REGISTRATION DOCUMENT 2018

including the annual financial report and CSR information

CONTENTS

SAINT-GOBAIN

2018 REGISTRATION DOCUMENT

including the annual financial report
and CSR information

SAINT-GOBAIN DESIGNS, MANUFACTURES AND DISTRIBUTES MATERIALS AND SOLUTIONS WHICH ARE KEY INGREDIENTS IN THE WELLBEING OF EACH OF US AND THE FUTURE OF ALL.

The French version of this Registration Document was filed with the French Financial Markets Authority (*Autorité des marchés financiers,* AMF) on March 15, 2019, pursuant to Article 212-13 of its General Regulations. It may be used in support of a financial operation if accompanied by a prospectus duly approved by the AMF.

This French document was drawn up by the issuer, and is binding on its signatories.

This report has been prepared in accordance with the GRI Standards: Core option.

This English-language version of the Registration document is a free translation of the original French text. It is not a binding document. In the event of a conflict of interpretation, reference should be made to the French version which is the authentic text. The auditors' report applies to the French version of the Management Report and the financial statements.

A Message from
Pierre-André de Chalendar

Chairman and Chief Executive Officer of Saint-Gobain

2018 was a very positive year for Saint-Gobain. Our operating results have grown significantly, especially in the second six months, thanks to globally buoyant markets, strong sale price dynamics, and the solutions to the industrial problems which impacted the Group's profitability in the first six months. This growth was seen across all our businesses and geographical regions. 2018 was also marked by the development and announcement of our ˝Transform and Grow˝ plan.

Building the Saint-Gobain of tomorrow

This plan has been effective since January 1, 2019, and is being systematically deployed across the whole Group. It will allow us to provide our customers with a better service, to strengthen our competitiveness and to accelerate our growth whilst maintaining the strategic course we have set.
˝Transform & Grow˝ has two pillars: a new organization, and the optimization of our asset portfolio by investing in an offensive acquisitions and divestments policy. It is creating new prospects because it improves the integration of our offers, reinforces the synergies between our businesses and makes us better equipped to seize the opportunities connected with digital technology.

An ambition which is part of a long term vision

While implementing our transformation plan, we are maintaining and strengthening our strategy of innovation and responsible commitment, which has always been the strength of our Group.
A large number of our solutions are co-developed with our customers with more personalized innovation and

"Transform & Grow will allow us to accelerate our growth"

tailored services at each stage of their journey. Our solutions profit both direct customers and end-users.
An ever-increasing number of our employees are members of our Group Savings Plan in over 47 countries and represent 8% of our shareholding.
We also have towards our employees and the people who work on our sites a duty to have exemplary health and safety standards and to be even more vigilant.
In the countries where we work, we are a responsible player committed to creating virtuous employment dynamics, providing vocational training and fostering respect for the environment in the local communities where we are implanted.
Finally, our responsible actions notably concerning climate is a commitment to society as a whole.

Meeting the great challenges of our time

Saint-Gobain, for a long time, has been committed to limiting the effects of climate change through its solutions. Designing the materials we use in a context of climate change, rapid urbanization and high demographic growth; helping to build energy-efficient buildings which protect the health and well-being of occupiers; allowing the transition towards a low carbon economy, and making this transition acceptable to the greatest number; being a stakeholder in new mobility; controlling the impact of our industrial operations; reducing the intensive use of resources by recycling materials... All these have become more than expectations: requirements. I am particularly proud that we joined this year CDP's Climate Change A List of the most committed companies to combating climate change, which invites us to do more to reduce CO_2 emissions.

In a changing world, reinventing ourselves whilst remaining true to our values

The digital transformation which has been on going for a number of years has radically changed things. The 4.0 industry is revolutionizing how we operate our plants and interact with our customers. We are seizing the new opportunities which digital is offering in e-commerce and services. We work and communicate differently. We have a strong corporate culture which helps us to create loyalty amongst our employees and attract tomorrow's talent. This is set out in our Principles of Conduct and Action - our code of ethical conduct - and our Attitudes - know-how which everyone in the organization must adopt. It also embodies our capacity to change our management methods and to reinvent ourselves in order to be more entrepreneurial, acquire new skills and provide continual feedback. We are therefore particularly proud of two awards: the Top Employer Global label which places us amongst the world's best employers for the 4^{th} year running, and our position for the 8th year running in the world's top 100 most innovative companies, the TOP 100 Global Innovator, established by Clarivate Analytics.

Saint-Gobain's assets – our capacity to innovate, our corporate social responsibility and the positive impact of our solutions – are well known. The Saint-Gobain brand is increasingly seen as a pledge of quality and performance by professionals and private individuals alike. Our positions and results are solid. In these changing times we strive to give meaning to our employees and our stakeholders. We are therefore embarking on 2019 with a renewed enthusiasm thanks to a profound transformation which will enable us to go further and to conquer new horizons.

Saint-Gobain Today

1

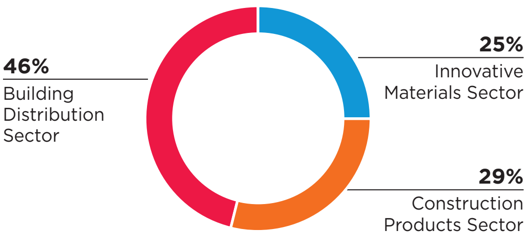
1 GROUP PROFILE

1.1 A Global Group

2018 net sales

€41,774M

NET SALES BY SECTOR



Operating income

€3,122M

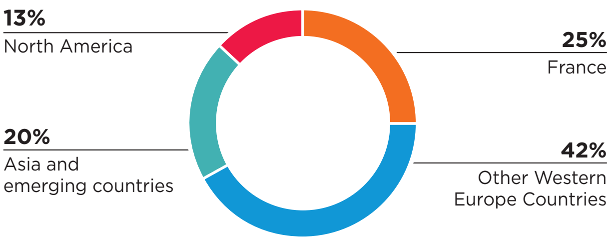
Recurring net income

€1,729M

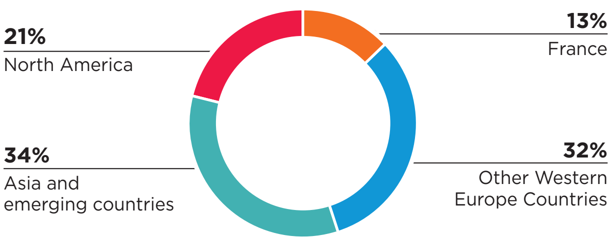
Industrial presence in 67 countries

Albania
Algeria
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
Singapore
Slovakia
Slovenia
South Africa
South Korea
Spain
Sweden
Switzerland
Tanzania
Thailand
Turkey
United Arab Emirates
United Kingdom
United States
Venezuela
Vietnam
Zimbabwe

BREAKDOWN OF NET SALES BY GEOGRAPHIC REGION



BREAKDOWN OF OPERATING INCOME BY GEOGRAPHIC REGION

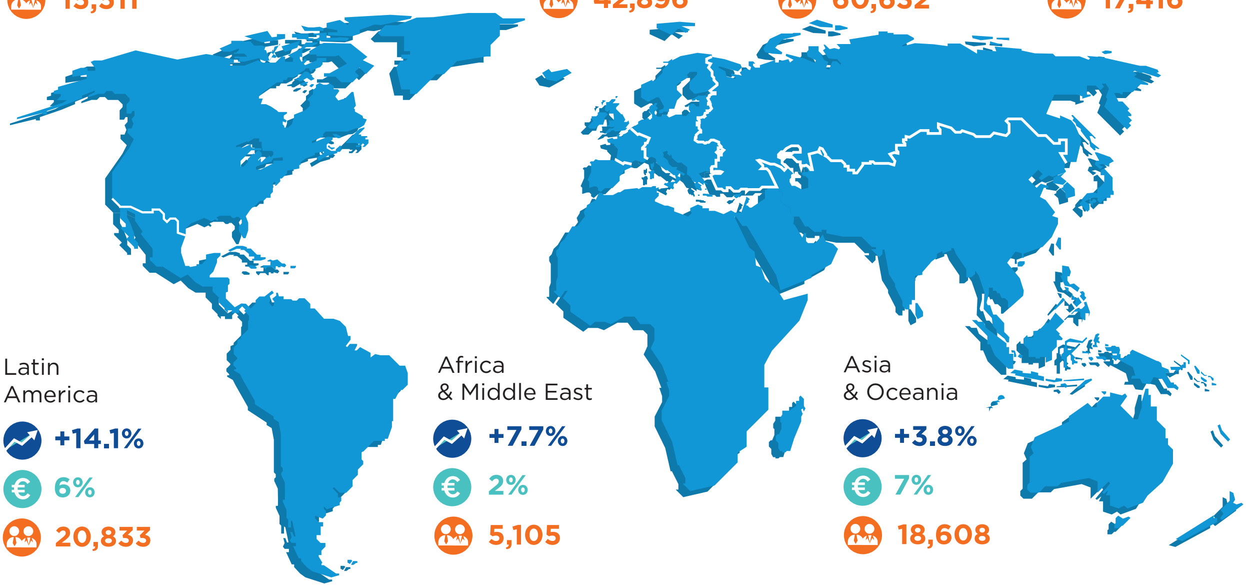


North America
- +6.2%
- 13%
- 15,511

France
- +3.0%
- 25%
- 42,896

Other Western Europe countries
- +3.5%
- 42%
- 60,632

Central & Eastern Europe
- +5.1%
- 5%
- 17,416



Latin America
- +14.1%
- 6%
- 20,833

Africa & Middle East
- +7.7%
- 2%
- 5,105

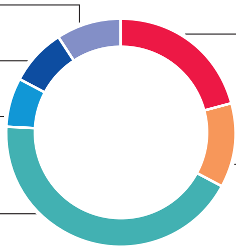
Asia & Oceania
- +3.8%
- 7%
- 18,608

2018/2017 Internal growth rate like-for-like · *Net sales* · *Number of employees*

181,001
employees

Over 100
nationalities represented

The Group's markets

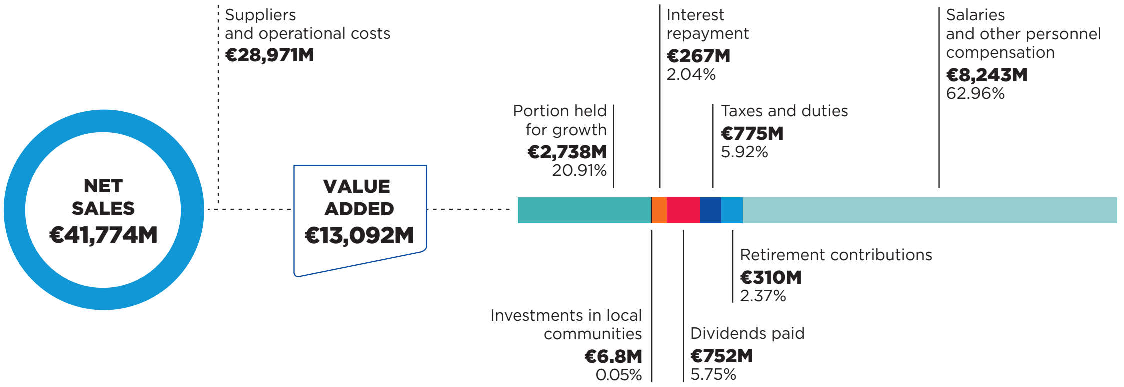


As a % of consolidated net sales - 2017 data

The organic growth and comparable change in revenue or operating income indicators reflect organic performance excluding the impact of: changes in scope of consolidation, by calculating the indicators for the current year on the basis of the scope of consolidation for the previous year (scope effect); changes in exchange rates, by calculating the indicators for the current year and the previous year on the basis of the same exchange rates for the previous year (currency effect); changes in applicable accounting principles.

CSR

BREAKDOWN OF NET SALES AND VALUE ADDED BY STAKEHOLDER



549,200
Indirect Jobs

47 **countries**
participating in the Group Savings Plan

91%
Diversity Index (proportion of Managers meeting one of the Group's three diversity critera a national of a country other than France; a diversity of experience; they are female).

2.4
Total recordable accident rate with and without more than 24 hour's lost time (employees, temporary workers, subcontractors).

Saint-Gobain is on
CDP's
Climate Change
A List

The energy savings generated by the Group's solutions are equivalent to 90 times the greenhouse gas emissions generated throughout their whole life cycle.

Digital

+16% **Increase in traffic**
to the Group's main websites between 2017 and 2018

+31% **followers**
on the Group's social media accounts between 2017 and 2018

R&D

Nearly 400 **patents filed in 2018**

8 **cross-functionnal research centers**

3,700 **R&D employees**

Governance

14 **Directors, of which:**

94%
attendance rate

73%
Independent Directors

42%
women

1
Lead Independent Director

2
employee Directors

1
Director representing employee shareholders

Committee Chairmen all independent

1.2 A solid financial base

1.2.1 Very good financial results

Recurring earnings per share

€3.18

Shareholders' equity

€17,931M

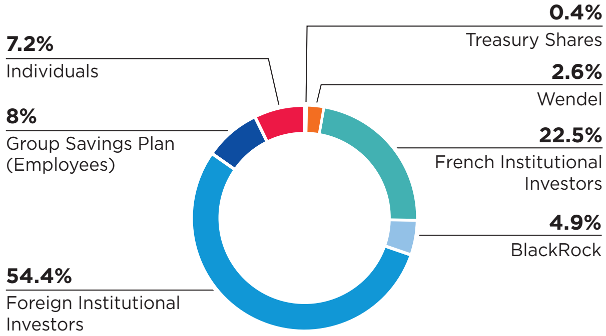
Net debt

€8,193M

Industrial investment

€1,666M

1.2.2 A stable shareholder base



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

Saint-Gobain's long-term debt has been rated BBB with a stable outlook by Standard & Poor's since December 9, 2014.

Saint-Gobain's long-term debt has been rated Baa2 with a stable outlook by Moody's since December 9, 2014.

Saint-Gobain is included on the CAC 40 index, the DJ Euro Stoxx 50 index and *the Global Dow*, a 150-stock index representing both the traditional and innovative sectors.

In the area of sustainable development and corporate social responsibility, Saint-Gobain is included on the *MSCI World ESG Leaders, STOXX® Global ESG Leaders, Euronext-Vigeo Europe 120, Euronext Vigeo Eurozone 120, Ethibel ESI Excellence Global,* Ethibel ESI Excellence Europe, *FTSE4Good* indices and *Dow Jones Sustainability Index.*

Inclusion in ethical stock market indices reveals recognition of the Group's long-term commitment and of the results achieved in the area of corporate social responsibility.

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 Labour 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 that are applied by all the activities and countries since January 1, 2019.

The most important of these are the "reference policies." These are directly derived from the Principles and define the management principles applicable to all Saint-Gobain units 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 Saint-Gobain employees and in the majority of employment contracts (see Section 1.2 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.
- The acquisition of Norton in 1990 doubles Saint-Gobain's presence in the United States, opening up new markets for the company and providing the opportunity to develop expertise in 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.
- The sale of Verallia, the Group's glass jar and bottle-making subsidiary, in 2015 was part of a strategy of business portfolio optimization.
- In 2018, Saint-Gobain implemented "Transform & Grow", an ambitious transformation plan aimed at bolstering its competitiveness and fully unleashing its growth potential.

2. "TRANSFORM & GROW": A TRANSFORMATION PLAN FOR SAINT-GOBAIN

2.1 Unleashing the potential for growth

Saint-Gobain possesses real strengths: solid market fundamentals, positioning in high-growth markets, a growing presence in fast-growing countries, unique industrial and innovation capacities, comprehensive solutions that respond to both customer needs and the ever-growing market trends of comfort, responsible products, performance, productivity, etc.

In order to fully leverage these strengths to bolster competitiveness and fully unleash its growth potential, the Group implemented a transformation and growth plan entitled "Transform & Grow" on January 1, 2019, focusing on two priorities:

- A new type of structure organized per market and in closer contact with customers in order to seize all opportunities, integrating the digital dimension at all levels to better adapt to the new modes of consumption and increase productivity. A structure that is more streamlined and agile to speed up decision-making, with an expected positive impact on the operative profit margin of around 60 basis points thanks to costs savings of €250 million by 2021 (€50 million in 2019, €120 million in 2020) in addition to our existing €1.2 billion costs savings program for 2017-2020 ;
- Agile and value-creating management of the products and solutions portfolio, with an expected positive impact on the operative profit margin of around 40 basis points related to the disposal program of €3 billion in revenues by end-2019.

This transformation plan will enable the Group to achieve a total of €250 million in additional savings and to increase its operating margin by a total of over 100 basis points by 2021.

2.2 A new structure centered on 5 entities

Saint-Gobain's previous structure relied on a matrix-based system with three Sectors of activity (Innovative Materials, Construction Products, Building Distribution) and 14 General Delegations coordinating the Group's actions and representing it in its various countries. To achieve simplification and greater efficiency, the Sectors and Delegations were eliminated in favor of a new structure that is more relevant to the markets, more nimble and streamlined, aiming to better serve the Group's customers and provide a broader and better-integrated range of products and services.

Since January 1, 2019:

- **Activities in regional markets** (activities from the former Building Distribution and Construction Products, as well as building glass) are now organized by country and consolidated into **four regions** (Northern Europe; Southern Europe, Middle-East, Africa; Americas; Asia-Pacific). In markets where products and services are supplied locally and mostly have short distances to cover, the structure per country and region will leverage Saint-Gobain's strengths to meet the specific needs of each local market, while promoting growth and the development of market synergies;
- **A High Performance Solutions entity** is responsible for **global market activities** (corresponding to the former High-Performance Materials Sector as well as the automotive glazing activities). These are products and services with a high unit value that can be shipped over long distances and whose value is often created through co-innovation with customers and bespoke technologies. The High Performance Solutions BUs provide the best service to the various markets with three market-oriented BUs (Mobility, Life sciences, Construction Industry) and two BUs serving industry more generally (one channel-oriented Abrasives and Composite Systems BU and one product-oriented Ceramics BU). The High Performance Solutions entity dedicated to global markets takes into account the diversity of businesses, while remaining aligned with the three great principles of the transformation plan: close contact with customers, digital incorporated at every level, simplicity and agility.

The countries (in the case of regional markets) or High Performance Solutions BUs are responsible for their own P&L as part of a simplified and streamlined decision process.

The new structure facilitates more rapid decision-making while eliminating several approval levels for most decisions. It relies on a development model adapted to the specifics of markets and regions, with customized approaches where needed. The matrix-based management structure has been streamlined to become simple and direct.

Communication and cooperation among the Group's businesses have also become easier, particularly between manufacturing and distribution activities. Accordingly, the brands with high digital capabilities can share their experience with other Group brands to accelerate time to market and launches of new products can lead to testing phases within the Group's brands. The overall result is more comprehensive and better integrated products and services being offered to customers.

Organization per country on local markets facilitates an accurate response to the specific needs of each market, given that climate and construction standards and methods vary greatly from one country to the next. It enables the Group to seek new growth engines through the development of new services, solutions and business models.

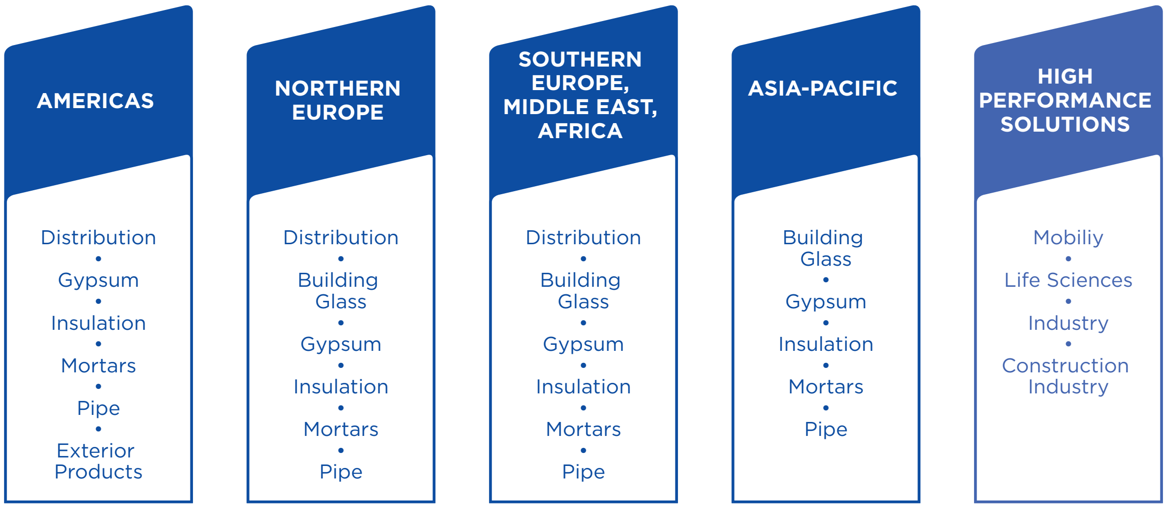
This new type of organization also entails changes in the culture and in collaborative working methods, based on sharing, as well as stronger integration and greater team accountability.

The responsibility for implementing this plan has been entrusted to Benoit Bazin, appointed by the Board of Directors upon the recommendation of Pierre-André de Chalendar, Chief Operating Officer.

From a broader perspective, the management bodies of the Group are streamlined and function more smoothly and efficiently.

The new Group's Executive Committee consists of 14 members.

THE GROUP'S NEW ORGANIZATION.



3. GOVERNANCE

3.1 Board of Directors

At January 1, 2019

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

Chief Executive Officer of Proximus

Jacques PESTRE

Deputy Chief Executive Officer of Saint-Gobain Distribution Bâtiment France, with responsibility for the Point.P brand 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

Chief Executive Officer of Michelin

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

3.2 The Group General Management

The Executive Committee consists of the following members since January 1, 2019:

1 Pierre-André de CHALENDAR, Chairman and Chief Executive Officer
2 Benoit BAZIN, Chief Operating Officer
3 Armand AJDARI, Vice-President, Research and Development
4 Julie BONAMY, Vice-President Strategy
5 Patrick DUPIN, Senior Vice-President, CEO Northern Europe Region
6 Javier GIMENO, Senior Vice-President, CEO Asia-Pacific Region

The Executive Committee meets once a month.

7 Laurent GUILLOT, Senior Vice-President, CEO High Performance Solutions | **8 Benoit d'IRIBARNE,** Vice-President Technology and Industrial Performance | **9 Thomas KINISKY,** Senior Vice-President, Innovation and Chairman North America | **10 Claire PEDINI,** Senior Vice-President, Human Resources and Digital Transformation | **11 Laurence PERNOT,** Vice-President Communications **12 SREEDHAR N.,** Chief Financial Officer | **13 Guillaume TEXIER,** Senior Vice-President, CEO Southern Europe, Middle East and Africa Region | **14 Antoine VIGNIAL,** General Secretary, in charge of Corporate Social Responsibility

4. 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.

BASED ON OUR RESOURCES

STRONG EMPLOYEE COMMITMENT
- **181,001** employees in **67** countries
- **+100** nationalities
- **23.8%** of women managers
- **71.9%** of employee participation

GLOBAL PRESENCE AND LOCAL PROXIMITY
Over **900** industrial sites and **4,100** sales outlets

A SAINT-GOBAIN BRAND AND STRONG BUSINESS BRANDS
For end-users, manufacturers and building professionals

EXPERTISE IN LOCAL AND GLOBAL BUSINESSES
- Distribution for construction, building glazing, gypsum, insulation, mortars, piping and exterior products
- Mobility, life sciences, construction industry, ceramics, abrasives and composite systems

SYNERGY AND COMPLEMENTARITY OF THE OFFER
- Portfolio of products and services
- Regional, international and market synergies

FINANCIAL RESOURCES
- Sales: **€41,774 million**
- Operating income: **€3,122 million** and Recurring net income: **€1,729 million**

KEY SKILLS FOR TRANSFORMATION
- Innovation: **8** research centers
- Digital: **1,600** tech-experts of **58** nationalities

NATURAL RESOURCES AND ENERGY

OUR VALUE CREATION

OUR IDENTITY COMBINING SIMPLICITY AND AGILITY

MISSION	OFFER	CUSTOMER RELATIONS
Design, produce and distribute materials and solutions that are key ingredients in the well-being of each of us and the future of all	Solutions and services Well-being, Sustainable Development, Performance	Customer intimacy Involvement up to the end-user

SHARED VALUES REVOLVING AROUND THE PRINCIPLES OF CONDUCT AND ACTION

OUR MARKETS

Local markets
- Northern Europe
- Americas
- Southern Europe, Middle-East and Africa
- Asia Pacific

Global markets
- Mobility
- Life Sciences
- Construction Industry
- Industry

PERFORMANCE DRIVERS

- INNOVATION
- DIGITAL TRANSFORMATION
- TECHNOLOGY AND INDUSTRIAL EFFICIENCY

AGILE AND VALUE-CREATING ASSET PORTFOLIO MANAGEMENT

TO ACHIEVE SUSTAINABLE GROWTH

FOSTERING GROWTH AND INCREASING COMPETITIVENESS

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

CONTRIBUTING TO A SUSTAINABLE AND RESPONSIBLE DEVELOPMENT *(CSR roadmap)*

BUSINESS ETHICS	CIRCULAR ECONOMY
• Train 100% of new managers in the Adhere, Comply Act programs in their first year of integration	• Reduce the withdrawal of virgin raw materials • Reduce by 50% the non-recovered waste by 2025 (basis 2010)
CLIMATE CHANGE	**HEALTH AND SAFETY ACROSS THE VALUE CHAIN**
• Reduce by 20% our carbon emissions by 2025 (basis 2010)	• Reduce the number of accidents with and without lost time (TRAR) for our employees, temporary workers and subcontractors on site
INCLUSION AND DIVERSITY	**CREATION OF LOCAL AND INCLUSIVE VALUE**
• Keep the diversity index above 90% • Have 25% of women managers in 2020 • Have 25% of women senior managers in 2025	• Be an active listener for our employees • Favour employee share ownership • Train all our employees

CREATING SHARED VALUE WITH STAKEHOLDERS
- Sales: **€41,774 million**
- Suppliers and operational costs: **€28,971 million**
- Added value **€13,092 million**
- Portion held for growth: **€2,738 million**
- Investments in favour of local communities: **€6.8 million**
- Interest repayment: **€267 million**
- Dividends paid: **€752 million**
- Imposition and other taxes: **€775 million**
- Retirement contributions: **€310 million**
- Salaries and other compensation: **8,243 million**

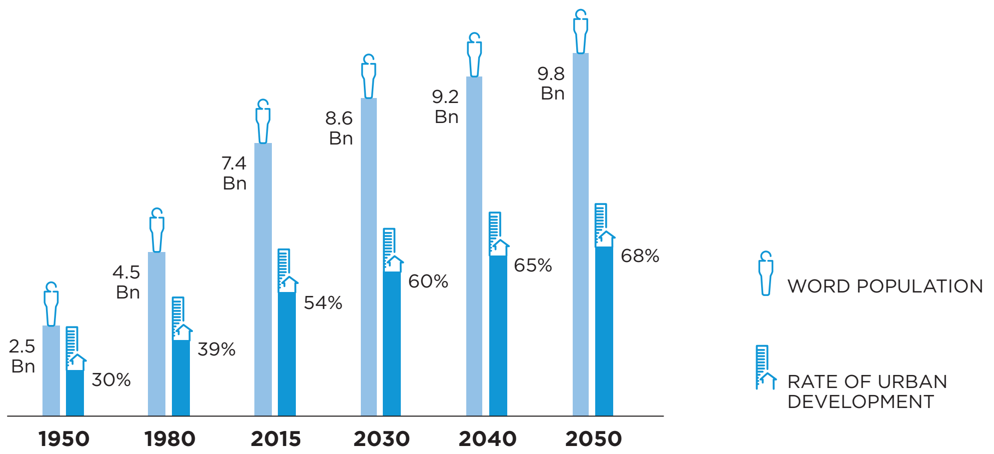
Strategy 2

1. THE GROUP AND ITS ENVIRONMENT

1.1 The challenge of population growth and urban development

Mid-2018, the world population was estimated at 7.6 billion [(1)]: it is expected to reach 9.8 billion in 2050 [(1)] This demographic growth is accompanied by rapid urbanization. In 2015, 53.9% of the word population lived in cities; this percentage will reach 68.4% by 2050, representing 2.7 billion additional urban dwellers [(1)]. Africa and Asia will represent 90% of this growth [(1)], resulting in a growing need for housing and infrastructure, particularly in currently mid-sized cities that will become megacities.

DEMOGRAPHIC GROWTH AND URBANIZATION



In fast-growing countries faced with the persistence of slums, access to housing is a major social and economic challenge that calls for appropriate solutions. At the same time, the emergence of a vast middle class with stronger purchasing power, including in Africa, is stimulating new demand with increasingly high comfort requirements.

This challenge forms the very core of the Group's concerns and translates to a comprehensive offering of solutions to address the growing demand for housing and infrastructures and locally adapted responses to designing sustainable solutions. It also translates to the construction of resilient cities, guaranteeing individual well-being in a context of dwindling resources and climate change.

1.2 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 [(2)] report, 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. To limit the increase to 1.5°C, beyond which environmental and economic consequences would be significant, it is necessary to reduce CO_2 emissions by 45% by 2030 compared to their 2010 level and to achieve "carbon neutrality" by 2050 [(3)]. Beyond the signatory countries, the positive engagement by many players (towns, cities and businesses) brings hope of growing beyond global awareness, the implementation of ambitious action plans and compliance with the objectives set by the Paris Agreement.

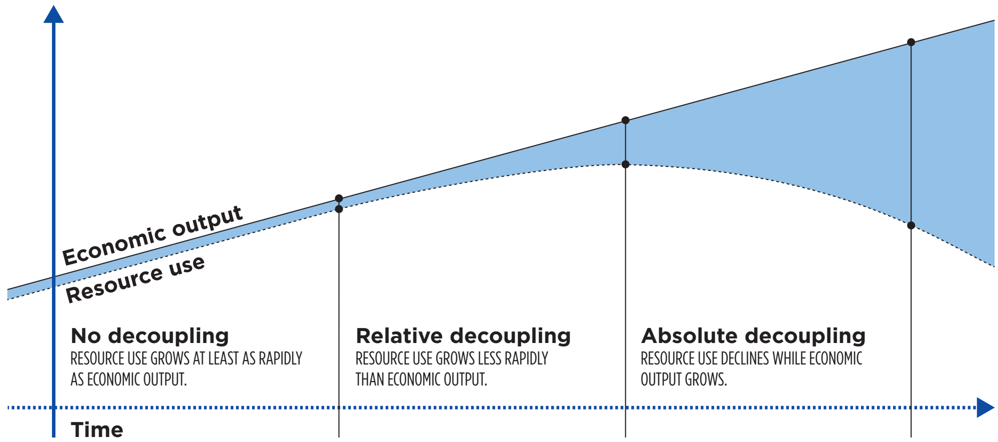
(1) *World Urbanization Prospects 2018 Revision – United Nations.*
(2) *Stern Review on the Economics of Climate Change, 2006.*
(3) *Global Warming of 1.5°C, Intergovernmental Panel on climate change, October 2018.*

In the private sector, there are many drivers for reducing the environmental footprint: in 2014, the building industry represented 31% of the world energy consumption, 54% of the electricity demand and 23% of the CO_2 emissions associated with energy. To limit warming to 1.5°C, energy consumption for buildings cannot increase by more than 20% by 2050, as compared to the 2010 worldwide levels[1].

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.

Furthermore, with increasing frequency, public policies are 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. The reuse of materials generates additional economic growth and limits resource usage and emissions. By expanding this kind of approach, greater economic affluence can be decoupled from the use of resources.



Source: Agence Européenne pour l'Environnement[2]

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 principled influence on the entire value chain, and by bringing to market increasingly sustainable solutions that respect the environment.

(1) *Global Warming of 1.5°C, Intergovernmental Panel on climate change, October 2018.*
(2) *The European Environment: State and outlook 2015 - Synthesis report, European Environment Agency.*

1.3 The challenge of the 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, there will be 3 billion internet users by 2022, compared to 2.1 billion in 2017. (1) 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. In addition, for differentiation, it is no longer just the 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, staff 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. Progress can thus be seen on two fronts: on the one hand, in the increase in productivity that results from reductions in stock, breakdowns, lost time and scrap material and on the other, in improved flexibility of production processes. Industry 4.0 opens the doors to 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, 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 (see Chapter 1, Section 2).

1.4 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 illustration 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.

(1) *Boston Consulting Group, Digital Consumers, Emerging Markets and the $4 trillion future, September 2018.*

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 the 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	■ Continuous contacts ■ Internal communication materials ■ Meetings with Group managers ■ Bodies representing employees ■ Intranet ■ Website
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 ■ Meeting 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 ■ Green Building Councils

1.5 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 corporate website at www.saint-gobain.com .

To provide greater transparency around the challenges, in 2016 they were grouped and summarized according to four long-term priority areas for Corporate Social Responsibility (CSR):

- climate change;
- responsible business practices;
- diversity;
- health and safety.

The Group then added two further CSR challenges associated with its development:

- circular economy;
- creation of local value.

Lastly, Saint-Gobain used stakeholder dialogue to confirm two strategic challenges linked to its performance and to the fulfilment of its brand promise:

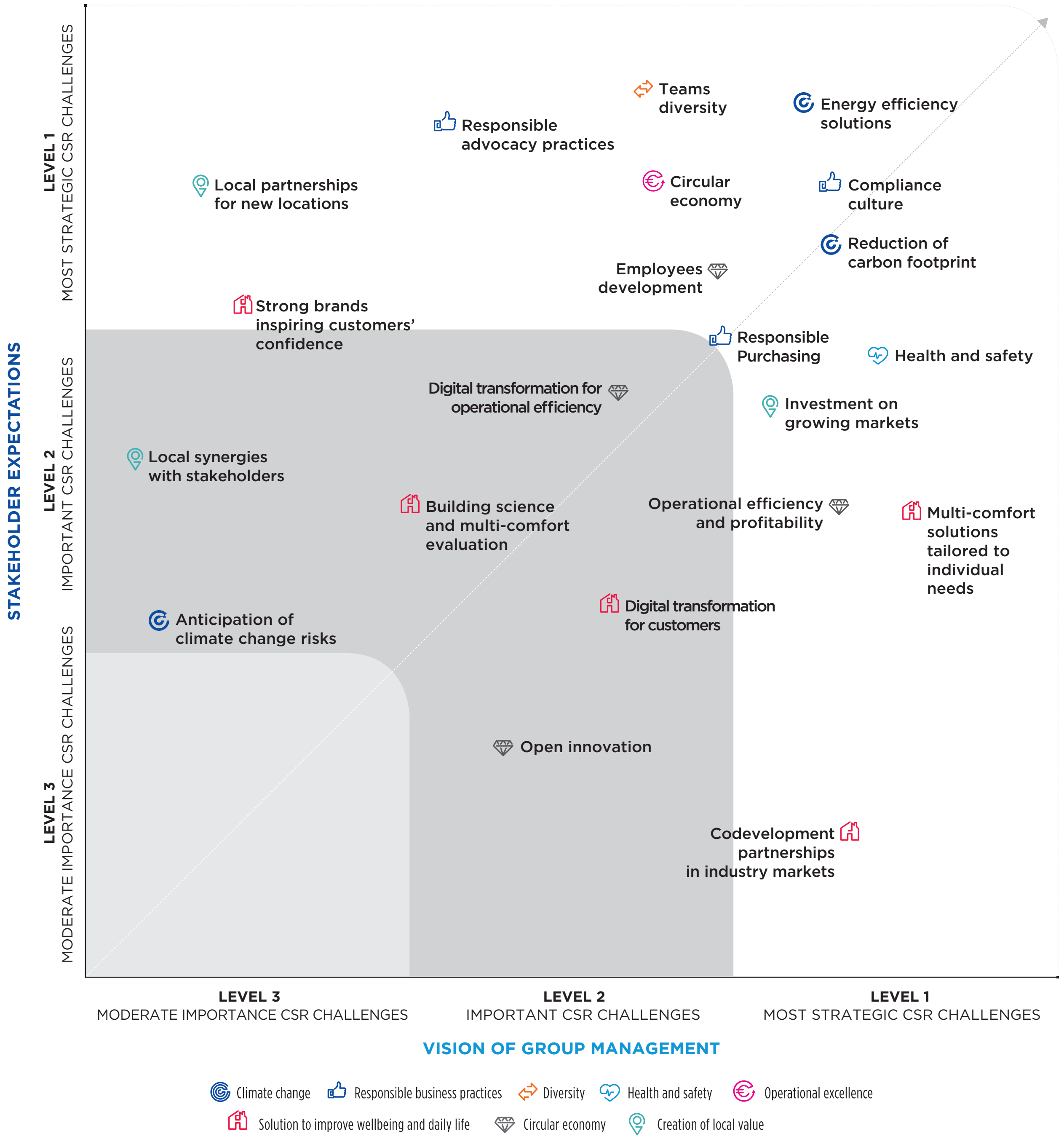
- operational excellence;
- solutions to improve well-being and daily life.

The matrix reflects both the Group's strong identity and the more specific challenges associated with its Activities and its local development. It is consistent with the Saint-Gobain rebranding that took place in 2016.

In 2018, Saint-Gobain conducted a study of the risks and opportunities associated with Corporate Social Responsibility (CSR), in accordance with Articles L.225-102-1, R.225-105 and R.225-105-1 of the French commercial code. 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, eight specific risks and opportunities have been identified at the core of these key challenges:

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


STAKEHOLDER EXPECTATIONS
LEVEL 1
MOST STRATEGIC CSR CHALLENGES
LEVEL 2
IMPORTANT CSR CHALLENGES
LEVEL 3
MODERATE IMPORTANCE CSR CHALLENGES
Teams diversity
Energy efficiency solutions
Responsible advocacy practices
Local partnerships for new locations
Circular economy
Compliance culture
Reduction of carbon footprint
Employees development
Strong brands inspiring customers' confidence
Responsible Purchasing
Health and safety
Digital transformation for operational efficiency
Investment on growing markets
Local synergies with stakeholders
Building science and multi-comfort evaluation
Operational efficiency and profitability
Multi-comfort solutions tailored to individual needs
Digital transformation for customers
Anticipation of climate change risks
Open innovation
Codevelopment partnerships in industry markets
LEVEL 3
MODERATE IMPORTANCE CSR CHALLENGES
LEVEL 2
IMPORTANT CSR CHALLENGES
LEVEL 1
MOST STRATEGIC CSR CHALLENGES
VISION OF GROUP MANAGEMENT
Climate change
Responsible business practices
Diversity
Health and safety
Operational excellence
Solution to improve wellbeing and daily life
Circular economy
Creation of local value

2. THE GROUP'S BUSINESSES

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 everyday 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, Saint-Gobain has been organized into regional and global businesses in order to be increasingly agile and close to its customers (see Chapter 1, Section 2, on the "Transform & Grow" plan).

