or have affected them. As of December 31, 2019, a total of 830 such lawsuits had been issued against the two companies since 1996 with the aim of obtaining supplementary compensation over and above the amounts paid by the French Social Security authorities in this respect.

As of December 31, 2019, 794 of these 830 lawsuits had been completed in terms of both liability and quantum. In all these cases, the employers were held liable on the grounds of "inexcusable fault".

Compensation paid by Everite and Saint-Gobain PAM in settlement of these lawsuits totaled approximately €5 million.

Concerning the 36 lawsuits outstanding against Everite and Saint-Gobain PAM at December 31, 2019, one has been completed in terms of both liability and quantum, but is still pending on the determination of who will pay the compensation due.

Out of the 35 remaining lawsuits, at December 31, 2019, the procedures relating to the merits of 33 cases were at different stages, with five in the process of being investigated by the French Social Security authorities and 28 pending before the Civil Courts (*Tribunaux de Grande Instance*), which since January 1, 2019 have been substituted to the social security courts as competent courts. The last two actions have been cancelled but the plaintiffs may request their restoration at any time within a two-year period following their cancellation.

In addition, as of December 31, 2019, 249 similar suits had been filed since the outset of the litigation by current or former employees, or persons claiming through them, of 13 French companies of the Group (excluding suits against companies that are no longer part of the Group), in particular by current or former employees who used equipment containing asbestos to protect themselves against heat from furnaces.

As of December 31, 2019, 221 lawsuits had been completed. In 138 of these cases, the employer was held liable for "inexcusable fault".

At the same date, compensation paid by these companies totaled approximately €8 million.

As regards the 28 suits outstanding at December 31, 2019, three cases were still being investigated by the French Social Security authorities and 22 were being tried – including 18 pending before the Civil Courts (*Tribunaux de Grande Instance*) and four before the Appeal Courts. Lastly, three actions have been canceled but the plaintiffs may request their restoration at any time within a two-year period following their cancellation.

Anxiety claims

Eight of the Group's French subsidiaries, including six that operate or have operated facilities in France classified as containing asbestos, are the subject of damages claims that are different from those described above.

"Facilities classified as containing asbestos" are defined as industrial facilities that have been closed or are still operating, which previously manufactured materials containing asbestos or used protection and insulation equipment containing asbestos and that are included by ministerial decree on the official list of facilities whose current or former employees are entitled to the early-retirement benefit paid to asbestos workers (ACAATA).

As of December 31, 2019, a total of 824 suits had been brought by current or former employees claiming compensation for prejudice of anxiety suffered as a result of their alleged exposure to asbestos. None of these plaintiffs were suffering from an asbestos-related disease and some of them were not receiving the ACAATA benefit. Of these 824 lawsuits, 720 have been definitively terminated, representing a total amount of compensation of €7.6 million at December 31, 2019. The remaining 104 lawsuits are pending before the competent labor tribunals or appeal courts.

It should be clarified that the above figures do not take into account suits filed against companies that are no longer part of the Group.

The provision related to the asbestos-related litigation in France amounted to €4.1 million as of December 31, 2019 (€4.2 million as of December 31, 2018).

Asbestos-related litigation in the United States

In the United States, several companies that once manufactured products containing asbestos such as asbestos-cement pipes, roofing products and specialized insulation, have been facing legal action from persons other than their employees or former employees. These claims for compensatory – and in some cases punitive damages – are based on alleged exposure to these products, although in many instances the claimants cannot demonstrate any specific exposure to one or more products, or any specific illness or physical disability. The vast majority of these claims are made simultaneously against many other non-Group entities that have been manufacturers, distributors, installers or users of products containing asbestos.

Developments in 2019

Approximately 2,600 new asbestos-related claims were filed against CertainTeed Corporation in the United States in 2019, stable compared to 2018.

Virtually all lawsuits involving CertainTeed Corporation have either been settled out of court or dismissed. Around 2,500 of the pending claims were settled in 2019, compared to 4,300 in 2018 and 3,900 in 2017. Taking into account the number of claims outstanding at the end of 2018 (32,600), new claims arising during the year and settled claims, some 32,700 claims remain outstanding at December 31, 2019. A large number of these pending claims were filed more than five years ago by individuals without any significant asbestos-related impairment, and many of them are likely abandoned or otherwise lack merit.

Compensation paid in respect of these claims against CertainTeed Corporation (including claims settled prior to 2019 but only paid out in 2019 as well as claims fully settled and paid out in 2019), as well as compensation paid in 2019 by other Group businesses in the United States in connection with asbestos litigation, amounted to USD 59 million (compared to USD 67 million in 2018 and USD 76 million in 2017).

Action taken to achieve equitable and permanent Resolution of the former CertainTeed Corporation's legacy asbestos liabilities in the United States

DBMP LLC, an affiliate of CertainTeed LLC based in North Carolina, that holds the legacy asbestos liabilities of the former CertainTeed Corporation, announced that it filed, on January 23, 2020, a voluntary petition for Chapter 11 relief in the U.S. Bankruptcy Court for the Western District of North Carolina in Charlotte in an effort to achieve a certain, final and equitable Resolution of all current and future claims arising from the asbestos-related liabilities of the former CertainTeed Corporation.

DBMP LLC intends to seek court authority to establish a trust under Section 524 (g) of the U.S. Bankruptcy Code – a specific provision that is applicable to companies that face substantial numbers of asbestos-related claims – to achieve a fair and equitable Resolution of its asbestos-related liabilities. Upon establishment of the trust, current and future plaintiffs with qualifying claims will be able to receive faster payment of their claims without the delay, stress and uncertainty of litigation in the tort system; at the same time, the creation and funding of such a trust will permanently resolve DBMP LLC's liabilities.

During the course of this bankruptcy process, which can take three to eight years, all asbestos litigation will be stayed and all related costs suspended, allowing DBMP LLC the time and protection to negotiate an agreement to be approved on behalf of all claimants and by the court.

This action has been taken as a result of the increasing risks presented in the US tort system. Despite the aging of the population and lessening opportunity for claimants to assert legitimate claims of exposure to the former CertainTeed Corporation asbestos-containing products, naming practices in the tort system continued to result in a steady volume of claims against DBMP LLC, with no foreseeable end in sight and, in general, an escalation of settlement demands and verdicts.

Impact on the Group's financial statements

The Group has recorded the estimated costs related to the Resolution of the DBMP LLC bankruptcy proceedings. This amount, determined with the assistance of external experts and advisors, amounts to $576 million as of December 31, 2019. The provision for asbestos-related litigation recorded in the accounts of the former CertainTeed Corporation in the United States amounted to $568 million as of December 31, 2018.

At this stage of the proceedings as of January 23, 2020, the stay of litigation results in all legal costs and indemnity payments related to DBMP LLC's numerous asbestos claims being suspended, and no more annual charges in relation to such claims ($99 million, corresponding to €88 million, in 2019).

Situation in Brazil

In Brazil, former employees of Brasilit, that once manufactured fiber cement containing asbestos, suffering from asbestos-related occupational illnesses are offered, depending on the case, either financial compensation alone or lifetime medical assistance combined with financial compensation. Around 1,200 contractual instruments have accordingly been signed to date.

Two class actions were initiated against Brasilit in 2017 by two associations defending former employees exposed to asbestos at the São Caetano (São Paulo state) and Recife (Pernambouc state) plants, asking for their medical assistance and compensation to be revised. These suits are currently at an early stage and first court decisions have not yet been made.

A third class action was initiated against Brasilit in 2019 in Capivari (State of São Paulo) by the Labor prosecutor asking for health insurance, as well as collective moral damages, in favor of employees, former employees and their respective families, as well as subcontractors who were exposed to asbestos. This suit is at an early stage.

Brasilit is subject to controls by the Ministry of Labor and continues to comply with all of its legal obligations with regard to medical assistance for its current and former employees.

In November 2017, the Supreme Court of Brazil decided to ban asbestos definitively across the country. Brasilit stopped using asbestos voluntarily as early as 2002.

20.3 Environmental disputes

PFOA matters in the United States

Levels of PFOA (perfluorooctanoic acid) in excess of U.S. Environmental Protection Agency (EPA) health advisories or state maximum contaminent levels for drinking water have been found in municipal water systems and private wells near current Saint-Gobain Performance Plastics (SG PPL) facilities in Hoosick Falls (New York) and Merrimack (New Hampshire), and two former facilities in North Bennington (Vermont) in the United States. PFOA and PTFE (polytetrafluorethylene) have never been manufactured by these plants. SG PPL is a processor of PTFE which it purchases from third party suppliers and which in the past contained traces of PFOA.

SG PPL has voluntarily provided bottled water in all three communities, installed point-of-entry treatment systems to residents and businesses in the Hoosick Falls and North Bennington areas, installed carbon filtration systems on the municipal water supply in Hoosick Falls and agreed to fund the installation of a carbon filtration system on the Merrimack Valley District's municipal water supply. In addition, it has voluntarily funded both completed and ongoing construction of water line extensions in certain communities in the Merrimack and Bennington areas. The investigations are ongoing and the scope of responsibility for SG PPL arising from environmental remediation and clean-up obligations at these sites has not yet been established. Without admitting liability, SG PPL has signed consent orders with the environmental regulators in New York in 2016, in Vermont in 2017, and in New Hampshire in 2018, pursuant to which SG PPL has agreed to complete investigations, implement interim or final remediation measures at its current and former facilities and in the case of Vermont and New Hampshire, fund construction of water lines. Responsibility, if any, is expected to be shared with other parties as regards in particular the Hoosick Falls site.

PFOA-related lawsuits alleging both health-related and economic damages claims have been filed in civil courts in New York, New Hampshire and Vermont, some of which are in the form of proposed class actions. It is difficult to predict the timing or outcome of any such litigation, or whether any additional litigation will be brought against SG PPL.

At December 31, 2019, the provision recorded by the Company in respect of this matter amounted to €21 million.

20.4 Other contingent liabilities

Grenfell Tower fire in the United Kingdom

Celotex provides insulation materials for specific applications for the building and construction industry.

Insulation materials from two Celotex ranges were purchased via distributors and used in refurbishing Grenfell Tower, London in 2015/2016, including as one component of the rainscreen cladding system designed and installed (by third parties) on the tower's external facade.

Following the Grenfell Tower fire on June 14, 2017, a Public Inquiry is underway, which will consider, among other things, the modifications made to the building as part of the refurbishment, the role played by the various construction professionals, and the information provided by the manufacturers of the products used. A criminal investigation into the circumstances of the fire is also in progress.

There are a large number of issues and circumstances that need to be explored, and the implications for Celotex are unlikely to be known for some time.

The extent to which Celotex may incur civil or criminal liability in connection with the production, marketing, supply or use of its products is currently unclear.

20.5 Other proceedings and disputes

Some of the Group's companies may also be the subject of other claims made by their employees or by the tax authorities, or in the context of the enforcement of seller's warranties granted by the Group to the buyers of divested businesses. Apart from the proceedings and litigation described above, to the best of the Company's knowledge no other government, court or arbitration proceedings exist (including pending proceedings or proceedings where the Company and/or the Group might be threatened), which could have or have had, in the last 12 months, a significant impact on the financial position or profitability of the Company and/or Group.