2.1 Regional businesses

Saint-Gobain designs and develops innovative solutions to improve the quality of living places and reduce the environmental impact of buildings with a unique set of product and services for all aspects of construction. These solutions are intended to improve building energy efficiency and user comfort – particularly acoustic, thermal, visual and indoor air quality – as well as being environmentally friendly, specifically thanks to a life cycle analysis of its products. As the world leader in the interior and exterior home improvement markets with very well-known brands, the sector meets expectations for both user comfort and ease of installation for contractors. The Group offers solutions adapted to the specifics of its local markets such as construction methods and styles, construction systems, distinctive features associated with climate, the renovation of already-built cities or initiating massive worksites for new buildings in fast-growing areas.

Distribution of construction products

Saint-Gobain serves over seven million customers each year on the new building, renovation and home improvement markets. The Group has developed a network of strong and complementary brands, generalist, specialist and cross-channel, aimed at trade professionals, the private project owner, and small, medium and large businesses. Each brand is rooted in its local market, positioned so as to cater for the specific needs of that market. The Group is building on the development of its cross-channel offer to drive profitable, sustainable growth for its brands, with the aim of providing the same level of service and satisfaction for every type of customer. Strong logistics also mean that it can broaden its range of products and services and continue to improve product availability. The Group's increasingly innovative range of services is constantly enhanced with the addition of new mobile applications for improving and smoothing the customer journey, for example through fast-track payment in sales outlets.

The brands identify needs and take hold of growth levers to diversify their businesses. Thus, some of them provide their customers with specific products and services for roads (guardrails, light poles, etc.). They also supply solutions for the hydroelectric dam market, as well as materials specifically for the marine industry. Other specialist brands are investing in the offsite construction market, such as bathroom, roofing and structural components. In anticipation of the major social issue of population aging, Saint-Gobain has a range of products and services devoted more broadly to accessibility for all in living places. Finally, the Group is developing shared spaces for several brands, as well as for the logistics centers throughout Europe. It offers a comprehensive, centralized product line to save customers time.

Building Glass

Saint-Gobain produces and sells flat glass, and process and distributes,glass solutions for the building market, the automotive industry and transport. These solutions, intended for the façade, window and interior decoration markets and to protect assets and people, address the challenges of energy savings, aesthetics, comfort, ergonomics and safety. 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. Saint-Gobain also offers a wide range of active glazing such as PRIVA-LITE, which turns opaque on demand when switched on, and the variable-tint SageGlass® solutions, provided mainly for façade projects.

Gypsum

Saint-Gobain extracts and processes gypsum into a wide array of plaster products for construction and decoration. These solutions are intended for use in partitions and facings for walls, ceilings and floors. They meet high technical specifications in terms of fire and damp resistance and thermal and acoustic insulation. Easy to install, the products also meet growing customer demand for a comfortable and visually pleasing home environment. The Gypsum and Ceilings Activity offers solutions that comply with the highest technological standards and promote their widespread adoption, and remain a step ahead of new regulations concerning, for example, the elimination of formaldehyde to improve interior air quality.

Insulation

Saint-Gobain designs, develops and markets products, systems and solutions for thermal and acoustic building insulation as well as for industrial applications. Its line of products made from mineral wool (glass wool and stone wool), polystyrene foam, polyurethane and, most recently, wood fiber, caters for the needs of the residential and commercial building markets. Here, they are used to insulate the building envelope (roofs, walls and floors) in order to reduce energy consumption and improve comfort with insulation from noise pollution. Other needs are also addressed, such as heating and air conditioning system insulation. Finally, some products also afford technical solutions for industrial facilities, the transport sector and various niche industries.

Mortars

Saint-Gobain is the world leader in its field. It provides a wide range of solutions to protect, insulate and decorate the exterior walls of single-family dwellings and multi-unit housing, commercial and industrial buildings. Its 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. Lastly, a line of admixtures caters for the growing demand for improved technical properties in concrete for use in construction.

Pipe

Saint-Gobain offers complete solutions leveraging 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 durability. The Activity also offers complete exterior solutions for single-family and multi-family dwellings, with fencing, decking and railing products in PVC and composite materials.

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 fireproof glazing and high-security solutions for building and marine applications
SageGlass	Electronically controlled, dynamic variable-tint glazing to maximize light, save energy and improve interior building comfort
SWISSPACER	Thermal spacers for insulating glazing
Placo, Gyproc, Rigips, British Gypsum, Formula	Plaster-based solutions for insulation and interior solutions
Ecophon, eurocoustic	Acoustic panel systems, walls and ceilings
ISOVER	World leader in sustainable insulation solutions for building and technical markets
CertainTeed	Construction products specifically for North American buildings
Celotex	PIR insulation solutions for building and the technical markets in the UK
weber	Fixing ceramic tiles, façade solutions, and technical, masonry and flooring mortars
PAM	Full pipe system solutions for water supply and sewage systems
	FRANCE
POINT.P	Building materials and construction products distributor
CEDEO	Specialist in plumbing-heating-sanitaryware
LA PLATEFORME DU BATIMENT	Distribution network exclusively reserved for building professionals
LAPEYRE	Home improvement specialist (kitchens, bathrooms, joinery) since 1931
HOMLY YOU	Intermediation website connecting qualified building professionals and private homeowners with projects
	UNITED KINGDOM
JEWSON	Supplier of building materials and sustainable 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
	GERMANY
raab karcher	Building materials distributor
KERAMUNDO	Tiles specialists
MARKETING PLUS	Marketing service for craftsmen: customized websites and advertising materials
	NETHERLANDS
raab karcher	Building materials distributor
	NORDIC COUNTRIES (Denmark, Finland, Norway, Sweden)
DAHL	Specialist in plumbing-heating-sanitaryware, civil engineering, industry, cooling and property management
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

Main Brands	Positioning
	SPAIN
Distriplac	Insulation and interior solutions specialist
dp materiales	Building materials and construction products distributor
La Plataforma de la Construcción	Distribution network exclusively reserved for building professionals
	BRAZIL
Telhanorte	Sale to professionals and private individuals of home improvement products and services
	EUROPE
Altech	International distribution private label. Plumbing & Heating
	EUROPE & BRAZIL
Alterna	International distribution private label. Sanitaryware
	EUROPE
NOVIPro	International distribution private label. Hand tools and power tools, PPEs, building chemicals, jobsite equipment, building hardware.
	EUROPE (EXCLUDING FRANCE)
ULTIPRO	International distribution private label. Heavy building materials, roofing, interior solutions

Competitive positions[(1)]

- No. 2 for building glass in the world
- No. 1 for building glass in Europe
- No. 1 in Europe in building distribution
  A major player in the plumbing-heating-sanitary ware market
- No. 1 worldwide
  Plaster and plasterboard
  Mortars and floor coatings
- A world leader in ductile cast iron pipe systems
- No. 2 worldwide
  Insulation (all types of insulation products)
  Tiling
- No. 1 in Europe
  Façade render
- No. 4 in the United States
  Exterior products

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)
- USG (worldwide excluding 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, Switzerland, Netherlands)
- CRH (Netherlands, France, Switzerland, Germany, Belgium)
- BayWa (Germany)
- Travis Perkins (United Kingdom)
- SIG (United Kingdom, France, Germany, Netherlands)
- Grafton (United Kingdom, Belgium, Netherlands)
- Ahlsell (Scandinavia)
- Chausson, Herige, Samse (France)
- Cordes & Graefe (Germany, Poland, Netherlands, Norway)

(1) *Internal source.*

2.2 Global businesses

Saint-Gobain's High Performance Solutions are value-added solutions for varied and comprehensive applications to mobility, health, construction and industry. These solutions are present in living places and everyday life. 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 of the sector's products are developed jointly with customers to cater to specific customer 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 and produces windshields, side windows, rear windows, glass sunroofs and pre-assembled modules for major global automotive manufacturers. These solutions ensure everyday comfort for motorists 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.

On the automotive market, Saint-Gobain also designs and supplies bearings and tolerance rings designed to reduce weight, noise and vibrations, and improve vehicle performance. On the transportation market, the Group provides high-performance technological solutions (high performance plastics, composite mold-release films, seals and low-pressure conduits, etc.) for aircraft and the aerospace industry. 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 has developed and designed 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, floor and roadway reinforcement; glass fiber mat solutions to improve product technical performance; and ranges of wall coverings, joint tapes and insect screens.

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. Lastly, Saint-Gobain produces composite materials for construction and industry: specialty films, foams, tapes, specialty adhesives and coated fabrics. The BU is structured by distribution channel to offer the best service to each market and as wide a range of solutions as possible.

Ceramics

Leveraging its first expertise in refractory materials for glass industry, the Ceramics BU consists today of businesses involved in the synthesis and transformation of ceramics raw materials used in a wide variety of markets: abrasives, petroleum extraction, 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.

Main brand	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 SULLY High-performance transparencies for the aerospace and naval industries, and armored vehicles
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	A complete range of abrasives solutions for all industrial application in all markets
WINTER	Precision milling tools for high-tech sectors such as the automotive, glazing and aerospace industries
NORTON clipper	Cutting tools, high-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	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	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	Reinforcement and covering solutions comprising a broad range of technical fabrics for construction (insect screens, reinforcement grids and mesh, joint tapes, wall coverings) and manufacturing (glass fiber mat and mesh fabrics)
Vetrotex	Glass fiber reinforcement solutions for use in various industrial and construction applications

Competitive positions[1]

- No. 2 in the world for all abrasives lines
- No. 2 in the world for automotive glazing
- No. 1 in the world for bearings for automotive applications
- World leader for single-use tubes for the pharmaceutical industry
- No. 1 in the world for aircraft radomes for communications satellites
- No. 1 in the world for glass fiber wall coverings
- No. 1 in the world for zirconium-based abrasive grains, ceramic balls and refractories for the glass industry

Main competitors

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

(1) *Internal source.*

2

3. THE GROUP'S MAIN MARKETS

3.1 Construction market

Saint-Gobain's largest market, construction, offers considerable 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 3.2% annually between 2017 and 2022[1].

- The fast-growing countries will remain the primary growth engine. The strongest growth is expected in the Africa-Middle East and Asia regions during this period, with average annual growth rates of 4.4% and 4.2% respectively [2]. Construction in the Chinese market is expected to slow over the coming years due to a cooling economy and an aging population, while maintaining the global leader position it has held since 2010. Nevertheless, some markets will continue to grow by more than 5% annually, particularly India.
- Among developed countries, the construction sector is expected to grow by an average of approximately 1% annually in North America between 2017 and 2022, and more than 2% in Europe[1]. The renovation sector is crucial in these mature markets: in France alone, the residential renovation market is thought to represent around €62 billion per year[2].
- Currently, 75% of European buildings have been constructed before the implementation of energy efficiency standards.[3] Renovation will therefore be stimulated by increasing energy efficiency requirements, on the one hand, which are increasingly reflected in regulatory changes, and on the other hand, by increasing demand for comfort in buildings. In France, the energy transition law for green growth passed in July 2015 and the Hulot plan for energy renovation presented in April 2018 provide an auspicious context for the acceleration of energy renovation work in accordance with European provisions. The building energy renovation scheme announced by the French government in November 2017 should help to support French renovation in the short- to medium-term.

Lastly, the construction is steering increasingly towards sustainable and environmentally friendly solutions and a more circular economy.

Saint-Gobain possesses a unique portfolio of materials, solutions and services through its manufacturing and distribution activities. The new Group structure for local businesses, primarily linked to the construction markets, will enable it to fully leverage its assets to better serve its customers (see Chapter 2, Section 4) and develop synergies (see Chapter 2, Section 5.3) between its different businesses.

3.2 Mobility market

The automotive market is being driven by demographic growth and the emergence of a new middle class, particularly in Asia, as well as the profound transformations currently underway in this sector. Major trends involving electric, autonomous, shared and connected vehicles all represent market growth opportunities. A recent PwC study estimated that annual new vehicle sales will increase from 63 million in 2017 to 84 million in 2030 in Europe, the United States and China. Electric vehicles may represent more than 55% of new vehicle sales by 2030[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, the Group offers products that meet these new requirements, both in the primary market and in the spare parts market.

For example, 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 solutions also involve production using, for example, a wide range of abrasive products (adhesives, agglomerates and super abrasives) for finishing and polishing automotive parts. In order to benefit from the opening of new markets in fast-growing countries, the Group is also developing solutions appropriate for these regions, without compromising quality.

(1) *IHS Global Construction Outlook Executive Overview, October 2018.*
(2) *86th Euroconstruct summary report; November 2018..*
(3) *RESIDE: Boosting innovation in the European building Refurbishment sector through roadmaps for demand SIDE policy measures, 2015.*
(4) *Five trends transforming the automotive industry, PWC, 2017-2018.*

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 4.4% per year until 2037. Thanks to the increase in their standard of living, 85% of the population of fast-growing countries will use air travel. 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 and production quality.

The Group's aerospace solutions specifically include cockpit glass, high-performance plastics and ceramics used in aircraft engines. Saint-Gobain's cockpit windows and windshields, both glass and acrylic, are thus fitted in civil and military aircraft.

The Group's new structure consolidates the mobility-related activities of Sekurit and those of Performance Plastics under one Mobility BU in order to provide a comprehensive and unified range of products and services (see Section 2.2 of this Chapter 2.).

3.3 Healthcare market

Biopharmacy is one of the most promising markets in the healthcare industry. Between 2015 and 2030, the proportion of over-65s in the population of developed countries will rise from 18% to 23%. [2] An aging population and enhanced medical procedures are creating new needs, while biotechnology is having an increasing impact. At a time when liquid management techniques are evolving, the biopharmaceutical sector is seeing a new need for single-use solutions, requiring a more tailored approach.

Healthcare is also a sector where solution reliability and the strict demands of standards are of the utmost importance. The Group also markets a number of tailor-made, single-use plastic solutions (tubes, connectors, pockets, filters, etc.), used in handling fluids. Finally, for the medical imaging market the Group also manufactures crystals and scintillators, which are used in particular in medical scanners.

3.4 Industrial markets

The industrial markets comprise a number of different markets: energy, metallurgy, non-metal raw materials, mineral extraction, chemicals, petrochemicals, semi-conductors, etc., primarily B to B, offering growth opportunities that differ according to the market and the world region, and where differentiation is based on increased research into new technologies and co-development. These markets are also shaped by the increasing impact of automation and Industry 4.0 and by the Group's customers who tend to operate in low-cost countries. The energy sector is currently experiencing a profound realignment of its model, specifically related to our current economies' heavy dependence on oil. Aware of the risks these changes may represent for their long-term investments, large financial institutions are pushing energy players to reorient themselves toward greener energy sources.

The Group is developing technical solutions specifically tailored to the various markets, mindful of current needs as well as emerging trends. The Group is developing technical solutions specifically tailored to the manufacturing processes of the energy sector, mindful of current needs as well as emerging trends. Specifically, the Group is active in the market for ceramic pellets to increase the conductivity – and therefore yield – of gas and oil wells. 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.).

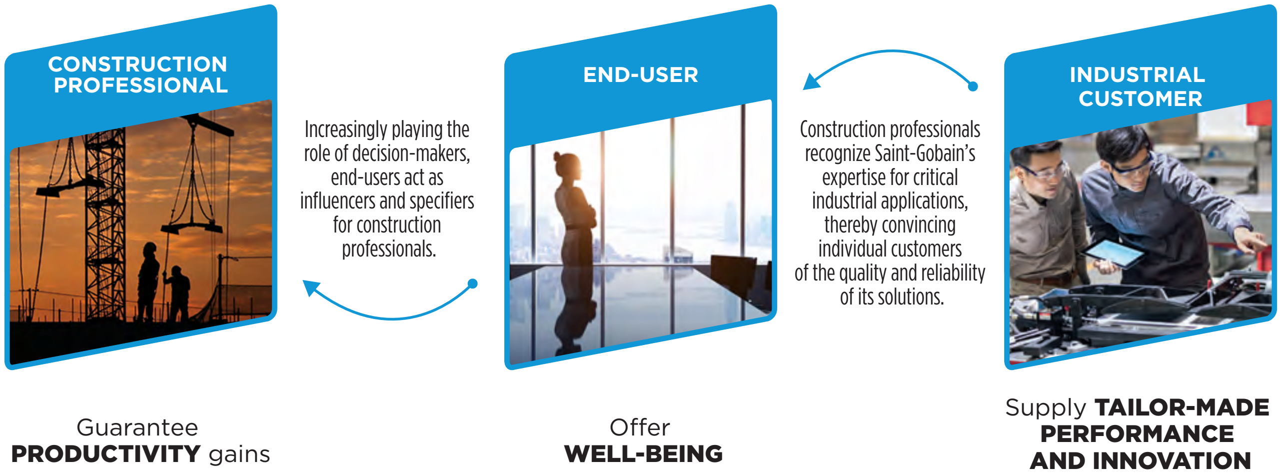
The Group offers chemical and petrochemical market solutions that improve chemical reactions due to the action of specifically designed catalyst substrates. Saint-Gobain offers a wide variety of solutions for other markets: polymer strips and films that have chemical and thermal properties with multiple 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 2018-2037, Global Networks, Global Citizens, 2018.
(2) World Population Prospects 2017 Revision – United Nations.

4. RESPONSES ADAPTED TO EACH CUSTOMER

4.1 A comprehensive offering

4.1.1 Three main customer categories



4.1.2 A strong Saint-Gobain brand and a comprehensive brand portfolio

Given the wide range of areas in which its products and solutions are used, Saint-Gobain serves 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 is positioning itself firmly as a B to C to B (Business to Customer to Business) brand.

Saint-Gobain has long relied on its decentralized organizational structure, its brands recognition and the strength of its activities throughout 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 every three years. In 2017, awareness of the brand among all construction players had significantly improved once again compared with the previous survey in 2014 (an improvement in awareness 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 five countries: 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%).

Lastly, for the first time, a survey of the general public was conducted in parallel – which is consistent with the aim of making Saint-Gobain a brand for end consumers – in the four countries where the Distribution Sector has the largest presence. Saint-Gobain is a well-known name in France (more than 80% of respondents said they had heard of Saint-Gobain), but much less so in Germany, the United Kingdom and Sweden (where brand awareness is between 20% and 30%). It is, however, substantially higher than that of the Group's main competitors, whose brands are unknown outside of professional circles.

In 2018, Saint-Gobain continued a mainstream advertising campaign in France in the form of a film and press advertisements on the theme of "living together". This campaign illustrates the brand's contribution to well-being by featuring the materials and solutions that provide thermal, acoustic and visual comfort, durability and improved air quality, in everyday life.

In addition, Saint-Gobain has 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 Chapter 2, Section 3).

4.2 For end-users: offering well-being

4.2.1 The increasing power of end-users

Today, the voice of the end customer is being heard more strongly: better informed, more involved in purchasing decisions, they may have a decisive influence, including on the choice of materials. The boundary between professionals and private individuals is becoming blurred, with private individuals now becoming key 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 a considerable influence on the manner in which Saint-Gobain designs and positions its products and services. Today, the Group is seeking to build closer relations with the users of its products (building occupants, automobile drivers, public transport users, etc.) in order to inspire them, to cultivate a reputation for reliability, quality, and high-performance, and to draw benefits from their role as specifiers, particularly in the context of construction or renovation work.

Consumers have a growing thirst for information regarding their purchases: are they paying the right price? is it a quality product? can they trust the selling company? etc. 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 has done work on its housing over the past five years and over 50% of these plan 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.

Accordingly, the saint-gobain.fr website, launched in 2018, endeavors to help property owners planning a renovation, construction, extension, or purchase to properly design and complete these projects. The site is continuously being improved and provides numerous explanations as to what constitutes comfortable and sustainable housing, offers inspiration, ideas and pricing, and even a tax and financial assistance simulator. It also facilitates contact with professionals *via* the Homly You platform.

Worldwide and in all walks of life, end-customers are expressing a growing need for comfort and well-being.

4.2.2 The Multi Comfort approach

To answer this need, Saint-Gobain has developed a unique approach around comfort and benefits of products and solutions for customers: the Multi Comfort approach. It encompases 4 types of comfort: acoustic, thermal, visual and indoor air quality.

a) Users' experience at the heart of the Multi Comfort approach

In any physical 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 or percentage humidity.

This novel approach to the design process, underpinned by intensive needs analysis, makes the user the central focus of the entire innovation process": several parameters, rather than just one, determine well-being, and therefore the health, efficiency and productivity of end customers.

While comfort is an intuitive 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. The most commonly cited sources of discomfort, in any environment (residential, professional, transport, etc.) 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 point-like, or too colorful;
- in a transport setting, vibrations.

To develop its solutions, Saint-Gobain draws on its innovation processes and its R&D teams organized around the concept of Building Science. A program has been developed to go beyond this handful of observations.

Building on digital techniques, Saint-Gobain has developed a measurement tool, the MC350, which can immediately characterize a situation by measuring the parameters that describe the different types of sensory comfort. The tool is a portable, pocket-sized box fitted with sensors and connected to a Smartphone *via* an app. A measurement of the parameters is taken on demand. It can be processed locally to provide information to the user – the app gives indications of the recommended levels, etc. It can also be sent to a cloud service: by aggregating all the data, Saint-Gobain's data scientists can derive lessons learned that help the R&D teams to find targeted solutions, and the specification and sales teams to hone their arguments.

For example, based on thousands of measurements sent to the cloud service by MC350 users, it has been possible to prove that the average noise levels in open plan office space, which play a decisive role in employee productivity and health, vary considerably between countries: the measurements give an average of 46 decibels in the US, and 63 in Brazil.

Similarly, the thousands of measurements taken in restaurants have helped to determine that the sound level above which customers complain of discomfort is 71 decibels.

Featuring a new design with improved sensors, the second version of the MC350, launched in 2018, benefits from an original feature that makes it possible to communicate with users worldwide *via* measurement campaigns, in order to help Saint-Gobain better understand how they perceive comfort.

More than the tool, Saint-Gobain's teams have integrated experts in physiology, psychology and sociology to better understand the individual, cultural, and subjective dimension of comfort perception. The objective is still to define comfort for the future and make possible the diagnostic of comfort level of an existing building or to check the quality of the technical improvement during a renovation.

The skills in the area of building science, especially *via* cross-functional programs, are key for the success of the Group's construction strategy. They are essential to the roll-out of the Multi Comfort program developed by the marketing teams. Developing Saint-Gobain's capabilities in this area supports the user comfort and experience-centered approach to designing effective buildings, taking into account the use value of the solutions adopted.

b) The Multi Comfort program, demonstrating solution effectiveness

The Group is leveraging the breadth of its portfolio of Activities to develop new systems and solutions for developing 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 innovation centers, "demo buildings" are constructed to illustrate the Multi Comfort program and prove that the recommended solutions are not just theoretical, but rather that they function as real buildings. This constitutes indispensable support for the program.

The data from the 30 new 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, making them representative of the diversity of users' expectations in response to their culture and subjective perception of comfort.

As part of the program, housing building and renovation operations were launched in conjunction with players in the construction industry. Using Saint-Gobain solutions, these test sites make it possible to monitor energy efficiency and comfort levels in real time, on a long-term basis.

The Multi Comfort projects conducted in different countries help the R&D and marketing teams to improve their understanding of buildings' performance in response to the behavior of occupants and the installed Saint-Gobain products, and to develop new and increasingly effective solutions tailored to local construction methods and to occupant comfort.

The Multi Comfort program is being applied to several market segments, new building and renovation, individual and collective housing, and non-residential building.

> In 2018, the Group broke ground on the first Multi Comfort house in the Middle-East, the thirtieth worldwide. Located in Masdar, a research town near Abu Dhabi, this project is an addition to the Eco-Villa prototype designed as a model for residential villas with very low energy and water consumption in the United Arab Emirates. This 400 m^2 house will serve as a Multi Comfort experimentation hub, office space for Saint-Gobain employees, and as a training facility on Group solutions and products. The German architectural and engineering firm Obermeyer designed and will supervise the construction of this project scheduled to be inaugurated at the end of 2019. In addition, the final round of the Multi Comfort Competition was held in Dubai in 2018. This annual competition rewards projects proposed by architecture students. Students were expected to incorporate Saint-Gobain Multi Comfort solutions and hot and humid climate challenges in their work on the development of the Dubai cultural village. Prizes were awarded to the submissions that best integrated a reduction in energy consumption for air-conditioning and ventilation, building envelope efficiency, occupant comfort, harmonious integration into the environment, and ecological and aesthetic impact.

The tools for assessing the performance of Multi Comfort implementation have recently been specified: recognized third-party certification, surveys of occupants, and calculation of the environmental impacts and the costs throughout the building's life cycle.

Finally, since 2015, physical premises have been established in the Group's main countries where its products and solutions can be displayed and, even more importantly, where their features and impacts can be easily demonstrated to a broad, non-expert audience.

Following the Domolab, which opened in Aubervilliers in 2011, and its equivalents in Russia, Italy and Spain, 2016 saw the opening or renovation of a large number of these educational showrooms:

- in the Capivari R&D center in Brazil;
- in the Chennai R&D center in India;
- at the premises of the General Delegation in Copenhagen;
- at the headquarters of the General Delegation for North America;
- in the Saint-Gobain Innovation Center in central London.

Customers are widely invited to visit these premises by appointment, and numerous blue printing sessions make it possible to directly suggest solutions to the desires expressed. In 2018, several tens of thousands of visitors, customers, architects and investors had a practical introduction to the Group's products and services for improving the different types of comfort. The recently inaugurated exhibit center in Nairobi, Kenya, is both a showroom and a teaching space. As such, it provides interactive digital access points and a variety of experiences, and demonstrates how the Group's solutions make a difference in the daily life of individuals. Created for building professionals, the center aims to enhance the reputation of Saint-Gobain and its brands in the region, thereby spurring sales.

4.3 For construction professionals: improving productivity

4.3.1 Enabling customers to save time

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.

A key 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.

By pooling their logistics centers, the brands can optimize their stock 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.

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 year, 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.

4.3.2 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. 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 Décoream sellers with 60 channels for new and renovation worksites. It will expand to other trading brands in 2019;
- Saint-Gobain Distribution Bâtiment France acquired a majority stake in Tolteck, a start-up offering the first online sales management software to help building trade customers in quickly and simply creating their professional estimates and managing invoices. This ergonomic tool is intended for trade customers working on renovation projects. It rounds out the range of services offered, which includes configurators, simulators and contact initiation platforms already offered to 300,000 customers;
- 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.

4.3.3 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. c).

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.

4.3.4 Innovations for productivity

Numerous solutions are being developed to improve worksite productivity. This is particularly essential in developed countries experiencing significant workforce shortages. 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.

The Group is also innovating in emergent aspects of construction:

a) Offsite manufacturing

Saint-Gobain launched its Offsite Manufacturing Community, that aims to promote the exchange of information and development opportunities between countries to answer the increasing need for productivity in construction. The strategic challenge for the Group is two-fold: becoming the preferred partner of prefabrication actors, and accelerating the development of prefabricated solutions for more efficient worksites, and. Eighty Saint-Gobain employees from 22 countries gathered in Sweden in September 2018 to mark this launch. They were able to take part in a debate with various value chain actors on the major challenges of prefabrication and to share their most promising internal initiatives.

Saint-Gobain finalized the acquisition of SIG RoofSpace Solutions ("RoofSpace") in the United Kingdom. This acquisition expanded the Group's products portfolio in this country and is accelerating 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 Euope. This €360 million agreement, which will be spread out over the 2019-2023 period, was signed on November 1, thereby formalizing several years of collaboration between the two companies. 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 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 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.

c) Digital construction

Digital design and construction represent a major trend in the 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, enabling 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, with improved quality and lower costs 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 “BIM” (Building Information Model). 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 industrial performance program WCM fully integrates this dimension.

4.4 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 thanks to digital manufacturing, which incorporates customers needs from the earliest stages and permits the production of customized short series thanks to flexible and automated units and system interconnection (see Chapter 3, Section 2.2 on WCM program).

The close relationship between Saint-Gobain and its industrial partners is evident in its innovative collaboration methods. Withing the Mobility BU, the Bristol facility (United Kingdom), which manufactures bearings and tolerance rings for electronics and automotive, has added a semi-anechoic chamber dedicated to sound measurements to help its automotive market customers develop noise-reducing solutions for cars. This facility enables customers to test the performance of their equipment and to identify how Saint-Gobain products can be used to reduce noise and vibrations.

Saint-Gobain also explores future development opportunities through partnerships with manufacturers. For example, the SGR Provence R&D center signed a collaboration agreement with Safran Ceramics, the Safran Group's center of excellence for high-temperature composite materials, to develop a comprehensive coating solution for hot components of the next generation of aircraft engines. This solution will help improve the performance of aircraft engines and reduce fuel consumption and emissions, a strategic aerospace priority. Saint-Gobain also created a joint venture with Corning to develop, manufacture and market lightweight automotive glazing. These glass products will be used for all laminated glazing in cars and will noticeably reduce vehicle weight, thereby optimizing fuel consumption, environmental impact, and driving comfort.

Lastly, this co-development model relies on business models evolving 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.

4.5 For all: being a key player in sustainable development

4.5.1 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, as well as the increased scarcity of resources (see Chapter 3, Section 4.1.3).

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 it 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.

In France, Saint-Gobain is a signatory of the "Team Pro Habiter Mieux" Charter to fight against energy insecurity alongside some twenty institutional, private and charitable organizations. This charter is part of the "Habiter Mieux" program launched in 2010 by the French government and the ANAH *(Agence nationale de l'habitat)*. Its 2018 objective was to complete the energy renovation of 75,000 dwellings with a budget of €1.2 billion. In espousing this charter, Saint-Gobain has committed to supporting trade customers so that they may offer adequate devices and materials to their individual customers wishing to complete energy renovation work.

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 have provided help in obtaining building labels such as LEED, BREEAM or VERDE.

In 2018, several acknowledgments demonstrated the key role played by Saint-Gobain: in September 2018, Hang Phan, Technical Director of Saint-Gobain Gypsum in Vietnam was elected chairperson of the Vietnam Green Building Council. This appointment will facilitate an acceleration in the deployment of international building standards to Vietnam. Saint-Gobain Glass was awarded a "Leadership award 2018" by USGBC.

To support the efforts of its entire value chain on sustainable construction and to raise the level of the entire market, Saint-Gobain has also launched its own platform, Green Buildings, to support architects, consultancy firms, consultants, and entrepreneurs in the building certification process. This new website presents the criteria for obtaining labels and provides practical 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 disclosures 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.

4.5.2 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).

These solutions 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 bio-sourced 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;
- ultra-light glass 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 recovery.

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

5. OPERATIONAL PRIORITIES

5.1 Continue to improve the customer experience

5.1.1 Strengthen relations with customers

a) Being present throughout the customer experience

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. In a certain number of Activities, the use of a unique and continuous Customer Relationship Management (CRM) tool allows to monitor customers' various interactions with the Group and provide them with flawless service.

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.

The brands are enhancing the product information available on their websites. New sites have been launched and new digital services have been made available, covering the entire customer journey, from initial inspiration to after-sales. In the United Kingdom, a Digital Hub has been created to provide customers with a "Connected Experience", while helping brands to develop their business using new digital tools. It brings together the expertise of specialists in data analysis, user experience and online advertising.

Some of the Group's trading brands 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.

b) Multiplying contacts thanks to 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. In 2018 alone, the number of sessions was more than 118 million, an increase of 16% on 2017.

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 which 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. A central R&D team focuses specifically on helping the Activities to make the necessary cultural adjustments.

This background work improves customer proximity and helps the sector to develop services, particularly digital services, which support the customer in their journey.

c) A personalized approach thanks to Big Data

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 concerning both the brand and the customer. Tailored services and communication are key to this.

The first challenge in the Smart Data approach is to strengthen relationships 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 2017, more highly developed approaches emerged; these are likely to become more widespread in 2018. In this regard, Saint-Gobain Research data scientists 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.

d) Responding to customer needs with an expanded offering

Saint-Gobain is constantly expanding its products and solutions portfolio to provide an expanded offering thanks to related products. 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.

5.1.2 Customer satisfaction and commercial excellence

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

- firstly, the use of a short questionnaire, after every interaction, both direct and indirect, to identify the main areas of satisfaction and dissatisfaction and determine the "net promoter score", a single, common metric across all customers;
- secondly, a more stringent, responsive measurement of compliance and timeliness (see Chapter 3, Section 2.2 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.

The Group's Activities have all strengthened their marketing teams to organize these kinds of surveys and especially, to respond to them. They have also created customer experience manager posts whose role is to adapt the organizational structure to make it more responsive to new customer expectations.

5.1.3 New concepts

This marketing strategy of customer interaction using new digital and data analysis tools allows the Activities to develop new concepts essential for maintaining margins, which are more uncertain in the digital era. These new models can be grouped into three main categories.

The first is services for the Group's direct customers. In France and Great Britain, Saint-Gobain has developed software to help with preparing quotes, Solu+ in France and BuildAviator in Great Britain, which helps professionals to make significant time savings on this onerous task. In addition, software for creating layouts, for one-click ordering and for other purposes was introduced in most activities in 2017 and will develop further in 2018.

The second concerns services to "end customers", or at least, to key influencers in Saint-Gobain's markets, who are not always direct customers – on the contrary, with digital, the decision-making power tends to shift towards the end customer. It is therefore essential to develop products and solutions that cater for their needs and which they are able to understand and evaluate. The "Homly You" offering, launched in 2016, continues its successful development. Generally speaking, the Group is launching user services: PAM, for example, with a leak diagnosis tool for water networks, aimed at local authorities; or Sefpro, with diagnostic or maintenance services for industries that use its refractory solutions; or Abrasives, which offers full package services to bodyshops and repair shops, including inventory management and safety training for their staff.

Lastly, the third group comprises "concept" sales. This format involves presenting the end customer with a solution to a problem they are dealing with, in the form of a combination of different products. A number of examples have already been successfully sold:

- specification teams in India have a framework agreement with a number of IT service companies: they carry out an assessment of their facilities, particularly their open plan office space, and propose solutions to improve employees' comfort and therefore, their productivity;
- more and more "manhole cover replacement kits" combining products from PAM, Weber and Adfors are being sold, to ensure that works are carried out properly and will be durable;
- launched in Norway in 2016, the MyComfort or Multi Comfort option in residential is being adopted more widely: it involves offering a coherent suite of products for building or renovating housing that noticeably improve all aspects of comfort for the occupant;
- In France, KANDU, launched in 2018, is a new service offering for businesses wishing to improve the quality of their work spaces, or for catering industry professionals for their restaurants. It provides Saint-Gobain's expertise in building science and its Multi Comfort approach to improve acoustics, air quality, thermal comfort, luminosity and space layout, while also offering adapted technical solutions. KANDU also offers customized support to its customers in implementing the chosen solutions.

The complementary nature of the Group's BU, brands and trade names, makes these new concepts more effective. Innovate for sustainable differentiation

5.2. Innovate for sustainable differentiation

5.2.1 Innovation as a driver of development

a) R&D is the core of the Group's strategy

Research and Innovation, integral to Saint-Gobain's strategy, is key to increasing the share of sales of high value-added products and solutions in the most buoyant sectors.

Differentiation is one of the critical drivers of this strategy which is expressed at all stages of the value chain, from innovation and design of Saint-Gobain's solutions in relation to its customers to the creation of tools and services. It specifically includes an ambitious approach to marketing aimed at better understanding, anticipating and formulating customer needs, supplemented by R&D developments directly involving these customers, to provide tailored solutions.

R&D also contributes to improving industrial manufacturing processes, with regard to competitiveness, capability and environmental performance.

R&D will continue its efforts in the next few years, in particular with regard to investments, to allow the Group to maintain and expand its leadership positions in its markets and to maintain a high level of performance and operational excellence. In 2018, the Group invested €451 million in research and development, and 3,700 employees worked on nearly 900 research projects, resulting in applications for nearly 400 new patents.

There is continued recognition for Saint-Gobain's approach to innovation. For the eighth year running, Clarivate Analytics ranked Saint-Gobain among its Top 100 Global Innovators.

Research and development costs

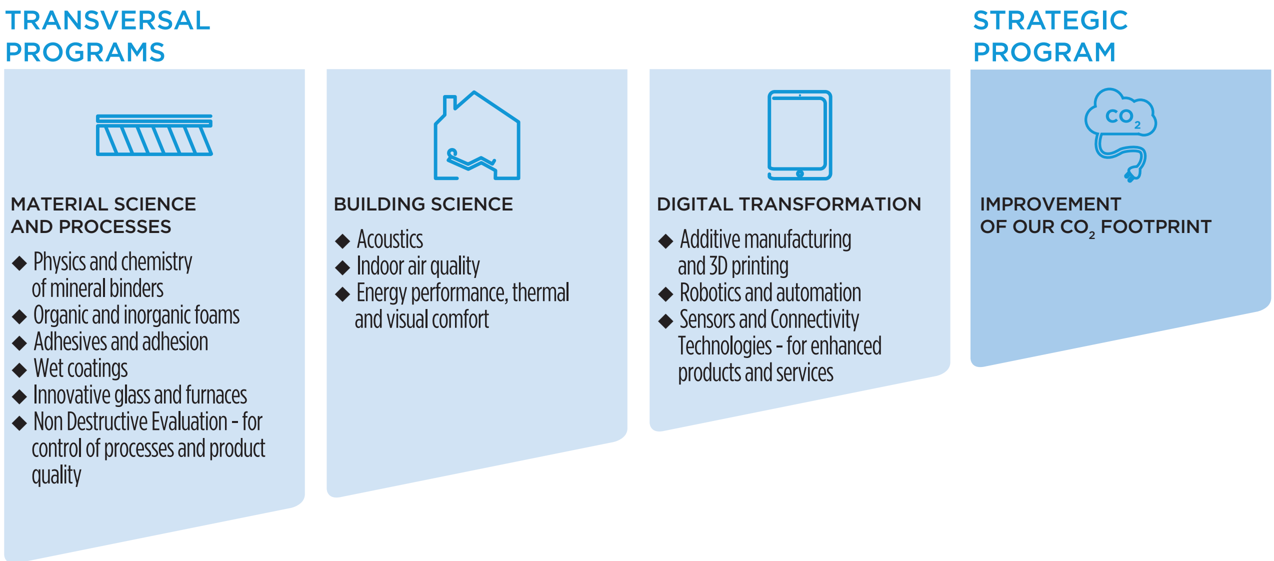
(in EUR million)

2015	434
2016	438
2017	446
2018	451

These R&D teams operate on the basis of individually managed projects. This method of operation allows it to conduct activities with the greatest possible efficiency, assigning the appropriate resources and looking a long way upstream at considerations relating to markets, industrial property, production, respect for health and the environment. This organizational structure also means that Saint-Gobain can ensure a continuous flow of innovations, for market launch at the appropriate time.

The main task of R&D is to provide active and proactive support for the Group's BUs through targeted research projects, yielding developments and innovations involving both processes and products or systems, thus strengthening competitiveness and serving Saint-Gobain's current markets. New projects are initiated each year in every area, while others reach the point of production release or commercial launch.

Its second task is to prepare the Group's future through strategic, cross-functional R&D programs, by anticipating major changes in techniques and markets. These programs, linked to the focus areas for the marketing teams, allow Saint-Gobain to organize general skills and to improve its ability to develop key technologies.



Group R&D is based on a global network of eight multi-activity, cross-functional research centers and numerous R&D units and teams specific to a single Saint-Gobain BU.

This networked organization enables it to identify local innovation needs and provide global responses, by drawing on solutions and skills from all of its centers throughout the world.

It helps to speed up the innovation processes that bring together teams from R&D, manufacturing, marketing and sales throughout project durations, ensuring that all the skills that are needed for project success are available.

b) Priority areas

R&D contributes to the roll-out of the Multi Comfort program (see Chapter 2, Section 3.1.2) by developing new increasingly efficient solutions, adapted to the local construction methods and focusing on the comfort and experience of occupants. It is supporting the Group in its digital transition, providing strong support for Industry 4.0 and the development of new services and more effective sales strategies.

For several years now, the virtual and augmented reality research teams have contributed their expertise to develop sales support applications. The data science teams have been strengthened to support the BUs with digital marketing and production data analysis.

This support for Group strategy and developments is possible as a result of the prospective development of new skills in the R&D centers in terms of automation, sensors, 3D printing and data science, as well as design and user experience, and sociology and human sciences, to provide better analysis of the impact of these solutions on user behavior.

The Group is also accelerating growth and differentiation in diversified niche industrial markets, particularly through co-developments with customers. These highly specialized niches include, for example, catalyst substrates for the petrochemicals industry, refractory products for glass furnaces, bearings and customized tolerance rings for the automotive industry, as well as single-use plastics solutions for the biopharmaceuticals industry. In markets where Saint-Gobain is a world leader, an integrated development strategy covering the composition of materials, the design of components and precision manufacturing, facilitates tailor-made solutions to address the specific needs of customers.

Saint-Gobain continues to develop R&D projects on well-being in living places by studying numerous subjects (soundproofing, air quality, aesthetics, environmental sustainability, recycling) with the aim of providing greater ease of installation to its professional customers and greater everyday comfort to its end-users. Its approach to innovation is based on identifying local needs, followed by collaboration between local and worldwide R&D teams to develop appropriate products and solutions, which may then be rolled out to other geographic areas.

For the past several years, R&D efforts have also involved logistics optimization, processing of sales data and the development of new digital services.

Saint-Gobain aims to steer its R&D work towards high-growth markets such as mobility. The Group's teams are therefore working on developing polymer components for electric vehicle batteries, and researching the man-machine interfaces that will form the core of the autonomous vehicle market.

c) Exploring new opportunities thanks to open innovation

Saint-Gobain is in an outward-looking position of attentiveness to its customers' needs. To respond to current needs and anticipate future needs, Saint-Gobain is very open to a culture of partnership and co-development.

Various methodologies are used today to better understand customers' desires and requirements, within the BUs or support functions. The cross-businesses research centers use design thinking methodolodies to develop new products, systems and services close to customers' needs.

Over 10 years ago, Saint-Gobain introduced NOVA, a global Corporate Ventures unit, with the aim of structuring partnerships and investments between start-ups and Saint-Gobain businesses. Since its creation, NOVA has already studied 4,000 start-ups and signed more than 90 partnerships.

The NOVA team focuses its approach on identifying the most innovative start-ups across a range of strategic, cross-disciplinary topics: Multi Comfort, Customers' Digital Experience, Internet of Objects and sensors, Exoskeletons and Robotics. Specific resources are also dedicated to High Performance Solutions BUs.

More broadly, the Group is developing partnerships with the world of start-ups. All around the world, notably in Europe, the US, Brazil and China, official partnership agreements were signed with start-up incubators providing the Group with direct access to start-ups offering innovative services, either to direct clients, or more generally to relevant ecosystems (construction, automotive, civil engineering, healthcare, etc.).

This "open innovation" program also provides the opportunity to share the Group's missions and issues with an audience of entrepreneurs and future professionals. Business challenges are organized to further refine this approach, taking the form of competitions involving start-ups and/or teams of students looking at a well-defined market issue. In 2018, in France, the business challenge thus asked students and start-ups to take up the challenge of the circular economy in construction.

In the USA, Saint-Gobain thus extended its partnership up to 2019 with Greentown Labs, the largest start-up incubator on the continent specializing in clean technologies. In Brazil, Saint-Gobain has formed part of the Cubo Coworking incubator of the Brazilian bank Itaú since 2016 and is increasing partnerships with an ecosystem of more than 400 start-ups. In China, Saint-Gobain inaugurated its Open Innovation Projects Incubator in 2017, situated on the premises of the Shanghai Innovation Park. Partnerships with start-up incubators, and business challenges, are set to become more prevalent in the Group's main countries over the next few years.

Saint-Gobain has also pursued its policy of developing innovation through SUN, its international network of universities. These long-term academic collaborations provide it with access to the most recent scientific progress in the fields of interest to the Group and to a breeding ground of young talent. In 2017, Saint-Gobain signed a collaboration agreement in particular with Shanghai Jiao Tong-Antai University as well as a strategic five-year partnership agreement with *Université Technologique de Compiègne* (France) which will lead to research into predictive maintenance, and the application of Big Data to the optimization of processes, autonomous vehicles and flat glass of the future. In 2018 the "Ingenious Engineer" chair was launched at the National Institute of Applied Sciences (INSA) in Lyons and two new chairs were created: "Physics and Chemistry of Innovative Materials" with the ESPCI and "Innovative Processes & Materials" with the *École Polytechnique.*

Lastly, the Group encourages intrapreneurship amongst employees through an initiative known as Saint-Gobain Intrapreneurs. Employees with a project that is viable for the Group can focus on developing it for a period of 18 months, to enhance agility and performance.

5.2.2 Continue Saint-Gobain's digital transformation

Digital offers many opportunities to intensify relationships with customers and prospects, to provide them with tailor-made services that enable them to increase efficiency and develop their business. Digital transformation, more broadly, encompasses the Group as a whole and has a strong impact on working methods and talent acquisition issues.

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 Chapter 3, Sections 3.2 and 3.3), 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.

For the past two 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 have jointly 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 more than 100 certified coaches mastering 23 languages, thus ensuring the support of each manager in his 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 Chapter 3, Section 3.3.4 on use of Big Data in talent management).

In industry 4.0, digital marketing, cybersecurity, for example, the growth of digital has significantly increased recruitment needs. These are also new professions that have become very important: data scientists, data analysts, UX Designer, SEO specialist... 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.

This philosophy was central to the employer branding campaign organized in December 2018, entitled *Elevate Yourself*. It was built around an event website and made the most of digital experience and physical events:

- inspiring conferences by external experts broadcasted live on Facebook;
- a generator of futuristic projects;
- Skype or WeChat meetings with Saint-Gobain employees to explore a variety of topics;
- a quiz to identify users' main strengths (echoing Saint-Gobain Attitudes);
- a gallery of Group employee video portraits to introduce net users to professional careers that they perhaps had never thought of;
- and finally, an overview of Saint-Gobain projects, which may possibly be their playground for the future.

5.2.3 Innovation and industrial performance

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.

Generally speaking, Saint-Gobain rolls out its technology in stages. For example, the Ceramics factory in Mezzocorona (Italy) uses a data analysis system. Sekurit has invested in new collaborative robots in its factory in Devisa (Spain). On other manufacturing sites, this involves investments in systems for monitoring maintenance. In 2018, Saint-Gobain equipped the Pont-à-Mousson factory in France with 10 new robots to improve employee working conditions, while still emphasizing the quality of product finishes and productivity.

Saint-Gobain Sekurit has also invested in operator workstation ergonomics at the Société Verrière d'Encapsulation site thanks to virtual reality and cobotization.

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.

5.3 Develop synergies

With the "Transform & Grow" transformation plan (see Chapter 1, Section 2), the Group intends to develop and capitalize on deep synergies to offer customers all the assets of Saint-Gobain's existing range of products and services (strong brands, strict principle of commercial independence between industry and distribution) but with significantly better services. These will include an enhanced range of logistical and digital services and greater visibility from use of the Saint-Gobain brand. These synergies operate on three levels:

5.3.1 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:

- offering a unique range of products and services, as in Flat Glass, Pipe, Insulation, Cement Blocks, Mortars and Gypsum in Brazil, provides an enhanced customer experience;
- the Group's cross-disciplinary solutions offer opportunities to increase offsite construction market share, for example, in the United Kingdom with a range of prefabricated façades for light construction;
- 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. saint-gobain.fr in France) to support end customers with their renovation plans.

5.3.2 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;
- For industrial markets, adhesives, abrasives and tapes are complementary products sold *via* the same distribution channels.

5.3.3 Global synergies

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

- Fire retardant plasterboard developed thanks to the high-temperature expertise of the Ceramics BU;
- 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).

The centralization of certain key functions (industrial efficiency, Marketing & Development, Innovation & R&D, Central IT, shared HR and Finance service centers) makes goals more achievable: expertise, critical mass, sharing best practices, cost-cutting, generalized deployment of excellence programs.

5.4 Optimize resource allocation

5.4.1 Implementing an investment policy targeting growth

a) Prioritizing investment outside Western Europe

Although Europe remains Saint-Gobain's primary market, the Group's development strategy aims to ensure its global presence. In 2018, 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 2018, the renovation and expansion project at the glass production factory in Dabrowa, Poland, was finalized, thereby increasing its production capacity by 50%. In Egypt, the expansion of a production line for value-added plasters was inaugurated at the Sadat factory. The Group has also developed in Asia in order to benefit from the region's growth potential by, for example, commissioning the third production line for DURAflex® fiber cement board in Vietnam and the fourth Indonesian Weber factory in Cikande.

Saint-Gobain also invested in strengthening its production capacities in High Performance Solutions. In North America, the Meldin® thermoplastic polymers production site, located in Bristol in the United States, was also expanded to support the requirement of the regional automotive market. In fast-growing countries, production of Rulon® 123 polymer seal for the local market started in Bangalore, India, for the Mobility BU.

b) 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 2018, the Group invested in key areas of growth, such as the medical sector and the offsite construction market.

The Life Sciences BU, dedicated to the medical sector, regularly invests to adapt its capacities to high market growth. Specifically, the expansion of the Beaverton site in the United States, including an additional warehouse, a development center, a materials testing laboratory and an office building, will increase capacity for designing and manufacturing single-use products for the pharmaceutical industry.

Saint-Gobain is positioning itself on the offsite construction market to address the growing productivity needs of its customers. The Group, already present in this segment, particularly in the United Kingdom with the Pasquill roof trusses and Scotframe timber-frame homes, acquired SIG Roofspace, a manufacturer of turnkey panelized roofing and loft conversion systems. In the United States, the signature of a co-development agreement with Unity Homes, a prefabricated home builder, has opened a new path for innovation in the high-performance construction market and for revolutionizing construction methods in the US residential market.

Seizing growth opportunities in principal markets

Saint-Gobain is also leveraging opportunities in its principal markets by targeting situational opportunities such as increases in market shares due to innovative concepts.

To address the growing demand in the European insulation market, Saint-Gobain has initiated several investments in capacity in its factories. These include the modernization and expansion of the rockwool production line at the Isover factory in Ploiesti in Romania, and the launch of a new glass blowing wool production line at its Chemillé factory in France. These investments will enable the Group to support the booming growth in the insulation market, driven by increasingly strict regulations.

In the distribution sector, Raab Karcher in the Netherlands launched a new sales outlet concept, the Bouwshop+ offering a more comprehensive range of products and several value added services.

Strengthening our high value added product offering

Finally, 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 2018, the Overlength glass range was launched, capable of reaching 18 meters in height, to provide optimal design flexibility as a direct response to architectural and construction trends.

c) Supporting digital transformation and logistics

Digital technology enables customers to be better informed and therefore more demanding. The Group is seizing this opportunity to innovate and to offer an ever-increasing amount of added value to its customers. To this end, Saint-Gobain initiated its digital and logistic transformation a few years ago to be able to provide a customized offering with increasingly efficient service.

Continuing the deployment of new IT systems

Numerous digital solutions support the efficient IT systems that various Group entities are currently using. In distribution in particular, several trading brands continue to deploy IT projects, such as Atlas in France and M3 in the Nordic countries. These systems must result in significant gains in productivity. In the United Kingdom, Saint-Gobain also launched ICON, a new integrated IT solution to centralize its customer data and provide new information and reporting tools. ICON also facilitates tailor-made service and a better customer experience for end users.

Implementing new logistics centers in Distribution 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 2018, Saint-Gobain announced the construction of a new logistics center for distribution in Germany. It also continued its investment in a new ultra-automated logistics center in Sweden to address the current and future growth of the Dahl trading brand.

5.4.2 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 2018, the Group acquired 27 entities for a total amount of €768 million (excluding Sika). There are three complementary strands to the strategy of acquiring small and medium enterprises: local acquisitions, particularly among regional businesses, niche technologies, particularly among High Performance Solutions, and acquisitions for entering into new territories.

Local acquisitions

In 2018, the Group completed several acquisitions to strengthen its position in key markets. Accordingly, the acquisition of Per Strand has enabled distribution activities in Norway to strengthen their regional network throughout the country by filling in a gap in a region with a weak presence. In France, the Pyréverre and Miroiterie centrale Vitrolles acquisitions have enabled Saint-Gobain to establish its positioning on the market for the transformation, distribution, and installation of glass solutions. The Group also increased its range of insulation solutions by improving its position in this high-growth sector through the acquisition of Kaimann, one of the major European manufacturers of elastomeric insulation products. In addition, the Group acquired the North American ceilings business of Hunter Douglas, a leading manufacturer in architectural ceilings.

Niche technologies

Saint-Gobain has also acquired companies offering solutions with high growth potential, particularly under High Performance Solutions. For example, the Abrasives and Composite Systems BU strengthened its solutions portfolio for the aerospace and industrial markets thanks to the acquisition of HyComp, a US supplier of composite components made with carbon fibers and thermoplastic materials. The acquisition of MicroHydraulics, an Irish supplier and manufacturer of single-use components and systems in high-performance plastics for fluid handling, expands the offering in the high-growth pharmaceutical market. Finally, the acquisition of HKO in Germany positions the Construction Industry BU on the new, very high temperature thermal insulation market.

New territories

Finally, the Group's acquisition strategy enables it to seize the opportunity to conquer new territories, particularly in fast-growing countries. The establishment of a new partnership in 2018 with Alghanim Industries in Kuwait, in a joint venture within KIMMCO, placed the Group in a leading position on the Middle-East insulation market. Saint-Gobain also invested in a flat glass production line built by the Chinese group, JJG.

Signing of an agreement with the Burkard family and Sika

During the first half of 2018, Saint-Gobain pursued its planned acquisition of a controlling interest in Sika, described in Section 1.2 of Chapter 3 of the 2017 Registration Document. A decision by the Supreme Court of Zoug was expected in the second half of 2018.

On May 11, 2018, Saint-Gobai, Sika and the Burkard family announced they had signed an overall agreement under the terms of which:

- Saint-Gobain acquired the entirety of the Schenker Winkler Holding AG (SWH) shares from the Burkard family for an acquisition price of CHF 3.22 billion;
- Sika acquired 6.97% of its own capital from SWH (representing 23.7% of Sika's voting rights) for a total amount of CHF 2.08 billion;
- Sika held an Extraordinary Shareholders' Meeting on June 11, 2018, which decided on the conversion of all its shares into a single class of shares ("one share, one vote"), the elimination of the statutory opt-out clause, the statutory limitation of shares assignments to 5%, and the cancellation of 6.97% of the shares acquired from SWH;
- both groups stated that they wish to deepen their existing trade relations, which they will seek to expand to other mutually beneficial areas, while preserving and respecting the economic and legal independence of the other.

Saint-Gobain, through SWH, became the top shareholder in Sika, with 10.75% of its capital stock and voting rights. The parties agreed, regarding this equity interest, to a retention commitment of two years and a holdings cap of 10.75% of Sika's capital stock for four years, followed by 12.875% during the next two years. In the event that SWH were to consider selling shares, these would have to be offered to Sika first, within the 10.75% cap of Sika's capital stock.

This overall agreement resolved and definitively ended the disputes that opposed Sika, the Burkard family and Saint-Gobain, to the benefit of each of the parties and that of their respective shareholders and stakeholders.

This transaction translated into comprehensive income of €781 million for Saint-Gobain, which includes, on the one hand, a financial gain of €601 million (*i.e.* the difference between the fair value of the shares as of the transaction date and the value of the stock options from December 2014) and, on the other, a €180 million compensation payment recognized under other business income. The Group opted to recognize ulterior changes in the fair value of the Sika shares held by SWH as income and expenses recognized directly as equity.

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

Saint-Gobain announced an ambitious disposal program of €3 billion in revenues by end-2019 for around €1 billion, as part of its "Transform & Grow" transformation plan, with an expected positive impact on the operative profit margin of around 40 basis points. 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 is this the right time to divest?

Divestments representing sales of over €500 million were completed or signed in 2018, including, in particular, the glass installation activities in the United Kingdom and EPS insulation in Germany and the disposal of the pipe activities of the Xuzhou site in China, Glasssolutions Norway and Sweden, and Silicon Carbide activities, for which Saint-Gobain announced it has entered into exclusive negotiations.

Since the beginning of 2019, several additional disposal transactions are underway, including the divestment of Building Distribution in Germany, whose sales process is well under way (sales representing approximately €1.9 billion).

An efficient and responsible group

3

1. PRACTICES GUIDED BY REFERENCE POLICIES

1.1 The Group's responsible approach

1.1.1 The Principles of Conduct and Action at the heart of the approach

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

The "reference policies" are at the forefront of these Principles. They define the management principles applicable to all Saint-Gobain entities and employees, but also to its subcontractors and suppliers.

The materiality matrix helped identify the main CSR risks and opportunities (see Chapter 2, Section 1.5). "Reference policies" aim to meet these CSR challenges, which reflect the Group's strategy and identity. A table summarizing the Group's actions and commitments relating to these risks and opportunities can be found in Chapter 9, Section 3.3: Extra-Financial Performance Declaration.

A globally-committed Group with key partners

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 10 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. The Goals also enable new multi-stakeholder partnerships to which companies, including Saint-Gobain, are committed both locally and globally, particularly on SDG 13 for the climate and SDG 8 to promote sustained, shared 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.

Finally, 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 set up structures to prevent tax evasion and applies tax laws and regulations with honesty and integrity.

Involvement in public debates related to the impacts of its operations

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, the 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. Pierre-André de Chalendar was Epe's Chairman from 2012 to 2015. In 2018, Saint-Gobain was involved in the ZEN2050 study "France working towards zero net greenhouse gas emissions by 2050".

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 been a member of the "Factor10" circular economy project.

1.1.2 The compliance culture

The Group's compliance culture reflects its values, formalized in 2003 in the Principles of Conduct and Action (see Chapter 1, Section 1.3).

This compliance culture has been supported by a full program since 2009 which strengthens the effective application of the Principles of Conduct and Action and the resulting obligations, in all the Group's activities and worldwide.

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.

Teams in charge at all Group levels

The compliance program is monitored by the Board of Directors of the 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;
- 35 compliance correspondents operate in different countries and across the Group's various activities to disseminate policies, implement programs, manage operational teams and check and report results. In particular, they are trusted to answer operational questions and to advise their teams;
- Local Compliance Committees are set up and organized in the same format as the Group committee.

At the operational level, the dissemination of the compliance culture and values is supported by:

- the Group's Management, which engages in the communication and reminders of compliance rules, both internally and externally;
- the Compliance Department within the General Secretariat, which draws up and implements the programs associated with specific themes such as conflicts of interest, the embargo policy and the action plans for the professional associations policy. This department promotes the Principles of Conduct and Action to all employees;
- over 280 Business Compliance Correspondents, who implement the Group's Compliance policy on the ground within the Group's entities;
- the managers, who receive regular training and are responsible for endorsing and implementing the compliance policies and programs;
- and the Audit and Internal Control Department (see Chapter 6, Section 2.2.3), which verifies the effective application of rules and procedures.

This is why the Group has set itself the objective of training all new managers in compliance policies in their first year of integration. This objective is included in the CSR dashboard monitored by the Board of Directors.

A comprehensive set of tools that deploy the compliance program

Regularly enriched since its launch, the compliance program is today focused on the following main subjects:

- compliance with the rules on anti-trust law: as part of the Competition Law Plan established in 2009, various actions are implemented: training measures (online and in-person), conduction of audits, provision of practical guides and newsletters but also of dedicated teams for all operational questions on the subject;
- prevention of corruption: a program of measures and best practices is managed and implemented in the Group's subsidiaries to prevent the risk connected with international business transactions, passive and active corruption and relations with public officials and the private sector. The managers perform local risk mapping on selected companies. The program involves online and on-site training on internal policies (gifts, conflicts of interest, intermediaries, HR, etc.) and is monitored by the compliance network;
- compliance with economic sanctions and with embargoes for which screening tools, training (online and in-person) and specific policies are applied. Changes are actively monitored, and close links have been built with specialist external lawyers.

This results in a well-established and well-structured compliance culture. Supported by the Group's Management and passed on to all levels by the managers and the compliance network, it is constantly evolving according to topical subjects.

Various tools are used to implement the Group's compliance program:

- a dedicated Intranet, known as "Compliance", where key messages are passed on and tools are made available to all Group employees;
- several e-learning modules, that must be undertaken by all managers, and various on-site trainings are provided by the General Secretary, the Vice President of Competition and Legal Affairs, the Vice President of Responsible Development and the compliance correspondents;
- internal policies that are disseminated throughout the organization by the Compliance network;
- internal audits, based on compliance questionnaires that are filled out each year by all the entities, and external audits, carried out by specialized lawyers; these check adherence to antitrust law, prevention of corruption and compliance with regulations on trade sanctions and embargoes;
- a compliance alerts system, allowing employees to report any non-compliance with the applicable laws, the Group's internal rules and procedures and the Principles of Conduct and Action. All reports are examined and, if necessary, investigated. When a report identifies a case of non-compliance, suitable measures are taken.

Supporting the compliance culture within the Group involves calling upon many participants both centrally and locally. To do this, the Group is regularly mobilized on compliance issues:

- a presentation by the Group's Chairman and Chief Executive Officer and/or General Secretary;
- events to highlight operational compliance and engage employees in fun events that relate to their daily duties (Saint-Gobain products which can be described as "dual-use", interactive games, a range of quizzes, video competitions, etc.);
- publication of a practical/best practice guide on tackling corruption.

Finally, the Group has also strengthened its partnership with the charity Transparency International. For every Group employee who completes at least one episode of the optional section of the "Act" training course, the "Business Act Game", Saint-Gobain donates €1 to Transparency International.

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. Similarly, for child labor, the Group companies shall ensure that they are not involved in forced or compulsory labor in any way, particularly through dialog with the personnel representation entities, in an effort to detect any violations.

The Group is aware that the field of human rights is constantly changing and that the effective management of potentially negative incidents requires constant, transparent dialogue with the relevant stakeholders.

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).

Since 2014, the Group has increased the collection of information on discrimination. Grievance collection systems have been improved to make it easier for employees to come forward. They complement the existing workplace alert system. The workplace alerts system was opened up to suppliers in 2018 in addition to Saint-Gobain employees (see Chapter 3, Section 1.2.5 Duty of vigilance plan).

1.1.4 Environmental, Health and Safety policy

The Environmental, industrial hygiene-Health and Safety (EHS) policy was defined by the Chairman and CEO of Saint-Gobain in a commitment letter of undertaking updated in 2017. It is an extension of the code of ethical conduct: the Group's Principles of Conduct and Action. It places the environment, health and safety on the same level of requirement and establishes the following as long-term objectives: zero work-related accidents, zero occupational illnesses, zero environmental accidents and minimum impact of the Group's activities on the environment. These objectives are recalled in the Group's EHS Charter, available in 30 languages and displayed on all sites.

Beyond the Group's activities, the EHS policy includes the consequences for stakeholders, particularly customers, subcontractors, suppliers and residents of sites and sales outlets.

To support policy implementation, the EHS Guidelines made available to the sites cover all EHS management system requirements as well as risk identification, action plans to be implemented, and monitoring and evaluation in order to ensure compliance and performance.

The Saint-Gobain EHS Department draws up and circulates framework policies that have to be implemented worldwide. They correspond to priority risks identified by the EHS network during the development of site risk maps. These policies are supplemented by Saint-Gobain "standards" and "recommendations", which are technical documents that describe the minimum requirements that the sites have to observe whatever the country and the local legislation. The themes for the policies, standards and recommendations are identified based on the recurrence or severity of the risks identified by the sites.

The EHS training matrix, which defines the training to be completed for each job, is a particularly relevant tool to shape employees' EHS training paths. A skills matrix is also available.

The implementation of the EHS policy is based on a network of correspondents and is coordinated by a Central Department.

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.

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 and 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 (see Chapter 3, Section 1.1.4). It specifies the EHS management system that needs to be put in place and explains the risk identification and management method for environmental, health and safety risks posed to employees and on-site subcontractors. It is coordinated with the ISO 14001 and OHSAS 18001 requirements.

Whether it is certified or not, each site of the Group carries out its own mapping of environmental, health and safety risks. In addition to the information linked to the Reference Frame and to the certifications, the health-safety risk assessment is subject to a specific standard disseminated by EHS network members.

In addition to its EHS policy, Saint-Gobain has introduced policies on health, water, energy and air emissions management, sustainable resource management and biodiversity, as well as three "health" standards on noise, exposure to toxic agents and the purchase and use of cellphones; and 11 safety standards.

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. The risks of purchasing categories integrate environmental performance in particular 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 (Chapter 3, Section 2.3).

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 rights and 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. 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. This way in 2018, 52 simplified audits and 121 full audits were carried out to evaluate industrial activities and 121 audits specific to the distribution activities were realized.

In 2018, the EHS Reference Frame changed in response to the new ISO 14001: 2015 and ISO 45001: 2018 standards. A new version of the internal EHS audit (ISA: Integrated System Assessment) consistent with the new EHS Reference Frame was launched in 2018. It will be adapted to sites' characteristics (size and complexity) 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 the objective to assess the CSR performance of almost all suppliers deemed to comprise a CSR risk and achieving 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.

The Department of Non-Trade Purchasing initiated in 2016 a program to audit on site the suppliers identified at risk by the Group's purchasing managers jointly with EHS teams. The program is deployed in priority in emerging countries (Brazil, China, India). The objective is to propose an alternative to the CSR risk evaluation tools already in place in order to favor suppliers' commitment.

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 the non-trade Purchasing 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.

1.2.5 The alert system and reporting

Incident monitoring

Since 2014, the Group has increased the collection of information on discrimination specifically. 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, so that staff are made aware of certain risks and can ask themselves the following question: 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.

In 2012, Saint-Gobain launched the standard for managing environmental events and feedback "EvE" (*Événement Environnemental*). The environmental events mainly include accidental discharge into the atmosphere, into the water and onto the soil and events connected with waste, nuisances (smells, noise, etc.) and non-compliance with the regulations in relation to the Group's environmental management system.

Professional alert system

A professional alert system allows employees and suppliers to report any non-compliance with the applicable laws, the Group's internal rules and procedures and the Principles of Conduct and Action. All reports are examined and, if necessary, investigated.

A guide was published in 2018 to explain how the Group's alert system works, the rules for using it and the confidentiality guarantees. This guide is available on the Saint-Gobain website. The alert system was included in the new Responsible Purchasing clause in Suppliers contracts.

2. OPERATIONAL EXCELLENCE

2.1 Designing comfortable, sustainable, efficient solutions

2.1.1 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 R&D "Saint-Gobain 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.

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 undergoes specific checking in the internal control reference framework (see Chapter 6, Section 2.5.1).

Finally, the WCM industrial excellence program (see Chapter 3, Section 2.2) ensures the deployment of 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.

2.1.2 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 Argentina and Flat Glass in India were published this year. With over 800 verified EPDs published, 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. As it is favorable to greater transparency, the Group will therefore work to adapt to initiatives on a case-by-case and regional basis and is committed to the emergence of 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 (see Chapter 3, Section 2.1.3).

2.1.3 Evaluation and improvement of sustainable product performance

To develop solutions that anticipate market trends, the Group has introduced an eco-innovation approach and a related tool box. There are two strands to this innovation methodology:

- tools for understanding market needs and customer expectations in terms of environmental and social impacts;
- tools for finding solutions based on existing best practices or in-depth analysis of the impacts of the existing solution.

The Group began to deliver training in eco-innovation in 2013. Today, eco-innovation is covered in the training provided for new research managers and R&D project leaders. It is also covered in a specific one-day training course primarily for marketing and R&D teams; more than 700 people have attended this session since it was launched. The approach continues to evolve regularly to include new tools and ensure an ever-closer match with market expectations.

A new version of the eco-innovation training has been developed in 2018, which incorporates the developments in the new tool SCORE, to evaluate the sustainable performance of construction projects.

Having studied in 2016 the methodologies developed by other groups in different sectors and explored its customers' expectations with regards to sustainable solutions, the Group enhanced this 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.

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.

In 2018, the roll-out of SCORE continued successfully in all of the Nordic countries, and it has begun in Spain. Pilot schemes have shown the quality of the information supplied by SCORE, particularly the relevance of the sustainable performance profile.

2.2 Industrial excellence program with WCM

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.

At the same time, the World Class Manufacturing (WCM) program continues to ensure the 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 4.0 program or Saint-Gobain Attitudes for Human Development or the risk prevention Standard. 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.

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 pillars

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 indispensable to accommodate a wide variety of industrial processes. It is based on pillars that cover performance improvement methods such as Lean, Six Sigma and TPM (Total Productive Maintenance) or 5S.

Each pillar of the WCM represents a center of excellence on which the organization will draw and organize itself to reduce losses as much as possible. The WCM methods are applied in the same way for each of the pillars under the responsibility and leadership of the manager and the subject-matter expert, working in a cross-functional way and involving the entire organization.

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.

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 3.3.4), the professional careers of employees and, if necessary, the search for external skills.

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, the World Class Supply Chain program promotes Saint-Gobain's ability to offer products and solutions that are increasingly differentiated according to customer needs, up to customized solutions ("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 Section 4.3, Chapter 2) and to be the supplier of tailor-made performance and innovation for industrial customers (see Section 4.4, Chapter 2).

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 5.2.2).

2.2.2 The WCM path of an industrial site

Achieving industrial excellence is a demanding measure that requires gradual implementation, pillar by pillar, 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.

Tools and methods are therefore made available to the sites to construct their own roadmap and to define their stages of application. Training programs are applied, in advance for managers and as projects are implemented for each site employee.

The site preparation stage is essential. It may take one to three months depending on the sites and allows for a team to be formed and brought together around the program, priorities to be identified based on the identification of losses and an initial pilot project to be defined.

The implementation of the pilot project constitutes the second stage of the program. This 6 to 9 months period is a stage of application of training, of training programs deployment and the application of the methods on site from management to the operators. The WCM is then applied pillar by pillar.

Regular audits make it possible to assess the maturity of the program by site and acknowledge major milestones in the implementation of the program:

- first audit: the site has finalized the pilot stage and started the deployment;
- the "Bronze" level is confirmed at the end of the learning process;
- the "Silver" level is reached when 80% of the site's critical processes are covered by the WCM program and are delivering a high level of performance;
- lastly, on achieving the "Gold" level, the site has incorporated the WCM methods, Digital and Industry 4.0, is delivering stable, world-class performance and is independent to continue its progress.

2.3 Purchases, a competitiveness challenge

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. With a global annual amount of some €29 billion for more than 250,000 active suppliers, Purchasing meets the needs of the Group's industrial and distribution activities.

Although the Purchasing functions are based on common policies and a common base, they do not participate at the same level in the Group's value chain:

- non-trade purchases are upstream of the production stage and all logistic aspects;
- trade purchases are downstream of the production stage.

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, creating competitive advantages and contribution of the function.

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 Trade Purchases

Trade purchases are purchases of products made by trading brands distributing building materials. The portfolio of trade suppliers comprises 22,000 suppliers from more than 50 countries distributed over 15 markets, reflecting the various markets of customers of the building distribution brands. An annual segmentation of purchases makes it possible to identify "Strategic Partners" suppliers with which a strong international partnership is built year after year; "National Strategic" suppliers on which brands rely nationally; and "niche" suppliers which provide particular products essential to a region's product mix.

This segmentation constitutes stage 1 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. Optimization of the supplier portfolio is a priority objective which, following the approval, is reflected in personalized support for partners thanks to the annual Partnership Analysis. Every year, all the building distribution brands evaluate the partners that they work with. Feedback to partners takes the form of a report covering the seven assessment criteria: trade, marketing, logistics, purchases, teams, CSR and digital strategy. 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 how he is positioned within the markets in which he is active. An action plan is drawn up jointly in order to improve the quality of the partnership.

The Category Managers form a community responsible for managing one or more product portfolios and therefore, suppliers. International meetings for each market category or area are held periodically to define shared action plans with partners common to the different trading brands. The 150 members of this community meet each year to monitor market developments, changes in the role of the category manager function itself and to exchange best practices.

2.3.2 Non-trade Purchases

Non-trade purchases are divided into five overall families: production purchases, investment purchases, transport purchases (on sales and on supplies), energy purchases and general purchases (general expenses, non-production services, etc.).

The high number of non-trade suppliers reflects the great diversity of Saint-Gobain's businesses.

Non-trade purchases rely on a community of more than 600 professional purchasers, trained in purchasing practices based on the various categories of purchases and positioned within the different levels of the Saint-Gobain organization: Group, country, activities and sites.

This collaborative and professional community of purchasers operates at the service of the Group's operations and is recognized as a key factor of the Group's competitiveness and innovation. A specific leadership program has been developed, World Class Purchasing (WCP), in order to strengthen the industry and improve the contribution made by the Purchasing Department to Saint-Gobain's performance, particularly in the field of responsible purchasing. The WCP program is included in the WCM industrial excellence program (see Chapter 3, Section 2.2).

2.4 Environmental protection

The Group wishes to ensure the preservation of the environment, to meet the expectations of the stakeholders involved and to offer its customers the greatest value added for a minimum environmental impact.

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).

2.4.1 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.

The main areas for the implementation of this policy are as follows:

- have a maximum recycled content in its products;
- generate a minimum amount of production waste;
- recover the waste originating from these processes either internally or externally.

a) 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, as is the case for flat glass 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, 18 countries throughout the world use plaster waste from worksites to manufacture their plasterboard. More than 209,000 tons of waste plasterboard from the sites were recovered and recycled in this way across the globe in 2018, 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[(1)] 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: glass wool and cast iron pipe.

For many years, glass wool has included cullet in its composition. In 2018, external cullet accounted for over 41% of all materials loaded into the furnaces.

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.

b) Generating a minimum of production waste and recovering it

The priority waste management actions initially relate to a reduction in the quantities of production waste generated. They then relate to the recovery of production waste internally, followed by the promotion of external recovery industries (reuse, recycling or, failing that, recovery of energy) for production waste that cannot be recovered internally. Waste is landfilled as a last resort, if no other solution is possible.

Progress in the reduction of production waste achieved on certain Group sites shows that "zero non-recovered waste" is an achievable ambition. The Group is also developing the recovery of waste among activities, so that one's waste becomes the other's raw materials. Some group works to promote the cooperation between activities are organized. The Group is also involved in the creation of recycling networks with the help of external local partners.

In connection with the Health policy and in compliance with the local regulations, the management of dangerous waste is closely monitored to protect the health of employees, residents, customers and users of its products and services (see Chapter 3, Section 3.1.1).

2.4.2 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.

(1) *Broken glass coming from manufacturing waste or from the selective collection of waste and recycled content.*

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) in all of the Group's industrial sites is another driver for progress.

a) 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 2018, 91 sites in the relevant scope were certified to ISO 50001, compared with 86 a year earlier. 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.

b) 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.

For example, the LECA factory in Hinge, Denmark, which specializes in the production of clay aggregates, will invest in 2019 in a biomass utilization facility, which will bring an end to the use of fossil fuels, driving down the site's CO_2 emissions by over 50 %.

c) 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.

2.4.3 Water management

Saint-Gobain's Water policy, which was adopted in 2011, followed the signature in 2009 of the CEO Water Mandate by Pierre-André de Chalendar. It has confirmed the desire to reduce the quantitative and qualitative impact of Saint-Gobain's activities on water resources as much as possible, both during withdrawals and discharges.