NOTE 21 SUBSEQUENT EVENTS

On January 30, 2020, Saint-Gobain announced that Continental Building Products (NYSE: CBPX) had obtained shareholder approval to be acquired by Saint-Gobain and that the US Competition Authority had authorized the transaction. The deal closed on February 3, 2020. Upon completion of the transaction, Saint-Gobain will have acquired all of the shares of Continental Building Products for $37.00 per share in a transaction valued at approximately $1.4 billion (around €1.3 billion). Continental Building Products presents strong geographic complementarity with Saint-Gobain's North American operations.

DBMP LLC, an affiliate of CertainTeed LLC based in North Carolina that holds the legacy asbestos liabilities of the former CertainTeed Corporation, announced that on January 23, 2020 it had filed a voluntary petition for Chapter 11 relief in the US Bankruptcy Court for the Western District of North Carolina in Charlotte. Pursuant to Chapter 11 relief under US bankruptcy law, even though the Group remains the legal owner of the shares comprising the entire share capital of DBMP LLC, its assets are frozen and placed under the control of the competent court of the city of Charlotte, North Carolina (United States). Accordingly, the assets and liabilities of the entity and its wholly-owned subsidiary M&P LLC (operating income estimated at €12 million on an annual basis) have been removed from the consolidated financial statements with effect from January 23, 2020.

4. Statutory Auditors' report on the financial statements

For the year ended December 31, 2019

This is a free translation into English of the Statutory Auditors' report issued in French and is provided solely for the convenience of English speaking readers. This report includes information specifically required by European regulations or French law, such as information about the appointment of Statutory Auditors. This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

COMPAGNIE DE SAINT-GOBAIN SA

Les Miroirs

18, avenue d'Alsace

92400 CourbevoieFrance

To the Shareholders,

1. Opinion

In compliance with the engagement entrusted to us by your Shareholders' Meeting, we have audited the accompanying financial statements of Compagnie de Saint-Gobain for the year ended December 31, 2019.

In our opinion, the financial statements give a true and fair view of the assets and liabilities and of the financial position of the Company at December 31, 2019 and of the results of its operations for the year then ended in accordance with French accounting principles.

The audit opinion expressed above is consistent with our report to the Audit and Risk Committee.

2. Basis for opinion

Audit framework

We conducted our audit in accordance with professional standards applicable in France. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our responsibilities under these standards are further described in the "Responsibilities of the Statutory Auditors relating to the audit of the financial statements" section of our report.

Independence

We conducted our audit engagement in compliance with the independence rules applicable to us, for the period from January 1, 2019 to the date of our report, and, in particular, we did not provide any non-audit services prohibited by article 5(1) of Regulation (EU) No 537/2014 or the French Code of Ethics (Code de déontologie) for Statutory Auditors.

3. Justification of assessments – Key audit matters

In accordance with the requirements of articles L.823-9 and R.823-7 of the French Commercial Code (*Code de commerce*) relating to the justification of our assessments, we inform you of the key audit matters relating to the risks of material misstatement that, in our professional judgment, were the most significant in our audit of the financial statements, as well as how we addressed those risks.

These matters were addressed as part of our audit of the financial statements as a whole, and therefore contributed to the opinion we formed as expressed above. We do not provide a separate opinion on specific items of the financial statements.

Measurement of financial investments

Description of risk

At December 31, 2019, the carrying amount of the Company's financial investments, chiefly comprising investments in subsidiaries and affiliates and related loans and advances, stood at €27,561 million. Investments in subsidiaries and affiliates are initially stated at cost and are impaired based on their value in use, corresponding to the amount the Company would be prepared to pay for the investment if it were to acquire it. A decline in the performance of certain subsidiaries or affiliates or risks relating to the international locations of those companies could lead to impairment losses.

We deemed the measurement of the value in use of these investments, which is performed each year by Management using the multi-criteria approach described in Note 1 to the financial statements, to be a key audit matter in light of the potential materiality of any impairment and the high degree of estimation and judgment required from Management to assess impairment losses. Management's judgment is based in part on assumptions relating, on the one hand, to the multiples applicable to the valuation of the investments and, on the other, to future changes in the cash flows relating to the investments, as well as to the calculation of the appropriate discount rate applied to future cash flows.

As described in Note 8 to the financial statements, the impairment tests performed by Management have not led to book complementary impairment losses for the year ended December 31, 2019.

How our audit addressed this risk

We examined the impairment test procedure applied by the Company's financial management team, verified the consistency of the method used and tested the effectiveness of the controls implemented by Management to ensure the quality and reliability of the procedure.

We carried out an independent analysis of certain key assumptions used by Management to perform the tests, pertaining, as appropriate, to the multiple deemed applicable to the valuation of the investments or to the discount rate and average perpetual growth rate used to project future cash flows, referring both to external market data and analyses of comparable companies.

For each investment selected for our tests of detail, we corroborated the calculation parameters applied in Management's multi-criteria approach with the accounting and budget data available for that investment. Where projected future cash flows were used, we analyzed the consistency of the projections with past performance and our knowledge of the Company's business, supported by interviews with managers from the various businesses and, in so far as they were available, external data relating to markets or competitors. We paid particularly close attention to the calculation of the normalized amount of the terminal cash flows projected to perpetuity.

We verified the disclosures provided in the notes to the financial statements concerning the valuation of financial investments to ensure their appropriateness.

4. Specific verifications

In accordance with professional standards applicable in France, we have also performed the specific verifications required by French legal and regulatory provisions.

Information given in the management report and in the other documents provided to the Shareholders with respect to the Company's financial position and the financial statements

We have no matters to report as to the fair presentation and the consistency with the financial statements of the information given in the Board of Directors' management report and in the other documents provided to the Shareholders with respect to the Company's financial position and the financial statements.

We attest to the fair presentation and the consistency with the financial statements of the information given with respect to the payment terms referred to in article D.441-4 of the French Commercial Code.

Report on corporate governance

We attest that the Board of Directors' report on corporate governance sets out the information required by articles L.225-37-3 and L.225-37-4 of the French Commercial Code.

Concerning the information given in accordance with the requirements of article L.225-37-3 of the French Commercial Code relating to remuneration and benefits received by corporate officers and any other commitments made in their favor, we have verified its consistency with the financial statements or with the underlying information used to prepare these financial statements, and, where applicable, with the information obtained by your Company from companies controlling it or controlled by it. Based on this work, we attest to the accuracy and fair presentation of this information.

Other information

In accordance with French law, we have verified that the required information concerning the identity of the shareholders and holders of the voting rights has been properly disclosed in the management report.

5. Report on other legal and regulatory requirements

Appointment of the Statutory Auditors

We were appointed Statutory Auditors of Compagnie de Saint-Gobain by the Shareholders' Meeting held on June 26, 1986 for Petiteau Scacchi and subsequently PricewaterhouseCoopers Audit and on June 10, 2004 for KPMG Audit.

At December 31, 2019, PricewaterhouseCoopers Audit and KPMG Audit were in the thirty-fourth year and the sixteenth consecutive year of their engagement, respectively.

6. Responsibilities of Management and those charged with governance for the financial statements

Management is responsible for preparing financial statements giving a true and fair view in accordance with French accounting principles, and for implementing the internal control procedures it deems necessary for the preparation of financial statements that are free of material misstatement, whether due to fraud or error.

In preparing the financial statements, Management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern, and using the going concern basis of accounting, unless it expects to liquidate the Company or to cease operations.

The Audit and Risk Committee is responsible for monitoring the financial reporting process and the effectiveness of internal control and risk management systems, as well as, where applicable, any internal audit systems, relating to accounting and financial reporting procedures.

The financial statements were approved by the Board of Directors.

7. Responsibilities of the Statutory Auditors relating to the audit of the financial statements

Objective and audit approach

Our role is to issue a report on the financial statements. Our objective is to obtain reasonable assurance about whether the financial statements as a whole are free of material misstatement. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with professional standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions taken by users on the basis of these financial statements.

As specified in article L.823-10-1 of the French Commercial Code, our audit does not include assurance on the viability or quality of the Company's management.

As part of an audit conducted in accordance with professional standards applicable in France, the Statutory Auditors exercise professional judgment throughout the audit. They also:

- identify and assess the risks of material misstatement in the financial statements, whether due to fraud or error, design and perform audit procedures in response to those risks, and obtain audit evidence considered to be sufficient and appropriate to provide a basis for their opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;
- obtain an understanding of the internal control procedures relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control;
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates made by Management and the related disclosures in the notes to the financial statements;
- assess the appropriateness of Management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. This assessment is based on the audit evidence obtained up to the date of the audit report. However, future events or conditions may cause the Company to cease to continue as a going concern. If the Statutory Auditors conclude that a material uncertainty exists, they are required to draw attention in the audit report to the related disclosures in the financial statements or, if such disclosures are not provided or are inadequate, to issue a qualified opinion or a disclaimer of opinion;
- evaluate the overall presentation of the financial statements and assess whether these statements represent the underlying transactions and events in a manner that achieves fair presentation.

Report to the Audit and Risk Committee

We submit a report to the Audit and Risk Committee which includes, in particular, a description of the scope of the audit and the audit program implemented, as well as the results of our audit. We also report any significant deficiencies in internal control that we have identified regarding the accounting and financial reporting procedures.

Our report to the Audit and Risk Committee includes the risks of material misstatement that, in our professional judgment, were the most significant for the audit of the financial statements and which constitute the key audit matters that we are required to describe in this report.

We also provide the Audit and Risk Committee with the declaration provided for in article 6 of Regulation (EU) No 537/2014, confirming our independence within the meaning of the rules applicable in France, as defined in particular in articles L.822-10 to L.822-14 of the French Commercial Code and in the French Code of Ethics for Statutory Auditors. Where appropriate, we discuss any risks to our independence and the related safeguard measures with the Audit and Risk Committee.

Neuilly-sur-Seine and Paris La Défense, February 27, 2020

The Statutory Auditors

PricewaterhouseCoopers Audit		KPMG Audit Département de KPMG S.A	
Edouard Sattler	Cécile Saint-Martin	Pierre-Antoine Duffaud	Bertrand Pruvost

5. Management report Compagnie de Saint-Gobain annual financial statements

Compagnie de Saint-Gobain's net income totaled €849.0 million in 2019 (2018: €669.2 million). This income consisted largely of financial income from subsidiaries and affiliates (dividends and income transfers from subsidiaries of the German branch) totaling €813.8 million in the year (2018: €894.9 million), and tax income of €226.4 million (2018: €154.2 million) from the French and German tax consolidation groups, partially offset by a net exceptional expense of €191.6 million (2018: €15.8 million) due mainly to the sale of Saint-Gobain Distribution Deutschland outside the Group. Net income in 2018 had been impacted by a €371.0 million impairment loss recognized against investments in subsidiaries and affiliates. No such impairment loss was recognized in 2019.

Shareholders' equity before allocation of income for the year totaled €17,080 million at December 31, 2019 (December 31, 2018: €17,049 million).

Significant events during the year

1.1 Transactions involving shareholders' equity

The main changes in shareholders' equity included:

- an increase of €153.3 million in shareholders' equity on May 15, 2019 through the subscription of 5,999,997 shares at a price of €25.69 under the Group Savings Plan;
- a reduction of €266.6 million in shareholders' equity following the cancellation of 6,000,000 shares on June 14, 2019 and of 2,211,754 shares on November 29, 2019;
- the payment on June 12, 2019 of the Company dividend of €716.4 million.

1.2 Sale of Saint-Gobain Building Distribution Deutschland

On September 30, 2019, Saint-Gobain completed the sale of Saint-Gobain Building Distribution Deutschland to the Stark group. This business, which had €1,924 million in sales and €21 million in operating income in 2018, was sold based on an enterprise value of €335 million. This transaction was approved by the European Competition Authority on September 6, 2019.

1.3 Acquisition of Continental Building Products

On November 12, 2019, Saint-Gobain and Continental Building Products (NYSE: CBPX) announced that they had entered into an agreement pursuant to which Saint-Gobain is to acquire all of the outstanding shares of Continental Building Products. The transaction was unanimously approved by the Boards of Directors of both Saint-Gobain and Continental Building Products. A forward purchase of $1.3 billion was taken out in respect of this put option on January 14, 2020. On January 30, 2020, Saint-Gobain announced that Continental Building Products had obtained shareholder approval to be acquired by Saint-Gobain and that the US Competition Authority had authorized the transaction. The deal closed on February 3, 2020. Upon completion of the transaction, Saint-Gobain will have acquired all of the shares of Continental Building Products for $37.00 per share in a transaction valued at approximately $1.4 billion (around €1.3 billion).

1.4 Saint-Gobain headquarters

In April 2015, Compagnie de Saint-Gobain and "SCI Iris La Défense" signed an off-plan lease regarding the occupation of the Group's future headquarters. Construction work continued during the year and was completed on December 10, 2019. The move to the new Saint-Gobain tower will take place gradually during the first half of 2020.

1.5 "Transform and Grow" program

In November 2018, Saint-Gobain announced the launch, starting January 1, 2019, of "Transform and Grow", an ambitious transformation program aimed at leveraging its strength to bolster its competitiveness and fully unleash its growth potential.

The Group continued to implement this program in 2019, seeking to unlock around €300 million in additional cost savings over the year (calculated on the 2018 cost base). In October, the initial target of €50 million in cost savings under the "Transform & Grow" program was increased to €80 million.

The change in the Group's organization as a result of the "Transform & Grow" program has led to the introduction of a new billing procedure for general assistance services within the Saint-Gobain Group. Up to 2018, Compagnie de Saint-Gobain only billed those central support services that were recorded in its books. As from January 1, 2019, Compagnie de Saint-Gobain also bears all costs relating to central and business support functions that were previously booked by the holding companies for the Group's businesses. As a result, the sharp rise in general assistance services allows the Company to rebill all such costs to the Group subsidiaries to which the services were provided. This change has a limited impact on operating income/loss.

1.6 Financing activities

In 2019, Compagnie de Saint-Gobain issued:

- March 15, 2019:
  - €750 million worth of 0.625% fixed-interest bonds, maturing March 15, 2024,
  - €750 million worth of 1.875% fixed-interest bonds, maturing March 15, 2031. The nominal amount of this bond issue was increased to €1,044 million through three additions on March 26 (€124 million), April 5 (€70 million) and May 15, 2019 (€100 million);
- March 22, 2019: a €750 million private placement paying floating-rate interest at 3-month Euribor +0.35%, maturing March 22, 2021;
- May 3, 2019: a €100 million private placement paying fixed-rate interest of 1.875%, maturing May 3, 2035.

On September 30, 2019, Compagnie de Saint-Gobain redeemed a bond that had been increased to €950 million with a coupon of 4.5%.

These issues extended the average maturity of Saint-Gobain's debt while also optimizing average borrowing costs.

Other mandatory disclosures

2.1 Maturity of amounts owed to suppliers and from customers

Pursuant to Article D.441-4, amounts owed to non-Group suppliers and from non-Group customers can be analyzed as follows by maturity:

	Article D.441 I.-1: Overdue invoices from suppliers unpaid at Dec. 31, 2019						**Article D.441 I.-2: Overdue invoices to customers unpaid at Dec. 31, 2019**					
	0 days (for information)	**1 to 30 days**	**31 to 60 days**	**61 to 90 days**	**91 days and more**	**Total (1 day and more)**	**0 days (for information)**	**1 to 30 days**	**31 to 60 days**	**61 to 90 days**	**91 days and more**	**Total (1 day and more)**
(A) OVERDUE BY DELAY												
Number of invoices	751					117	0					80
Total value of invoices incl. VAT	12,247	54	(83)	46	15	32		140	84	28	79	331
Percentage of 2019 total purchases incl. VAT	7.96%	0.04%	-0.05%	0.03%	0.01%	0.02%						
Percentage of 2019 sales incl. VAT							0%	4%	3%	1%	2%	10%
(B) INVOICES EXCLUDED FROM (A) RELATING TO DISPUTED OR UNRECOGNIZED PAYABLES/RECEIVABLES												
Number of invoices						0						0
(C) METHOD USED TO CALCULATE OVERDUE INVOICES (CONTRACTUAL OR STATUTORY PERIOD – ARTICLE L.441-6 OR L.443-1 OF THE FRENCH COMMERCIAL CODE)												
Method used to calculate overdue invoices	Due date of the invoice						Due date of the invoice					

Compagnie de Saint-Gobain settles its debts by their given due dates. The only invoices not settled by their due dates are those subject to disputes and classified as pending decisions, as well as invoices that were received late.

2.2 Company branch

Compagnie de Saint-Gobain has a German branch.

6. Five year financial summary

(in EUR thousand)	2019	2018	2017	2016	2015
1 – CAPITAL STOCK AT YEAR-END					
Share capital	2,178,734	2,186,340	2,214,228	2,221,121	2,243,774
Number of common shares outstanding	544,683,451	546,585,004	553,557,091	555,280,358	560,943,439
2 – RESULTS OF OPERATIONS					
Net sales	296,897	188,609	181,074	175,762	176,004
Income before tax, depreciation, amortization and provisions	677,122	914,931	864,136	952,078	967,838
Income tax	226,402	154,213	14,032	128,412	147,122
Income after tax, depreciation, amortization and provisions (net income)	848,966	669,184	839,496	1,048,738	1,070,854
Dividends	(1) 748 994	(2) 716,380	(3) 707,475	(4) 694,143	(5) 680,584
3 – EARNINGS PER SHARE *(IN EUR)*					
Income before tax, depreciation, amortization and provisions	1.24	1.67	1.56	1.71	1.73
Income after tax, depreciation, amortization and provisions (net income)	1.56	1.22	1.52	1.89	1.91
Net dividend per share	1,38	1.33	1.30	1.26	1.24
4 – EMPLOYEE INFORMATION (6)					
Average number of employees during the year	201	200	199	205	209
Total payroll for the year	33,729	30,788	29,867	33,059	32,165
Total benefits paid for the year	15,423	14,756	14,612	15,572	14,573

(1) *Estimated amount based on 544,683,451 shares carrying, at January 31, 2020, rights to dividends in respect of 2019, less 1,934,234 treasury shares held at January 31, 2020.*

(2) *Based on 546,585,333 shares carrying rights to dividends in respect of 2018, less 7,953,739 treasury shares held on the ex-dividend date.*

(3) *Based on 553,557,091 shares carrying rights to dividends in respect of 2017, less 9,345,487 treasury shares held on the ex-dividend date.*

(4) *Based on 555,284,802 shares carrying rights to dividends in respect of 2016, less 4,377,414 treasury shares held on the ex-dividend date.*

(5) *Based on 549,959,351 shares carrying rights to dividends in respect of 2015, less 1,101,621 treasury shares held on the ex-dividend date.*

(6) *Employee numbers only include staff at the Company's head office and exclude the German branch.*

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Additional information and cross-reference tables

1. Additional information

1.1 Principal statutory provisions and internal rules of the Board of Directors

1.1.1 Principal statutory provisions

The main provisions of Compagnie de Saint-Gobain's bylaws are summarized below.

A complete version of the bylaws may be consulted on the Company's website (www.saint-gobain.com). A copy may also be obtained upon request from the Clerk of the Commercial Court of Nanterre and at the Company's headquarters.

a) Corporate name, form, corporate headquarters and duration (Articles 1, 2, 4 and 5)

A French *société anonyme* governed by the provisions of Articles L.210-1 *et seq.* of the French Commercial Code, Compagnie de Saint-Gobain maintains its corporate headquarters at Les Miroirs, 18 avenue d'Alsace, 92400 Courbevoie, France (tel: +33 (0)1 47 62 30 00). It is registered with the Trade and Companies Register of Nanterre under No. 542 039 532.

The Company was founded in 1665 and registered with the Trade and Companies Register on July 21, 1954 for a period that will expire on December 31, 2040, unless it is subject to early dissolution or extension.

b) Corporate purpose (Article 3)

The Company's corporate purpose is, in summary form, to conduct and manage, in France and internationally, any and all industrial, commercial, financial, securities and real estate transactions related to its manufacturing and contracting activities, through French or foreign subsidiaries or affiliates or otherwise.

c) Fiscal year (Article 19)

Its fiscal year runs from January 1 to December 31.

d) Share capital and disclosure thresholds (Articles 6 and 7)

At December 31, 2019, the share capital was set at €2,178,733,804, divided among 544,638,451 shares with a par value of €4 each, entirely paid in and all of the same type.

The bylaws (Article 7.4) require shareholders to disclose to the Company within five trading days any direct, indirect or joint interest representing at least 0.50% of the capital or voting rights, or any multiple of this percentage.

The same disclosure requirement applies when a direct, indirect or joint holding falls below any of these thresholds.

Failure to comply with these disclosure rules may result in the undisclosed shares exceeding this percentage being stripped of voting rights for a period of two years from the date when the non-disclosure is remedied, at the request of one or more shareholders representing at least 3% of the capital or voting rights, as recorded in the minutes of the General Meeting.

Furthermore, the Company may request information regarding the composition of its shareholding structure and the ownership of its shares in accordance with current laws and regulations.

e) Share rights (Article 8)

Each share entitles the owner to ownership of corporate assets and liquidation proceeds in an equal proportion to the share capital it represents.

Whenever it is necessary to hold a certain number of shares in order to exercise a right, it is for the owners who do not possess such number to assume responsibility, as necessary, to create the corresponding grouping up to the required number of shares.

Each share entitles the holder to vote at the General Meetings under the conditions stipulated in the bylaws (see Article 18 below).