The 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 2018, some 60 Group sites withdrawing more than 5,000 m^3 of water each year and representing around 11% 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 the 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.

Saint-Gobain regularly evaluates the level of exposure of all its industrial sites to the water risk. The Water standard is applied as a priority in the sites with the highest water risks.

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 2018, the Group obtained a B rating.

2.4.4 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 do so in agreement with all parties concerned.

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. As such, of more than 6,000 sites (quarries, factories or selling points), 79 have been identified as part of a protected area and are priorities for the management of biodiversity.

The vast majority of the Group's 153 underground or open quarries worldwide are for the production of Gypsum (125, *i.e.* 81.7%). A biodiversity charter in the Gypsum quarries has been in place for many years. 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 2018, Saint-Gobain signed up to Act4nature, a French scheme in which companies commit to protecting biodiversity.

3. PROFESSIONAL DEVELOPMENT FOR EMPLOYEES

3.1 Health and Safety

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 protect the health of its employees, temporary workers and subcontractors working on its sites throughout the world, by anticipating and preventing risks of occupational illness or disability. The Health policy also promotes the individual health of each of the Group's employees, by taking actions to prevent illness connected with individual risk factors such as a sedentary lifestyle or nicotine addiction. Taking into account the physical constraints of the workstations, promoting a balance between private life and work life as well as preventing the psycho-social risks and the stress connected with work are all challenges to ensure the health of employees and good working conditions.

To ensure the same level of protection 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 tailors these standards and recommendations to its specific needs and local 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 adhered to.

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 toxic agents standard (TAS) and the analysis of risks, compel the sites to follow an authorization procedure for the use of any new chemical;
- 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 or TSCA in the United States. SBASE is managed by the EHS Department;
- the SAFHEAR management tool allows each site to perform its own inventory of the chemical substances and products used but also potentially generated during industrial production processes. The sites can also perform the evaluation of their chemical risks following the TAS standard using a second module in the tool.

In 2018, the inventory of the products and substances used by Group entities continued. Since 2015, 857 sites (96% of the sites concerned) have updated their inventory of chemical products. At the same time, the toxic risk analysis module was rolled out: 8% of the sites affected started to perform risk analyses and to input the results into the dedicated module, compared with 3% in 2017.

In connection with the internal TAS, 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, possibly 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 fulfil 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 communication to stakeholders (in particular consumers) initiatives (see Chapter 3, Section 2.1.2).

b) A steering indicator for health risks

In parallel with the indicators monitoring safety (total recordable accident rate: TRAR) and the environment (number of major and significant accidents for 100 sites: T2E), 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.

This new indicator testifies to the Group's desire to better understand certain facts by objectivizing them through measurement, and thus be able to provide better guidance and make better decisions.

It constitutes the rate of potential major exposure to a health hazard. This health indicator (HICE, Health Indicator for Occupational Exposure) was defined in 2017. The pilot phase investigating the feasibility as well as a relevance study were completed in 2018 (8 Group sites involved) confirming the benefit of its introduction. HICE currently applies to around 75 entities, and its extension in 2019 would authorize its periodic publication in parallel to TRAR and T2E as of 2020.

3.1.2 Safety, a central value to the Group

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 emphasize this commitment, a portion of the managers' compensation is based on the results and the resources invested, particularly by carrying out safety inspections and by applying safety standards (see Chapter 5, Section 2.4.1).

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 2018, 545,290 SMAT visits took place within the Group, a ratio of 2.56 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 2.6 in 2017 (employees, temporary workers and subcontractors) to 2.4 in 2018. 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 2.4.3).

In 2018, 72% of the entities did not declare any accidents, compared with 70% in 2017.

The "Millionaires' Club" comprises the most exemplary Group sites in terms of safety, with 1 million hours worked or 5 years without any accidents involving lost time specifically, including all the individuals present on a site (employees, temporary workers, subcontractors, visitors, etc.). In 2018, a total of 280 sites were in the Millionaires' Club (compared to 276 at the end of 2017). 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" (10 years with no lost-time accidents) and 17 are "gold millionaires" (15 years with no lost-time accidents) compared to 81 and 14 on December 31, 2017.

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. An e-learning module is available to site teams so that they can learn relevant procedures:

- two categories of subcontractors are distinguished to adapt action plans to risks: permanent subcontractors with which long-term actions are possible;
- occasional subcontractors (worksite, maintenance, etc.) for which prevention and safety information must be provided quickly and tailored to each situation.

Following the deadly events involving on-site subcontractors in 2018, the monitoring of these two standards has been stepped up. In partnership with Group Purchases, the procedures for selecting subcontractors will be reviewed in 2019 to increase the weight of safety criteria. Welcome procedures will be improved.

To complete this system, EHS 2019 and 2020 audits will cover as a priority sites that have not been audited for over three years, and those where an accident involving a subcontractor or temporary worker has taken place in 2018. Monitoring of subcontractor-specific action plans as a result of the EHS audits will be improved under the responsibility of the country EHS.

Since 2017, the safety results of permanent subcontractors have been included in the Group's overall results. Accidents with and without lost time involving occasional subcontractors are recorded and reported.

3.2 Saint-Gobain Attitudes and the human resources policy

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.

Social, economic and technological changes make it necessary to rethink managerial practices and the functioning of the Group.

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.

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.

Lastly, Saint-Gobain submits its human resources practices to the Top Employers Institute each year. The Group is one of 14 companies to have gained global recognition for the third year running.

Saint-Gobain also has local Top Employers recognition in 33 countries.

3.3 The OPEN 4.0 program

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. This new version better integrates the challenges of the Group's digital transformation.

Action plans are defined for each objective identified as a priority to contribute effectively to a working environment that is conducive to professional and personal development and which balances job-related performance with employees' well-being.

3.3.1 Enrich the policy of 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.

3.3.2 Promote 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 a 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 carries a strong commitment towards diversity and inclusion; they are key challenges for the Group in terms of CSR (see 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.

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 2018, over 2,400 apprentices were employed in the Group, mostly in France and Germany.

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 across the Group. In some subsidiaries in France, employees receive training in sign language so that they can communicate with their deaf and mute colleagues.

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.

Finally, the Group attains its objectives by adapting workstations and working hours. In the United Kingdom, Ireland and North America, personal support is in place to adapt working environments to individual needs.

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. They are monitored each quarter by the Senior Management Committee. They have been developed by country and industry 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. Through training programs, communication and awareness-raising events such as Women's Day in India, gender equality is anchored in the Group's strategic vision.

Present in several countries, Saint-Gobain's female networks feed this culture of gender diversity and act as a lever to promote parity. In North America, the Saint-Gobain Women's network works to promote diversity and inclusion by developing women's potential, with a special focus on recruitment and talent retention.

Measures for parents have been introduced in the Mediterranean countries, to promote a better work-life balance and offer greater flexibility of working hours, and the option to work from home, etc. Parents' Charters are also in place in most European countries and Vietnam.

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

An overall diversity indicator which covers gender diversity, nationality and professional experience is included in the CSR dashboard (see Chapter 4, Section 2.1). This overall diversity indicator is also a component of performance in the long-term compensation plans for the Group's managers (see Chapter 5, Section 2.4.3).

Saint-Gobain was listed on two recognized diversity and inclusion indices: Equileap's Top 200 for Gender equality in 2018 and the Bloomberg Gender Equality Index in January 2019.

3.3.3 Reinforce employees' 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 measure: managers motivate and develop the loyalty of employees by giving more meaning to their everyday work and by favoring a spirit of initiative. Saint-Gobain has defined a set of tools, seeking to contribute towards reinforcing the commitment of its employees: measuring employee commitment, remuneration, health cover, social dialogue, maintaining jobs and corporate culture.

Tools for attentiveness to employees and measuring commitment

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.

Surveys are conducted among employees in all the countries in which the Group is established under the responsibility of the countries' organization in order to measure:

- the conditions of their commitment;
- the individual perception of commitment;
- the understanding and adherence to the Group's values, policies, objectives and strategy.

These surveys by country or region are conducted in a coordinated manner and repeated every two years. The questionnaires are adapted to the local or regional context and include seven recurring questions on understanding and acceptance of the Group's strategy, the sharing of corporate values, leadership, employee commitment, effective implementation of the HR policy, the Group's attractiveness in the choice of professional paths and, finally, trust in the future.

Since 2016, the management of survey results has been coordinated in order to consolidate the lessons learned at Group level. An analysis is conducted through six main themes, two of which are directly related to the Saint-Gobain Attitudes (Client and Engaging culture). This analysis is focused on the five best and the five worst scores, the three biggest improvements and the three biggest deteriorations, by scope and globally.

At local level, the results of these surveys are analyzed and fed into progress plans and action plans to facilitate employee commitment.

Group performance indicators are monitored including the number of employees invited to respond, the response rate and the approval rate expressed. The approval rate is the proportion of positive opinions expressed across all seven Group questions. It reflects acceptance of the Group's values and confidence in the strategy and management.

After the survey campaign carried out in 2018, 72% of the employees that were invited replied to the survey. The question that gained the highest level of global approval was the one that was relative to their confidence in the Group's success, with levels of approval between 75% and 95% depending on the regions. In that way, they expressed their optimism, their commitment and their trust in Saint-Gobain's strategy and management.

In 2018, a centralized management tool for employee satisfaction surveys was developed and tested. It will be deployed in 2019.

Compensation policy and benefits

Regarding compensation, the basic salary standards are defined by each country based on market conditions. The companies then draw up their wage policy. At the same time, employee share ownership offers employees the possibility of becoming shareholders under preferential conditions. The Group Savings Plan (PEG) 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.

Saint-Gobain also seeks to offer its employees' health cover enabling them to obtain effective protection against the uncertainties of life. In France, social policy on health and pension expenses has been harmonized for all the companies, by mutualizing plans and benefits in order to offer common cover to everyone. The Group wishes to continue this measure for the social protection systems, in all its countries of establishment.

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).

Well-being at work

Saint-Gobain attaches fundamental importance to the physical and mental health of its employees. In 2018, a digital, interactive and intelligent application was developed to support managers in improving well-being at work. This tool proposes best practices, collects those identified by teams around the world, and provides key information for each of them to implement it. Thus, specific programs can be initiated locally by linking specific issues and proposals for concrete actions to improve well-being at work.

The application encourages people to act upstream to promote an attractive, motivating and fulfilling working environment. It will be launched in 2019 and will be enriched by new experiences implemented in the Group.

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. The same applies to the CARE:4 extension, the energy efficiency improvement program for Saint-Gobain's service buildings, based on the concepts of comfort and good working conditions.

3.3.4 Develop talent

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 an annual progress update meeting with the members of the General Management 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. The development of personal reviews and succession plans, mentoring and relations with the Group’s target schools and universities reinforce this measure. A specific program has also been designed to support and develop experts within the Group.

As part of the digitization of Human Resources processes, an algorithm specific to the “SG Talents” program was developed and tested in 2018. 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.

2017 was marked by the completion of a worldwide review of this program, to measure the long-term performance. The retention of executives identified in the “SG Talents” program is regularly double the average retention observed among the Group's executives who are not part of this program.

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.

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 wealth 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.

The training policy revolves around three areas of focus. Firstly, training must anticipate, facilitate and accompany the Group’s transformation. In particular, it should accelerate its digital transformation by continuing to raise employees’ awareness to the challenges and modalities of the digital world, while implementing training courses that are specific to our activities and that support sometimes radical changes. Saint-Gobain’s transformation is also found at management level: our Saint-Gobain Attitudes have defined the direction in which we want to move and the way that we want to live and work together. 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.

Saint-Gobain develops three types of actions at corporate level:

- training programs related to value sharing and digital transformation: they are deployed uniformly and systematically throughout the Group, such as compliance programs (Adhere, Comply, ACT, etc.) or those dedicated to digital transformation (Digital Journey). In 2018, more than 120,000 modules of the “Digital Journey” (a program designed to raise awareness and develop digital culture within the Group) were followed;
- programs dedicated to the Group's main professional sectors (EHS, finance, HR, purchasing, marketing, etc.), which include technical training that is not specific to a Group business line: 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;
- the School of Management integrates important stages of a manager's professional life in the Group providing programs in five levels.

The countries deploy these training programs locally and develop a specific offer to answer to local needs.

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 Section 2.2 of this Chapter 3) identifies and monitors key competencies.

Training programs dedicated to each technical trade sector 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 specific training teams around production by trade: glass, gypsum, insulation, mortars, pipe, etc.

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

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. On the one hand, this is based on redesigning training practices, in particular integrating all modalities such as digital skills. For example, in 2018, the Management School's initial training program was completely revised to adapt to the new learning methods. From a classic 9-day classroom format, the Group now offers a real 4-month course combining e-learning sessions, a personal development program and classroom time. The participant's manager is integrated into this process and a follow-up of the participant's evolution over time completes the system. This course for young managers was designed by bringing together university professors from different cultures.

On the other hand, it also requires a change in habits and the emergence of a learning culture. Saint-Gobain devotes a full week to this issue at the “Learning Week” organized in all countries. The 2018 edition brought together more than 13,000 participants at 472 events in 40 countries and focused on “digital and the evolution of working methods”.

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 2°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, acting locally (country, regions, etc.) makes it possible to identify resilient local ecosystems favorable to a low-carbon economy. 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 targets are monitored on the CSR dashboard (see Chapter 4, Section 2.1) In February 2018, the Directors were able to participate in a half-day seminar on climate change and its consequences for companies (see Chapter 5, Section 1.2).

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 5, Section 2.3.4).

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

4.1.1 Seizing the opportunities presented by the transition to a low-carbon economy

a) 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 2.1.3).

b) 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.

c) 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 (see Chapter 2, Section 4.3.4).

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 (see Chapter 2, Section 4.5.1).

Saint-Gobain also invests in research on clean energy, such as the next generation of solid oxygen fuel cells (see Chapter 2, Section 4.3.4).

4.1.2 Continuing to reduce the impact of production

In addition to the programs initiated at site level (see Chapter 3, Section 2.4.2), 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.

a) 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 CO2 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 makes it possible to better anticipate future financial risks.

b) 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) 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.

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 where the Group operates.

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.

c) 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.

The first evaluations of the scope 3 have estimated soda ash and cement to be the two main sources of scope 3 emissions of the Group's purchases.

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 b). 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 2018, the Group began updating its Scope 3 evaluation, making the methodology and data more reliable for each category, particularly for the trade purchase categories with the largest carbon impact.

4.1.3 Fighting against climate change with stakeholders

a) Strong climate commitments

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

Recent Conferences of Parties (COPs) on climate change have marked a turning point, with improved participation in climate negotiations from non-government actors, including businesses. Pierre-André de Chalendar attended the COP24 in Katowice, Poland, where he spoke about the key role of companies in response to the climate emergency and Saint-Gobain's involvement in this area.

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 February 2018, the Group signed up to Science Based Targets.

b) Actions for a strong, 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. In November 2018, the ETC published a report entitled "Mission Possible: reaching net zero carbon emissions from harder-to-abate sectors by mid-century".

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 2017; it will continue until 2019. Saint-Gobain will test this tool on some of its projects.

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 42 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). In 2018, Saint-Gobain provided active support for a number of WGBC campaigns, including:

- Better Places for People, which promotes the quantification and understanding of the positive impacts of sustainable buildings on health and well-being;
- Green Mortgage, a European plan to define innovative solutions for financing energy renovation.

Saint-Gobain is committed to creating a low-carbon trajectory for the global construction industry and this is the reason it is a founder member of the Global Alliance for Buildings and Construction (GABC) and sits on its steering committee (see Chapter 3, Section 4.1.5).

c) Training customers locally, keeping end users informed

Some of the training courses delivered by local teams (see Chapter 2, Section 4.3.3) cover energy efficiency and reducing the environmental impact of buildings. The building distribution sector is particularly active on that subject. In France, the Point.P network has implemented “Energy Efficiency” counters in over 130 agencies. The sellers are specifically trained and tools such as a simulator that allows for the evaluation of the energy efficiency in the construction sector, baptized Feebat, is offered alongside a support for the official recognition of the efficiency of the measures implemented 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.

4.1.4 Manage the risks connected with climate change

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. 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 2.4.3).

4.1.5 Committing to a 2°C scenario

No methodology has yet been published for setting emissions reduction targets for the construction industry. This item of data is essential for Saint-Gobain to position its contribution and its impacts, both positive and negative, on a 2°C trajectory.

This is why Saint-Gobain has mobilized and committed itself to the Global Alliance for Building and Construction, jointly with other players in the construction value chain, and supported the CDP's “We Mean Business” campaign.

This alliance, launched during COP21 by France and the United Nations Environment Program (UNEP), aims to bring together states, local authorities, companies of the construction sector and associations concerned around a roadmap to facilitate the transition to energy-efficient and low greenhouse gas buildings. At the global level, less than half of the contributions to which states have committed themselves in order to achieve the objectives set by the Paris Agreement include measures on buildings, whether for new or existing buildings. Through its involvement in the GABC, Saint-Gobain seeks to demonstrate to all countries that technical solutions exist, particularly for improving energy efficiency, regardless of the geography concerned – hot countries, cold countries, dry or tropical climates – and that these solutions are affordable. GABC organised a symposium on building at COP24 in Poland.

Furthermore, in February 2018, the Group signed up to the “Science-Based Targets” approach, promoted by the CDP, the United Nations Global Compact, the World Resources Institute and the WWF, which aims to ensure that companies align their greenhouse gas emissions with the objective of the 2°C scenario.

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 life span 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.

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 of products, solutions or services to the benefits expected by customers and end users to managing the end of life of the products, the Saint-Gobain product range must adapt to new realities: 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 3 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).

The SCORE tool makes it possible to assess and improve the sustainable performance of products (see Chapter 3, Section 2.1.3). 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 lifecycle 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 consumption of raw materials used for each functional unit produced and the waste generated by industrial processes are the pillars of the sustainable resources management policy introduced in 2015 (see Chapter 3, Section 2.4.4) 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 we operate, 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.

In Germany, in the Frankfurt region, one of Saint-Gobain's Gypsum factories has begun using recycled gypsum from worksites, using the best available practices to achieve 20% recycled materials in its production in the first 6 months.

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). 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

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 Factor10 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 stakeholders involved in an area, customers, local authorities and 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.

With nearly 50,000 tons of plaster collected and recycled yearly in France by Placorecycling®, the recycled internal and external plaster scrap content of Placo plasterboard is now close to 10% on average.

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.

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. The network thus created also offers a solution for voluntary selling points that are not concerned by this regulatory requirement.

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.

The main countries in which the Group operates will put forward a circular economy roadmap in 2019, with a priority on European countries.

4.3 Promoting local, inclusive economic development

4.3.1 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, Brasil, 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.

4.3.2 Contributing to economic development and to local employment

Economic development as a result of the Group's local presence

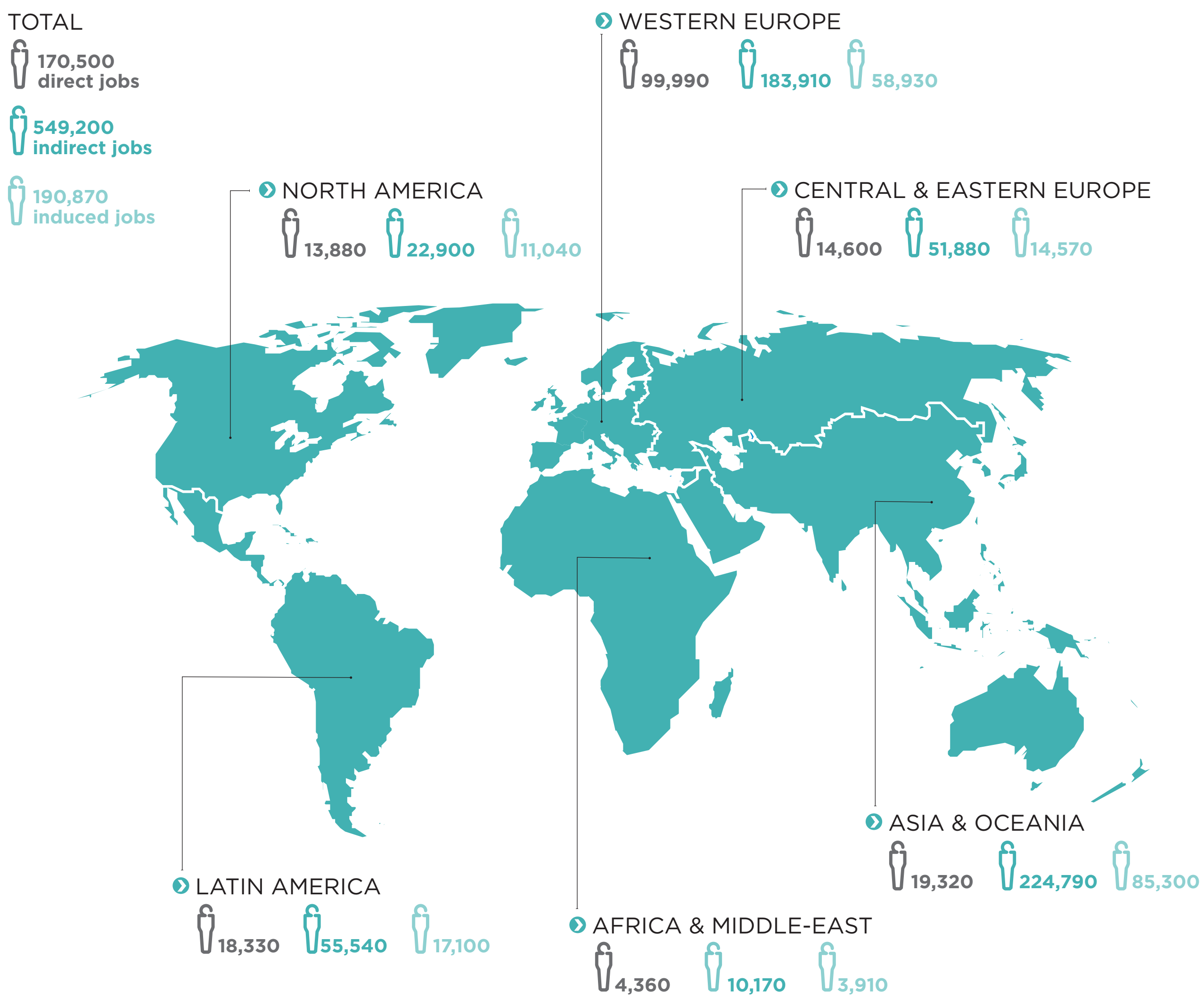
Saint-Gobain participates to economic and industrial dynamics in regions where the Group has established sites, as well as in suppliers' labor pools. Saint-Gobain's employment footprint can thus be calculated at three levels:

- 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)



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: the 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 in Ireland, the programs currently underway are numerous and tackle various issues. The "Entrepreneurship Foundation" subsidizes, trains, certifies and supports SME owners in order to boost growth and dynamism in the construction sector. Various levers are being used to support the development of these players, such as the provision of training and technical skills, as well as access to a network of 18 Saint-Gobain entities. Since its creation in 2015, the foundation has assisted 47 construction actors and aims to support 150 of them by 2020. The partnership with children's charity Barnardo's brings support to marginalized young people throughout the country by providing them with construction skills training in a purpose built academy, mentoring and access to professional opportunities. The program has also instigated the construction of intermediary homes for them to gain progressively their independence.

In North America, Saint-Gobain has built a partnership with the non-profit 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. Around ten sustainable renovation projects have been launched *via* this initiative in four communities where the company operates: Canton, Ohio; Worcester, Mass.; Schenectady, N.Y.: 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 the Group 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.

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 265 students. 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.

4.4 Contributing to societal issues through sponsorship and philanthropy

4.4.1 The Saint-Gobain Initiatives International Corporate Foundation

The Saint-Gobain Initiatives International Corporate Foundation is based on the commitment of employees. All Group employees – current or retired – can sponsor solidarity actions in two areas:

- the professional integration of young adults in difficulty;
- the construction, improvement or renovation of living spaces for people in precarious situations for the general good, contributing in particular to the reduction of energy consumption and the preservation of the environment.

Projects must be run 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 clarified its main selection criteria:

- projects with a strong health or disability focus must have a social (socially excluded people) or professional integration dimension;
- the amount requested is assessed in relation to the number of beneficiaries;
- projects with high social innovation are particularly encouraged;
- in terms of professional integration, it is important to check that the training courses are qualified.

The financial allocation for 2018 was increased by 27% to reach €1,650,000. In addition, Saint-Gobain subsidiaries can offer support through their expertise or materials donations. Some projects are an opportunity to mobilize Saint-Gobain's local teams, who are committed to the project supported by the Foundation, or more broadly to the association.

In 2018, the Foundation celebrated its 10th anniversary. This anniversary resulted in an International Foundation Week in June 2018. Throughout the world, solidarity and commitment have been honored. An international communication campaign entitled “Time to Act” was deployed and enabled the Saint-Gobain Foundation to become better known and to propose several ways to get involved. The Foundation Week was a high point with times of exchange, collections for associations, solidarity activities, meetings with the Foundation's leaders and sponsors.

Over the period 2008-2018:

- 205 projects received funding, representing a commitment of €10.7 million from the Foundation;
- 140 associations were supported in 37 countries.

4.4.2 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.

4.4.3 Active local foundations

a) 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 organisations for social and societal development, improving energy efficiency and preserving the environment.

b) 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.

c) 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.

4.4.4 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 is focused on three areas: cultural sponsorship, scientific publications and seminars/educational initiatives.

As part of its cultural sponsorship initiative, Saint-Gobain provides long-term support for large cultural establishments. 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 2018, Saint-Gobain took part in many operations, providing one-off sponsorship to the Palace of Versailles for the major renovation project on the chapel, for which the glass was provided by la Manufacture des glaces (now Saint-Gobain) at the time of its construction. This project will last three years.

Saint-Gobain has also supported innovation to foster cultural democratization, by providing financial and in-kind sponsorship to *L'atelier des lumières*, the first digital art center in Paris, which hosts immersive art exhibitions in a renovated foundry. Since it opened on April 13, 2018, L'atelier des lumières has proven very popular with the general public (1.2 million visitors in 2018) for its first exhibition on Gustav Klimt and Egon Schiele.

In the field of architecture, two exhibitions were held with the support of Saint-Gobain: one on Dominique Perrault at the *Bibliothèque nationale de France*, and an exhibition on the history of construction and demolition at *Cité de l'architecture et du patrimoine*. These two exhibitions also benefited from loans of documents and artifacts belonging to the collections of Saint-Gobain Archives.

Saint-Gobain has also supported two initiatives to promote the history of design: the UAM (modern artists' union) exhibition at the Centre Pompidou, with the loan of glass furniture by René Coulon, and the new design collections at the *Musée des arts décoratifs* (MAD) for which Saint-Gobain supplied the show windows.

The *La Fabrique du luxe, les marchands merciers parisiens au XVIII^{e} siècle* exhibition, at the Cognacq-Jay museum, received financial support and loans of documents about glass manufacture.

An exhibition at the *Institut du monde arabe* on the Suez Canal was also supported by the Group's Middle-East region.

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.

As regards scientific publications and seminars, Saint-Gobain enables institutions, associations or researchers to publish works and reviews and to organize 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*, the *Rendez-vous de l'histoire de Blois* (21st edition on the power of images), the *Histoire de lire* show in Versailles, where a small exhibition on Saint-Gobain under De Gaulle was presented to the public in 2018.

Educational measures 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).

Saint-Gobain provided its expertise to the *Cité des sciences et de l'industrie* and in-kind sponsorship for the exhibition *Feu et au passage du silence* which enables visitors to perceive the effects of the absorption of sound *via* an anechoic chamber.

Finally, Saint-Gobain supports the photo exhibition *L'industrie vue du ciel*, organized by *L'Usine nouvelle*, which was launched at the end of 2018, and presented in engineering schools in 2019 before being shown to the general public in Luxembourg in 2020.

2018 results and outlook for 2019

4

1. FINANCIAL RESULTS

The 2018 consolidated financial statements were approved and adopted by Saint-Gobain's Board of Directors at its meeting of February 21, 2019. The consolidated financial statements were audited and certified by the statutory Auditors.

2018 KEY FIGURES

SALES
€41.8bn
ACTUAL **+2.4%**
LIKE-FOR-LIKE **+4.4%**

OPERATING INCOME
€3,122m
OPERATING MARGIN: 7.5%, +10bp
ACTUAL **+3.1%**
LIKE-FOR-LIKE **+4.5%**

RECURRING NET INCOME
€1,729m
EPS[1]: **€3.18, +7.4%**
ACTUAL **+6.0%**

CASH FLOW FROM OPERATIONS
€2,936m
+1.6%

NET DEBT
€8,193m
1.9 X EBITDA

CHANGES BASED ON 2018 VS 2017

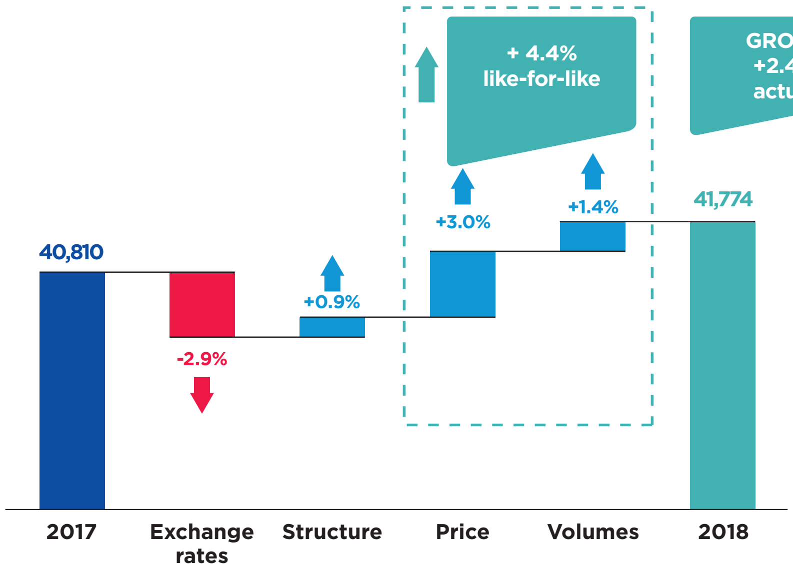
- Solid organic growth at 4.4%, including 4.8% in Q4. Strong pricing dynamic, up 3.0%; acceleration in H2, up 3.5%;
- Like-for-like increase in operating income of 7.2% in H2, clearly above the level achieved in H1; increase of 4.5% over the full year;
- Significant operating margin growth in H2 to 7.9%;
- Further increase in recurring net income [2] of 6.0%; net income at €420 million after €2.0 billion in asset impairment;
- Slight rise in cash flow from operations [3]; acceleration in growth capex led by emerging countries;
- Acceleration of portfolio rotation: selective acquisition strategy targeting small and mid-sized businesses for €768 million; significant divestments completed or announced for a total of over €2.4 billion in sales as part of the €3 billion target already announced; within the context of the new organization, new strategic review of the business portfolio launched which will lead to an additional dynamic of divestments and acquisitions;
- 2018 dividend up to €1.33 per share, to be wholly paid in cash.

(1) Calculated on the number of shares in circulation of 543,879,267 shares at December 31, 2018.
(2) Recurring net income: net attributable income excluding capital gains and losses on disposals, asset write-downs, matérial non-recurring provisions and Sika income.
(3) Cash flow from operations excluding the tax impact of capital gains and losses on disposals, asset write-downs and material non-recurring provisions, less capital expenditure.

1.1 Operating Performance

SALES

(in €m)



- Depreciation of the **US dollar, Brazilian real**, Nordic krona and other Asian and emerging country currencies against the euro
- **Impact of acquisitions** and **the divestment program**
- **Sharp increase in prices**
- **Volume growth** in all regions

4

The Group's 2018 **sales** totaled **€41,774 million**, up 2.4% on a reported basis and **up 4.4% like-for-like**. Organic growth was driven both by prices (up 3.0%), accelerating in the second half (up 3.5%), and by volumes (up 1.4%), progressing in all regions. All Business Sectors delivered significant price increases amid continued raw material and energy inflation.

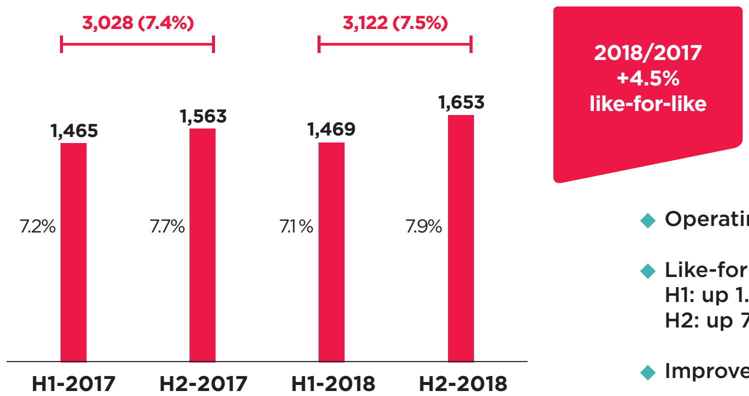
The **Group structure impact** added 0.9% to overall growth and essentially corresponds to the consolidation of acquisitions in Asia and emerging countries (KIMMCO, Megaflex, Isoroc Poland), in new niche technologies and services (TekBond, Scotframe, Maris, HKO), and to consolidate our strong positions (Glava, Kirson, Wattex, bolt-on acquisitions in Building Distribution including Per Strand in Norway).

The smaller positive Group structure impact of 0.4% in the second half reflects the acceleration in the Group's portfolio optimization program, with in particular the disposal of the Pipe business in Xuzhou, China, the EPS insulating foam business in Germany, and glazing installation operations in the UK. It should be noted that in light of the now 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 as of July 1, 2018.

However, overall growth was tempered by a negative 2.9% **currency effect** over the year, albeit with a smaller negative 1.5% impact in the second half resulting mainly from the appreciation of the US dollar against the euro, despite the continued depreciation of the Brazilian real, Nordic krona and other Asian and emerging country currencies.

OPERATING INCOME

(in €m and % of sales)



- **Operating income up 3.1%** on an actual basis
- **Like-for-like change:**
  H1: up 1.7%
  H2: up 7.2% (versus a 4.0% increase in sales)
- **Improved Group margin** at 7.5%

As expected, like-for-like **operating income** improved significantly in the second half, rising 7.2%, bringing growth over the full year to 4.5%. The Group's operating margin[(1)] (operating income expressed as a percentage of sales) widened to 7.5% from 7.4% in 2017, with 7.9% in the second half (*versus* 7.7% in second-half 2017).

The acceleration of the Group's transformation continues, with the new organizational structure in place as of January 1, 2019. The Group has reviewed its asset impairment tests. In this context, given the current situation and the downward revisions to the outlook for certain businesses and countries, impairment amounts to €2.0 billion and mainly concerns Distribution in the UK, Pipe, Lapeyre and Distribution in Germany.

Saint-Gobain recorded a capital gain of €781 million on the Sika transaction in 2018 and became the company's largest shareholder, with 10.75% of the capital.

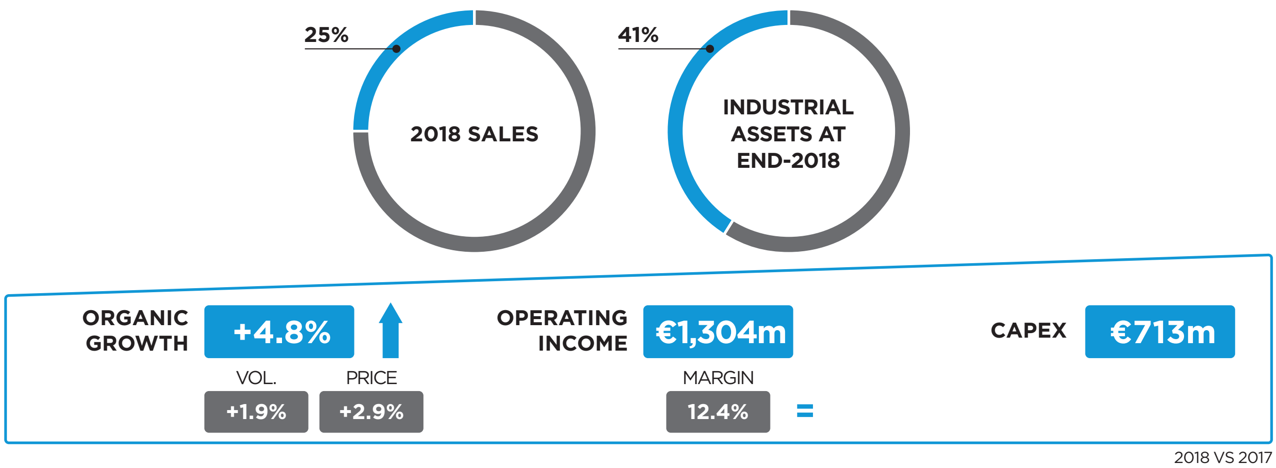
The Group continued to implement its strategic priorities in 2018:

- **€1.67 billion in capital expenditure**, *versus* €1.54 billion in 2017, with an acceleration in growth capex in emerging countries;
- **around €300 million in cost savings** *versus* 2017 as part of the €1.2 billion cost reduction program for 2017-2020, with a particular focus on Industry 4.0 and digitalization.

1.1.1 Operating performance by Business Sector

a) Innovative Materials

INNOVATIVE MATERIALS[(2)]



Innovative Materials sales climbed 4.8% like-for-like over the year and 3.6% in the second half. The operating margin for the Business Sector remained stable over the year at 12.4% and stood at 12.5% in the second half.

(1) *Operating margin = operating income/sales.*
(2) *Industrial assets include net property, plant and equipment and working capital requirements.*

FLAT GLASS

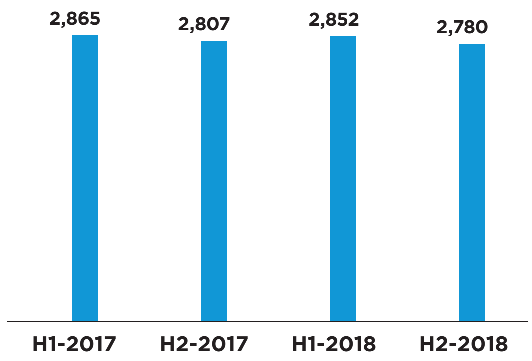
ORGANIC GROWTH **+2.8%** — VOL. -0.9% — PRICE +3.7%

OPERATING INCOME **€501m** — MARGIN 8.9%

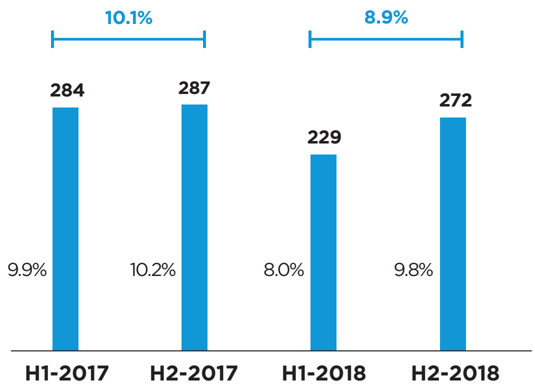
CAPEX **€486m**

2018 VS 2017

Sales (€m)



Operating income and margin (€m - %)



Flat Glass like-for-like sales increased 2.8% over the year (up 2.1% in the second half). Automotive glass advanced in line with the division over the year, buoyed by growth in Latin America despite a significant downturn in European and Chinese markets in the fourth quarter. Recent industrial and innovation investments continue to ramp up. Sales linked to the construction market in Europe, Asia and emerging countries progressed, driven by prices. Following the restart of production at the three float glass facilities under repair in 2018 (Poland, Romania and Egypt), India started up its fifth float line in the second half of the year. The operating margin rallied sharply in the second half at 9.8% (after 8.0% in the first half), in a context of improved industrial performance and price increases. Over the year, the operating margin was 8.9% *versus* 10.1% in 2017.

HIGH-PERFORMANCE MATERIALS

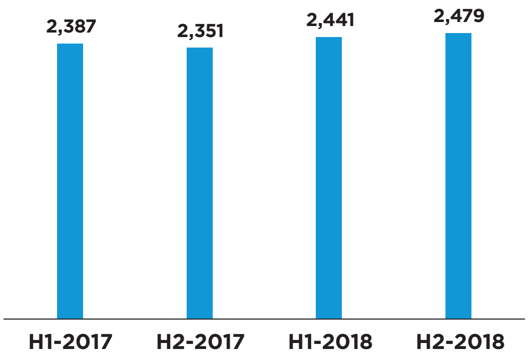
ORGANIC GROWTH **+7.2%** — VOL. +5.2% — PRICE +2.0%

OPERATING INCOME **€803m** — MARGIN 16.3%

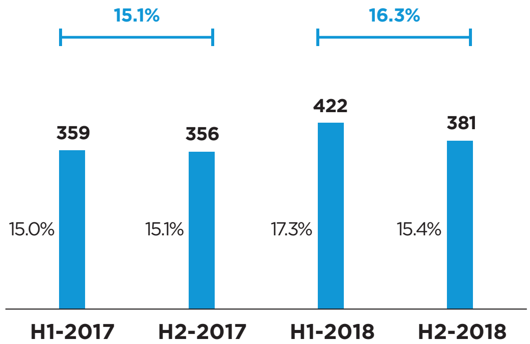
CAPEX **€227m**

2018 VS 2017

Sales (€m)



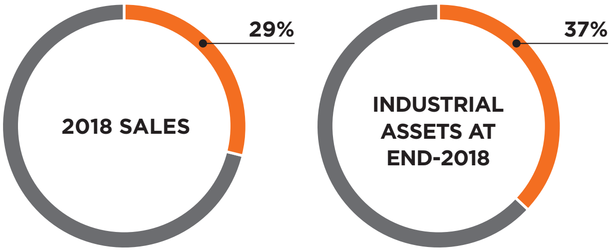
Operating income and margin (€m - %)



High-Performance Materials (HPM) sales rose 7.2% on a like-for-like basis (up 5.2% in the second half), driven by all businesses and all regions, especially Asia and emerging countries. The strategy of allocating capital to niche technologies and fast-growing markets is paying off. Despite a higher comparison basis in the second half, HPM continued to deliver growth. The operating margin increased sharply to 16.3% from 15.1% in 2017 on the back of good volumes, particularly in Ceramics in the first half.

b) Construction Products

CONSTRUCTION PRODUCTS



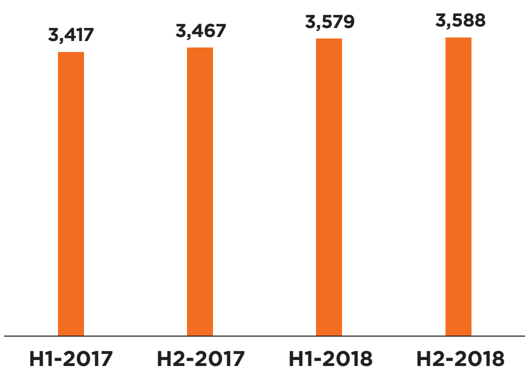
2018 VS 2017

Construction Products (CP) reported 5.6% organic growth, with 4.2% in the second half. The operating margin progressed to 9.3% *versus* 9.1% in 2017.

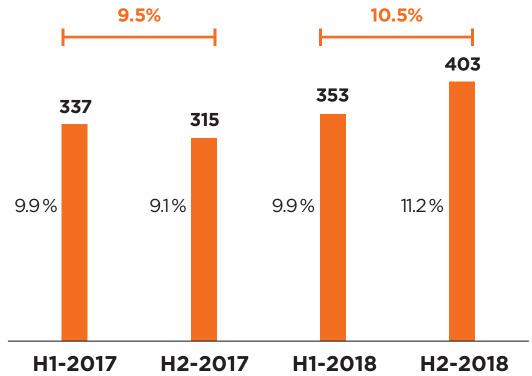
INTERIOR SOLUTIONS

2018 VS 2017

Sales (€m)



Operating income and margin (€m - %)

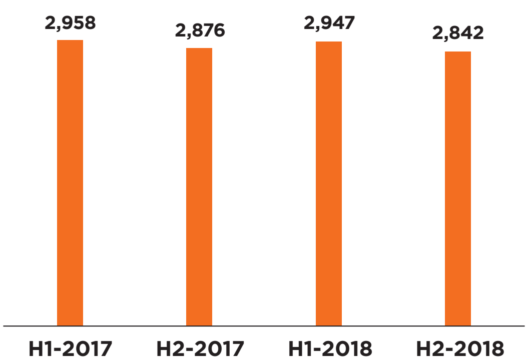


Interior Solutions like-for-like sales moved up 5.5% over the year and 3.9% in the second half in the context of an acceleration in sales prices. All regions advanced, especially Asia and emerging countries. The strong pricing dynamic in North America intensified in the second half. The operating margin came in at 10.5% in 2018 (*versus* 9.5% in 2017), benefiting in particular from a positive price-cost spread in terms of raw materials and energy.

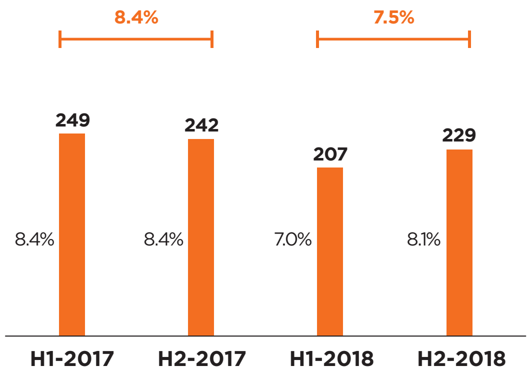
EXTERIOR SOLUTIONS

2018 VS 2017

Sales (€m)



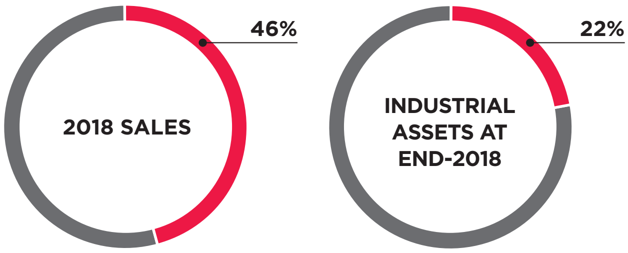
Operating income and margin (€m - %)

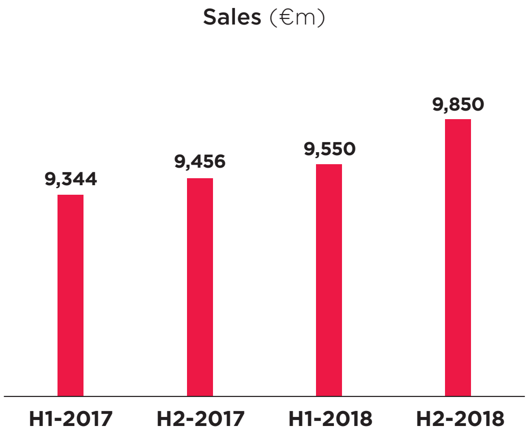


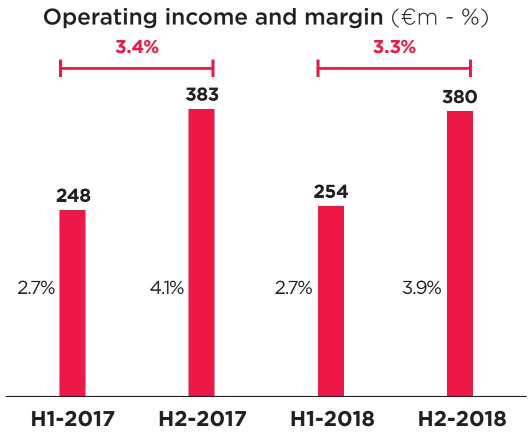
Exterior Solutions reported 5.7% organic growth over the year and 4.8% in the second half. Amid strong inflation in raw material and transport costs, Exterior Products in the US successfully implemented significant price increases in the second half, against a high comparison basis in terms of volumes (weather-related impacts in 2017). Pipe advanced over the year thanks to the increase in its second-half sales and efforts to improve its competitiveness. Mortars recorded an increase in sales led by Asia and emerging countries, with a pick-up in Brazil. The operating margin was 7.5% for the year *versus* 8.4% in 2017, affected by the spread between prices and raw material and energy costs for Exterior Products in the US, which improved significantly in the second half.

BUILDING DISTRIBUTION

2018 VS 2017





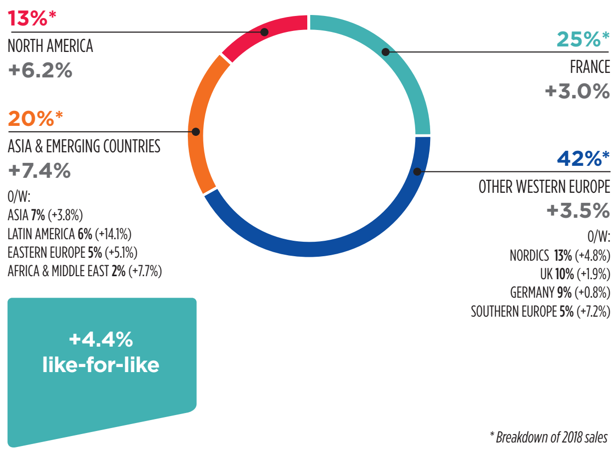


Building Distribution delivered 3.6% organic growth in 2018 and 4.0% in the second half which benefited from a positive calendar effect of around 0.5%. France had a good year in a growing market. Nordic countries enjoyed robust growth throughout the year, while Germany progressed slightly. The UK saw a decline in volumes and increased competitive pressure on margins, despite a sharp rise in prices. Brazil remained hesitant over the year and stabilized in the second half. Despite a rise in operating margin in France and Nordic countries, the Business Sector operating margin came out at 3.3% for the year (*versus* 3.4% in 2017) with a second half at 3.9%, affected by the contraction in the UK. The acceleration in digitalization investments took around 20 basis points off the margin between 2017 and 2018.

1.1.2 Operating performance by region

SALES TRENDS BY REGION

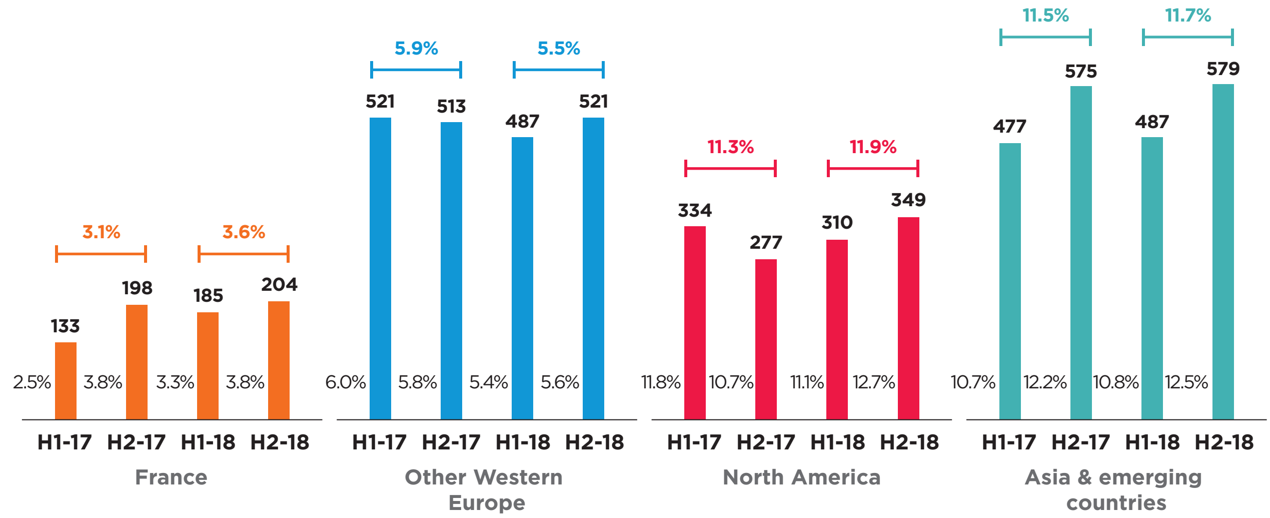
(% change in 2018/2017 like-for-like sales)



- The growth momentum in **France** continued, with like-for-like sales up 3.0% over the year (up 2.9% in the second half) in a market that remains constrained by the lack of skilled labor. The operating margin widened to 3.6% in 2018 from 3.1% in 2017.
- **Other Western European countries** reported like-for-like sales growth of 3.5% over the year and 3.3% in the second half. Nordic countries continued to enjoy good momentum. Germany remained hesitant, affected by disruptions in the automotive market, significantly down in the second half of the year. The UK reported further organic growth led by pricing, with declining volumes in an uncertain environment. As a result, the operating margin narrowed to 5.5% in 2018 from 5.9% in 2017.
- **North America** climbed 6.2% like-for-like, with 2.6% in the second half against a high comparison basis in Exterior Products and HPM. Construction and industrial markets continued to trend well. The operating margin improved, at 11.9% in 2018 *versus* 11.3% in 2017, aided notably by price increases.
- **Asia and emerging countries** continued to advance, posting robust organic growth of 7.4% (6.7% in the second half), with a positive contribution from all regions and particularly Brazil, which saw an improvement on the prior year. The operating margin continued to rise, up to 11.7% in 2018 from 11.5% in 2017.

OPERATING INCOME BY REGION

(in €m and % of sales)



1.2 Financial Results

Consolidated **sales** increased by 4.4% like-for-like, with a positive 3.0% price impact. On a reported basis, sales were up 2.4% with a negative 2.9% currency impact, albeit with a smaller negative impact of 1.5% in the second half due mainly to the appreciation of the US dollar against the euro, despite the continued depreciation of the Brazilian real, Nordic krona and other Asian and emerging country currencies. The positive 0.9% **Group structure** impact essentially reflects the consolidation of acquisitions made in Asia and emerging countries, in new niche technologies and services, and to consolidate our strong positions. The smaller positive Group structure impact of 0.4% in the second half is attributable to the acceleration in the portfolio optimization program.

Operating income rose 3.1% on a reported basis despite a negative currency effect, and by 4.5% like-for-like. The operating margin stood at 7.5% of sales *versus* 7.4% of sales in 2017. **EBITDA** climbed 2.1% to €4,324 million, stable at 10.4% of sales.

Business income

(in €m)	2017	2018	2018/2017	Like-for-like change
Operating income	**3,028**	**3,122**	**+3.1%**	**+4.5%**
Non-operating costs	(337)	(284)		
o/w provision for asbestos-related litigation	*(90)*	*(90)*		
o/w other expenses	*(247)*	*(194)*		
Other operating expenses	(180)	(2,040)		
o/w disposal gains (losses)	*57*	*(3)*		
o/w asset write-downs	*(237)*	*(2,037)*		
Business income	**2,511**	**798**	**-68.2%**	

Non-operating costs totaled €284 million *versus* €337 million in 2017, reflecting on the one hand a one-off gain of €180 million relating to the Sika transaction and on the other, a rise in restructuring costs relating to Pipe. Non-operating costs also include a €90 million accrual to the provision for asbestos-related litigation involving CertainTeed in the US, unchanged from 2017. The launch of the "Transform & Grow" program resulted in additional expenses of around €60 million.

The net balance of capital gains and losses, asset write-downs and corporate acquisition fees represented an expense of €2,040 million *versus* an expense of €180 million in 2017. The Group reviewed its asset impairment tests in light of the current situation and the downward revision to the outlook for certain businesses and countries. The UK faces uncertainty due to Brexit in a more competitive environment. Restructuring measures continue at Pipe and Lapeyre. The value of the Distribution business in Germany has been adjusted in the context of its divestment. In 2018, asset write-downs represented €2,037 million, of which €750 million relates to the Distribution business in the UK, €511 million to Pipe (including €223 million in first-half 2018, in particular in China), €372 million to Lapeyre and €212 million to the Distribution business in Germany. As a result, business income was down 68.2%.

Net income

(in €m)	2017	2018	2018/2017
Business income	**2,511**	**798**	
Net financial income (expense)	**(448)**	**189**	
o/w Sika		*601*	
o/w finance costs	*(448)*	*(412)*	
Average cost of gross debt (at December 31)	*2.8%*	*2.3%*	
Income tax	**(438)**	**(490)**	
Tax rate on recurring net income	*25%*	*24%*	
Net attributable income	**1,566**	**420**	**-73.2%**
Recurring net income	**1,631**	**1,729**	**+6.0%**
Recurring EPS (in EUR)	**2.96**	**3.18**	**+7.4%**

The Group reported **net financial income** of €189 million in 2018 *versus* a net financial expense of €448 million in 2017. The interest cost on pensions fell (thanks to prior-year contributions), as well as the average cost of gross debt, down to 2.3% from 2.8% at December 31, 2017; net financial income also includes a €601 million gain resulting from the Sika transaction.

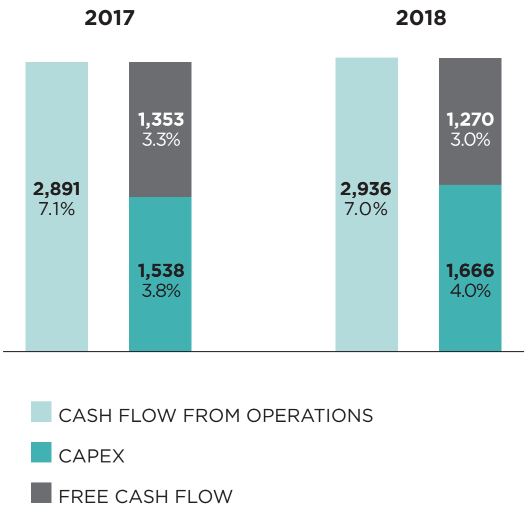
The income tax rate on recurring net income was 24% compared to 25% in 2017, due mainly to the reduction in the US tax rate. **Income tax** totaled €490 million *versus* €438 million in 2017.

Recurring net income (excluding capital gains and losses, asset write-downs, material non-recurring provisions and Sika income) rose 6.0% to €1,729 million.

Net attributable income came in at €420 million in 2018 *versus* €1,566 million in 2017, owing to asset write-downs.

CASH FLOW[(1)] FROM OPERATIONS AND CAPEX

(in €m and % of sales)



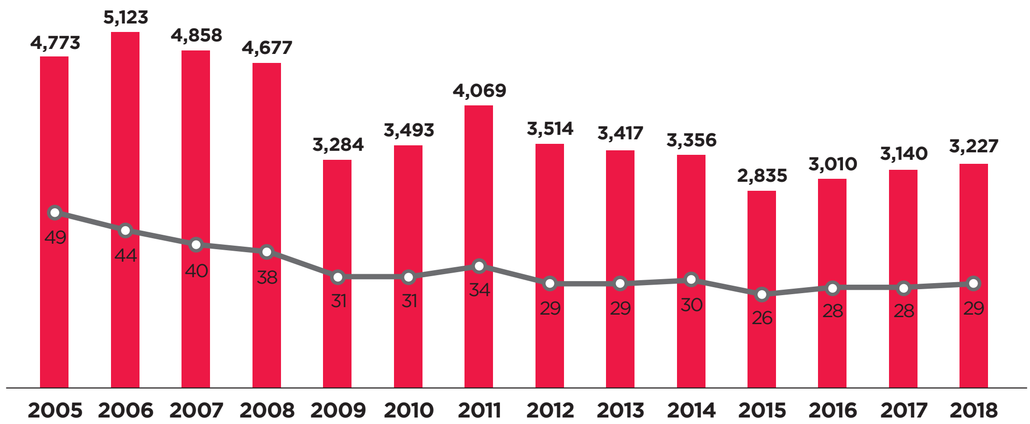
Cash flow from operations remained stable at €3,023 million; before the tax impact of capital gains and losses on disposals, asset write-downs and material non-recurring provisions, cash flow from operations was 1.6% higher at €2,936 million.

Capital expenditure was increased to €1,666 million in 2018 *versus* €1,538 million in 2017, with a focus on growth capex in emerging countries and on digitalization. Consequently, **free cash flow** fell 6.1% to €1,270 million in 2018, or 3.0% of sales (3.3% of sales in 2017).

4

OPERATING WCR

(at December 31, in €m and no. of days)



ONGOING TIGHT REIN ON OPERATING WCR

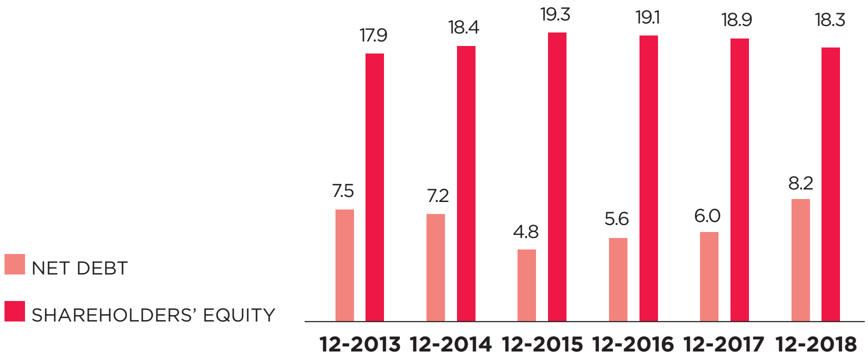
Operating working capital requirements (WCR) came in at €3,227 million (€3,140 million at December 31, 2017), or 29 days of sales, in line with our objective of less than 30 days.

Investments in securities totaled €1,699 million in 2018 (€641 million in 2017), including approximately €930 million relating to the Sika transaction (on a net basis after the disposal of 6.97% of shares) and €768 million in targeted acquisitions made to consolidate leading positions, notably Per Strand in Norway (Building Distribution) and Hankuk Glass in South Korea; to develop innovative niches with Kaimann (technical insulation) and HyComp (composite solutions for aerospace markets); and to establish a foothold in new countries with KIMMCO in Insulation in Kuwait.

(1) Cash flow from operations excluding the tax impact of capital gains and losses on disposals, asset write-downs and material non-recurring provisions.

NET DEBT AND SHAREHOLDERS'EQUITY

(in €bm)



	12-2013	12-2014	12-2015	12-2016	12-2017	12-2018
NET DEBT/SHAREHOLDERS'EQUITY	**42%**	**39%**	**25%**	**29%**	**32%**	**45%**
NET DEBT/EBITDA(1)	**1.8**	**1.8**	**1.2**	**1.4**	**1.4**	**1.9**

STRONG BALANCE SHEET MAINTAINED

Net debt increased to €8.2 billion from €6.0 billion at December 31, 2017, with in particular €1.7 billion of acquisitions (including Sika for approximately €930 million) and €532 million in share buybacks. Net debt represents 45% of consolidated equity compared to 32% at end-2017.

The net debt to EBITDA ratio was 1.9 compared to 1.4 at December 31, 2017.

(1) EBITDA = Operating income + operating depreciation/amortization over a 12-month period.

1.3 Shareholder policy

In 2018, the Group bought back 12.8 million shares, an acceleration on 2017 (8.3 million shares), contributing to the reduction in the number of shares outstanding to 543.9 million at December 31, 2018 (550.8 million at December 31, 2017).

At the meeting held on February 21, 2019, Compagnie de Saint-Gobain's Board of Directors decided to recommend to the June 6, 2019 Shareholders' Meeting to pay in cash an **increased dividend of €1.33 per share**. This dividend represents **42% of recurring net income** and a dividend yield of 4.6% based on the closing share price at December 31, 2018 (€29.165). The ex-dividend date has been set at June 10 and the dividend will be paid on June 12, 2019.

1.4 Strategy: implementation of the "Transform & Grow" program

New organization put into place

The new organization is being swiftly put into place. It intends to align the Group more closely with its end markets, taking into account the regional dimension of the majority of our markets and the global nature of our most innovative businesses. The new structure consists of five reporting units, with four regional businesses and a global High Performance Solutions unit.

These five reporting units replaced the three Business Sectors and 14 delegations as from January 1, allowing for a more agile Group leveraging new opportunities from our digital transformation, and for simplified decision-making processes which will enhance competitiveness. Tailoring this business model to regional and market specificities will allow us to accelerate profitable growth, and streamlined management structures will result in a leaner organization, with increased synergies at country and market level, to the benefit of customers.

Acceleration of the rotation of the portfolio

- **€768 million in acquisitions** in 2018: 27 fully consolidated acquisitions of small and mid-sized businesses;
- **divestments completed or signed to date represent sales of over €500 million**: Pipe in China (Xuzhou plant), EPS insulating foam in Germany, glazing installation operations in the UK, Silicon Carbide, Glassolutions in Norway and Sweden;
- the process to **divest the Distribution business in Germany** representing **€1.9 billion** in sales is well under way;
- **a strategic review of the business portfolio is in progress** in the context of the new organization, which will lead to an additional dynamic of divestments and acquisitions.

Positive impact on the operating margin

As a result of the new organizational structure and the acceleration of the rotation of its portfolio, the Group expects a positive impact on the operating margin **of more than 100 basis points**:

- positive operating margin impact of around **40 basis points** relating to the divestment of businesses representing sales of more than €3 billion by the end of 2019;
- positive operating margin impact of around **60 basis points** relating to the new organization, thanks to cost savings of €250 million by 2021 (including more than €50 million in 2019), in addition to our existing €1.2 billion cost savings program for 2017-2020 (annual savings of €300 million on average).

1.5 Outlook

The Group expects the following trends for its new reporting units in 2019:

- **High Performance Solutions**: industrial markets should remain supportive, particularly in the US, despite uncertainties on the automotive market in Europe and China;
- **Northern Europe**: should progress despite uncertainties in the UK with the increased risk of a no-deal Brexit;
- **Southern Europe, Middle East and Africa**: overall growth expected for the Region, with a construction market in France which should be supported by renovation while new construction could be down from the second half;
- **Americas**: market growth in both North and Latin America;
- **Asia**: further growth.

Saint-Gobain will continue its disciplined approach with regard to its free cash flow and its financial strength. In particular, it will maintain:

- its **focus on sales prices** amid continued inflationary pressure on costs;
- its **cost savings program**, with the aim of unlocking additional savings of around **€300 million** (calculated on the 2018 cost base), as well **as more than €50 million in 2019** as part of the "Transform and Grow" program;
- its **capital expenditure program** close to the 2018 level, with a focus on growth capex outside Western Europe and also on productivity and continued digital transformation;
- its **commitment to invest in R&D** to support its differentiated, high value-added strategy;
- its **focus on high levels of free cash flow generation**.

The Group is targeting a further like-for-like increase in operating income in 2019.

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 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 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 1.5). They also take into consideration the expectations of stakeholders identified in the materiality analysis, as well as the environmental and societal challenges facing the Group.

In 2019, the various CSR roadmaps will be combined in a single roadmap which will act as a tool for managing the Group's CSR strategy. This roadmap is based on the Group's six key challenges: 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, human and societal impacts of its activities.

The Group is developing its CSR dashboard in line with the roadmap, under the supervision of the Board of Directors.

Objectives/Indicators	2018	2017
BUSINESS ETHICS		
To share our values with our stakeholders to build together over the long term		
To provide all new managers with Adhere (Principles of Conduct and Action), Comply (competition law) and Act (fight against corruption) training in their first year with Saint-Gobain	Adhere: 96% Comply: 94% Act: 95%	Adhere: 81% Comply: 89% Act: 87%
CLIMATE CHANGE		
To contribute to the emergence of low-carbon economies capable of preserving the common good		
To reduce our carbon emissions by 20% by 2025 (base 2010)	11.7%	7.6%
INCLUSION AND DIVERSITY		
To have broadly diverse teams to build an open and engaging corporate culture		
To always maintain a diversity index of over 90%	91%	90%
To have 25% female managers by 2020	23.8%	22.6%
To have 25% female senior executives by 2025	15.2%	12.7%
CIRCULAR ECONOMY		
To change the way we design, produce and distribute our products and solutions to develop the circular economy		
Primary natural raw materials avoided	9,024,612 tons	8,322,690 tons
To reduce non-recovered waste by 50% by 2025 (base 2010)	15.9%	13.2%
HEALTH AND SAFETY ACROSS THE ENTIRE VALUE CHAIN		
Our main responsibility is to ensure the health and safety of our employees and our stakeholders		
To achieve a lost-time and non-lost-time accident rate (TRAR) of 2.3 in 2019 (employees, temporary workers and contractors on site)	2.4	2.6
CREATION OF LOCAL AND INCLUSIVE VALUE		
To be a corporate citizen in each country		
Percentage of our employees responding to our satisfaction survey	71.9%	72.9%
Percentage of our shares held by employees	8%	7.4%
Percentage of our employees who have received training during the year	87.7%	87.2%

2.2 Integration of the United Nations Sustainable Development Goals

Saint-Gobain integrates the Sustainable Development Goals (SDG) into its approach to CSR, building on the materiality analysis (see Chapter 2, Section 1.5), 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, moderately aligned SDGs (limited levers of action or associated with a specific activity) and non-priority SDGs where the Group has little or no impact.

SDGs aligned with the strategy — *SDGs moderately aligned with the strategy* — *Non-priority SDGs*

SDG 1 — Creating inclusive growth in the countries where we operate

SDG 2 — Actions are implemented according to the local context

SDG 3 — Promoting healthy lives and support the well-being of all at all ages

SDG 4 — Promoting learning opportunites throughout life

SDG 5 — Being inclusive by encouraging equal opportunities

SDG 6 — Ensuring a sustainable management of water resources

SDG 7 — Using our potential for local consumption to foster the development of local renewable energy networks

SDG 8 — Creating conditions guaranteeing quality jobs for our employees

SDG 9 — Engaging our innovation at the service of sustainable development and the circular economy

SDG 10 — Being inclusive by encouraging equal opportunities

SDG 11 — Offering sustainable and affordable solutions that are adapted to the lifestyle changes associated with increasing urbanization

SDG 12 — Changing the way we design, produce and distribute our products and solutions to develop the circular economy

SDG 13 — Contributing to the emergence of low-carbon economies capable of preserving the common good

SDG 14 — Actions are implemented according to the local context

SDG 15 — Managing and reducing our impact on biodiversity

SDG 16 — Sharing our values with our stakeholders

SDG 17 — Behaving like a corporate citizen in each country

The Group is particularly committed to 12 Sustainable Development Goals, which are incorporated into its strategy. Some examples of actions related to stakeholders are presented in this document:

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. 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 shareholders (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. Quality education: to promote lifelong learning opportunities.

- *for employees*: Saint-Gobain's aim is to be an employer of reference, known and recognized for the wealth 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 4.3.3);
- *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 4.4);
- *for civil society*: supporting young people is a priority in all the countries where the Group operates. For example, in France, 4.2% of contracts are youth contracts. The Group offers several different types of training, work/study programs, apprenticeships and the International Postgraduate Internship Program (VIE).

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 3.3.2);
- *for local communities*: the Saint-Gobain India Foundation has dedicated itself to improving the living conditions of the most destitute people by supporting projects connected with education, particularly for young girls (see Chapter 3 Section 4.4.3).

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 Section 4.1.2 of Chapter 3). This is done through the use of competitive low-carbon energy.

SDG 8. Decent work and economic growth: to create conditions guaranteeing quality employment 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 3.3);
- *for suppliers*: the Group's suppliers that are signatories to the suppliers' charter are committed to guaranteeing decent working conditions (see Chapter 3, Section 1.2.4);

- *for civil Society*: the promotion of social dialogue is at the heart of Saint-Gobain's commitment with the Global Deal (see Chapter 3, Section 1.1.1).

SDG 9. Industry, innovation and infrastructure: to build our innovation into sustainable development and a circular economy.

- *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 2.1.3);
- *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 1.1.1).

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);
- *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 3.3.2).

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 4.5.2);
- *for civil society*: at the local level, Group subsidiaries are becoming involved in partnerships, e.g. with the Green Building Councils (GBC) (see Chapter 3, Section 4.5).

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);
- *for customers*: Saint-Gobain designs, produces and distributes sustainable and comfortable solutions (see Chapter 3, Section 2.1).

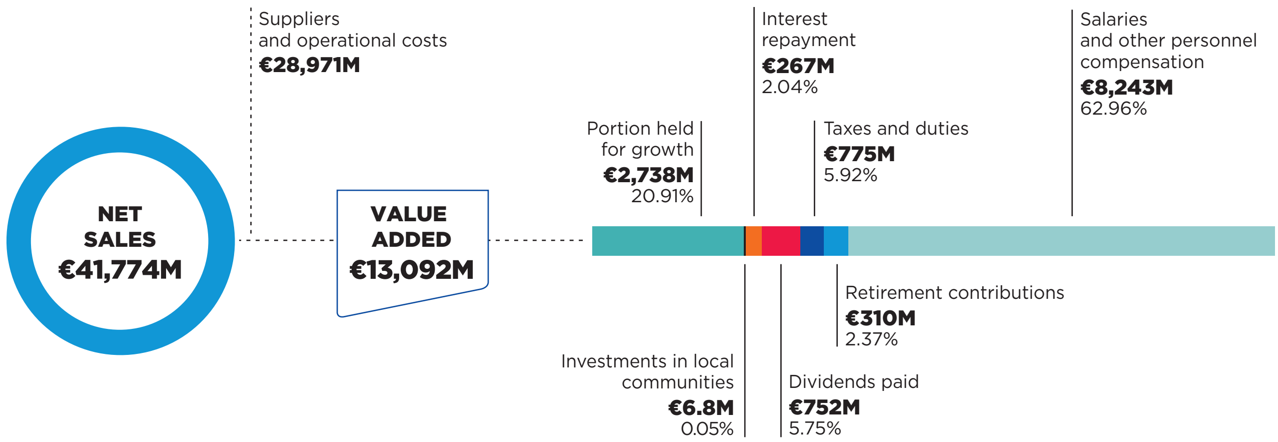
SDG 13. Climate action: to contribute to the emergence of low-carbon economies capable of preserving the common good.

- *for customers*: Saint-Gobain is committed, in conjunction with a number of private and public players, to increasing its positive contribution and to creating ethical dynamics (see Chapter 2, Section 4.5);
- *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 G20 Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD);
- *for regulatory authorities*: the Group takes part in the public debate on climate change (see Chapter 2, Section 1.3);
- *for suppliers*: Saint-Gobain is continuing its scope 3 assessment process and encourages suppliers to reduce their carbon footprint through its Responsible Purchasing policy (see Chapter 3, Section 4.1.2).

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).
- *for suppliers*: the Responsible Purchasing approach incorporates suppliers' compliance with the Suppliers' Charter, based on Principles of Conduct and Action (see Chapter 3, Section 1.1).
- *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).