Share ownership automatically requires compliance with the Company's bylaws and the decisions taken by the General Meeting.

f) Company Management (Articles 9 to 12, 14 and 15)

The Company is administered by a Board of Directors comprised of at least three members and no more than eighteen members, subject to the exceptions provided for by law in the event of a merger.

Directors are elected for a four-year term which is renewable, subject to the age limits for holding office, which are 70 for a Director and 68 for the Chairman of the Board of Directors. The Chairman of the Board of Directors may also hold the position of Chief Executive Officer of the Company, if agreed by the members of the Board. In this situation, their job title shall be Chairman and Chief Executive Officer. The age limit for holding office as Chairman and Chief Executive Officer is 65 (the same as for the Chief Executive Officer and Chief Operating Officers).

One Director representing employee shareholders shall be appointed by the General Meeting, upon a proposal from the Board of Directors, among the members of the Supervisory Boards of the corporate mutual funds of the Company's Group Savings Plan. Such Director will be subject to all legal and statutory provisions applicable to Directors appointed by the General Meeting.

Two employee Directors shall be appointed by the Group Works Council (*Comité de Groupe*) of the Company. The appointment of the employee Directors shall take place within six months of the General Shareholders' Meeting.

The duties of the members of the Board of Directors and the Chairman of the Board of Directors (whether or not he is Chairman and Chief Executive Officer) shall end upon completion of the Annual General Meeting called to approve the financial statements for the year during which they reach the age limit. The duties of an employee Director shall also terminate in the event of termination of his or her employment contract, on the date of the termination, subject to intragroup transfer. If the conditions for application of the law are not met, the term of office of the employee Directors shall end upon completion of the meeting of the Board of Directors that confirms the Company's exit from the scope of application of the law.

The Board of Directors determines the Company's overall business strategy and examines any issues related to the efficient operation of business.

The Board's activities are organized and led by the Chairman of the Board.

Board meetings may be held using videoconferencing or other interactive telecommunication technology, under the conditions stated by law.

Each Director appointed by the General Meeting is required to hold at least eight hundred shares.

g) General Management (Articles 13 and 15)

At the choice of the Board of Directors, the Company's General Management is assumed either by the Chairman of the Board of Directors, in this case in his capacity as Chairman and Chief Executive Officer, or by the Chief Executive Officer.

The Chief Executive Officer, chosen by the Board of Directors, whether or not from among its own members, is vested with the broadest authority to act under any circumstances in the name of the Company within the limits of the corporate purpose and subject to such powers as the law expressly attributes to General Meetings and to the Board of Directors. He represents the Company in its relations with third parties.

h) General Meetings and voting rights (Article 18)

Any shareholder may participate in General Meetings in person or by proxy, provided that his/her/its shares have been formally recorded in the accounts, subject to the applicable legal provisions.

Where decided by the Board, shareholders may be convened to and vote at a General Meeting by any form of electronic communication. All shareholders may give proxy to another person or entity to represent them at a General Meeting, subject to the applicable legal provisions. Legal entities shareholders are represented at a General Meeting by their legal representative or by any person designated by such legal representative.

At all General Meetings, voting rights are exercisable by the beneficial owner of the shares. Each shareholder has a number of voting rights corresponding to the number of shares held, without limitation.

However, double voting rights are allocated to fully paid-up shares registered in the name of the same holder for at least two years.

In addition, in the case of a capital increase through capitalization of reserves, profits or share premiums, registered shares allocated free of charge to a shareholder carry double voting rights from the date on which they are issued on the basis of shares already held by the shareholder carrying such entitlement.

Double voting rights are forfeited when the shares are converted to bearer form or sold. However, double voting rights are not forfeited when title is transferred by way of an inheritance or as a result of the liquidation of the marital estate or an inter vivos donation to a spouse or a relative in the direct line of succession, and the transfer is not taken into account for the purpose of calculating the two-year qualifying period.

Shareholders may vote by mail in accordance with applicable laws and regulations.

i) Allocation and appropriation of net income (Article 20)

An appropriation of at least five per cent is deducted from net income, less any losses carried forward from the previous year, and allocated to the reserve fund prescribed by law. This appropriation is no longer mandatory once the reserve fund reaches a sum equal to one tenth of the share capital. It is reactivated if the reserve comes to be lower than this tenth.

Distributable income corresponds to net income for the year less any losses carried forward from prior years and less any amounts to be credited to reserves in application of the law or the Company's bylaws, plus retained earnings.

The General Meeting may appropriate this distributable income as follows:

1. all or part of this amount to any contingency or special reserves or to retained earnings, based on a recommendation of the Board of Directors;

2. if these appropriations do not absorb the total amount of distributable income, shareholders are paid a non-cumulative first dividend equal to 5% of the paid-up par value of shares, without being entitled to claim such payment from appropriations from the distributable income of subsequent years;

3. if any funds remain after paying these appropriations, they are divided among the shareholders.

The Annual General Meeting approving the financial statements for the fiscal year may decide to offer shareholders the option of receiving all or part of the dividend (or any interim dividend) in cash or in shares.

1.1.2 Internal Rules of the Board of Directors

The Compagnie de Saint-Gobain's Internal Rules of the Board of Directors in force on February 1, 2020 describe the Board's organization and functioning. The Internal Rules were last updated by the Board of Directors on July 25, 2019.

The provisions of the Board of Director's Internal Rules are reproduced in their entirety below, except for the provisions that concern Board Committees, which are set out in Chapter 5, Section 1.2.3. (b). Paragraphs shown in italics below provide commentary.

"These internal rules aim to set out the organization and functioning of Compagnie de Saint-Gobain's Board of Directors.

They are to be applied in conjunction with the rules and duties laid out in those applicable legal and regulatory provisions and the Company's bylaws which have not been reproduced below.

They implement the recommendations published by the AFEP-MEDEF corporate governance code for French listed companies.

I. Meetings of the Board of Directors

The Board holds at least seven scheduled meetings each year. At each year-end, an annual work program is drafted and distributed to Directors for the following year. The draft minutes of each meeting are sent to the Directors at the same time as the agenda for the next meeting. They are approved at that meeting and the final minutes are then sent with the agenda for the following meeting.

Except for meetings held to approve the annual financial statements of the Company, the annual consolidated financial statements and the annual management report, Directors who take part in a Board meeting using videoconferencing or other telecommunication technology without any break in transmission, enabling them to be identified and to participate actively in the discussion, are deemed to be present for calculation of the quorum and voting majority.

II. Prior and permanent information for Directors

Each time a meeting is called, Directors are provided with a selection of financial analyses and a range of press articles concerning the Saint-Gobain Group published in the period since the last Board meeting.

The text of explanations and presentations scheduled on the agenda for a meeting is sent to the Directors prior to the meeting.

The draft annual report for the Saint-Gobain Group and the draft Group and Company annual and interim financial statements are sent to the Directors prior to the meeting at which they are to be considered.

The information file handed out to the Directors at each meeting includes, among other things, an analysis of the Saint-Gobain Group's operating income and its net debt at the previous month-end, as well as details of the Saint-Gobain share performance compared with the CAC 40 and an industry index.

One Board meeting is held at a different Saint-Gobain Group site each year, to give the Directors an opportunity to also visit the site concerned.

Between meetings, the Directors receive copies of all press releases issued by the Company, along with any relevant information about events or transactions that are material for the Saint-Gobain Group.

Directors have the right to ask for any other documents that they consider necessary in order to make an informed contribution to the Board's discussions; the request is made to the Chairman and Chief Executive Officer, who may submit the request to the Board for a decision.

Directors may also ask to meet senior executives of the Saint-Gobain Group and to request that no Executive Directors are present; in the latter case, notice shall first be given to the Chairman and Chief Executive Officer, who may submit the request to the Board for a decision.

III. Deliberations of the Board of Directors

The Board examines all issues that fall within its remit, as specified in the applicable laws and regulations and the Company's bylaws, particularly on the following subjects:

The Board meets annually to review and approve the budget for the Saint-Gobain Group.

It reviews and approves the strategic orientations of the Saint-Gobain Group at least once a year and monitors their implementation, taking into account the social and environmental challenges of its business.

All capital expenditures, restructuring, disposals, acquisitions and financial investment and divestment projects in individual amounts greater than €150 million must be submitted to the Board for prior approval, along with any material transactions that fall outside the Group's stated strategy.

For urgent matters where there is not enough time to call a Board meeting, the Chairman and Chief Executive Officer provides the Directors with all relevant information by the most efficient method in order to obtain their opinion.

Once a year, the Board of Directors dedicates an item on its agenda to a discussion about its operation. In addition, an assessment of its organization and operation is carried out periodically at the initiative of the Lead independent Director; this assessment is added to the agenda of a subsequent meeting of the Board of Directors.

Every year, the Board also reviews each Director's situation in relation to the independence criteria set out in the AFEP-MEDEF code, based on a report prepared by the Nomination and Remuneration Committee. The results of the review are reported to shareholders in the annual report.

Non-Executive Directors may meet during or after a Board meeting, without the Executive Directors being present, so that they can assess the performance of the Executive Directors and consider the future line-up of Saint-Gobain Group's senior management.

IV. Board Committees

Three Board Committees exclusively composed of Directors – the Audit and Risk Committee, the Nomination and Remuneration Committee, and the Strategy and Corporate Social Responsibility Committee – prepare the Board of Directors' tasks and deliberations in their respective areas.

Committee members may participate in meetings either by videoconference or telephone, enabling them to be identified ensuring their effective participation in the meetings, and shall thus be deemed present at such committees.

For the purposes of carrying out their duties, these Committees may commission technical studies by outside experts at Compagnie de Saint-Gobain's expense, and consult Group executives after notifying the Chairman and Chief Executive Officer, who may submit the request to the Board for decision. They report to the Board on the opinions and information obtained.

The Chairman of each Board Committee designates the person responsible for acting as secretary of the Committee.

The Board's internal rules also cover, among other things, the respective duties and areas of the three Board Committees. A description of these duties and areas is provided in Chapter 5, Section 1.2.3 in the section dedicated to each Committee.

V. Lead independent Director

The Board of Directors may appoint a Lead independent Director among the independent Directors of the Board. The Lead independent Director will remain in office throughout his/her term of office as a Director. The Lead independent Director's term of office is renewable and may be revoked at any time by the Board of Directors.

Responsibilities of the Lead independent Director

The Lead independent Director's main responsibility is to oversee the efficient running of the Company's governance bodies. As such, he/she is in charge of:

- preventing and managing conflicts of interest: the Lead independent Director is responsible for preventing the occurrence of situations of conflicts of interest. He brings to the attention of the Board of Directors possible conflicts of interest that he is aware of concerning the Directors;
- leading the assessment of the organization and the operations of the Board of Directors which is periodically carried out;
- convening, chairing, organizing and reporting to the Chairman and Chief Executive Officer on the meetings of the Directors held without the presence of the Executive Directors. Such sessions may be held during or at the close of a meeting of the Board of Directors and, as the case may be, such sessions may be co-chaired by the Chairman of the Nominations and Remuneration Committee in the event he/she is a different person, and for matters falling under the responsibility of the Nominations and Remuneration Committee (in particular succession plans and compensation of the Chairman and Chief Executive Officer);
- serving as a point of contact of the shareholders of Compagnie de Saint-Gobain on governance matters, and meet them at the request of the Chairman and Chief Executive Officer;
- ensuring that the Directors receive the relevant information to exercise their duties under the best possible conditions, in accordance with these internal rules;
- more generally, ensuring compliance with the internal rules of the Board of Directors is honored.