2.3. Value creation in line with stakeholders' expectations



2.4. Non-financial indicators

ENVIRONMENT	2018	2017	2016	GRI
ENVIRONMENTAL MANAGEMENT				
Total environmental expenditure, of which:*	€159.4 M	€150.2 M	€127.1 M	EN31
a) Salaries and other payroll expenses for environmental officers	€28.2 M	€28.6 M	€26.1 M	103-2
b) Environmental certification and renewal costs (ISO 14001, EMAS or ISO 5001)	€3.0 M	€3.1 M	€3.5 M	307-1
c) Environmental taxes	€6.8 M	€6.0 M	€6.9 M	307-1
d) Insurance and warranties	€16.6 M	€9.2 M	€8.4 M	103-2
e) Environmental fines	€0.4 M	€0.2 M	€0.3 M	307-1
f) Cost of environmental incidents	€0.8 M	€1.0 M	€3.9 M	307-1
g) Cost of technical measures	€9.7 M	€7.9 M	€6.7 M	103-2
h) Environmental R&D budget	€78.3 M	€75.2 M	€59.7 M	103-2
i) Soil decontamination, site remediation and other clean-up costs	€15.6 M	€19.0 M	€18.4 M	307-1
Capital expenditure on environmental management measures	€84.1 M	€74.1 M	€78.8 M	
Provisions for environmental risks	€151.4 M	€154.4 M	€180.3 M	
Number of sites certified for Environment management (ISO 14001 and/or EMAS)*	76%	76%	77%	
Number of sites concerned certified for Energy management (ISO 50001)*	91	86	80	
Number of sites certified for Quality* (including ISO 9001)	651 (599)	674 (623)	664 (594)	

* *The values are adjusted to the 2018 scope and/or to the scope concerned by the 2017-2019 environment.*

RAW MATERIALS AND PRODUCTION WASTE	2018	2017	2016	GRI
Monitoring the goal of reducing non-recovered waste by 50% between 2010 and 2025	(15.9)%	(13.2)%	(7.9)%	
Quantity of waste generated	1.614 Mt	1.755 Mt	1.668 Mt	306-2
Quantity of hazardous waste generated	0.123 Mt	0.111 Mt	0.113 Mt	306-2
Quantity of non-recovered waste	0.517 Mt	0.575 Mt	0.590 Mt	306-2
Quantity of non-recovered hazardous waste	0.038 Mt	0.032 Mt	0.030 Mt	306-2
Quantity of waste reused or recycled	1.091 Mt	1.066 Mt	0.990 Mt	
Recycled materials incorporated in the product (cullet, gypsum, scrap iron)	8.961 Mt	8.297 Mt	8.596 Mt	
Natural raw materials saved	9.025 Mt	8.323 Mt	8.530 Mt	
ENERGY				
Monitoring the goal of reducing energy consumption by 15% between 2010 and 2025	(2.9)%	(2.8)%	(0.9)%	302-3
Total energy consumption of entire Group	44,111 GWh	45,789 GWh	44,521 GWh	302-1
Annual variation in total energy consumption	(1,678) GWh (-3.7%)	1,267 GWh (+2.8%)	803 GWh (+1.8%)	302-4
Variation in production in sellable units	14%	9%	18%	
Total indirect energy consumption	9,610 GWh	9,486 GWh	9,295 GWh	302-1
Variation in indirect total energy consumption	124 GWh (+1.3%)	191 GWh (+2%)	376 GWh (+4.2%)	302-4
Electricity consumption	9,504 GWh	9,325 GWh	9,152 GWh	302-1
Consumption of renewable electricity generated on site	5 GWh	5 GWh	4 GWh	
Consumption of renewable electricity (electricity purchases, electricity produced on site and biomass)	2,343 GWh	1,731 GWh	Unavailable	
Utilities consumption (steam, hot water, etc.)	102 GWh	156 GWh	140 GWh	302-1
Direct total energy consumption	34,501 GWh	36,303 GWh	35,226 GWh	302-1
Variation in direct total energy consumption	(1,802) GWh (-5.0%)	1,077 GWh (+3.1%)	426 GWh (+1.2%)	302-4
Coal and coke consumption	3,654 GWh	5,576 GWh	5,632 GWh	302-1
Natural gas consumption	26,229 GWh	26,088 GWh	24,810 GWh	302-1
Petroleum products consumption	3,411 GWh	3,415 GWh	3,447 GWh	
Sale outside the Group of renewable electricity generated on site	112 GWh	99 GWh	96 GWh	
Sale outside the Group of utilities (steam, hot water, etc.) generated on site	0.7 GWh	2 GWh	Unavailable	

GHG EMISSIONS	2018	2017	2016	GRI
Monitoring the goal of reducing CO_2 emissions (scope 1+2) by 20% between 2010 and 2025	(11.7)%	(7.6)%	(7.4)%	305-4
Total CO_2 emissions (scope 1 and 2)	11.7 Mt	13.0 Mt	12.6 Mt	305-1
Variation in total CO_2 emissions (scope 1 and 2)	(1.3) Mt (-10%)	0.4 Mt (+3.2%)	(0.1) Mt (-0.8%)	305-5
Direct CO_2 emissions	8.6 Mt	9.6 Mt	9.2 Mt	305-1
Variation in production in sellable units	14%	9%	18%	
Variation in direct CO_2 emissions	(1) Mt (-10.4%)	0.4 Mt (+4.3%)	(0.1) Mt (-0.8%)	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 emissions of greenhouse gases (purchases of electricity, steam, hot water)	3.1 Mt eq.CO_2	3.4 Mt eq.CO_2	3.4 Mt eq.CO_2	305-2
Variation in indirect emissions of greenhouse gases (purchases of electricity, steam, hot water)	(0.3) Mt eq.CO_2 (-8.8%)	0 Mt eq.CO_2 (0%)	0 Mt eq.CO_2 (0%)	305-5
Development in CO_2 impact on Group turnover (2010 value: 0.47)	0.28kgCO_2/€	0.32 kgCO_2/€	0.34 kgCO_2/€	305-4
OTHER AIR EMISSIONS				
Monitoring the goal of reducing SO_2 emissions by 20% between 2010 and 2025	(46.0)%	(44.8)%	(50.6)%	
SO_2 emissions	18,213 t	18,229 t	16,509 t	305-7
Monitoring the goal of reducing NO_x emissions by 20% between 2010 and 2025	(20.6)%	(19)%	(10.3)%	
NO_x emissions	19,308 t	20,704 t	22,258 t	305-7
Monitoring the goal of reducing dust emissions by 20% between 2010 and 2025	(49.0)%	(43.3)%	(50.3)%	
Dust emissions	7,482 t	7,732 t	6,455 t	305-7
WATER				
Total water withdrawal	52.8 M of m^3	54.6 M of m^3	52.9 M of m^3	303-1
Surface water withdrawal on sites with very high water stress (*sites with withdrawal >5,000 m^3/year)*	59,806 m^3	61,202 m^3	63,826 m^3	303-2
Water withdrawal on sites with high and very high water stress (*sites with withdrawal >5,000 m^3/year*)	0.007 m^3 per unit produced	0.013 m^3 per unit produced	0.015 m^3 per unit produced	
Municipal water withdrawal	16.2 M of m^3	15.5 M of m^3	15.2 M of m^3	303-1
Surface water withdrawal	15.1 M of m^3	17.7 M of m^3	15.5 M of m^3	303-1
Ground water withdrawal	19.0 M de m^3	19.2 M de m^3	20.3 M de m^3	303-1
Monitoring the goal of reducing water discharge by 80% between 2010 and 2025	(35.0)%	(36.9)%	(31.8)%	
Total water discharge	27.6 M of m^3	27.5 M of m^3	29.4 M of m^3	306-1
Water discharges into the surrounding environment	18.9 M de m^3	18.4 M of m^3	19.2 M de m^3	306-1
Water discharges into the municipal waste water collection system	8.2 M of m^3	8.7 M of m^3	9.6 M of m^3	306-1
Quantity of water reused in production processes through internal recycling systems	322.2 M de m^3	322.6 M of m^3	285.8 M of m^3	
ENVIRONMENTAL EVENTS				
Number of Seveso sites	7	5	3	
Number of serious major Group environmental events or accidents	0	1	0	

4

HEALTH –SAFETY	2018	2017	2016	GRI
Lost-time and non-lost-time accidents rate (TRAR), Group (employees, temporary workers)	2.4	2.6	3.3	403-2
Lost-time accident rate (LTAR) (employees, temporary workers with permanent subcontractors from 2017)	1.3	1.3	1.7	403-2
Group accident severity rate (employees)	0.09	0.11	0.09	403-2
Number of fatal incidents involving Saint-Gobain employees	1	1	2	403-2
Number of fatal incidents connected with the work of subcontractors	5	1	2	
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	2	1	
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	280	276	251	
Number of Health & Safety certified sites at the actual scope (OHSAS 18001 – ILO OSH 2001 – ISO 45000)	364	378	365	
Percentage of sites offering medical inspections at comparable scope	79%	78%	80%	
Number of occupational illnesses in France *Definition reviewed in 2017*	71	51	174	
Absenteeism rate*	3.6%	3.4%	3.6%	
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	7.5%	5.8%	4.9%	403-4

**See the note on methodology in Chapter 9, Section 2.1.*

EMPLOYMENT	2018	2017	2016	GRI
NUMBER OF EMPLOYEES				
Total headcount	181,001 persons	179,149 persons	172,696 persons	
Rate of blue-collar workers	40.5%	40.6%	40.8%	
Fixed-term employment contract*	6.9%	6.7%	5%	102-8
Percentage of fixed-term employment contracts transformed into permanent contract	53.1%	48.6%	44.6%	
Turnover rate	11.0%	9.5%	9.0%	
Resignation rate	6.2%	5.4%	5.1%	
Layoff rate	3.7%	3.2%	2.8%	
Managers turnover	8.9%	8.0%		
RECRUITMENT				
Hiring rate	19.0%	16.1%	16.2%	401-1
Number of employees hired	34,299 persons	28,412 persons	27,635 persons	401-1
Hiring rate of young people under 30	45.8%	44.8%	Unavailable	401-1
Hiring rate of employees aged 50 or older	8.0%	7.3%	7.8%	401-1
Hiring rate by gender M/F	73.6% 26.4%	74.0% 25.6%	74.9% 25.1%	401-1
Manager hiring rate by gender M/F1	68.3% 31.7%	71.6% 28.4%	72.5% 27.5%	401-1
Proportion of youth contracts (work/study programs, apprenticeship etc.) in France	4.2%	3.9%	3.8%	
WORK STRUCTURE				
Share of employees working on shifts	28.6%	28.0%	31.7%	102-8
Rate of overtime	4.4%	4.1%	4.0%	102-8
Rate of temporary employees	9.7%	7.2%	6.7%	102-8
Rate of part-time employees	4.2%	4.1%	2.3%	102-8

* *Basis of calculation: excluding North America, i.e. 91.6% of the reporting scope.*

DIVERSITY	2018	2017	2016	GRI
GENDER DIVERSITY				
Employee distribution by gender (M/F)	77.4%/22.6%	77.8%/ 22.2%	78.1%/21.9%	102-8
Share of women managers among managers **Goal: 25% by 2020**	23.8%	22.6%	22.0%	405-1
Promotion of female managers among all management promotions	27.7%	25.9%	26.6%	405-1
Percentage of female managers hired	31.7%	28.4%	27.5%	
Percentage of female managers among all senior executives (senior management) **Goal: 25% en 2025**	15.2%	12.7%	10.7%	405-1
Percentage of women on the Executive Committee	21.4%	17.6%	12.5%	
Turnover rate by gender	10.7%/11.9%	9.4%/9.8%	10.2%/10.5%	
AGE DIVERSITY				
Proportion of young people under 30	18%	17.8%	Not determined	405-1
Proportion of people between 30 and 50	54%	55.1%	Not determined	405-1
Proportion of people over 50	28%	27.1%	Not determined	405-1
DISABILITY				
Proportion of disabled employees within the Group	1.5%	1.6%	1.7%	405-1
Proportion of disabled employees in France	2.9%	3.0%	3.0%	405-1
Number of workstations fitted out for disabled employees in France	222	182	121	

TALENT DEVELOPMENT	2018	2017	2016	GRI
TRAINING[1]				
Proportion of payroll of training investment	1.1%	1.1%	1.8%	
Employees who have received training during the year	87.7%	87.2%	83.9%	404-1
Average number of training hours per employee per year	23.3 hours	19.2 hours	25.4 hours	404-1
Average number of training hours per employee per year and per gender	Male: 23.5 h Female: 22.9 h	Male: 19.2 h Female: 19.6 h	Male: 24.7 h Female: 27.9 h	404-1
Share of technical and EHS training[2]	41.4% EHS training	46.5% EHS training	51% 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	2018	2017	2016	GRI
ANNUAL REVIEWS				
Proportion of Group employees receiving annual reviews	61.4%	61.3%	64.6%	404-3
Proportion of non-managers receiving annual reviews	56.3%	55.8%	59.5%	404-3
Proportion of managers receiving annual reviews	87.2%	89.1%	90.9%	404-3
SOCIAL RELATIONS				
Percentage of employees with employee representation	53.7%	57.5%	64.5%	
Percentage of Group employees covered by a collective bargaining* agreement (in France)	66% (100% in France)	69% (100% in France)	79.8% (100% in France)	102-41
Number of agreements signed with employee representatives	1,506	1,595	1,569	
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%	7.4%	7.7%	401-2
Number of countries participating in the Group Savings Plan	47	42	41	401-2

** Basis of calculation: excluding North America, i.e. 91.6% of the reporting scope.*

NON-DISCRIMINATION	2018	2017	2016	GRI
TRAINING FOCUSED ON NON-DISCRIMINATION				
E-learning Gender Balance for managers: number of persons	944	1,471	1,157	
EQUALITY OF TREATMENT				
Ratio of basic average male to female wages	0.91	0.91	0.90	405-2
Ratio of basic average male to female wages for junior managers	0.99	0.97	0.97	405-2
Ratio of basic average male to female wages for confirmed managers	0.95	0.95	0.93	405-2
Ratio of basic average male to female wages for senior managers	0.92	0.94	0.94	405-2
Ratio of total average male to female remuneration	0.88	0.87		405-2
Ratio of total average male to female remuneration for junior managers	0.97	0.95		405-2
Ratio of total average male to female remuneration for confirmed managers	0.93	0.93		405-2
Ratio of total average male to female remuneration for senior managers	0.88	0.91		405-2
NUMBER OF INCIDENTS COLLECTED				
Total of incidents including:	*59*	*77*	*65*	*406-1*
Disability	5	5	6	
Harassment	32	49	37	
Ethnic origin	1	1	6	
Gender	0	0	2	
Other	21	22	14	

GROUP VALUES	2018	2017	2016	GRI
PRINCIPLES OF CONDUCT AND ACTION				
Adhere training: proportion of managers trained in the 1st year after joining the Group	96%	80.7%	73.1%	412-2
Incorporation of the Principles into the employee welcome booklets (fixed-term and indefinite-term contracts)	100%	100%		
Number of persons trained during dedicated training sessions provided by the Responsible Development Department	319	857	602	
Number of persons receiving in presence training in the management school	651	619	581	
Number of trainers trained for local deployment	89	82	161	
Percentage of countries with at least one local trainer	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%		
Number of incidents involving child labor	0	0	0	408-1
Number of incidents involving forced or mandatory labor	0	0	0	409-1
Number of incidents involving union freedom	1	1	0	407-1
Other incidents involving human rights	0	0	0	
Reports received through the occupational whistle-blowing system *In 2017, a new occupational whistle-blowing system was set up in Brazil.*	406	210	80	103-2
ANTI-CORRUPTION				
ACT training: training of managers in their first year of presence	95%	87.2%		
Number of cases of corruption reported	0	0	0	205-3
COMPLIANCE PROGRAM				
Compliance statements (Internal Audit program)	699	659	655	
Almost 700 training seminars including anti-corruption, competition and embargos	155	336	209	
COMPLIANCE WITH THE LAW				
Online Training Comply (anti-trust laws): proportion of managers trained in the 1st year after joining the Group	94%	88.7%	86.6%	
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	2018	2017	2016	GRI
TRADE SUPPLIERS AND OUTSIDE CONTRACTORS				
Total trade purchases covered by the Suppliers Charter	83%	83.5%	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.)				
Critical	9%	4%	4%	414-2
To be improved	18%	29%	28%	414-2
Effective	73%	67%	68%	414-2
Number of audited supplier plants	70	46	32	
Critical	0%	0%	0%	
To be improved	69%	62%	69%	
Effective	31%	34%	31%	
Responsibly sourced Timber	95%	94%	94%	
NON-TRADE SUPPLIERS AND OUTSIDE CONTRACTORS				
Training in the Responsible Purchasing policy (including Purchasing Department)	2,734 (1,163)	2,279 (1,171)	1,930 (1,295)	
Total trade purchases covered by the Suppliers Charter	82.6%	80.4%	65.5%	
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.)				
Critical	2.4%	1.8%	1.7%	414-2
To be improved	92.1%	92.7%	93.7%	414-2
Effective	5.5%	5.5%	4.6%	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	8.7%	8.5%	7.7%	
Proportion of audits concluding on a "to be improved" CSR performance	58.8%	60.9%	57.7%	
Proportion of audits concluding on an "effective" CSR performance	32.5%	30.6%	34.5%	
Percentage of certified timber purchases (pallets)	95.9%	96.2%	96.1%	

LOCAL IMPACT	2018	2017	2016	GRI
LOCAL ECONOMIC DEVELOPMENT				
Number of agreements signed with companies to create external jobs in France	9 agreements	40 agreements	28 agreements	203-2
Financial commitments under agreements to assist SMEs in France	€0.34 M	€1.43 M	€1.46 M	203-2
Number of days of technical support to SMEs in France	131 days	211 days	255 days	203-2
Number of external jobs created in France through the support of Saint-Gobain Développement	96 jobs	320 jobs	359 jobs	203-2
SOCIAL AND ECONOMIC FOOTPRINT				
Indirect jobs			549,000	203-2
Induced jobs			190,800	203-2
Ratio indirect jobs/direct jobs			3.20	203-2
SUPPORT TO LOCAL COMMUNITIES				
Investments in projects	€6.8 M	€6.3 M	€6.3 M	
Number of projects received by the International Saint-Gobain Initiatives Corporate Foundation	84	56	49	
Number of projects accepted by the International Saint-Gobain Initiatives Corporate Foundation	49	25	24	
Cultural sponsorship	€1.1 M	€1.1 M	€1.2 M	

Corporate governance 5

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

94%
ATTENDANCE RATE

1 LEAD INDEPENDENT DIRECTOR

42%
WOMEN

2 EMPLOYEE DIRECTORS AND **1** DIRECTOR REPRESENTING EMPLOYEE SHAREHOLDERS

The table below gives a general overview of the members of the Board of Directors and Committees as at February 1, 2019.

Name	Age	Independent (1)	Other terms (5)	ARC (6)	NRC (7)	SCSRC (8)	Years of seniority
Pierre-André de Chalendar	60	No	1			(M) (9)	13
Lydie Cortes	47	No (2)	0				0.5
Iêda Gomes Yell	62	Yes	2		(M)		3
Anne-Marie Idrac	67	Yes	3		(C)(10)		8
Pamela Knapp	60	Yes	3	(M)			6
Agnès Lemarchand	64	Yes	2	(M)			6
Frédéric Lemoine	53	No	0			(M)	10
Dominique Leroy	54	Yes	2				1
Jacques Pestre	62	No (3)	0				8
Denis Ranque	67	No	1		(M)		16
Gilles Schnepp	60	Yes	1	(M)			10
Jean-Dominique Senard (4)	65	Yes	1 (6)			(C)	7
Philippe Thibaudet	38	No (2)	0				0.5
Philippe Varin	66	Yes	1	(C)			6
Number of meetings			**Board: 9**	**ARC: 4**	**NRC: 4**	**SCSRC: 6**	
Attendance rate			**94%**	**100%**	**92%**	**100%**	

(1) According to the criteria set forth in Recommendation 8.5 of the AFEP-MEDEF Code, see Section 1.1.2 of Chapter 5 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 Director independence and gender parity ratios at the Board of Directors, in compliance with the recommendations of the AFEP-MEDEF Code.

(4) Lead independent Director.

(5) Held within listed companies (excluding Compagnie de Saint-Gobain).

(6) Audit and Risk Committee.

(7) Nomination and Remuneration Committee.

(8) Strategy and Corporate Social Responsibility Committee.

(9) Member of a committee.

(10) Chairman of a committee.

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, 2019, 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 and CEO
Member of the Strategy and CSR Committee
Principal office held: Chairman and Chief Executive Officer of Compagnie de Saint-Gobain
Compagnie de Saint-Gobain – "Les Miroirs" – 18 avenue d'Alsace – 92400 Courbevoie France

60 years

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

A graduate of ESSEC, alumnus of École Nationale d'Administration and former Finance Inspector, 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
Principal office held: Product safety coordinator, Saint-Gobain Weber France
Saint-Gobain Weber France – Route de Lyon – 01960 Servas

47 years

Nationality:
French

Number of shares held:
2,005

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 & 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 – "Les Miroirs" – 18 avenue d'Alsace – 92400 Courbevoie France

62 years

Nationality:

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

A graduate in Chemical Engineering from the Federal University of Bahia, in Energy from the University of São Paulo and in Environmental Engineering from the Federal Polytechnic School of Lausanne, Iêda Gomes Yell was Chief Executive Officer of the 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 duties held over the past 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 & Risk Committee and of the Strategy 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 Holdings**
- Director and member of the Compliance Committee of Odebrecht SA (Brasil)

Other offices held outside the Group and expired over the past five years

- Founding Chairman of Energix Strategy Ltd** (up to 2017)

* Listed company
** Foreign company

ANNE-MARIE IDRAC

Independent Director
Chair of the Nomination and Remuneration Committee
Principal office held: Director of companies
Compagnie de Saint-Gobain – "Les Miroirs" – 18 avenue d'Alsace – 92400 Courbevoie France

67 years

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 2018

Expertise and experience

Anne-Marie Idrac is a graduate of Institut d'Etudes Politiques of Paris and an alumna of École Nationale d'Administration.

As a civil administrator, she 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 Chair of the Robert Schuman Foundation.

Her other offices and duties held over the past 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*

Other offices held outside the Group and expired over the past five years

- Chairman of the Supervisory Board of Aéroport Toulouse-Blagnac (up to 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 – "Les Miroirs" – 18 avenue d'Alsace – 92400 Courbevoie France

60 years

Nationality: German

Number of shares held: 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

A graduate of Berlin University and Harvard University, Pamela Knapp started her career in 1987 as a Mergers and Acquisitions Consultant at Deutsche Bank Morgan Grenfell GmbH and at 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 duties held over the past 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 of HKP Group AG (Switzerland)
- Director and member of the Audit Committee of Panalpina World Transport (Holding) Ltd.* (Switzerland)
- 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)

* Listed company

AGNÈS LEMARCHAND

Independent Director
Member of the Audit and Risk Committee
Principal office held: Director of companies
Compagnie de Saint-Gobain – "Les Miroirs" – 18 avenue d'Alsace – 92400 Courbevoie France

64 years

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

A graduate of École Nationale Supérieure de Chimie de Paris (ENSCP) and MIT (USA), and holder of an MBA from INSEAD, Agnès Lemarchand began her professional career 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 Economic, Social and Environmental Council (Economic Activities Section), from March 2012 to April 2014.
His other offices and duties held over the past 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* (Belgium)
- Director of BioMérieux*
- Chairman of Orchad SAS

Other offices held outside the Group and expired over the past five years

- 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)
- Member of the Supervisory Board of Mersen* (up to 2013)

* Listed company

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FRÉDÉRIC LEMOINE

Director
Member of the Strategy and CSR Committee
Principal office held: Chairman of Allegro Cantabile
Compagnie de Saint-Gobain – “Les Miroirs” – 18 avenue d’Alsace – 92400 Courbevoie France

53 years
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

Graduate of École des hautes études commerciales (HEC) and Institut d’Etudes Politiques de Paris, holding a degree in law, an alumnus of École Nationale d’Administration, Frédéric Lemoine is a Finance Inspector.
In 1992-1993, he led the Heart Institute of Ho Chi Minh City, Vietnam, for one year, and became from 2004 to 2013 General Secretary of the Alain Carpentier Foundation which supported that hospital.
From 1995 to 1997, he 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. 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.
His other offices and duties held over the past 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
- Vice Chairman then Chairman of the Board of Directors of Bureau Veritas* (up to 2013 and 2017 respectively)
- Director of Legrand* (2009-2013)

* Listed company

DOMINIQUE LEROY

Independent Director
Principal office held: Chief Executive Officer of Proximus
Compagnie de Saint-Gobain – “Les Miroirs” – 18 avenue d’Alsace – 92400 Courbevoie France

54 years
Nationality:
Belgian
Number of shares held:
1,000
Date of first election:
November 23, 2017
Term start date:
November 23, 2017
Term end date: General Shareholders’ Meeting convened to approve the financial statements for fiscal year 2018

Expertise and experience

Holder of a Master’s in Commercial Engineering and Management from the Solvay Business School (1987), Dominique Leroy spent 24 years in various roles at Unilever. 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. Since January 2014, Dominique Leroy has been CEO of Proximus Group, listed on the first market of Euronext Brussels.
At Proximus Group, she also chairs the Boards of Directors of BICS and Be-Mobile and is a Director of Proximus Art.
Dominique Leroy is currently an independent member of the Supervisory Board and the Governance and Appointments Committee of Ahold Delhaize. She chairs the International Advisory Board of the Solvay Brussels School of Economics and Management.
His other offices and duties held over the past 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
- CEO of Proximus* (Belgium)
- Member of the Supervisory Board and the Governance and Appointments Committee of Ahold Delhaize* (Netherlands)

Other offices held outside the Group and expired over the past five years
- 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 Point.P.
SGDB France – Immeuble le Mozart – 13/15 rue Germaine Tailleferre – 75940 Paris cedex 19

62 years
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 2018

Expertise and experience
Jacques Pestre is a graduate of École supérieure de commerce de Toulouse. Joining the Saint-Gobain Group more than 30 years ago, he began his career 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

* Listed company

DENIS RANQUE

Director
Member of the Nomination and Remuneration Committee
Principal office held: Chairman of the Board of Directors of Airbus
Airbus – 42 avenue Raymond Poincaré – 75116 Paris

67 years
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 2018

Expertise and experience
Denis Ranque is an alumnus of École polytechnique and of École des Mines.
He 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. He left in 2009 due to a change in shareholder control. He is currently Chairman of the Board of Directors of Airbus. He has served as Chairman of the Board of Mines Paris Tech, of the Cercle de l'Industrie and Association Nationale Recherche et Technologie. Denis Ranque is currently Chairman of the Haut Comité de Gouvernement d'Entreprise (High Committee on Corporate Governance) and Chairman of the Board of Directors of the Fondation École polytechnique.
His other offices and duties held over the past 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* (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

GILLES SCHNEPP

Independent Director
Member of the Audit and Risk Committee
Principal office held: Chairman of the Board of Directors of Legrand
Legrand – 128 avenue du Maréchal de Lattre de Tassigny – 87045 Limoges Cedex

60 years

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 is a graduate of École des hautes études commerciales (HEC). He 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.

His other offices and duties held over the past 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*

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

JEAN-DOMINIQUE SENARD

Lead Independent Director
Independent Director
Chairman of the Strategy and CSR Committee
Principal office held: Chief Executive Officer of Michelin (1)
Michelin – 23 place des Carmes-Déchaux – 63040 Clermont-Ferrand Cedex 9

65 years

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

A graduate of École des hautes études commerciales (HEC) and with a master's degree in law, Jean-Dominique Senard began his career with various financial and operational responsibilities within the Total Group from September 1979 to September 1987, then at Saint-Gobain from 1987 to 1996.

From September 1996 to March 2001, he was Finance Director 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 in May 2012.

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 duties held over the past 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

- Chief Executive Officer of Michelin*
- Chairman of the Board of Directors of Renault*

Other offices held outside the Group and expired over the past five years

- Director of SEB* (up to 2013)

* Listed company

(1) As was announced by the Michelin Group on February 9, 2018, Jean-Dominique Senard will step down as Chief Executive Officer of Michelin at the end of the General Shareholders' Meeting of May 17, 2019.

PHILIPPE THIBAUDET

Employee Director
Principal office held: EHS Officer, Saint-Gobain Isover
Saint-Gobain Isover – 19 rue Paul Sabatier – 71102 Chalon-sur-Saône

38 years

Nationality:
French

Number of shares held:
495

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

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PHILIPPE VARIN

Independent Director
Chairman of the Audit and Risk Committee
Principal office held: Chairman of the Board of Directors of Orano and Chairman of the Board of Directors of Areva
Orano – 1 place Jean Millier – 92400 Courbevoie France

66 years

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

An alumnus of École polytechnique and of École des Mines de Paris, 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.
In June 2009, he was appointed as Chairman of the Board of PSA Peugeot Citroën, and left the Group in June 2014.
He is currently Chairman of the Board of Directors of Orano and Chairman of the Board of Directors of Areva. 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 duties held over the past 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 the Board of Directors of Areva

Other offices held outside the Group and expired over the past five years

- Chairman of the Board of Directors of PSA Peugeot Citroën* (2009-2014)
- Director of PCMA Holding BV (2009-2014)
- Director of Faurecia SA* (2009-2014)
- Director of Banque PSA Finance SA (2009-2014)
- Director of BG Group Plc (2006 to 2013)
- Director of EDF* (2014-2016)

* Listed company

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, with which the Company complies, at the proposal of the Nomination and Remuneration Committee.

The Board of Directors, at its meeting of February 21, 2019, 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 concluded that, with the exception of Jean-Dominique Senard and Dominique Leroy, as described below, neither Director, nor any company or group of companies within which they hold office as senior executives, has any business relationship with the Company, its group or its management.

The Board then carried out a quantitative and qualitative review of the particular case of Jean-Dominique Senard, Chief Executive Officer of Michelin, and Dominique Leroy, Chief Executive Officer of Proximus and the business relationship between, on the one hand, the Michelin or Proximus groups respectively and Saint-Gobain on the other.

The business transactions between each of these two 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, and Dominique Leroy, therefore, in their capacity as Director of the Saint-Gobain Group, have no direct or indirect decision-making powers within the implementation or the carrying out of 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 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 and Dominique Leroy 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, 2019, eight Directors out of 11 (*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	✓	✓	✓	✓	✓	✓	✓	×
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 X 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.

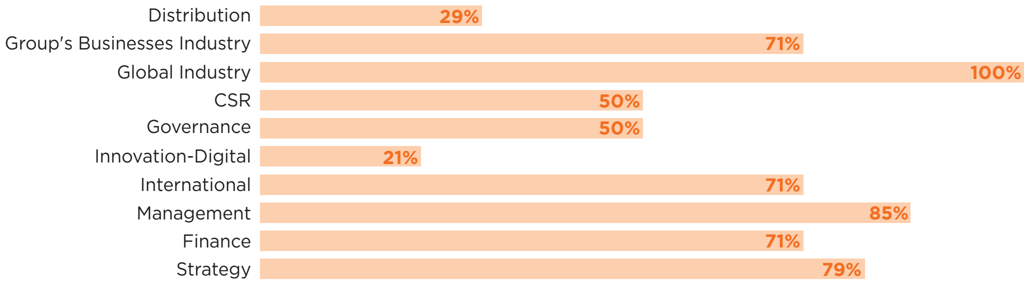
Diversity policy, complementarity of skills and Director experience

As of February 1, 2019, three members of the Board of Directors out of 11 (*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 2018 (see Section 1.2.4 of this Chapter 5), the Board of Directors was of the opinion that progress has been made in the area of diversity (age, gender, experience), especially with the appointment in November 2017 of Dominique Leroy, who is appreciated for her experience as an executive of a listed group and her operational knowledge of the world of distribution and of digital transformation. The Board believes that its size and diversity in terms of gender are 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 Section 1.1.1 of this Chapter 5).

It also believed that it would be desirable, for future recruitments, to strengthen distribution, digital and 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 was 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.

The chart below summarizes the skills of the members of the Board of Directors as of February 1, 2019:



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, 2019, the Board includes five women among 12 members (41.7%), *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, is counted in calculating this proportion, unlike employee representatives Lydie Cortes and Philippe Thibaudet, who are not.

Representation of employee shareholders and employees

Lydie Cortes and Philippe Thibaudet were appointed as Directors representing employees 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 Directors representing employees regardless of the size of the Board of Directors, even though, given its size, the law only required the appointment of one Director representing employees. This initiative anticipated the enactment of the PACTE law and is an expression of Saint-Gobain's culture of social dialogue.

Jacques Pestre, the Director representing employee shareholders, is also appointed in accordance with the law. The Directors representing employees and the 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 Works Council (Vincent Cotrel, elected by the members of the Works Council 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, 2019 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).

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, 2018	Anne-Marie Idrac (June 2011) Jacques Pestre (June 2011) Dominique Leroy (November 2017) Denis Ranque (June 2003)
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)

The General Shareholders' Meeting of June 6, 2019 will be asked to renew the terms of office of Anne-Marie Idrac and Dominique Leroy, who was co-opted in November 2017 to replace Olivia Qiu, who resigned, for the remainder of her term of office (until June 2019), Jacques Pestre and Denis Ranque. These Directors have very good attendance records: in 2018, Anne-Marie Idrac attended all the meetings of the Board and all meetings of the Nomination and Remuneration Committee, which she chairs; Dominique Leroy attended seven Board meetings out of nine (it was the first year of her term); Jacques Pestre attended all meetings of the Board and Denis Ranque attended eight of the nine Board meetings and three of the four Nomination and Remuneration Committee meetings.

Should the terms of office of Anne-Marie Idrac, Dominique Leroy, Jacques Pestre and Denis Ranque be renewed, five out of twelve members of the Board of Directors would be women (a proportion of 41.7% calculated in accordance with the law) and the number of independent Directors on the Board would be eight out of eleven (a proportion of 72.7% calculated in accordance with the rules set by 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 2018 and the renewals proposed to the General Shareholders' Meeting of June 6, 2019:

	General Shareholders' Meeting: June 7, 2018	General Shareholders' Meeting of June 6, 2019
Cessation of duties	None (1)	None
Renewal	Pierre-André de Chalendar	Anne-Marie Idrac (June 2011) (3) Dominique Leroy (November 2017) (2) Jacques Pestre (June 2011) (4) Denis Ranque (June 2003)
Proposed nomination/ratification	Dominique Leroy (2)	None

(1) Lydie Cortes and Philippe Thibaudet, Directors representing employees, were appointed by the Company's Works Council to replace Pascal Laï and Alain Destrain, at the conclusion of the General Shareholders' Meeting of June 7, 2018.

(2) Independent Director, co-opted on November 23, 2017 following the resignation of Olivia Qiu on June 30, 2017.

(3) Independent Director.

(4) Director representing employee shareholders.

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 2018, and as envisaged by the end of the General Shareholders' Meeting of June 6, 2019, subject to the renewal of the Directors listed above:

	As from the General Shareholders' Meeting of June 8, 2017	As from the General Shareholders' Meeting of June 7, 2018	As from the General Shareholders' Meeting of June 6, 2019 (contemplated)
Percentage of independents (1)	73%	73%	73%
Percentage of women (2)	42%	42%	42%
Percentage of foreign nationals (3)	27%	27%	27%

(1) In accordance with the rules set by the AFEP-MEDEF Code.
(2) Excluding employee Directors, in accordance with the law.
(3) Excluding employee Directors appointed under specific mandatory legal provisions.

Summary of the composition of the Board of Directors Committees

The following tables show the changes in the composition of the three Committees of the Board of Directors during fiscal year 2018 and, if applicable, as expected by the end of the General Shareholders' Meeting to be held on June 6, 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	Since October 27, 2017	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, 2018 in connection with the assessment of the Board conducted by the Lead Independent Director, the Board of Directors concluded that 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.

Moreover, the decision to combine the two roles is in line with the Group's longstanding management tradition. 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 two-thirds 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 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 Chairman 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 Section 1.1.2 of Chapter 9.

The Lead Independent Director reports to the Board of Directors on the completion of his mission on an annual basis.

Activities during fiscal year 2018

In 2018, the Lead Independent Director attended all meetings of the Board of Directors and the Strategic and Corporate Social Responsibility Committee, which he chairs, as well as half of the meetings of the Nomination and Remuneration Committee.

At the meeting of the Board of Directors on February 21, 2019, Jean-Dominique Senard presented a review of his activity as Lead Independent Director for fiscal year 2018. This included:

- working with the Chairman 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 Chairman of the Nomination and Remuneration Committee;
- chairing, or co-chairing with the Chairman of the Nomination and Remuneration Committee depending on the topics being addressed (notably the "Transform & Grow" Transformation Program and the appointment of a Chief Operation Officer), meetings of the Board held without the Executive Directors present ("executive sessions") (see Section 1.2.2 below);
- conducting the assessment of the organization and operation of the Board and the Committees, which took place as follows:

  The Lead Independent Director reviewed the draft questionnaire to be submitted to the Directors prepared by the General Secretary, as well as the responses provided, all Directors having had the opportunity to speak with the Lead Independent Director on this topic.

  The Lead Independent Director spoke with the Chairman and Chief Executive Officer and the Chairman of the Nomination and Remuneration Committee, and individually with Directors who wished so, about the Directors' individual contributions to the work of the Board, in light of their skills and their respective participation in discussions.

  The Lead Independent Director also presented the results of the Board's self-assessment to the Directors at an executive session and led the debate in order to draw conclusions. 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);
- 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 2018 General Shareholders' Meeting and, at the end of 2018, in preparation for the 2019 General Shareholders' Meeting;
- discussing with the Chairman of the Nomination and Remuneration Committee the appropriateness of and conditions for reconfiguring that Committee;
- reviewing the draft agendas for the meetings of the Board of Directors and the Committees in fiscal year 2019;
- 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 first year in that office to shareholders at the General Shareholders' Meeting held on June 7, 2018.

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, 2019, which incorporates successive revisions of the AFEP-MEDEF Code, 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 at least once per year of the Saint-Gobain Group's strategic guidelines;
- 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 regulation affords 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 General 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). In addition, the Chairman and Chief Executive Officer left the November Board meeting during the examination of the proposed appointment of the Chief Operating Officer.

The Board intends to continue to meet in 2019 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 Chairman 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, Directors receive copies of all press releases issued by the Company, along with relevant information, if required, about events or transactions that are material for the 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 attendance fees and the right of Directors to additional training on the specific activities of the Saint-Gobain Group, its businesses and its business lines.

1.2.3 Principal activities of the Board and Committees in 2018

a) Principal activities of the Board in 2018

The Board of Directors held nine meetings in 2018. The attendance rate of the Directors in office as of February 1, 2019 for all of those sessions was 94%. Seven of the fourteen Directors attended every meeting of the Board. Five Directors missed only one meeting. Two Directors missed two meetings. No Director missed more than two meetings.

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, 2019.

First and last name (function)	Attended nine Board meetings [(1)]	Attended four meetings of the Audit and Risk Committee	Attended four meetings of the Nomination and Remuneration Committee	Attended six 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	N/A	N/A
Iêda Gomes Yell *(Independent Director)*	89%	N/A	100%	N/A
Anne-Marie Idrac *(Independent Director)*	100%	N/A	100%	N/A
Pamela Knapp *(Independent Director)*	100%	100%	N/A	N/A
Agnès Lemarchand *(Independent Director)*	78%	100%	N/A	N/A
Frédéric Lemoine *(Director)*	89%	N/A	N/A	100%
Dominique Leroy *(Independent Director)*	78%	N/A	N/A	N/A
Jacques Pestre *(Director representing employee shareholders)*	100%	N/A	N/A	N/A
Denis Ranque *(Director)*	89%	N/A	75%	N/A
Gilles Schnepp *(Independent Director)*	100%	100%	N/A	N/A
Jean-Dominique Senard *(Lead Independent Director)*	100%	N/A	N/A	100%
Philippe Thibaudet *(Employee Director)*	100%	N/A	N/A	N/A
Philippe Varin *(Independent Director)*	89%	100%	N/A	N/A

(1) The 89% rate corresponds to one missed session and the 78% rate to two missed sessions.