Powers of the Lead independent Director

- In the course of his duties, the Lead independent Director has the right to:
- suggest to the Chairman and Chief Executive Officer the addition of points to the agenda of any meeting of the Board of Directors;
- request the Chairman and Chief Executive Officer to convene the Board of Directors on a specific agenda;
- convene and chair the meetings of the Board of Directors in the event of the temporary inability or death of the Chairman and Chief Executive Officer; and
- attend, as the case may be, the meetings of the Committees of which he is not a member to the extent strictly necessary to accomplish his duties and upon the approval of the Chairman of the relevant Committee.
- The Lead independent Director reports to the Board of Directors on the completion of his mission on an annual basis.

VI. Directors' duties

- Directors have a regular access to insider information in the meaning of financial markets legislation and regulations and as such are required to comply with the laws and regulations concerning insider trading.
- Closed periods are also set each year, during which Directors are prohibited from trading directly or indirectly and from derivative transactions in Compagnie de Saint-Gobain's securities.
- These closed periods cover the thirty days preceding the Board meetings at which the annual and interim consolidated financial statements are reviewed, the fifteen days preceding the publication of quarterly sales figures, and the day following the publication of the annual and half-year results.

  The calendar of the closed periods is sent each year to the Directors by the Board Secretary. The Group's senior management, as well as employees having regular or occasional access to insider information, are also subject to these closed periods.

  Directors must declare to the French Financial Markets Authority (Autorité des marchés financiers) any trades they have executed involving Compagnie de Saint-Gobain's securities, in compliance with applicable regulations.

  Directors hold their Compagnie de Saint-Gobain shares in registered form.

Beyond the obligation of discretion provided by law, Directors are bound by a general duty of confidentiality with regard to the documents and information communicated to them before or during the meetings, as well as on the deliberations of the Board of Directors, until such time as they have been made public.

They must seek to avoid any actual or potential conflict of interest, whether direct or indirect, and if any such conflict of interest should arise, they must inform the Chairman and Chief Executive Officer and the Lead independent Director and refrain from participating in discussions and votes on the concerned topics.

The Chairman and Chief Executive Officer must consult the Board before accepting any new appointment in a publicly traded company.

VII. Compensation of the Directors and reimbursement of expenses

The Board of Directors distributes the amount allocated by the General Meeting as compensation for the work of the Directors.

The Chairman and Chief Executive Officer does not receive compensation for his role as Director.

For Directors who are elected or retire/resign from the Board during the year, the fixed fee is paid pro rata to the actual period served.

The fees are paid in two half-yearly installments in arrears, with any balance available from the annual amount distributed at the beginning of the following year, based on variable parts allocated to each Director depending both on his/her participation to Board and Committees meetings held during the prior fiscal year.

Directors may be reimbursed upon submission the necessary supporting documents, for travel expenses, and any expenses incurred within the course of carrying out their duties as Directors of the Company.

VIII. Other provisions

All Directors may benefit, if they consider it necessary, from additional training on the Saint-Gobain Group's specific characteristics, businesses, operating segments and its social and environmental responsibilities.

Those appointed to the Audit and Risk Committee may, if they consider it useful, receive training in the accounting, financial and operational specificities of the Group's activities.

Unless impeded, the Directors must attend the General Shareholders' Meetings."

1.2 Documents on display

For the lifetime of this Universal Registration Document, the following documents (or a copy of them) relating to the Company may be consulted through the Investor Relations Department at the Company's corporate headquarters, at Les Miroirs, 18, avenue d'Alsace, 92400 Courbevoie (France), and may be viewed online at www.saint-gobain.com:

- this Universal Registration Document, which may also be consulted on the French Financial Markets Authority (*Autorité des marchés financiers*) website (www.amf-france.org);
- the Company bylaws; and
- any reports, letters and other documents, historical financial information, assessments and statements prepared by an outside expert at the Company's request, a part of which is included in or referred to in this Universal Registration Document.

1.3 Persons responsible for the Universal Registration Document

1.3.1 Appointment of the person responsible for the Universal Registration Document

Pierre-André de Chalendar, Chairman and Chief Executive Officer of Compagnie de Saint-Gobain.

1.3.2 Statement by the person responsible for the Universal Registration Document including the Annual Financial Report

I hereby declare, after having taken all reasonable care to ensure that such is the case, that the information contained in this Universal Registration Document is, to the best of my knowledge, consistent with the facts and contains no omission likely to affect its import.

I further declare that, to the best of my knowledge, the financial statements have been prepared in accordance with applicable accounting standards and give a true and fair view of the assets, liabilities, financial position and results of the Company and of all the companies included in the consolidation scope, and that the information provided in the management report contained in this Universal Registration Document and listed in the Cross-reference Table in Chapter 9, Section 3.2, page 356, provides a true and fair view of the evolution of the business, results and financial position of the Company and of all the companies included in the consolidation scope, as well as a description of the main risks and uncertainties to which they are exposed.

Courbevoie, March 23, 2020

Pierre-André de Chalendar
Chairman and Chief Executive Officer

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1.4 Information about the Statutory Auditors

1.4.1 Statutory Auditors and Substitute Auditors

As at December 31, 2019, the Statutory Auditors of the Company are:

- PricewaterhouseCoopers Audit [1], 63 rue de Villiers, 92208 Neuilly-sur-Seine, France, represented by Mr. Edouard Sattler and Mrs. Cécile Saint-Martin. Its mandate was renewed on June 2, 2016 for a period of six years and expires at the 2022 Annual Shareholders' Meeting;
- KPMG Audit, a Division of KPMG S.A. [1], Tour Eqho, 2 avenue Gambetta, CS 60055 – 92066 Paris La Défense (France), represented by Mr. Pierre-Antoine Dufaud and Mr. Bertrand Pruvost. Its mandate was renewed on June 7, 2018, for a period of six years and expires at the 2024 Annual Shareholders' Meeting.

The Substitute Auditors are:

- Mr. Jean-Baptiste Deschryver, 63 rue de Villiers 92208 Neuilly-sur-Seine (France), appointed on June 2, 2016. His mandate will expire at the 2022 Annual Shareholders' Meeting.

1.4.2 Statutory Auditors' fees

Fees of the Statutory Auditors and members of their networks paid by the Group for fiscal year 2019

	PricewaterhouseCoopers				KPMG			
	2019		2018		2019		2018	
(in EUR million)	Amount before tax	%	Amount before tax	%	Amount before tax	%	Amount before tax	%
Accounts certification services								
Issuer	0,9	6%	1.2	9%	0,9	9%	1.1	12%
Fully consolidated subsidiaries	8,2	58%	8.6	58%	7.5	81%	7.9	85%
Subtotal	**9,1**	**64%**	**9.8**	**67%**	**8,4**	**90%**	**9.0**	**97%**
Services other than accounts certification [2]								
Issuer	0.3	1%	0.4	3%	0.0	0%	0.0	0%
Fully consolidated subsidiaries	5,0	35%	4.3	30%	0.9	10%	0.3	3%
Subtotal	**5,3**	**36%**	**4.7**	**33%**	**0.9**	**10%**	**0.3**	**3%**
TOTAL	**14.4**	**100%**	**14.5**	**100%**	**9.3**	**100%**	**9.3**	**100%**

(1) Members of the Versailles branch of the French Regional Auditors' Association.

(2) The nature of services other than accounts certification provided by the Statutory Auditors to the parent company and its subsidiaries is composed of mainly audit procedures, as an independent third party, on the consolidated social, environmental and corporate information, compliance services on accounting, tax and regulatory issues, as well as training.

1.5 Main addresses

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2. CSR information

2.1 Note on methodology

The content of the CSR chapters of this document reflects broad consultation with internal and external stakeholders.

Internally, countries or clusters of countries entities, BU of SHP and corporate support functions (Human Resources, Responsible Purchasing, Financial Communications, Responsible Development, EHS, etc.) have been asked to contribute, in order to enhance the report with examples.

Externally, stakeholders are regularly consulted on general policy or various specific aspects of Saint-Gobain's social responsibility. These consultations assist in developing the Group's CSR reporting and communications.

2.1.1 Reference bases

The guidelines used for social reporting, EHS reporting and the definition of indicators have been drawn up in accordance with the United Nations Global Compact and applicable French legislation.

In order to have a global reference framework, these standards are also based on indicators from the GRI (Global Reporting Initiative), SASB or other relevant standards depending on materiality issues.

The Saint-Gobain Group's Social Affairs Department, which is responsible for social reporting, regularly collaborates and exchanges information with leading contributors of the Human Resources Department in order to improve the doctrine and reporting processes.

For EHS reporting, working groups suggest developments in the new EHS indicators, to monitor changes in international standards, and enhance feedback from the sites. These proposals are then discussed and validated at Steering Committee level twice a year.

The data published on Saint-Gobain's CSR comes from three different Group reporting systems:

- the Smart'R management tool for employee reporting and the annual social report;
- management and reporting system, PeopleGroup, for managerial staff;
- the EHS (Environment, Health, Safety) reporting system known as Gaïa.

2.1.2 Social reporting

a) Basis

Scope of reporting

The Group's social reporting management tool, Smart'R, has 661 consolidated entities at the end of 2019.

This tool includes the employees of fully consolidated Group companies. It forms the basis for calculation of the consolidated total number of employees and the distribution of employees by gender, sector, geographic region, socio-professional category and contract type.

Newly integrated companies are accounted for in accordance with their financial integration, and companies sold during the past year are not included.

In order to simplify data collection, for non-interfaced entities with less than 500 employees, only the number of employees and hours worked are reported in our reporting tool. Thus, indicators concerning staff movements, absences and remuneration are calculated on 95% of the Group's perimeter.

The annual social reporting provides an overview of the Group's social performance. The calculation of social indicators is based on the entire scope of the annual campaign, unless otherwise stated.

b) Management tool

Smart'R is a decision-making tool, introduced by Human Resources in order to provide computer-based data on employees.

Since January 2017, Smart'R has integrated payroll details on a monthly basis. Data is incorporated automatically for more than 92% of the Group's employees and manually for those entities not incorporated into the shared service centers (8% of employees are not interfaced).

We are setting up interfaces as soon as it becomes possible to do so, but some data is still entered manually, particularly for the newly acquired companies.

Details of the annual social reporting were collected and entered in Smart'R. The entire consolidation of data is effected by the Saint-Gobain Group.

The data on the organization and scope of the Group is updated in Smart'R each month, based on the changes in scope such as acquisitions, sales or mergers, dealt with in the Group's financial consolidation report.