The principal topics discussed during Board of Directors meetings are listed below.

Monitoring of the strategic orientations of the Group and its Activities

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 planned acquisitions and disposals, including the acquisition by Saint-Gobain of an interest in Sika (see Section 5.4.2 of Chapter 2), comparison with major competitors or status of a Sector, Delegation or Activity, after questioning, if necessary, members of the senior management of the Activities in question.

As happens every year during the September strategic seminar, the Board of Directors discussed the strategic plans of the Group's Sectors and principal Activities with their operational managers, including, on a Sector-by-Sector basis, the implementation of the roadmap associated with digital transformation and presence in emerging countries.

The Board also monitored the progress of the Group's digital transformation roadmap. It also discussed the creation of economic and stock market value.

The Board of Directors also devoted an exceptional session to the "Transform & Grow" Group transformation program announced on November 26, 2018 (see Section 2 of Chapter 1).

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 7, 2018, 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. It also examined related-party agreements and commitments authorized in 2018 and those entered into in prior years whose execution continued during fiscal year 2018.

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 2018 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 discussed the revised cyber defense plan.

On several occasions, it reviewed the position of the Company and Group with regard to certain risks, procedures, litigation (specifically asbestos, competition, the Grenfell Tower fire in the United Kingdom and the environment) and the evolving regulatory environment. The Corporate Secretary reported on the implementation and changes in the Group's Compliance program (see Chapter 3, Section 1.1.2). In addition, the Board reviewed the measures taken by the Saint-Gobain Group to comply with the Sapin II Law, particularly with regard to the fight against corruption, and with the General Data Protection Regulation (GDPR).

Lastly it 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 2.1);
- climate change and reducing CO_2 emissions (carbon impact of production and contribution of Saint-Gobain solutions);
- CO_2 and energy roadmaps, "R&D, CO_2 and energy" innovation programs;
- circular economy (impacts and objectives of the Saint-Gobain Group, existing initiatives within the Group);
- compliance program (anti-trust, embargoes, fight against corruption);
- 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);
- environment policy in particular biodiversity (see Chapter 3, Section 2.4), and more generally;
- corporate social responsibility policy within the Group (participation for the third consecutive year, at a very satisfactory level, in the Dow Jones Sustainability Index) (see Chapter 7, Section 3.1);
- monitoring of the SCORE tool (evaluation of products for construction according to sustainable performance criteria) (see Chapter 3, Section 2.1.3).

Furthermore, in February 2018, the Directors attended a half-day seminar devoted to climate change and its consequences for the businesses. External experts, recognized internationally and in complementary fields of expertise, gave presentations to the Directors and discussed their following approaches with them:

- environmental: understand the causes and consequences of climate change to measure the importance of limiting temperature rises to 2°C;
- economic: assess the risks and opportunities connected with the consequences of climate change: cost of energy transition, carbon tax, role and expectations of investors, etc.;
- political and societal: anticipate the risks and opportunities and favor the emergence of new business models for the companies.

This seminar was intended to give every Director a better understanding of the challenges of climate change 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 and discussed the results of this assessment (see Chapter 5, Section 1.2.4).

At the proposal of the Lead Independent Director, it discussed the combining of the roles of Chairman of the Board and Chief Executive Officer, particularly in view of the renewal of Pierre-André de Chalendar's term of office as a Director by the General Shareholders' Meeting of June 7, 2018. On that occasion, the Board decided to renew his term of office as Chairman and Chief Executive Officer of Compagnie de Saint-Gobain.

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.

On the proposal of the Chairman and Chief Executive Officer and the recommendation of the Nomination and Remuneration Committee, it appointed Benoit Bazin as Chief Operating Officer effective January 1, 2019 (see Chapter 5, Section 1.3).

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, as well as amendments to the Compagnie de Saint-Gobain bylaws regarding the number of employee Directors on the Board. It made proposals for the renewal of terms of office and composition of the Committees in view of the General Shareholders' Meeting of June 6, 2019 (see Chapter 5, Section 1.1.4).

Lastly, it ruled on the training program of the employee Directors.

Compensation of the Chairman and Chief Executive Officer and the Chief Operating Officer and long-term employee profit sharing

The Board reviewed and prepared the various components of Pierre-André de Chalendar's compensation (fixed and variable compensations and allocations of stock options and performance shares) and their respective balance (see Chapter 5, Section 2.2). It decided the general principles of the Chairman and Chief Executive Officer Compensation policy for 2018 and, at its February 21, 2019 meeting, for 2019 (see Chapter 5, Section 2.2.2 (e)). The Board also authorized the renewal of the regulated agreements relating to commitments made to Pierre-André de Chalendar upon the renewal of his term of office as Director (see Chapter 5, Section 5).

In addition, in the context of the appointment of Benoit Bazin as Chief Operating Officer, the Board, at its meeting held on November 22, 2018, on the proposal of the Nomination and Remuneration Committee, set some of the components of his compensation as Chief Operating Officer: the fixed portion, the cap for the variable portion, allocation ceilings, hedging rules, the retention obligation and what would be done with his long-term compensation in the event of the termination of his duties as a corporate officer. The Board also authorized the signing of regulated agreements regarding commitments made to the Chief Operating Officer: a non-compete agreement, a contractual termination indemnity, a supplementary defined-benefit pension plan and life insurance and health care plans. Finally, at its meeting on February 21, 2019, the Board set the quantifiable and qualitative objectives applicable to the variable portion of the Chief Operating Officer's compensation for 2019 (see Chapter 5, Section 2.2.3).

The Board further approved the implementation of and adopted the principal features of the 2018 stock options and performance share plans, and set the performance criteria for these plans, from which the Executive Director and certain categories of employees may benefit (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 2019, up to a maximum of six 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 in 2018

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 in 2018 were regularly presented to the Board in the form of activity reports and proposals.

Composition of Committees

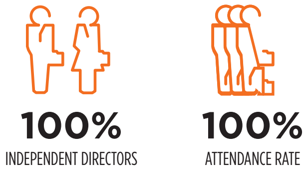
The Board's practice is to allow some time for all new Directors to adapt before proposing a position on a committee, since active participation on a committee requires familiarity with the operation of the Board of Directors and its committees, and the ability to understand the major challenges with 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, Director representing the employees, as members of the Nomination and Remuneration Committee at the close of the General Shareholders' Meeting of June 6, 2019.

In view of the replacement of employee Directors and the renewal of terms of Directors submitted to the General Shareholders' Meeting of June 6, 2019, the composition of the Committees has been modified as indicated in Section 1.1.4 of Chapter 5 ("Summary of changes in the composition of the Committees of the Board of Directors").

Audit and Risk Committee

Composition	
PHILIPPE VARIN	**AGNÈS LEMARCHAND**
Chairman	Member
PAMELA KNAPP	**GILLES SCHNEPP**
Member	Member



At February 1, 2019, 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, 2019, 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:
  - processes used to prepare financial information,
  - 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 Auditor's independence;
- it ensures that any questions relating to the preparation and control of accounting and financial information are followed up, 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;
- 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 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 2018

The Audit and Risk Committee met four times in 2018, in February, April, June, 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;

- report 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 2018, its audit plan for 2019 and its report on major fraud incidents;
- review of work related to the 2018 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 reviewed developments in cyber threats and the deployment of the revised cyber defense plan following the cyber attack on June 27, 2017. It also tasked an external service provider with an audit of the Saint-Gobain Group's cyber security and reviewed and discussed its results;
- the Audit and Risk Committee reviewed the measures taken by the Saint-Gobain Group to comply with the Sapin II Law, particularly with regard to the fight against corruption, and with the General Data Protection Regulation (GDPR);
- review of the Group's fiscal policy;
- 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 2017 for their auditing assignments, as well as for their other services (see Chapter 9, Section 1.4);
- proposal to the Board of Directors to renew the term of KPMG Audit as Statutory Auditor at the General Shareholders' Meeting of June 7, 2018.

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 22, May 23, July 26 and September 27, 2018.

Nomination and Remuneration Committee

Composition	
ANNE-MARIE IDRAC Chair	**PASCAL LAÏ** Member (until June 7, 2018)
IÊDA GOMES YELL Member	**DENIS RANQUE** Member

2/3
INDEPENDENT DIRECTORS, INCLUDING THE CHAIRMAN OF THE COMMITTEE

92%
ATTENDANCE RATE

As of February 1, 2019, the Nomination and Remuneration Committee consisted of two independent Directors out of a total of three members (2/3), including its Chairman. An employee Director is expected to join the Committee at the time of 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), along with one additional independent Director, Dominique Leroy. The employee 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, 2019, 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 independence 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 Chairman, it obtains assurance from the Chairman and Chief Executive Officer that a candidate has been identified for succession to his 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 Chairman and Chief Executive Officer's compensation package, and the criteria to be applied to determine his bonus, as well as the other aspects of his position;
- 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 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 Group General Management.

Activities in 2018

The Nomination and Remuneration Committee met four times in 2018, in February, March, September and November with an attendance rate of 92%.

The following were the major topics of discussion:

- the Committee made recommendations to the Board on Pierre-André de Chalendar's 2017 variable part of his compensation. It also made proposals to the Board regarding the Compensation policy for the Chairman and Chief Executive Officer for 2018 pursuant to the "say on pay" ex ante regime, particularly as regards the amount of the fixed compensation and the cap, the criteria and the targets to use to determine the variable part of his compensation for 2018, the rules on caps to be applied to allocations of stock options and performance shares in 2018, and what would be done with his long-term compensation in the event of the termination of his duties as Chairman and Chief Executive Officer (see Chapter 5, Section 2.2.2 (e)). 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 2018 (see Chapter 5, Section 2.2). In addition, the Committee reviewed and recommended to the Board the authorization of the regulated agreements relating to commitments made to Pierre-André de Chalendar upon the renewal of his term of office as Director by the General Shareholders' Meeting of June 7, 2018;
- 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. It also 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, particularly as regards the amount of the fixed compensation and the cap, the criteria and the targets to use to determine the variable part of his compensation for 2019, the rules on caps to be applied to allocations of stock options and performance shares in 2019, and what would be done with his long-term compensation in the event of the termination of his duties as Chief Operating Officer. In addition, the Committee recommended to the Board the authorization of the regulated agreements relating to commitments made to Benoit Bazin (see Chapter 5, Section 2.2.3);
- following discussions between the Chairman 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);
- the Committee also discussed the stock option and performance share plans to be renewed by the Board – all consisting of long-term compensation, deferred, variable, and performance-based compensation payable to the Executive Director and certain employees, all subject to performance criteria being met – and specifically set the service and performance criteria applying to these plans;
- the Committee suggested that the Board amend the Compagnie de Saint-Gobain bylaws to allow the appointment of two employee Directors to the Board, regardless of its size (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 2017 Registration Document.

The Committee reported to the Board on its activities and offered its recommendations during the Board meetings of February 22, March 22, September 27 and November 22, 2018.

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, 2019, 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 2018

The Strategy and CSR Committee met six times in 2018, in February, March, May, July, September and November, with an attendance rate of 100%.

During these meetings, the Committee discussed the 2018 budget, the outlook and development of the Group's business, the Saint-Gobain Group's "Transform & Grow" transformation program announced on November 26, 2018, the effects on the Group of various economic scenarios, planned acquisitions and disposals, including the plan to acquire an interest in Sika (see Chapter 2, Section 5.4.2) and all strategic issues presented to the Board. More specifically, the Committee examined certain aspects of the Group's strategy (specifically the status of a sector, Delegation or Activity). 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), CO_2 and energy roadmaps, "R&D, CO_2 and energy" innovation programs, and the SCORE tool for assessment of construction products based on sustainable performance criteria.

The Committee reported to the Board on its activities and offered its recommendations during the Board meetings of February 22, March 22, July 26, September 27 and November 22, 2018.

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 2016) every three years.

In the intermediate years, it is conducted using a questionnaire sent to each Director, and, in accordance with the wishes expressed by the Directors on completion of the 2017 assessment for those who wish so to obtain feedback on their individual contribution, the self-assessment also included the following three steps in 2018:

- confidential review of each Director's individual contribution by the Chairman 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 who are members of a Board committee also report on the operation of the Committees in which they participate.

The organization of the 2018 assessment was decided by the Board at its meeting of September 27, 2018, upon proposal from the Lead Independent Director, for the first time. The thirteen Directors in office as of that date were consulted and participated in the Board's assessment process. The Lead Independent Director led the self-assessment and reported the results at the Board of Directors meeting of November 22, 2018, making proposals for improvement.

The Lead Independent Director, the Chairman of the Nomination and Remuneration Committee and the Chairman and Chief Executive Officer have reviewed the effective contributions of each Director to the Board's work, with regard to their competencies and their respective participation in the discussions. The detailed questionnaire that each Director completes that specifically addresses the Board's operation, allows them, if they so wish, to freely express their assessment of the other Directors' individual contributions. 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.

General observations

The assessments highlighted the satisfaction of the Directors with the significant progress made, over several years. This positive perception is therefore confirmed in the long term.

A vast majority of the Directors are 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, are absolutely satisfactory.

The Directors considered indeed that the Board operates well, is independent, competent, is balanced and diversified in its composition, and addresses all the topics within its remit. They were satisfied with the relevance, quality and clarity of the information made available to them for the performance of their mission, in particular the information on the cybersecurity risks and the challenges of the Saint-Gobain Group's "Transform & Grow" transformation program. 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, the contribution and the report of the preparatory work of the Committees, as well as the availability of the management.

The Directors also appreciated the half-day seminar organized specifically for them by the Group devoted to climate change and its consequences for the businesses and noted the usefulness of on-site visits and of the strategic seminar, which allowed them in particular to meet the Sector and Business Directors and the Delegates. In addition, they praised the quality of the work of the Board Committees. Finally, the Directors appreciated the availability of a digital platform to perform their missions that allowed easy sharing of documents in digital format.

Composition of the Board of Directors

The Board's size has changed over the last four 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 after 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, especially with the appointment of Dominique Leroy in November 2017, who is appreciated for her experience as an executive of a listed group and her operational knowledge of the world of distribution and of digital transformation.

The Directors believed that it would be desirable, for future recruitments, to strengthen distribution, digital and 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 was 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 2018 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.

Results of implementing the 2018 recommendations and paths to improvement in 2019

Directors believe that the recommendations formulated upon completion of the 2017 assessment were duly taken into account in 2018. These include the recruitment of a young person from outside France with a Digital and/or Distribution profile and solid operational experience in the person of Dominique Leroy, continued in-depth exploration of strategic matters and plans for acquisitions, value creation (including in the context of acquisitions), digital transformation and technology risks and opportunities analysis (including developments of the cybersecurity risks), and improved Director familiarity with 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:

- for future recruitments, look for a younger Director (from outside France if necessary), with a digital/e-commerce profile or a current executive in another major group (or, failing that, a former executive), or a profile that has experience with Distribution. Ideally, the new Director should have operational experience in one of the fastest growing countries in which the Saint-Gobain Group operates (Asia-China, India-United States of America, Africa);
- explore the following topics in more detail: value creation, changes in the share price, speed of activity portfolio turnover, changes in the business model and jobs related to digitization, analysis of technological risks and opportunities;
- monitor the implementation of the Group's new organizational structure and its perception in the market;
- build Directors' knowledge of the Group's main operational managers;
- organize training sessions on topics of interest for Saint-Gobain's activities;
- appoint an employee Director to the Nomination and Remuneration Committee to replace the outgoing employee Director.

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 2018, the Board of Directors visited the Halle de Pantin in France, which gathers the main SGDB France brands.

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 Group General Management (see Chapter 1, Section 3.2).

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 General Management

1.3.1 Chairman and Chief Executive Officer and Chief Operating Officer

Chairman and Chief Executive 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 3.2).

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. More specifically, he is in charge of the Saint-Gobain Group's transformation program announced on November 26, 2018 and the management of the four regions : Northern Europe ; Southern Europe, Middle-East and Africa ; the Americas and Asia-Pacific (see Chapter 1, Section 2). He also participates in meetings of the Board of Directors.

Benoit Bazin is a graduate of the École polytechnique and Ponts Paris Tech and specialized in economics at the Institut d'études politiques of Paris. He also holds a Master of Science degree from the Massachusetts Institute of Technology.

In 1995, he joined the French Ministry of Economy and Finance as rapporteur to the Interministerial 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.

Benoit Bazin 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. From 2009 to the end of 2015, Benoit Bazin managed the Building Distribution Sector and, from 2016 to the end of 2018, the Construction Products Sector. 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 since January 1, 2019 by an Executive Committee, which now comprises 14 members (see Chapter 1, Section 3.2). Its new composition reflects the new organizational structure of the Saint-Gobain Group, which aims to increase the Group's proximity to its end markets. In addition to the Chairman and Chief Executive Officer and the Chief Operating Officer, the Senior Vice Presidents in charge of the regional entities and the global High Performance Solutions entity are members (see Chapter 1, Section 2).

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 Director 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 – attendance fees

Directors receive attendance fees, the amount of which has been set at €1.1 million by the General Shareholders' Meeting of June 5, 2014 with effect from January 1, 2015.

The rules for distribution of attendance fees, applicable since the 2015 fiscal year, and agreed by the Board of Directors on September 25, 2014, are the following:

- the Chairman and Chief Executive Officer of Compagnie de Saint-Gobain receives no attendance fees;
- the other 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 fees are 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.

The total fixed and variable Director's fees paid to each individual Director in respect of 2017 and 2018 are shown in Table 3 below.

Table 3 – Summary of each Director's compensation (AMF nomenclature)

Non-Executive Directors	Gross amounts received *(in EUR)*	
	for 2018	for 2017
Lydie Cortes (1) (2)	35,867	-
Alain Destrain (2) (3)	38,002	66,717
Jean-Martin Folz (4)	-	50,481
Bernard Gautier (4)	-	46,175
Iêda Gomes Yell	85,715	70,315
Anne-Marie Idrac	93,922	83,454
Pamela Knapp	91,172	78,793
Pascal Laï (2) (3)	46,469	83,456
Agnès Lemarchand	80,257	83,456
Frédéric Lemoine	92,992	101,259
Dominique Leroy (5)	62,954	2,577
Jacques Pestre	73,869	71,380
Olivia Qiu (6)	-	30,735
Denis Ranque	82,077	74,978
Gilles Schnepp	91,173	79,149
Jean-Dominique Senard	101,199	87,760
Philippe Thibaudet (1) (2)	35,867	-
Philippe Varin	88,465	89,315
TOTAL	**1,100,000**	**1,100,000**

(1) Director starting 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 Directors, 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 Alain Destrain) and the Confédération Générale du Travail (for Pascal Laï and Philippe Thibaudet), respectively, all attendance fees (net of social charges) paid by the Company for their terms as Directors. The net amount of these Director's fees is consequently paid directly by Compagnie de Saint-Gobain to these trade unions.

(3) Director until June 7, 2018.

(4) Director until June 8, 2017.

(5) Director co-opted by the Board of Directors on November 23, 2017 (see Chapter 5, Section 1.1.4).

(6) Director until June 30, 2017.

With the exception of the Employee Directors and the Director representing employee shareholders, who received compensation for their salaried positions, none of the non-Executive Directors received any other compensation from Compagnie de Saint-Gobain or any Saint-Gobain subsidiary for 2017 and 2018.

2.2 Compensation of executive corporate officers

2.2.1 General principles of the Compensation policy for 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 also seeks to ensure that the allocation 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 year does not represent a disproportionate share of their total maximum compensation for that year and has conditioned these allocations to demanding ceiling and holding rules (see paragraph on "Long-term compensation policy" of Section 2.2.2 (b) for the Chairman and Chief Executive Officer and Section 2.2.3 for the Chief Operating Officer).

2.2.2 Compensation and benefits allocated to the Chairman and Chief Executive Officer

a) Summary of compensation and benefits allocated to the Chairman and Chief Executive Officer for fiscal year 2018

The compensation policy of the Chairman and Chief Executive Officer for 2018 was decided by the Board, at its meeting of February 22, 2018, based on the recommendations of the Nomination and Remuneration Committee and was approved by the General Shareholders' Meeting of June 7, 2018 (seventh Resolution).

The following table presents a summary of the total compensation, stock options and performance shares allocated to Pierre-André de Chalendar, Chairman and Chief Executive Officer, for the fiscal years ended December 31, 2017 and 2018. No performance unit has been allocated since the last plan implemented in 2015.

Table 1 – Summary of compensation, stock options and performance shares allocated to the Chairman and Chief Executive Officer (AMF nomenclature)

(in EUR before social charges and income tax)	2018	2017
Pierre-André de Chalendar, Chairman and Chief Executive Officer		
Compensation for the year *(see Table 2 for details)*	2,314,317	2,590,877
Value in 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	293,626
Value of performance shares granted during the year *(see Table 6 for details)*	1,090,961	1,710,478
TOTAL	**3,514,426**	**4,594,981**

b) Compensation and benefits allocated to the Chairman and Chief Executive Officer for fiscal year 2018

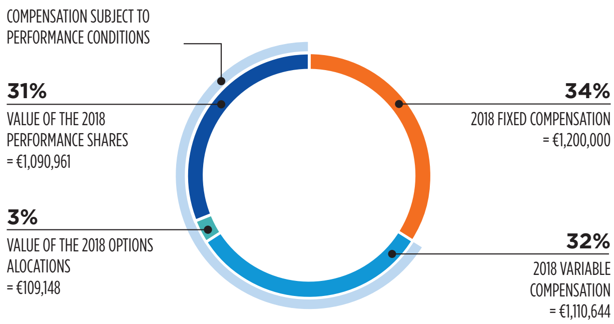
The table below presents a breakdown of the fixed and variable compensation and other benefits allocated to Pierre-André de Chalendar, Chairman and Chief Executive Officer, for the fiscal years ended December 31, 2017 and 2018.

Table 2 – Summary of the compensation of the Executive Director (AMF nomenclature)

	2018		2017	
(in EUR before social charges and income tax)	Amounts due (2)	Amounts paid (3)	Amount due (2)	Amount paid (3)
Pierre-André de Chalendar, Chairman and Chief Executive Officer				
Fixed compensation (1)	1,200,000	1,200,000	1,100,000	1,100,000
Annual variable compensation (1)	1,110,644	1,487,270	1,487,270	1,529,879
Multi-year variable compensation	0	0	0	0
Exceptional compensation (1)	0	0	0	0
Directors' attendance fees (4)	0	0	0	0
Benefits in kind: company car	3,673	3,673	3,607	3,607
TOTAL	**2,314,317**	**2,690,943**	**2,590,877**	**2,632,531**

(1) On a gross basis before taxes.
(2) Compensation allocated during the year, regardless of payment date.
(3) Compensation paid during the year.
(4) Attendance fees allocated to Compagnie de Saint-Gobain's Chairman and Chief Executive Officer for his Director's duties in non-Group companies, in which the Group holds stakes, are repaid to Compagnie de Saint-Gobain in their entirety.

The following chart presents the distribution of the various components of the compensation of Pierre-André de Chalendar, Chairman and Chief Executive Officer, paid or granted in respect of fiscal year 2018.



The various components of the compensation paid or granted to Pierre-André de Chalendar in respect of fiscal year 2018 were decided by the Board of Directors at its meetings of February 22, 2018, November 22, 2018 and February 21, 2019, as follows:

Fixed compensation

The fixed compensation of the Chairman and Chief Executive Officer is commensurable 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. This amount is reviewed at relatively long intervals of time.

In application of these principles, taking into account the fact that the fixed compensation of Pierre-André de Chalendar has remained unchanged since his appointment as Chairman and Chief Executive Officer in 2010, the operational performance and the very good 2017 results, the Board decided on February 22, 2018, on the proposal of the Nomination and Remuneration Committee, upon the renewal of Pierre-André de Chalendar's term of office and for its full term, to increase said fixed compensation from €1,100,000 to €1,200,000 for 2018. The Committee noted that, on the one hand, this increase was less than the increase of the base salaries within the Group in France since 2010, and that on the other hand, with the help of an external firm, this level of compensation was at the median for industrial CAC 40 companies comparable to Saint-Gobain in terms of size of sales, workforce or international footprint.

Annual variable compensation

The annual variable compensation, expressed as a percentage of his annual fixed compensation is allocated to the Chairman and Chief Executive Officer in recognition of his contribution to the Group's results for the year.

At its meeting of February 22, 2018, based 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 2018 unchanged, at 170% of his annual fixed compensation (cap unchanged since 2014).

Based on the recommendation of the Nomination and Remuneration Committee, during the same meeting, the Board also decided on the components and objectives of Pierre-André de Chalendar's 2018 variable compensation, as follows (structure unchanged 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:
  - ROCE (Return on Capital Employed),
  - the Group's operating income,
  - the Group's recurring net income per share, and
  - "OFCF" (Operating Free Cash Flow);
- a qualitative portion consisting of one-third, based on the following three objectives:
  - continuation of the Group's digital transformation,
  - implementation of the corporate social responsibility policy, and
  - continuation of the Group's development strategy.

Variable compensation owed for fiscal year 2018 to the Chairman and Chief Executive Officer was set by the Board of Directors at its meeting of February 21, 2019, at the proposal of the Nomination and Remuneration Committee, as follows:

		Weighting of objectives	Possible change in compensation for each objective	Percentage completion	Completion by amount *(in EUR)*
Quantifiable objectives* (2/3), of which:	ROCE	25%	0 to 100%	72%	244,800
	Group operating income	25%	0 to 100%	37%	125,800
	Group recurring net income per share	25%	0 to 100%	61%	207,400
	OFCF	25%	0 to 100%	0%	0
	Quantifiable total	2/3	-	42.5%	578,000
Qualitative objective (1/3)	**Qualitative (global)**	1/3	0 to 100%	78.33%	532,644
TOTAL VARIABLE SHARE		**100%**	**-**	**54.44%**	**1,110,644**

* *For each quantifiable objective, the corresponding portion of variable compensation becomes payable if from 91% to 95% of the budget is achieved, depending on the objective concerned, and it reaches its maximum if the objective reaches 108% to 110% of the budget, depending on the objective concerned (with base 100 corresponding to the budget). If actual performance is less than the above-mentioned thresholds from 91% to 95%, the portion of variable compensation corresponding to the objective in question is equal to 0.*

When the budget is met, the variable compensation determined according to all quantifiable criteria is 68% of the fixed part of his compensation. Within the Group, the budget is based on ambitious objectives that are not always met and the variable compensation's objectives are therefore challenging.

The Board meeting held on February 21, 2019, at the proposal of the Nomination and Remuneration Committee, set at 78.33% the global level of achievement of the three qualitative objectives applying to the 2018 variable compensation indicated above. It took the following main achievements into consideration in particular:

- very good continuation of the Group's digital transformation, demonstrated by: monitoring of key indicators; the digital performance of Building Distribution compared to competitors (particularly in France and the Nordic countries); 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 implementation of the right measures and a good level of protection of the Group's infrastructures, 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 2017 (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) ; excellent rates of e-learning training on the three priority subjects: competition, anti-corruption and embargo ; further implementation of the Sapin II law and the duty of vigilance (in particular through risk mapping, questionnaires and tests) with the finalization of risk control plans in General Delegations/regions and countries identified at risk, and the definition of action plans where required (see Chapter 3, Section 1.2) ; establishment of an action plan including initiatives for the realization of 2°C scenarios with a score of A for the new CDP questionnaire and participation in external (Science Based Target, Global Alliance for Building and Construction) or internal Group working groups to align with a 2°C trajectory in accordance with the commitment to follow up on TCFD recommendations (see Chapter 3, Section 4.1); and
- very good continuation of the Group's development strategy: good organic growth given the macroeconomic context ; very favorable outcome of the Sika matter from a financial perspective (see Chapter 2, Section 5.4.2) ; several actions carried out to accelerate commercial transformation in Building Distribution; launch of the "Transform & Grow" plan (see Chapter 1, Section 2).

In all, Pierre-André de Chalendar's total compensation (fixed and variable) for fiscal year 2018 represented €2,310,644, a decrease of 10.69% from 2017.

Long-term compensation

Cap on the Chairman and Chief Executive Officer's 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 the 2018 allocations of stock options, performance shares and performance units could not represent a value (according to IFRS standards) greater than 85% (compared to 100% in previous years) of his total gross maximum compensation for the same year (fixed compensation plus maximum variable compensation for the same year).

In 2018, stock options and performance shares granted to the Chairman and Chief Executive Officer represented a total value (according to IFRS standards), at the time of their grant, of €1,200,108 corresponding to 37% of his 2018 total maximum gross compensation.

Cap on the Chairman and Chief Executive Officer's allocation relative to the overall allocation envelope

At its meeting of February 22, 2018, the Board of Directors decided, as in previous years, that the Chairman and Chief Executive Officer could not receive more than 10% of the overall grants of performance shares and performance units allocated under long-term compensation plans to be set up in 2018.

Hedging rules

The Chairman and Chief Executive Officer formally undertook not to hedge his risk either on stock options or on shares allocated upon the exercise of stock options, on performance shares or on performance units he has been or will be granted, until the cessation of his duties. To the best of the Company's knowledge, the Chairman and Chief Executive Officer has not hedged his risk.

Closed periods

Under the Board's internal regulations (see Chapter 9, Section 1.1.2), Pierre-André de Chalendar, as a Director, is required to abstain from trading in Saint-Gobain shares for thirty days prior to Board meetings at which the annual and semi-annual consolidated financial statements are examined, for fifteen days preceding publication of quarterly consolidated net sales, as well as on the day following the publication of the annual and half-year results. Outside these periods, he is also required, as are the other Directors, to abide by the provisions on the prevention of insider trading.

Stock options

The following tables show the allocation of stock options to the Chairman and Chief Executive Officer in 2018 and the options he exercised.

Table 4 – Stock options granted in 2018 to the Chairman and Chief Executive Officer (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 year	Exercise price	Exercise period
Pierre-André de Chalendar	11/22/2018	Not yet defined	109,148	58,000	€32.24	from 11/22/2022 to 11/22/2028

Table 5 – Stock options exercised in 2018 by the Chairman and Chief Executive Officer (AMF nomenclature)

Name	Plan date	Type of options (purchase or subscription)	Number of options exercised during the year	Exercise price
Pierre-André de Chalendar	11/19/2009	new shares	10,000	€36.34
	11/20/2008	new shares	11,441	€25.88

At its meeting of November 22, 2018, the Board granted 58,000 stock options to Pierre-André de Chalendar, as in 2017, representing approximately 0.01% of the share capital, and less than the sub-cap set by the General Shareholders' Meeting on June 2, 2016.

The features of the stock options, specifically the service and performance conditions to which the allocation is subject and which apply to the Chairman and Chief Executive Officer, are explained in Chapter 5, Section 2.4.

Rules for holding shares

As for previous years, the Chairman and Chief Executive Officer is required to retain a number of Saint-Gobain shares equal to at least 50% of the net capital gain on the underlying shares (after deducting social charges and taxes) at the time he exercises the 2018 options, until the cessation of his duties. However, this obligation will cease to apply if and when the total number of Saint-Gobain shares he personally holds in registered form, on the day the options are exercised, represents the equivalent of five years' gross fixed compensation (based on the opening price quoted for Saint-Gobain shares on the option exercise date and the amount of his gross compensation applicable at that time).

Performance shares

The following tables show the performance shares granted or delivered to the Chairman and Chief Executive Officer during the 2018 fiscal year.

Table 6 – Performance shares granted in 2018 to the Chairman and Chief Executive Officer (AMF nomenclature)

Name	Plan date	Number of options granted during the year	Value (based on method used to prepare the consolidated financial statements)	Vesting date	Availability date	Performance conditions
Pierre-André de Chalendar	11/22/2018	67,000	1,090,961	11/21/2022	11/25/2022	See Chapter 5 Section 2.4.3

During the Board meeting of November 22, 2018, Pierre-André de Chalendar was granted 67,000 performance shares, as in 2017, representing approximately 0.01% of the share capital, less than the sub-cap set by the General Shareholders' Meeting of June 2, 2016 and less than the 10% cap on the overall allocation envelope for performance shares and performance units decided by the Board.

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, are explained in Chapter 5, Section 2.4.

Table 7 – Performance shares delivered in 2018 to the Chairman and Chief Executive Officer (AMF nomenclature)

Name	Plan date	Number of options delivered during the year	Availability date
Pierre-André de Chalendar	-	-	-

Rules for holding shares

The Chairman and Chief Executive Officer is required to retain 50% of the performance shares he received in 2018, that will be delivered to him, until the cessation of his duties. However, this obligation will cease to apply if and when the total number of Saint-Gobain shares he personally holds in registered form, at the delivery date of the performance shares, represents the equivalent of five years' gross fixed compensation (based on the average opening price quoted for Saint-Gobain shares in the twenty trading days preceding the delivery date of the performance shares and the amount of his gross compensation applicable at that time).

Performance units

By analogy with the rules applicable to performance shares, the tables below present performance units granted to the Chairman and Chief Executive Officer during 2018, and the number of performance units that became exercisable during the year.

Table 6 bis – Performance units granted in 2018 to the Chairman and Chief Executive Officer

Name	Plan date	Number of performance units granted during year	Value of units (based on method used to prepare the consolidated financial statements)	Exercise period	Performance conditions
Pierre-André de Chalendar	-	-	-	-	-

No performance unit plan was implemented during fiscal year 2018.

Table 7 bis – Performance units that became exercisable by the Chairman and Chief Executive Officer during 2018

Name	Plan date	Number of performance units that became exercisable in 2018	Start date of the exercise period
Pierre-André de Chalendar	11/20/2014	51,840	11/20/2018

c) Employment contract, retirement benefits and termination benefits allocated in case of termination of office of the Chairman and Chief Executive Officer

Table 11 – Employment contract, retirement benefits and termination benefits allocated in case of termination of office of the Chairman and Chief Executive Officer (AMF nomenclature)

Name	Employment contract		Supplementary pension plan		Benefits due or falling due owing to termination or a change of functions		Non-compete indemnity	
	Yes	No	Yes	No	Yes	No	Yes	No
Pierre-André de Chalendar, Chairman and Chief Executive Officer		X (1)	X		X		X	

(1) Termination of his employment contract as of 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, which correspond to compensation components, indemnities or benefits that are or may be due because of the termination of his duties as Chairman and Chief Executive Officer of Compagnie de Saint-Gobain that fall within the scope of application of Article L.225-42-1 of the French Commercial Code, and 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

The conditions applying to Pierre-André de Chalendar's compensation for termination of office as Chairman and Chief Executive Officer of Compagnie de Saint-Gobain are the following:

Forced departure

The indemnity for termination of office may only be paid in the event that Pierre-André de Chalendar's loss of office as Chairman and Chief Executive Officer was due to a forced departure, regardless of the form of such departure might take, under the following circumstances:

- he is removed before the end of his term of office or his mandate as Chairman and Chief Executive Officer is not renewed on expiry, unless this is at his own initiative or in the event of gross or willful misconduct or serious misconduct not related to his duties as Chief Executive Officer; or
- 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 an investor or group of investors acting in concert acquire control of the Company (as defined by 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.

In any case, no compensation for termination of office would be due if Pierre-André de Chalendar were to leave the Company at his own initiative under circumstances other than those described above, or if, upon leaving Compagnie de Saint-Gobain at his own initiative under one of the circumstances described above, he were eligible to retire during the twelve months following the date on which he ceases his functions, and to receive a pension under the so-called "SGPM" defined-benefit plan for engineers and supervisory employees (see paragraph "Supplementary pension arrangements" below).

Cap on indemnity for termination of office

Pierre-André de Chalendar will be able to receive compensation for termination of office not to exceed a maximum of the equivalent of double his gross total annual compensation, defined as the sum of his final year's fixed compensation as Chairman and Chief Executive Officer paid as of the date on which his functions cease, and of the average of the variable part of the annual compensation received or receivable as Chairman and Chief Executive Officer for his last three full fiscal years in office. This gross total annual compensation is henceforth defined as the "Reference Compensation".

Under no circumstances may the cumulative amount of such indemnity for termination of office and the non-compete indemnity (see paragraph "non-compete indemnity" below) exceed twice the amount of Pierre-André de Chalendar's Reference Compensation.

Performance condition

The indemnity for termination of office shall be subject to fulfillment of a performance condition defined as 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 overall completion rate of the objectives corresponding to the variable part of his compensation for the past two fiscal years, which in 2018 totaled 54.44%, and 80% in 2017.

Payment of the compensation for termination of office will be subject to the Board's prior determination, in accordance with applicable laws, of fulfillment of this performance condition, on the date of termination of office.

Stock options, performance shares and performance units in the event of termination of office of the Chairman and Chief Executive Officer

In the event of termination of his office as executive officer 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.

In the other events of termination of office, with the exception of the following events which lead to a total loss of rights:

- dismissal for gross or willful misconduct or serious misconduct related to his duties; and
- resignation (other than within twelve 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 to waive the service condition and to maintain, on a purely pro rata temporis basis, the benefit of the Saint-Gobain stock options, performance shares and performance units that he holds on his departure date and for which the minimum exercise period has not elapsed or which have not been delivered on this 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.

Non-compete indemnity

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 (see paragraph "Compensation for loss of office of the Chairman and Chief Executive Officer" 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 gross annual compensation.

It should be noted that the non-compete undertaking is a means of protection for Saint-Gobain, a non-compete indemnity being a mandatory 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.

Supplementary pension arrangements

Pension commitments to Pierre-André de Chalendar in his capacity as non-employee executive officer

Pierre-André de Chalendar continues to benefit from all provisions governing the so-called "SGPM" defined benefits pension plan for engineers and executive staff, on the same basis as for all other beneficiaries of this plan.