Smart'R allows social reporting to take place. In fact, the social data required for the analysis is extracted by means of the MicroStrategy reporting system, supported by Smart'R.

The GRI-HR questionnaire is completed each year by the HR Departments of the countries and the activities in France in order to collect qualitative indicators, and consult internal stakeholders when drafting the report.

c) Continuous improvement

The Saint-Gobain Group has taken a voluntary and progressive approach to enhancing the reliability of its social data, through:

- continuous exchanges of information with the HR managers in each country and of the activities in France and also with the reporting contributors (661) to ensure proper understanding and application of the rules for calculating the social indicators defined in the Group's doctrine, available in French and in English;

- the choice of indicators, in the interests of stability to ensure the reliability of comparisons over time, as far as possible;
- the annual submission of a selection of social data for external assessment;
- strengthening of the controls implemented at each collection and consolidation level;
- automation of collection, by a growing number of interfaces between shared service centers (SSC) and Smart'R, to ensure reliability and continuous improvement in data quality. Smart'R's purpose is to collect data from payment systems at the end of each month. Since the closing payment dates are different depending on the countries, some indicators are solely calculated over 12 rolling months in order to accommodate the potential discrepancies emerging from these different closing dates.

d) Data consolidation

The reporting process is organized into four stages:

- monthly incorporation into Smart'R of interface files originating from shared service centers and questionnaire for non-interfaced entities;
- collection of the annual social data in questionnaires, performed by contributors at company level. This represents additional data not present in Smart'R, such as indicators regarding social relations (e.g. number of agreements signed);
- verification and consolidation within the Group's Social Affairs Department;
- the reporting allows spreadsheets to be generated as management tools for the Group's Human Resources Department and at all levels of the structure, at all levels of the structure, both at company and regional levels.

e) Absenteeism and temporary employment indicators

Absence or temporary employment data of certain entities are sometimes difficult to collect in view of local contexts. Absenteeism is thus calculated over a more limited scope than that of the annual social reporting campaign.

Absenteeism rate is expressed as a percentage and corresponds to the total number of hours of absence over the total number of theoretical hours worked. The reasons for absence taken into account in this indicator are absences for illness, absences relating to occupational accidents (or travel), absences due to strike and unjustified absences. Authorized or anticipated absences (e.g. leave, family events) are not included in this indicator.

In some countries, entities have been excluded from the indicator's calculation because of the lack of data explained by a variety of reasons (no interfaces, local regulation, etc.). The following countries are concerned by this exclusion: United States, Canada, India, Bhutan, Egypt and Japan as well as non-interfaced entities with less than 500 employees.

The temporary employment rate is expressed as a percentage and corresponds to the total number of hours worked by temporary employees out of the total number of hours worked for the Group. Temporary employment does not include subcontractors and service providers.

In several countries, entities were excluded from the calculation of the indicator due to lack of data for various reasons (local regulations, accounting difficulties, etc.).

The following countries and entities are concerned by this exclusion: India, Vietnam and an entity in Norway.

The process of improving the reliability and quality of data will continue in 2020.

f) Training indicators

Training activities carried out at the sold entities are taken into account in the calculation of the training indicators. The completion rates for mandatory e-learning (Adhere, Comply and ACT) this year include training initiated and carried out during the year as well as cases of initiated training that have not been fully completed, depending on changes in the scope of the Transform & Grow program.

g) Difficulties and restrictions

The main difficulty lies in the variety of countries in which the Group is active. The guidelines for the calculation of social reporting indicators are distributed each year to contributors, but the indicators are sometimes interpreted according to local contexts (national laws or practices).

This is the case, among other things, for training concepts. Thus, the training indicators have been calculated on a perimeter excluding the following countries: Estonia, Malaysia, Oman, Turkey, South Korea and Japan.

2.1.3 EHS reporting

Basis

Scope of reporting

The EHS report covers 1,468 entities corresponding to all the Group's facilities. All entities belonging to consolidated companies in which Saint-Gobain held a stake of 50% or more at balance sheet date are monitored. This includes, where possible, facilities that came on-stream or were acquired during the year and excluding facilities that were closed or sold.

The entities are defined by the type of establishment according to the following categories: factory, sales branch or group of stores, office, warehouse, Research and Development Center, mines and quarries and building site.

The data is entered directly on the EHS data reporting system, called Gaïa, for all EHS entities. The various questionnaires sent, as well as their frequency, scope of reporting and content, are shown in the following table:

Questionnaire	Frequency	Scope of reporting	Content
Safety-On-Line	When needed	World, all categories of victims	Instant alert in case of work-related accidentwith or without work stoppage, fatal
Environment-On-Line	When needed	World, Environmental events	Instant alert in case of major or significant environmental accidents
Safety	Monthly	World, all categories of employees	Accidents, numbers of days lost, worked hours, etc.
General & Health	Annually	World (all entities except certain offices or attached sites)	Certification, audit results, monitoring of health programs, etc.
Environment	Annually	“Environmental concerned scope” sites + Mines and quarries (excluding sites connected to plants) + Other sites at the Sector’s initiative	Output, raw materials, energy consumption, atmospheric emissions, water, waste, mitigation plan, etc.

The Safety, Industrial Hygiene and Safety, General and Safety-On-Line (SOL) questionnaires are designed to cover all facilities and Saint-Gobain employees. Depending on the questionnaire, they also cover temporary employees and subcontractors (Safety and Safety-On-Line questionnaires).

Safety data are reported on a monthly basis and comprise all accidents occurring during the month and their severity level. The system covers approximately 96% of the Group’s employees. Full coverage is not achieved because of the maximum of two years’ grace for newly acquired establishments to be included in Gaïa.

One-time reporting also allows entities, through the Safety-On-Line system, to systematically report any occupational accident, with or without lost time, including fatal incidents, and to explain the circumstances.

The industrial hygiene and health questionnaire and the General questionnaire are completed annually.

The Environment questionnaire is also completed annually, by 839 entities. The consolidated data from these entities corresponds to the “Group scope”. An “environmental scope” has also been established to focus efforts on establishments having the greatest impact, and to improve data legibility and progress toward goals. The Activities have therefore also validated certain criteria (energy and water consumption, quantity of non-recovered waste, etc.) enabling clear identification and monitoring. This scope includes 475 entities.

Data for the sites concerned is presented using environmental sub-areas. Because of the wide range of activities of the Group, not all the environmental indicators in the Gaïa EHS data reporting system are relevant for all Activities. These indicators are therefore consolidated by “batches” and allocated to groups of entities with the same environmental impacts and ratios (indicators corresponding to the production unit, in general tons of finished products). These groups of entities are called “environmental sub-scopes”, with the main ones as follows:

- the Glass sub-scope, which includes Flat Glass activities, Saint-Gobain Adfors, and the Insulation activity which have a glass smelting facility (69 sites covered, across 75 entities);
- the sub-perimeter of the Pipe Activity (concerning 15 sites out of 18 entities);
- the “Other” sub-scope covering all entities not included in the previous sub-scopes (industrial mortars, Lapeyre factories, glass conversion subsidiaries, gypsum, etc.) (concerning 391 sites out of 746 entities). This sub-scope also includes the 92 quarries in operation.

One of the principles applied by the Group when calculating ratios is to use tons of finished products when relevant, rather than tons floated (for glass) or cast (for cast iron).

The EvE standard for environmental events management identifies and manages events that could potentially occur at the sites.

EHS financial data (expenses and capital expenditure) are tracked in the SIF, the Group’s financial reporting tool, since 2013.

The objective of the "avoided raw material withdrawal" indicator is to illustrate the reduced impact of extraction-related withdrawals through the substitution of recycled materials. The aim is to measure for the quantity of recycled materials used in production the equivalence of virgin natural raw materials that would have had to be used to obtain the same quantity of finished products. This calculation is made for sand and natural gypsum.

As a reminder, carbon emission avoidance related to the use of products is not reported in the Gaïa system and is therefore not included in any of the Group's emissions indicators, regardless of the scope considered.

b) 2010-2025 and 2017-2019 objectives

The Group has set medium-term objectives, up to 2025, based on the 2010 results. To achieve them, intermediate objectives are established for a three-year period. The baseline year for the intermediate objectives is the year prior to the period start. The current period 2017-2019 therefore uses 2016 as its base year.

Based on the results for the baseline year, every three years the Group updates the scope of “concerned sites” for which environmental results are tracked for the next three years (2011-2013/2014-2016/2017-2019/2020-2022/2023-2025).

The published results for this scope therefore have a comparable scope for the three years within the period: sites closed or sold are removed from current year and baseline year, but no acquisitions are taken into account. They are included in the subsequent period.

In addition, for the indicators tracking environmental objectives, results are published using comparable production to the baseline year. This means that 2017-2019 emissions and consumption are recalculated based on 2016 production.

Progress achieved over these five three-year periods (between 2010 and 2025) will be cumulated to assess whether the 2025 objectives have been achieved based on the 2010 results.

c) Data consolidation

The EHS reporting protocol is available in French and English. The reporting process (both monthly and annual) involves three stages:

- data input, performed by the EHS correspondent(s) at the reporting unit concerned;
- data verification, by the EHS Directors of each Region;
- data consolidation by the Group's EHS Department management.

d) Difficulties and limitations

Since the launch of the Group's reporting tools, the quality of the reports has continuously improved thanks to effective feedback and better use of the systems by the specialized teams. These factors allow the Group to prevent potential errors such as differences in units of measurement between businesses and countries, and difficulties in interpreting technical terms.

2.2 Auditors' opinion

COMPAGNIE DE SAINT-GOBAIN

Report by one of the Statutory Auditors, appointed as an independent third party, on the non-financial statement included in the management report.

For the year ended December 31st, 2019

This is a free translation into English of the Statutory Auditor's report issued in French and is provided solely for the convenience of English-speaking readers. This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.

Report by one of the Statutory Auditors, appointed as an independent third party, on the non-financial statement included in the management report.

For the year ended December 31st, 2019

To the shareholders,

In our capacity as Statutory Auditor of your company Compagnie de Saint-Gobain (hereinafter the "entity)], appointed as an independent third party and accredited by COFRAC under number 3-1060 rév.2 (whose scope is available at www.cofrac.fr), we hereby report to you on the non-financial statement for the year ended… (hereinafter the "Statement"), included in the management report pursuant to the legal and regulatory provisions of articles L. 225-102-1, R. 225-105 and R. 225-105-1 of the French Commercial Code (*Code de commerce*).

The entity's responsibility

Pursuant to legal and regulatory requirements, the Board of Directors is responsible for preparing the Statement, including a presentation of the business model, a description of the principal non-financial risks, a presentation of the policies implemented considering those risks and the outcomes of said policies, including key performance indicators.

The Statement has been prepared in accordance with the entity's procedures (hereinafter the "Guidelines"), the main elements of which are presented in the Statement (or which are available online or on request at the entity's head office).

Independence and quality control

Our independence is defined by the provisions of article L. 822-11-3 of the French Commercial Code and the French Code of Ethics (*Code de déontologie*) of our profession. In addition, we have implemented a system of quality control including documented policies and procedures regarding compliance with the ethical requirements, French professional guidance and applicable legal and regulatory requirements.

Responsibility of the Statutory Auditor, appointed as an independent third party

On the basis of our work, our responsibility is to provide a report expressing a limited assurance conclusion on:

- the compliance of the Statement with the provisions of article R. 225-105 of the French Commercial Code;
- the fairness of the information provided in accordance with article R. 225-105 I, 3 and II of the French Commercial Code, i.e., the outcomes, including key performance indicators, and the measures implemented considering the principal risks (hereinafter the "Information").

However, it is not our responsibility to comment on:

- the entity's compliance with other applicable legal and regulatory provisions, in particular the French duty of care law and anti-corruption and tax evasion legislation;
- the compliance of products and services with the applicable regulations.

Nature and scope of our work

The work described below was performed in accordance with the provisions of articles A. 225-1 *et seq.* of the French Commercial Code determining the conditions in which the independent third party performs its engagement and with the professional guidance of the French Institute of Statutory Auditors ("CNCC") applicable to such engagements, as well as with ISAE 3000 – Assurance engagements other than audits or reviews of historical financial information.

Our procedures allowed us to assess the compliance of the Statement with regulatory provisions and the fairness of the Information:

- we obtained an understanding of all the consolidated entities' activities, the description of the social and environmental risks associated with their activities and, where applicable, the impact of these activities on compliance with human rights and anti-corruption and tax evasion legislation, as well as the resulting policies and their outcomes;
- we assessed the suitability of the Guidelines with respect to their relevance, completeness, reliability, objectivity and understandability, with due consideration of industry best practices, where appropriate;
- we verified that the Statement includes each category of social and environmental information set out in article L. 225-102-1 III, as well as information regarding compliance with human rights and anti-corruption and tax evasion legislation;

- we verified that the Statement presents the business model and the principal risks associated with all the consolidated entities' activities, including where relevant and proportionate, the risks associated with their business relationships and products or services, as well as their policies, measures and the outcomes thereof, including key performance indicators;
- we verified, where relevant with respect to the principal risks or the policies presented, that the Statement provides the information required under article R. 225-105 II;
- we assessed the process used to identify and confirm the principal risks;
- we asked what internal control and risk management procedures the entity has put in place;
- we assessed the consistency of the outcomes and the key performance indicators used with respect to the principal risks and the policies presented;
- we verified that the Statement covers the scope of consolidation, i.e., all the companies included in the scope of consolidation in accordance with article L. 233-16 within the limitations set out in the Statement;
- we assessed the data collection process implemented by the entity to ensure the completeness and fairness of the Information;
- for the key performance indicators and other quantitative outcomes that we considered to be the most important, we implemented:
  - analytical procedures to verify the proper consolidation of the data collected and the consistency of any changes in those data,
  - substantive tests, using sampling techniques, in order to verify the proper application of the definitions and procedures and reconcile the data with the supporting documents. This work was carried out on a selection of 32 contributing entities[1] and covers 18% of consolidated headcount data and between 18% and 24% (with the exception of the indicator "Recycled materials integrated to products" – 6%) of the consolidated environmental data relating to the key performance indicators and outcomes selected for these tests;
- we referred to documentary sources and conducted interviews to corroborate the qualitative information (measures and outcomes) that we considered to be the most important;
- we assessed the overall consistency of the Statement based on our knowledge of all the consolidated entities.

We believe that the work carried out, based on our professional judgement, is sufficient to provide a basis for our limited assurance conclusion; a higher level of assurance would have required us to carry out more extensive procedures.

Means and resources

Our work was carried out by a team of 11 people between October 2019 and February 2020 and took a total of 15 weeks.

We were assisted in our work by our specialists in sustainable development and corporate social responsibility. We conducted some fifteen interviews with people responsible for preparing the Statement, representing Human Resources, Corporate Social Responsibility, Responsible Procurement, Environment and Health and Safety.

Conclusion

Based on our work, nothing has come to our attention that causes us to believe that the non-financial statement is not in accordance with the applicable regulatory provisions and that the Information, taken as a whole, is not presented fairly in accordance with the Guidelines.

Neuilly-sur-Seine, February 27th, 2020

One of the Statutory Auditors

PricewaterhouseCoopers Audit

Cécile Saint-Martin	Emilie Bobin
Partner	Sustainable Development Partner

(1) *Work was carried out in 32 EHS entities, corresponding to 32 HR entities, representative of the Group's activities and geographical areas of operation: Brazil (3), Brazil (3), Colombia (1), Czech Republic (2), Egypt (1), Finland (1), France (3), Germany (2), Hungary (1), India (2), Italy (1), Mexico (1), Morocco (1), Poland (2), Romania (1), Russia (1), Spain (2), Turkey (1), United Kingdom (1), United States (4) and Vietnam (1).*

Appendix 1: List of the information we considered most important

Selection of qualitative and quantitative information, associated to the policies, actions and results relating to the nine main risks identified for Saint-Gobain's activities, presented in the following sections of the management report:

Main risks or opportunities identified	Sections of the management report presenting the associated policies, actions and results reviewed in the context of our work
Diversity within the organization and inclusion	Chapter III, Sections 3.2. and 3.3.4. Chapter IV, Sections 2.1. and 2.4. *Including the results:* *- Diversity index* *- Percentage of women managers* *- Percentage of women senior managers*
Energy efficiency and carbon intensity of operations	Chapter III, Sections 1.2.1., 2.2.1., 2.2.3.b), and 4.1.2. Chapter IV, Sections 2.1. and 2.4. *Including the results:* *- Carbone missions (scope 1 and scope 2)* *- Energy consumption by type* *- Number of sites certified to ISO 50 001* *-% of non-recovered waste* *- Share of sites with the highest water risks*
Business ethics	Chapter I, Section 1.3. Chapter III, Sections 1.1.1., 1.1.2., and 1.2. Chapter IV, Sections 2.1. and 2.4. *Including the results:* *-% of new managers trained to the Adhere, Comply et Act program during their first year of integration* *- Reports received through the occupational whistle-blowing system*
Management of skills and talents	Chapter III, Sections 3.2., and 3.4. Chapter IV, Sections 2.1. and 2.4. *Including the results:* *- Percentage of employees participating in the engagement survey* *- Proportion of shares held by Group employees* *- Percentage of employees trained* *- Number of employees hired* - Number of departures
Responsible value chain management	Chapter III, Sections 1.1., and 1.2. Chapter IV, Section 2.4. *Including the results:* *- Proportion of suppliers per CSR performance level* *- Total trade purchases covered by the Suppliers Charter* *- Responsible timber purchases*
Integration of recycled materials into products	Chapter III, Sections 1.2.1., 2.1.2., 2.2.3.a), and 4.2. Chapter IV, Sections 2.1., and 2.4. *Including the results:* *- Avoided withdrawals of natural raw materials* *- Number of countries throughout the world using plaster waste* *- Tons of waste plasterboard from the sites which were recovered and recycled*
Energy and carbon efficiency of products and services	Chapter III, Sections 1.2.1., 2.1.2., 2.1.3.b), 4.1.1., 4.1.3.b) and 4.1.3.c) *Including the result « Greenhouse gas emissions avoided thanks to the insulation products sold in Europe by the Group » (2016 figure)*
Health and safety at work	Chapter III, Sections 1.2., 2.2.1., 3.1., 3.3.2., and 3.3.3. Chapter IV, Sections 2.1. and 2.4. *Including the results:* *- TF2 of Saint-Gobain employees, temporary workers and permanent contractors* *- Absenteeism rate* *- Percentage of sites concerned which have an inventory of their products and chemical substances* *- Number of SMAT visits* *- Number of sites in the "Millionaires Club"*
Product safety	Chapter III, Sections 1.2., 2.1.2., 2.2.1., and 3.1.

3. Cross reference tables

3.1 Cross-reference table for the Universal registration document

For the convenience of readers of this Universal registration document, the following table provides an index to the main disclosures required by Annexes 1 and 2 of the EU Regulation n°2019/980, dated March 14, 2019, supplementing provisions of EU Regulation 2017/1129, dated June 14, 2017.

Contents of Annexes 1 and 2 of the EU Regulation n°2019/980, dated March 14, 2019, supplementing provisions of EU Regulation 2017/1129, dated June 14, 2017	Pages
17 Related party transactions	**131-132, 156-157, 165-168, 172-174, 184-187, 219-220, 272-273, 318**
18 Financial information concerning the issuer's assets and liabilities, financial position and profit and losses	
18.1 Historical financial information	234-333
18.2 Interim and other financial information	N/A
18.3 Auditing of the historical annual financial information	294-299, 327-330
18.4 *Pro forma* financial information	N/A
18.5 Dividend policy	231
18.6 Legal and arbitration proceedings	194-197, 275-278, 323-326
18.7 Significant change in the financial position	N/A
19 Additional information	
19.1 Share capital	
19.1.1 Amount of issued capital	216, 287, 312, 336
(a) Number of shares authorized	217-218, 221, 314
(b) Number of shares issued and fully paid and issued but not fully paid	216, 287, 312, 336
(c) Par value per share	216, 311, 336
(d) Number of shares outstanding at the beginning and end of the year	216, 311
19.1.2 Shares not representing share capital	216
19.1.3 Treasury shares	219
19.1.4 Convertible securities, exchangeable securities or securities with warrants	N/A
19.1.5 Information on the conditions attached to any acquisition rights and/or obligations relating to the subscribed but unissued capital, or on any undertaking to increase the capital	176-181, 217-218, 314
19.1.6 Capital of any member of the Group which is under option or has agreed conditionally or unconditionally to be put under option	N/A
19.1.7 History of the share capital	216
19.2 Bylaws	
19.2.1 Issuer's Corporate Purpose	336
19.2.2 Rights, preference and restrictions attached to each class of existing shares	336-337
19.2.3 Provisions of the Articles of Association that would have aneffect of delaying, deferring or preventing a change of control	336
20 Material contracts	**N/A**
21 Documents available	340

Incorporation by reference

In accordance with Article 19 of Regulation (EU) n°2017/1129 of the European Parliament and of the Council of June 17, 2017, this Universal registration document incorporates the following information by reference which the reader is invited to refer to:

- in relation to the fiscal year ending December 31, 2018: the management report, the consolidated financial statements, the annual financial statements and the related reports of the Statutory Auditors, included in the Registration Document filed with the French Financial Markets Authority (*Autorité des marchés financiers*) on March 15, 2019 under number D.19-0153;
- in relation to the fiscal year ended December 31, 2017: the management report, the consolidated financial statements, the annual financial statements and the related reports of the Statutory Auditors, included in the registration document filed with the French Financial Markets Authoirty (*Autorité des marchés financiers*) on March 19, 2018 under number D.18-0146.

The information included in these two Registration Documents, other than that referred to above, is replaced or updated by the information included in this Universal registration document. These two Rgistration Documents are available at the Company's registered office and on its website www.saint-gobain.com.

3.2 Cross-reference table for the Annual Financial Report

For the convenience of readers of the Annual Financial Report, the following table provides an index to the main disclosures required by Article L.451-1-2 of the French Monetary and Financial Code.

3.3 Concordance table for social and environmental information

Declaration of Non-Financial Performance (DPEF), in compliance with the Order of July 19, 2017 (Order No. 2017-1180) which transposes the Directive 2014/95/EU of the European Parliament and of the Council of October 22, 2014.

The Declaration includes the presentation of the Group's business model and the analysis of its CSR risks and opportunities (risks, associated policies, action plans and key indicators).

The business model

Saint-Gobain's business model can be found in Chapter 1, Section 5 of this document. It is the product of a consultation with the Group's internal stakeholders and takes into account Saint-Gobain's new organization, effective as of January 1, 2019. It presents the Group's sustainable growth generation process through its key resources and its main pillars of value creation.

CSR risk and opportunity analysis

Saint-Gobain has conducted its study of the risks and opportunities related to Corporate Social Responsibility (CSR) within the framework of the priority challenges presented in the materiality analysis (see Chapter 2, Section 2.3).

Thus, a universe of the 15 most important CSR risks and opportunities for Saint-Gobain was built by factoring in the Group's strategy, objectives and operations as well as its main environmental, social and societal challenges. In an effort to harmonize the vocabulary and vision on these challenges, a table presenting a risk or opportunity's definition, potential impacts for stakeholders on the one hand and for Saint-Gobain on the other hand, was provided.

These risks and opportunities were then rated according to stakeholders' expectations in order to combine internal and external visions of the organization, according to the methodology shared with internal audit and control. While the risk assessment methodology follows the process developed by the internal control, the value scales were adapted to non-financial impacts and a long-term time scale. The interviews were conducted from May to September 2018 with two criteria to assess: impact and criticality. Members of the executive board participated in these evaluations.

9 risks and opportunities were identified as the most important:

- diversity within the organization and inclusion;
- energy efficiency and carbon intensity of operations;
- business ethics;
- management of skills and talents;
- responsible value chain management
- integration of recycled materials;
- energy and carbon performance of products and services;
- health and safety at work;
- product safety.

The identification of these risks is a key step in the construction of the Group's CSR roadmap (see Chapter 4, Section 2.1).

Risk or opportunity identified	Management of the risk or opportunity	Section
The Principles of Conduct and Action constitute the Group's code of ethics. All of Saint-Gobain's policies and commitments refer to them.		III – 1.1.1
Diversity within the organization and inclusion	**Commitment**: Human Resources Policy **Actions**: OPEN 4.0 program **Quantitative objectives**: Diversity index 25% of women managers in 2020 25% of women senior managers in 2025 **Indicators**: 23,02% of women in the 19,296 highest positions that is 11.3% of the Group's positions Other diversity indicators Other non-discrimination indicators	III – 3.2 III – 3.2.1 IV – 2.1 IV – 2.1 IV – 2.1 IV - 2.4 IV – 2.4
Energy efficiency and carbon intensity of operations	**Commitment**: EHS charter and policy Energy – climate policy **Actions**: WCM program Energy – climate network Transversal programs including internal carbon pricing, R&D programs and scope 3 control **Quantitative objectives**: Reduce carbon emissions by 20% by 2025 (base 2010) Reduce energy consumption by 15% by 2025 (base 2010) **Indicators**: GHG emissions indicators Energy indicators	III – 1.2.2 a) III – 2.2.3. III – 2.2.1 III – 2.2.3 b) III – 4.1.2 IV – 2.1 IV – 2.4 IV – 2.4 IV - 2.4
Business ethics This risk includes human rights and the fight against corruption.	**Commitment**: Code of ethics: the Principles of Conduct and Action **Actions**: Compliance culture and training programs for employees Duty of vigilance plan **Quantitative objective**: Train 100% of new managers to the Adhere, Comply et Act program during their first year of integration **Indicators**: Group Values Indicators Responsible Purchasing Indicators Non-discrimination indicators	I – 1.3 III – 1.1.1 III – 1.1.2 III – 1.2 IV – 2.1 IV – 2.4 IV – 2.4 IV – 2.4
Tax evasion The Group acts in compliance with the tax laws of the countries in which it operates and fulfils its tax reporting and payment obligations in time. Saint-Gobain has therefore not established structures whose purpose is tax evasion and applies tax laws and regulations with honesty and integrity.		
Management of skills and talents	**Commitment**: Saint-Gobain Attitudes and Human Resources policy **Actions**: WCM Program OPEN 4.0 Program SG Talents Program L&D Program **Indicators**: Percentage of employees trained Training indicators in talent development	III – 3.2 III – 2.2.1 III – 3.2.1. III – 3.4.2 III – 3.4.1 IV – 2.1 IV – 2.4
Responsible value chain management	**Commitment**: Code of ethics: the Principles of Conduct and Action Responsible purchasing (trade and non-trade purchases) **Action**: Duty of vigilance plan: responsible purchasing actions **Indicators**: Responsible purchasing indicators	III - 1.1 III - 1.2.4 III - 1.2 IV - 2.4

Risk or opportunity identified	Management of the risk or opportunity	Section
Integration of recycled materials into products	**Commitment**: EHS charter and policy Sustainable resource management policy	 III – 1.2.2 a) III – 2.2.3 a)
	Actions: Obtain a maximum recycled content SCORE tool for the evaluation of the sustainable performance of products Circular economy	 III – 2.2.3 a) III – 2.1.2 III – 4.2
	Indicators: Avoided withdrawals of natural raw materials Raw materials and production waste indicators	 IV – 2.1 IV – 2.4
Energy and carbon efficiency of products and services	**Commitment**: EHS charter and policy Energy and climate policy	III – 1.2.2 a) III – 2.2.3.
	Actions: Design sustainable, comfortable and performing solutions including product transparency and evaluation and improvement of the sustainable performance of products Seize the opportunities linked to the transition to a low carbon economy Actions that support a strong and low carbon economic growth Train clients locally, inform the end user	III – 2.1.2 III – 4.1.1 III – 4.1.3 III – 4.1.3
	Indicators: Provision of EPDs Carbon avoidance linked to insulation solutions	 III – 2.1.2 III – 4.1.1
Health and safety at work	**Commitment**: EHS charter and policy Health policy	 III – 1.2.2 a) III – 3.1.1
	Actions: Duty of vigilance plan WCM Program Safety at work Program Health at work Program CARE Program MWB Program	 III – 1.2 III – 2.2.1 III – 3.1.2 III – 3.1.1 III - 3.3.2 III - 3.3.3
	Quantitative objectives: Reach a TRAR of 2.3 in 2019	 IV – 2.1
	Indicators: HICE (Health Indicator for occupational Exposure) Health and Safety indicators	 III – 3.1.1 c) IV – 2.4
Product safety	**Commitment**: EHS charter and policy Health policy	III – 1.2.2 a) III – 3.1.1
	Actions: Duty of vigilance plan Innovation program, including the EHS check-list WCM program Product transparency SCORE program for the evaluation of the sustainable performance of products Management of chemical risks	III – 1.2 III – 2.1.2 III – 2.2.1 III – 2.1.2 III – 2.1.2 III – 3.1.1 a)
	Indicators: Deployment of chemical risk management tools	III - 3.1.1 c)
	Complementary work on the possibility of defining a performance indicator on product safety is being considered.	

Action to combat food waste:
Saint-Gobain is vigilant about food waste and is in constant dialogue with the managers of the collective catering facilities on its sites.

9

4. Glossary

A

ACT: training program dedicated to the prevention of corruption

Act4nature: voluntary French scheme in which companies commit to protecting biodiversity. Saint-Gobain signed up to the scheme in 2018

Ademe: French Environment and Energy Management Agency

Afep: *Association française des entreprises privées* [French Association of Private Enterprises]

ADHERE: training program dedicated to the Principles of Conduct and Action, the Saint-Gobain Group's code of ethical conduct

Attitudes: five in number, they represent both a management approach and a state of mind that binds all Group employees

Apef: *Association paritaire pour l'emploi et la formation* [Joint Association for Employment and Training]

B

BIM: Building Information Modeling

Boost: online training platform

C

CCI: French Chamber for Commerce and Industry

CMF: *Conseil des marchés financiers* [Financial Markets Council]

COMPLY: training program dedicated to antitrust law

CSR: Corporate Social Responsibility

Cullet: broken glass coming from manufacturing waste or the selective collection of waste and recycled content

E

EBITDA: Earnings before interest, taxes, depreciation and amortization

ECB: European Central Bank

EIB: European Investment Bank

EHS: Environment, Health and Safety

EPD: Environmental Product Declaration

EpE: *Entreprises pour l'Environnement* [Enterprises for the Environment]

ETC: Energy Transition Commission

F

FCPE: *Fonds commun de placement d'entreprise* [Corporate mutual fund]

G

GDPR: General Data Protection Regulation

GHS: Greenhouse gas

Global ABC: Global Alliance For Building and Construction

GBC: Green Building Councils

H

HPS: High Performance Solutions

HQE: French HQE™ certification (High Environmental Quality), created in 2005 in France

HR: Human Resources

I

IFRS: International Financial Reporting Standards

L

LCA: Life Cycle Assessment

LEED: Leadership in Energy and Environmental Design, American certification program created in 1998

M

Medef: *Mouvement des entreprises de France* [French company movement]

O

OPEN: Our People in an Empowering Network, the Group's Human Resources program

P

PEE: *Plan d'épargne entreprise* [Company Savings Plan]

PEG: *Plan d'épargne Groupe* [Group Savings Plan]

Principles of Conduct and Action (PCA): the Saint-Gobain Group's code of ethical conduct

R

R&D: research and development

S

SA: Statutory Auditors

SCORE: tool developed by Saint-Gobain in 2017 to assess the sustainable performance of construction products

SMAT: Safety Management Tool

T

TCFD: Task Force on Financial Disclosure

Transform & Grow (T&G): the Saint-Gobain Group's transformation plan, launched in January 2019

U

UN's SDGs: the Sustainable Development Goals of the United Nations

UNEP: United Nations Environment Programme

W

WBCSD: World Business Council for Sustainable Development

WCM: World Class Manufacturing, industrial excellence program

WCP: World Class Purchasing, excellence program in the field of purchasing and responsible purchasing in particular

WBCSD: World Business Council for Sustainable Development

WGBC: World Green Building Council

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The paper manufacturing plant has the following certifications:

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- *ISO 14001 (International Environmental Management standard); Traceability chain in accordance with FSC standards*
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- *ISO 50001 (International Energy Management standard).*

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- *ISO 50001 (International Energy Management standard).*

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- *Global Compact®. La Galiote Prenant has committed to upholding 10 fundamental values relating to human rights, labor law, the environment & the fight against corruption. Each year, we continue our commitment via specific initiatives within our workshops.*

These initiatives are described in our annual Sustainable Development report.

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