Pierre-André de Chalendar does benefit from the SGPM pension plan covering all employees who, as he did, joined Compagnie de Saint-Gobain before January 1, 1994, the date the plan was closed to new entrants. It is a so-called differential type system, according to Article 39 of the General Tax Code. As of December 31, 2018, 218 retired former employees of Compagnie de Saint-Gobain were receiving benefits under the plan and a further 25 active employees will be entitled to benefits upon retirement.

Commitments made to Pierre-André de Chalendar and all beneficiaries of the retirement system (current and retired employees) are partly financed, in the amount of approximately 60% 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 and his years of service with the Group, calculated as from October 1, 1989, the date on which 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 36% 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 ceiling, which is 45% of the sum of the fixed and 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% ceiling of the annual compensation 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, the rate of which is set at 24%.

At December 31, 2018, the estimated amount of the pension that Pierre-André de Chalendar will receive as supplemental pension would come to a gross amount of €313,000 per year. This indicative amount is calculated in accordance with the methodology set by Article D.225-104-1 of the French Commercial Code, according to which the pension must be estimated on an annual basis, take into account the seniority acquired by the executive director in his/her duties at the closing date of the fiscal year, be based on the remunerations recorded during the last fiscal year(s) and be calculated independently of the conditions of realization of the commitment, as if the executive director could benefit from it starting the day after the close of the fiscal year.

The lifetime benefits granted consist of the retirement income described above, as well as life insurance, to which Pierre-André de Chalendar will have an opportunity to subscribe like other retirees upon retiring, the annual premium of which is estimated as at December 31, 2018 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 Article L. 225-42-1 of the French Commercial Code, and upon the renewal of the term of office of the Chairman and Chief Executive Officer, the Board of Directors, at its meeting of February 22, 2018, decided upon the performance condition to which the annual increase in Pierre-André de Chalendar's retirement benefits will be subject, defined as follows: allocation by the Board of Directors of a variable compensation component at least equal to one-half of the average maximum amount fixed for that variable portion for the last three full fiscal years during which he held the positions of Chairman and Chief Executive Officer and ending prior to the date of assessment of the performance condition. At its meeting of November 22, 2018, the Board of Directors noted that the performance condition determining the increase of the potential rights of Pierre-André de Chalendar under the SGPM pension plan as of October 1, 2018 was met, the achievement rates for the last three fiscal years being 80%, 82% and 69% for fiscal years 2017, 2016 and 2015, respectively.

Benefits under the Group health and personal risk insurance policies applicable to Compagnie de Saint-Gobain employees maintained for Pierre-André de Chalendar in his capacity as non-salaried executive Director

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.

d) Compensation components paid or granted to Pierre-André de Chalendar, Chairman and Chief Executive Officer, in 2018 subject to approval of the General Shareholders' Meeting of June 6, 2019 ("Say on Pay" ex post)

The so-called "Sapin II" law (*loi relative à la transparence, à la lutte contre la corruption et à la modernisation de la vie économique*), enacted on December 9, 2016, requires that the fixed, variable and exceptional components of overall compensation and benefits of any kind paid or granted to Executive Directors in respect of the past fiscal year, be submitted to the approval of the Ordinary Shareholders' Meeting each year, and for the first time in 2018. This vote is binding (in contrast to the advisory vote previously provided by the AFEP-MEDEF code).

The compensation components paid or granted to Pierre-André de Chalendar, Chairman and Chief Executive Officer, in respect of 2018 were decided by the Board of Directors at its meetings on February 22, 2018, November 22, 2018 and February 21, 2019, upon proposal of the Nomination and Remuneration Committee and pursuant to the Compensation policy – namely, the principles and criteria applying to the determination, distribution and allocation of the compensation components – for the Chairman and Chief Executive Officer approved by the General Shareholders' Meeting of June 7, 2018 (seventh Resolution).

The following table shows the compensation components paid or granted to Pierre-André de Chalendar, Chairman and Chief Executive Officer in respect of 2018, subject to shareholders' approval at the General Shareholders' Meeting of June 6, 2019, in accordance with Article L.225-100 of the French Commercial Code.

Compensation components paid or granted to Pierre-André de Chalendar, Chairman and Chief Executive Officer, in respect of 2018 (Article L.225-100 of the French Commercial Code) ("Say on pay" *ex post*)

Compensation components paid or granted in respect of 2018	Amount or book value submitted to vote *(in EUR)*	Description
Fixed compensation	**Amount due: €1,200,000**	In accordance with the Compensation policy approved by the General Shareholders' Meeting of June 7, 2018 (7th Resolution).
Annual variable compensation	**Amount due: €1,110,644** (Board of Directors meeting of February 21, 2019)	At its February 22, 2018 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 2018 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 21, 2019 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 €578,000, which corresponds to an achievement rate of 42.50% of the various quantifiable objectives (the completion rate of the various quantifiable objectives is presented in Chapter 5, Section 2.2.2 (b)); ■ the amount of the variable portion of the three qualitative objectives (continuation of the digital transformation of the Group, implementation of the corporate social responsibility policy and continuation of the Group's development strategy) amounted to €532,644, corresponding to a percentage of overall completion of the qualitative objectives of 78.33% (see details in Chapter 5, Section 2.2.2 (b)). On this basis, his 2018 annual variable compensation totaled €1,110,644, corresponding to an achievement rate of 54.44%. Overall, Pierre-André de Chalendar's total compensation (fixed and variable) amounted to €2,310,644 for 2018, a decrease of 10.69% over 2017. *Pursuant to the law, payment of the variable compensation is subject to the approval of the Ordinary Shareholders' Meeting of June 6, 2019.*
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.

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Compensation components paid or granted to Pierre-André de Chalendar, Chairman and Chief Executive Officer, in respect of 2018 (Article L.225-100 of the French Commercial Code) ("Say on pay" *ex post*)		
Compensation components paid or granted in respect of 2018	**Amount or book value submitted to vote** *(in EUR)*	**Description**
Stock options	**Amount allocated: €109,148** **(valuation based on method used to prepare the consolidated financial statements)**	On November 22, 2018, based on the recommendations of the Nomination and Remuneration Committee, the Board of Directors decided, as in 2017, to grant Pierre-André de Chalendar 58,000 stock options, *i.e.*, less than the sub-cap set by the General Shareholders' Meeting of June 2, 2016. On February 22, 2018, the Board of Directors decided, as in previous years, that the grants of stock options, performance shares and performance units to the Chairman and Chief Executive Officer could not, at the time of their allocation, represent a value (according to IFRS) greater than 85% (compared to 100% in previous years) of his total maximum gross compensation for the same year (fixed compensation plus maximum variable compensation for the same year). In 2018, these allocations represented a total value (according to IFRS) at the time of their grant of €1,200,108, corresponding to 37% of his total maximum gross compensation for 2018. Refer to Chapter 5, Section 2.4.2 for a description of the service and performance conditions applying to the exercise of the options. 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 (0% for the 2014 plan, 58.9% for the 2013 plan, and 16.5% for the 2012 plan). Percentage of share capital represented by the allocation of performance shares to the Chairman and Chief Executive Officer: approximately 0.01%. Date of authorization by the General Shareholders' Meeting: June 2, 2016 (Resolution 13). Date of the Board's grant decision: November 22, 2018.
Performance shares	**Amount allocated: €1,090,961** **(valuation based on method used to prepare the consolidated financial statements)**	On November 22, 2018, the Board of Directors decided, as in 2017, to grant Pierre-André de Chalendar 67,000 performance shares, *i.e.* less than the sub-cap set by the General Shareholders' Meeting of June 2, 2016 and less than the 10% cap on the overall grants of performance share and performance unit decided by the Board. Refer to the "Stock options" item above for the cap on grants to the Chairman and Chief Executive Officer relative to his overall compensation. 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 (86.4% for the 2014 plan, 89.2% for the 2013 plan and 65.5% for the 2012 plan). The performance conditions relating to the 2015 plan will be determined in November 2019, as they include, in addition to the ROCE criterion, an external criterion which is assessed over a 4 years' period. Percentage of share capital represented by the allocation of performance shares to the Chairman and Chief Executive Officer: approximately 0.01%. Date of authorization by the General Shareholders' Meeting: June 2, 2016 (Resolution 14). Date of the Board's grant decision: November 22, 2018.
Performance units	**None**	No performance units were allocated to Pierre-André de Chalendar in 2018.
Directors' attendance fees	**None**	Pierre-André de Chalendar is not paid any Directors' fees.
In-kind benefits	**Amount due: €3,673 (book value)**	Pierre-André de Chalendar has use of a company car.

Compensation components paid or granted to Pierre-André de Chalendar, Chairman and Chief Executive Officer, for 2018, authorized by the General Shareholders' Meeting of June 7, 2018 as related-party agreements and undertakings		
Compensation components	**Amounts paid or granted in 2018** *(in EUR)*	**Description**
Compensation for loss of office	**None**	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 third parties 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 will be able to receive compensation not to exceed the double of the sum of the fixed portion of his annual compensation received as of the date of termination of his duties, and 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 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. 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. The indemnity for loss of office shall be subject to fulfillment of a performance condition (see Chapter 5, Section 2.2.2 (c)). Payment of the compensation for termination of office will be subject to the Board of Directors' prior acknowledgement, under the conditions set out by the applicable laws, of the fulfillment of this performance condition assessed as of the date of termination of the office. Date of authorization by the Board of Directors: February 22, 2018. Date of approval by the General Shareholders' Meeting: June 7, 2018 (8th Resolution).
Non-compete indemnity	**None**	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 double Pierre-André de Chalendar's total gross annual 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: June 7, 2018 (8th Resolution).
Supplementary pension arrangements	**None**	Pierre-André de Chalendar is a beneficiary under 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, date on which this plan was closed to new entrants. For information about the triggering events for benefits payments and potential benefits rights, see Chapter 5, Section 2.2.2 (c). Date of authorization by the Board of Directors: February 22, 2018. Date of approval by the General Shareholders' Meeting: June 7, 2018 (9th Resolution).

e) Compensation policy for the Chairman and Chief Executive Officer subject to approval of the General Shareholders' Meeting of June 6, 2019 ("Say on Pay" ex ante)

The so-called "Sapin II" law (*loi relative à la transparence, à la lutte contre la corruption et à la modernisation de la vie économique*), enacted on December 9, 2016, requires that the Compensation policy for the Executive Directors, *i.e.*, the principles and criteria applying to the determination, distribution and allocation of fixed, variable and exceptional components of their total compensation and the benefits of any kind attributable to them in respect of their mandate, be submitted every year to the approval of the Ordinary Shareholders' Meeting. This vote is binding (as opposed to an advisory vote).

At its meeting of February 21, 2019, the Board of Directors, on the proposal of the Nomination and Remuneration Committee, adopted the Compensation policy for the Chairman and Chief Executive Officer.

The general principles of the Compensation policy of the Chairman and Chief Executive Officer described in Chapter 5, Section 2.2.1 were reviewed by the Board of Directors and were confirmed for the 2019 fiscal year.

The following table describes the principles and criteria applying to the determination, distribution and allocation of the compensation components of the Chairman and Chief Executive Officer for the 2019 fiscal year, subject to the approval of the General Shareholders' Meeting of June 6, 2019 in accordance with Article L.225-37-2 of the French Commercial Code.

Principles and criteria applying to the determination, distribution and allocation of the compensation components of the Chairman and Chief Executive Officer, for the 2019 fiscal year, submitted to the approval of the Ordinary General 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 commensurable 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 2019 fiscal year will be decided by the Board of Directors in 2020 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 2019 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 2019 fiscal year: implementation of the "Transform & Grow" transformation program, continuation of the digital transformation of the Group 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 2020 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 2019.
Multi-year variable compensation	**None**	The Board of Directors does not intend to grant multi-year compensation to the Chairman and Chief Executive Officer in 2019.
Exceptional compensation	**None**	The Board of Directors does not intend to grant exceptional compensation to the Chairman and Chief Executive Officer in 2019. *In accordance with the law, the payment of the exceptional compensation would be conditioned to the approval of the 2020 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.

Principles and criteria applying to the determination, distribution and allocation of the compensation components of the Chairman and Chief Executive Officer, for the 2019 fiscal year, submitted to the approval of the Ordinary General 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 2019 total maximum gross compensation** **and** **Cap for allocation to the Chairman and CEO fixed at 10% of the overall grants performance shares and performance units in 2019** **and** **Caps for allocation to the Chairman and CEO to be provided by the resolutions on stock options and performance shares of the General Shareholders' Meeting of June 6, 2019 (to be similar to those provided by the 2016 General Shareholders' Meeting)**	The Board of Directors has decided that grants of stock options, performance shares and performance units to the Chairman and Chief Executive Officer in 2019, 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 2019 fiscal year (fixed compensation plus maximum variable compensation for the 2019 fiscal year). *The grants of stock options, performance shares and performance units to the Chairman and Chief Executive Officer for the 2018 and 2017 fiscal years represented a value of less than 40% and 70% 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 long-term compensation plans 2019. The Board of Directors, on the recommendation of the Nomination and Remuneration Committee, intends to propose to the General Shareholders' Meeting of June 6, 2019 to maintain, despite the appointment of a second executive corporate officer, the sub-cap on the granting of stock options to executive corporate officers set by the General Shareholders' Meeting of June 2, 2016 at 10% of the cap set by the 13th resolution (such being also applicable to the 14th resolution of the same Meeting related to the grant of performance shares which fixed a sub-cap at 10% for the allocation to the executive corporate officers, which must also be maintained), and to maintain unchanged the caps related to the issuance of stock options and performance shares. On the occasion of the General Shareholders' Meeting of June 6, 2019, the Board of Directors, on the recommendation of the Nomination and Remuneration Committee, will indicate its intention to subject the exercise of the stock options and the vesting of the performance shares to a **service condition and performance conditions** based at **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.** In the context of the implementation in 2019 of the long-term compensation plans, the Board of Directors intends, on the recommendation of the Nomination and Remuneration Committee, to maintain the same weighting of the criteria as the one adopted since 2017 for all the plans, as well as similar methods of assessment, namely: ■ 65% for the internal performance criterion (ROCE), to be assessed in a linear manner in relation to the brackets set by the Board for the following three years; ■ 25% for the relative performance criterion (stock market performance of the Saint-Gobain share *vis-à-vis* the CAC 40 stock market index), with the application of the "no pay below index" principle and ■ 15% for the criterion relating to corporate social responsibility, to be assessed in a linear manner in relation to the brackets that will be set by the Board taking into account the Group's published objectives. 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. **The duration of vesting periods applicable under long-term compensation plans shall not be shorter than three years.** In the event that the Board of Directors should decide in 2019 to implement in favor of certain beneficiaries a plan of performance units instead of the grant of performance shares, as in the past, the grants of performance units will be subject to the same service and performance conditions as the grants under performance share plans which would be implemented in 2019 in favor of other beneficiaries of long-term compensation plans. As in the past, the Board will set for the executive corporate officers, for any allocation in 2019 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.

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Principles and criteria applying to the determination, distribution and allocation of the compensation components of the Chairman and Chief Executive Officer, for the 2019 fiscal year, submitted to the approval of the Ordinary General 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 elapsed 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.
Directors' attendance fees	**None**	The Chairman and Chief Executive Officer is not paid any Directors' fees.
In-kind benefits	-	The Chairman and Chief Executive Officer has use of a company car.

Compensation components authorized by the General Shareholders' Meeting of June 7, 2018 as related-party agreements and undertakings	Description
Compensation for loss of office	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 third parties 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 the double of the sum of the fixed portion of his annual compensation received as of the date of termination of his duties, and 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 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. **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.** The indemnity for loss of office shall be subject to fulfillment of a performance condition defined as 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. Payment of the compensation for termination of office will be dependent on the Board of Directors' acknowledgement, under the conditions set out by 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: June 7, 2018 (8th Resolution).

Compensation components authorized by the General Shareholders' Meeting of June 7, 2018 as related-party agreements and undertakings	Description
Non-compete indemnity	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 gross annual compensation**. It should be noted that the non-compete undertaking is a means of **protection for Saint-Gobain**, a non-compete indemnity being a mandatory 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: June 7, 2018 (8th Resolution).
Supplementary pension arrangements	Pierre-André de Chalendar is a beneficiary under the defined benefit pension plan applicable to all employees and managers of Compagnie de Saint-Gobain who, as he did, joined the Company prior to January 1, 1994, date on which this plan was closed to new entrants. It is a so-called differential type system, according to Article 39 of the General Tax Code. As of December 31, 2018, 218 retired former employees of Compagnie de Saint-Gobain were receiving benefits under the plan – so-called "SGPM" – and a further 25 active employees will be entitled to benefits on retirement. 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 and his years of service with the Group, calculated as from October 1, 1989, the date on which 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 36% 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 ceiling, which is 45% of the sum of the fixed and variable compensations. In accordance with Article L.225-42-1 of the French Commercial Code based on the recommendations of the Nomination and Remuneration Committee, the Board of Directors, at its meeting of February 22, 2018, decided upon the **performance condition to which the annual increase in Pierre-André de Chalendar's retirement benefits will be subject**, defined as follows: allocation by the Board of Directors of a variable compensation component at least equal to one-half of the average maximum amount fixed for that variable portion for the last three full fiscal years. Fulfillment of this performance condition determining 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: June 7, 2018 (9th 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: June 7, 2018 (10th Resolution).

2.2.3 Compensation policy for the Chief Operating Officer subject to approval of the General Shareholders' Meeting of June 6, 2019 ("Say on Pay" ex ante)

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 (see Chapter 5, Section 1.3). On the proposal of the Nomination and Remuneration Committee, the Board also decided on the Compensation policy for the Chief Operating Officer (including the regulated commitments made to him, described below). On the proposal of the Nomination and Remuneration Committee, the Board of Directors set the quantifiable and qualitative objectives for the variable portion of his compensation for the 2019 fiscal year at its meeting of February 21, 2019, during which it approved the financial statements for the year ended December 31, 2018, approved the 2019 budget and adopted the Compensation policy of the Chairman and Chief Executive Officer.

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 tables below show, respectively, the principles and criteria applying to the determination, distribution and allocation of the compensation components of the Chief Operating Officer for the 2019 fiscal year, to be submitted to the approval of the General Shareholders' Meeting of June 6, 2019 pursuant to Article L. 225-37-2 of the French Commercial Code, and the commitments made to him that correspond to compensation components, indemnities or benefits that are or may be due as a result of the termination of his duties that fall under the scope of Article L. 225-42-1 of the French Commercial Code. These commitments will also be submitted to the approval of the General Shareholders' Meeting of June 6, 2019.

Principles and criteria applying to the determination, distribution and allocation of the compensation components of the Chief Operating Officer, for the 2019 fiscal year, submitted to the approval of the Ordinary General 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 that fixed compensation at €750,000 for 2019. The Committee noted that, with the help of an external firm, this level was at the median for industrial CAC 40 companies comparable to Saint-Gobain in terms of size: net sales, workforce and international scope of operations.*
Annual variable compensation	**120% of the fixed compensation**	The Board of Directors decided to set the cap for the annual variable portion of the compensation of the Chief Operating Officer at 120% of his fixed compensation. The amount of the variable compensation for the 2019 fiscal year will be decided by the Board of Directors in 2020 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. As regards the quantifiable objectives, the Board decided to adopt the same quantifiable objectives for the 2019 fiscal year as those applicable to the Chairman and Chief Executive Officer, i.e. 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: 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 same qualitative objectives, as those applicable to the Chairman and Chief Executive Officer, deemed relevant to the extent that they reflect the implementation of strategic orientations for the 2019 fiscal year: implementation of the "Transform & Grow" transformation program, continuation of the digital transformation of the Group 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 2020 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 2019.
Multi-year variable compensation	**None**	The Board of Directors does not intend to grant variable multi-year compensation to the Chief Operating Officer in 2019.
Exceptional compensation	**None**	The Board of Directors does not intend to grant exceptional compensation to the Chief Operating Officer in 2019. *In accordance with the law, the payment of the exceptional compensation would be conditioned to the approval of the 2020 Ordinary Shareholders' Meeting.*
Indemnity for taking up office	**None**	The Board of Directors did not grant any compensation for assuming the duties of Chief Operating Officer.

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Principles and criteria applying to the determination, distribution and allocation of the compensation components of the Chief Operating Officer, for the 2019 fiscal year, submitted to the approval of the Ordinary General Shareholders' Meeting (Article L.225-37-2 of the French Commercial Code)		
Compensation components attributable to the Chief Operating Officer	**Cap**	**Description**
Long-term compensation	**Caps for 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 (i) 85% of his 2019 maximum gross annual compensation and (ii) 50% of the Chairman and CEO's grants** **and** **Cap for allocation to the COO fixed at 5% of the overall grants of performance shares and performance units in 2019** **and** **Caps for allocation to the COO to be provided by the resolutions on stock options and performance shares of the General Shareholders' Meeting of June 6, 2019 (to be similar to those provided by the 2016 General Shareholders' Meeting)**	The Board of Directors has decided that grants of stock options, performance shares and performance units to the Chief Operating Officer in 2019, 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 2019 fiscal year (fixed compensation plus maximum variable compensation for the 2019 fiscal year). Any grants of stock options, performance shares and performance units to the Chief Operating Officer will be capped at 50% of the grants to the Chairman and Chief Executive Officer. 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 2019 long-term compensation plans. For any allocation in 2019 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 2.2.2 (e), paragraph on "Long-term compensation").

Principles and criteria applying to the determination, distribution and allocation of the compensation components of the Chief Operating Officer, for the 2019 fiscal year, submitted to the approval of the Ordinary General 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 and performance shares 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 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 and 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 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 executive corporate officer 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 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.
Directors' attendance fees	**None**	The Chief Operating Officer is not paid any Directors' fees.
In-kind benefits	**-**	The Chief Operating Officer has use of a company car.

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Compensation components authorized by the General Shareholders' Meeting of June 6, 2019 as related-party agreements and undertakings	Description
Severance 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 the payment of the Indemnity related to the Employment Contract** (as defined below) **or (ii) by a resignation from his employment contract occurring after a Forced Resignation, provided that the notification of the termination of his employment contract 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 not 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. 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 paid in addition to the Indemnity related to the Employment Contract, which is linked 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 all previous full fiscal years (not exceeding three) during which he held the position of Chief Operating Officer that ended prior to the date of termination of his duties, with a variable compensation component at least equal to half of the maximum amount set for that variable portion. In the event that, at the date of termination of duties of Chief Operating Officer, there is not at least one full fiscal year during which he held the position of Chief Operating Officer that ended prior to the date of termination of his duties, the Board of Directors shall assess the performance condition as regards to the fulfillment of the objectives of the variable portion for the current fiscal year as of the date of termination of his duties as Chief Operating Officer, on a *prorata temporis* basis as appropriate. The payment of the Severance Indemnity shall be subject to the prior recognition 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 of all proceedings and actions by Benoit Bazin. Date of authorization by the Board of Directors: November 22, 2018. Date of submission to the General Shareholders' Meeting's approval : June 6, 2019.

Compensation components authorized by the General Shareholders' Meeting of June 6, 2019 as related-party agreements and undertakings	Description
Non-compete indemnity	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. 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 office 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 the sum of the fixed portion of his compensation, on an annual basis, as Chief Operating Officer received on the date of termination of his duties, and of the average of the variable portion of his annual compensation as Chief Operating Officer paid or to be paid for all previous full fiscal years in office (not exceeding three) 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 his 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 two times 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 submission to the General Shareholders' Meeting's approval: June 6, 2019.
Supplementary pension arrangements	By decision of the Board of Directors, Benoit Bazin continues to fully benefit from the supplementary defined-benefit pension plan set up in 2012 under identical conditions to those applicable to all participants in the pension plan, subject to the following clarifications: ■ Since Benoit Bazin joined the Saint-Gobain Group on September 1, 1999, he accumulated 19 years and 4 months of seniority under the "2012" pension plan when his term of office came into effect and his employment contract was suspended on January 1, 2019. ■ In accordance with the law (7th and 8th paragraphs of Article L.225-42-1 of the French Commercial Code), **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 **shall be subject to a performance condition** defined as follows: allocation by the Board of Directors, on average, for all previous full fiscal years (not exceeding three) 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, with a variable compensation component at least equal to half of the maximum amount set for that variable portion (a condition similar to the one applicable to the Severance Indemnity described above). ■ The Board of Directors noted that the supplementary pension plan called "2012" is more restrictive than Article L.225-42-1, paragraph 8 of the French Commercial Code, according to which the potential rights attached to a supplementary pension plan cannot increase annually for executive corporate officers by more than 3% of the annual compensation used as a reference for calculating the pension paid under that plan. ■ The satisfaction of the performance condition that determines the increase in Benoit Bazin's rights shall be assessed by the Board of Directors for the first time when one full financial year during which he has held the position of Chief Operating Officer is available. It shall be determined by the Board of Directors in the first quarter of each year until he reaches the 20-year seniority limit set by the "2012" supplementary pension plan. Date of authorization by the Board of Directors: November 22, 2018. Date of submission to the General Shareholders' Meeting's approval : June 6, 2019.
Health and personal risk insurance	By decision of the Board of Directors, Benoit Bazin continues to benefit in full 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 submission to the General Shareholders' Meeting's approval : June 6, 2019.

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.

Gross compensation received by the members of Senior Management Committee, as composed as at December 31, 2018 (excluding the Chairman and Chief Executive Officer and long-term compensation) in 2018 from Group companies in and outside France, totaled €15.3 million (€11.9 million in 2017), including €4.2 million (€4.2 million in 2017) gross variable compensation and termination benefit of €2.6 million (no termination benefits were paid in 2017).

Pensions and other post-employment benefits (Defined Benefit Obligations in respect of lenght-of-service awards and pensions) accruing to the members of the Senior Management Committee as it stood on December 31, 2018 (including the Chairman and Chief Executive Officer) totaled €50.9 million at December 31, 2018 (€46.6 million at December 31, 2017).

Attendance fees 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.

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 2018, these plans covered 2,214 Group officers and employees, in France and outside France, including high-potential managers and managers who have performed exceptionally well (2,175 grantees), key corporate and line executives in the Sectors and General Delegations (39 grantees), members of the Group Liaison Committee excluding the senior management team (29 grantees) and senior management (9 grantees), with grants to the Chairman and Chief Executive Officer being described in Chapter 5, Section 2.2.2 (b), paragraph on "Long-term compensation".

The beneficiaries of these plans belong to 55 different nationalities and work in 58 countries.

On November 22, 2018 the Board of Directors resolved that the origin of the shares of the 2018 stock options plan, new or existing shares, would be determined at its discretion no later than by the end of the vesting period. This plan represents 0.05% of the share capital and therefore has no material impact in terms of dilution. The performance share plan entitles beneficiaries to existing shares and therefore has no impact in terms of dilution. No performance unit plan was implemented during fiscal year 2018.

The members of the Liaison Committee were allocated both stock options and performance shares.

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 Stock option plans

Stock option plans have been set up by the Board of Directors every year since 1987.

Under the authorization granted by the 13th Resolution of the General Shareholders' Meeting of June 2, 2016, at its meeting of November 22, 2018 the Board of Directors resolved to implement a stock option plan, following analysis and the recommendation of the Nomination and Remuneration Committee.

This plan covers 39 employees and officers of the Group, in France and outside France, who were granted a total of 290,500 options (including allocations to the Chairman and Chief Executive Officer), with the type of options, whether for new or existing shares, to be determined by the Board no later than by the end of the vesting period (noting that any options that may be exercised before their type is determined will be options to subscribe for new shares). Grants to the Chairman and Chief Executive Officer are less than the grant sub-cap defined by the General Shareholders' Meeting on June 2, 2016.

The lifetime of the options is 10 years. The option price was set at €32.24, without rebate or discount based on the average opening price of the Saint-Gobain shares in the 20 trading days preceding the date of the grant by the Board of Directors.

The performance criteria applicable to the stock options plan implemented on November 22, 2018 entail, as 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 dialogue with investors and as announced in 2016, the stock option and performance share plans put in place since 2017 by the Board of Directors, on the proposal of the Nomination and Remuneration Committee, 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.

As in 2017, the Board of Directors decided at its meeting of November 22, 2018, on the proposal of the Nomination and Remuneration Committee, to apply the same exact conditions, weighted and calculated in the same way to all 2018 long-term compensation plans (stock options and performance shares).

Exercise of the stock options is subject to fulfillment of the following cumulative conditions:

- *service condition*: to be an employee or a Director of a Saint-Gobain Group company throughout the period up to the exercise date of the stock options, without interruption, except in a number of defined 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 options initially allocated are subject to the criteria of Return on Capital Employed, including goodwill, of the Saint-Gobain Group (ROCE),
  - 20% of the options 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 options 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 options 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.

ROCE performance will be calculated as follows:

Arithmetic average of the ROCE for the years 2019, 2020 and 2021	Percentage of options initially granted, contingent upon the ROCE (*i.e.* 65% of allocation), exercisable
Greater than 13%	All
Between 10% and 13%	[Arithmetic average of 2019, 2020 and 2021 ROCE – 10%] / [13% - 10%]
10% 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 22, 2018 to the average over the six months prior to November 22, 2022, as follows:

Performance of the Saint-Gobain stock price compared to the CAC 40 index	Percentage of options initially granted, contingent upon stock market performance (*i.e.* 20% of allocation), exercisable
At least 10% greater	All
Between 0% and + 10%	2/3+1/3*[(Performance of the Saint-Gobain stock/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.

Performance in respect of the corporate social responsibility criterion is calculated as follows:

Arithmetic average TRAR of the Group for the years 2019, 2020 and 2021 (1) (2)	Percentage of options initially granted, contingent upon the TRAR (*i.e.*, 5% of the allocation), exercisable
Less than 2.5	All
Between 2.5 and 2.8	Linear interpolation
Greater than 2.8	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 improved 2018 results, in which the TRAR decreased from 3.3 in 2016 to 2.6 in 2017, the Group set, when implementing the 2018 plan, the objective of consolidating the performance achieved at a TRAR level of 2.5.

Reduction of the Group's CO_2 emissions between 2017 and 2021 (1) (2)	Percentage of options initially granted, contingent on the reduction rate of the CO_2 emissions (*i.e.* 5% of the allocation), exercisable
Greater than 6.2%	All
Between 4.8% and 6.2%	Linear interpolation
Less than 4.8%	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 2019, 2020 and 2021 (1) (2)	Percentage of options initially granted, contingent on the diversity index (*i.e.* 5% of the allocation), exercisable
Greater than 90%	All
Between 85% and 90%	Linear interpolation
Less than 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 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 (0% for the 2014 plan, 58.9% for the 2013 plan, and 16.5% for the 2012 plan).

The following table shows stock options granted to the ten highest-paid non-executive employees, and options exercised by them in 2018 (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)	143,000	€32.24	2018
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)	49,381	€27.42	2008 2013

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The following table shows the history of the stock option allocation plans in place at December 31, 2018. 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	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Date of General Meeting	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	06/04/2009
Date of Board of Directors' meeting	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	11/19/2009
Type*	purchase or subscription	purchase or subscription	purchase or subscription	purchase or subscription	purchase	purchase	new shares	new shares	new shares	new shares
Total number of exercisable options at the start of the Plan	290,500	284,500	280,000	224,950	234,550	247,250	253,000	482,150	1,144,730	1,479,460
Cumulative number of canceled or forfeited options	0	0	0	0	234,550 (5)	98,047 (4)	202,994 (3)	459,650 (2)	1,117,390 (2)	493,154 (1)
Total number of exercisable options after adjustments and forfeitures:	290,500 (7)	284,500 (7)	280,000 (6)	224,950 (6)	0	149,203	50,006	22,500	27,340	986,306
Of which: options granted to Executive Directors:										
Pierre-André de Chalendar	58,000	58,000	58,000	50,000 (9)	0 (9)	29,465 (8)	8,235 (8)	0 (9)	0 (9)	133,333 (8)
Starting date of exercise period	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	11/20/2013
Expiry date of exercise period	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	11/18/2019
Exercise price	€32.24	€49.38	€40.43	€39.47	€34.13	€38.80	€27.71	€31.22	€35.19	€36.34
Number of options exercised at 12/31/2018	0	0	0	0	0	28,856	30,044	0	0	358,558
Exercisable options outstanding at 12/31/2018	290,500	284,500	280,000	224,950	0	120,347	19,962	0	0	627,748

* *Of the plans in place at December 31, 2018, the 2009 to 2012 plans are for the subscription of new shares and the 2013 and 2014 plans are purchase plans. For the 2015-2018 plans, the Board of Directors resolved that the type of options, whether for the purchase of existing shares or the subscription of new shares, would be determined at its discretion no later than the beginning of the exercise period, and that any options that might be exercised before their type had been determined would be to subscribe new shares.*

(1) *Options which are non-exercisable because the performance condition attached to all options granted in November 2009 was only partly met.*

(2) *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.*

(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 2012 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 2013 were subject.*

(5) *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.*

(6) *Before application of the performance conditions relative to the Saint-Gobain share price performance and the ROCE of the Saint-Gobain Group (see 2015 and 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 Registration Document and above).*

(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.*

2.4.3 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 fourteenth Resolution of the General Shareholders' Meeting of June 2, 2016, at its meeting of November 22, 2018 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 2,214 employees and officers of the Group in France and abroad, who were granted a total of 1,219,619 performance shares (including the grant to the Chairman and Chief Executive Officer). It should be noted that no performance units plan was implemented in 2018, all the beneficiaries being granted performance shares.

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 22, 2018 and their respective weightings are strictly identical to those applying to stock options and will be calculated in the same way (see Section 2.4.2 above).

However, the first 100 shares allocated to each grantee other than to Liaison Committee members will be exempt from the performance conditions.

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 (86.4% for the 2014 plan, 89.2% for the 2013 plan and 65.5% for the 2012 plan). The performance condition relating to the 2015 plan will be determined in November 2019, since it includes, in addition to the ROCE criterion, a relative external criterion that is assessed over a 4-year period ending in November 2019.

Vesting of performance shares is subject to fulfillment of a service condition that applies for the entire duration of the acquisition period in a manner similar to that stipulated for stock options above (see Section 2.4.2 above).

The ten Group employees and non-executive officers who were granted the highest number of shares in 2018 were allocated 196,500 performance shares (global information), valued at €31.16 per share based on the closing stock price on the day preceding the grant decided by the Board of Directors' meeting of November 22, 2018.

The following table shows the history of the performance share plans outstanding at December 31, 2018 as well as the features of the 2014 plan, delivered in November 2018.

Table 10 – Historical information about performance share plans (AMF nomenclature)

Fiscal year	2018	2017	2016	2015	2014
Date of General Meeting	06/02/2016	06/02/2016	06/02/2016	06/04/2015	06/05/2014
Date of Board of Directors' meeting	11/22/2018	11/23/2017	11/24/2016	11/26/2015	11/20/2014
Type of shares	existing	existing	existing	existing	existing
Total number of performance share rights initially granted (4+0)	1,219,619 (3)	1,226,680 (3)	1,231,320 (2)	500,910 (2)	530,240 (1)
of which, rights granted to Executive Director, P-A. de Chalendar	67,000	67,000	67,000	0	0
Cumulative number of shares delivered	0	200	640	700 (5)	438,638 (4)
Number of rights forfeited	0	0	0	0	91,602 (6)
TOTAL OUTSTANDING PERFORMANCE SHARE RIGHTS	**1,219,619 (7)**	**1,226,480 (7)**	**1,230,680 (7)**	**500,210 (7)**	**0**

(1) Before application of the performance condition related to the ROCE of the Saint-Gobain Group (see 2014 Registration Document).

(2) 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).

(3) 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 Registration Document and above).

(4) After taking into account service and performance conditions.

(5) By anticipation, as part of the exceptions defined in the service condition (including death, disability – see Chapter 5, Section 2.4.2).

(6) 56,160 rights under the 2014 plan forfeited following partial achievement of the performance condition and 35,442 rights under the 2014 plan forfeited after consideration of the service condition.

(7) 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).

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 2018.

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 (86.4% for the 2014 plan, 89.2% for the 2013 plan and 65.5% for the 2012 plan). The performance condition relating to the 2015 plan will be determined in November 2019, since it includes, in addition to the ROCE criterion, a relative external criterion that is assessed over a 4-year period ending in November 2019.

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 above (see Section 2.4.2 above).

The following table shows the history of performance unit plans not vested at December 31, 2018 as well as the features of the 2013 plan, which vested in November 2017.

Table 10 bis – Historical information about performance unit plans

Fiscal year	2018	2017	2016	2015	2014
Date of Board of Directors' meeting	N/A	N/A	N/A	11/26/2015	11/20/2014
Total number of units initially granted (4+0)			-	556,340 (2)	598,400 (1)
of which, units granted to Executive Director, P-A. de Chalendar	-	-	-	60,000	60,000
Starting date of exercise period	-	-	-	11/26/2019	11/20/2018
Expiry date of performance unit exercise period	-	-	-	11/25/2025	11/19/2024
Total number of units that have become exercisable	-	-	-	0	495,087 (3)
Total number of units forfeited	-	-	-	0	103,313 (4)
of which, number of performance units granted to Executive Director, P-A. de Chalendar, forfeited	-	-	-	0	8,160
PERFORMANCE UNITS OUTSTANDING	**-**	**-**	**-**	**556,340 (5)**	**0**

(1) Before application of the performance condition related to the ROCE of the Saint-Gobain Group (see 2014 Registration Document).
(2) Before application of the performance conditions related to the ROCE of the Saint-Gobain Group and Saint-Gobain share price performance (see 2015 Registration Document).
(3) After taking into account service and performance conditions and including 1,550 performance units exercised by anticipation.
(4) Of which 81,172 rights forfeited following partial achievement of the performance condition and 22,141 units forfeited following non-achievement of the service condition.
(5) Subject to cumulative fulfillment of the service and performance conditions (see 2015 Registration Documents).

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 *Autorité des marchés financiers* in 2018 pursuant to Article L.621-18-2 of the French Financial and Monetary Code were the following:

	Securities	Type of transaction	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 16, 2018	€36.31	€308,544
	Exercise of stock options	Subscription	September 24, 2018	€36.34	€363,400
	Units of the Saint-Gobain France FCPE (Saint-Gobain Group Savings Plan)	Sale	September 24, 2018	€37.70	€302,818
	Exercise of stock options	Subscription	September 27, 2018	€25.88	€296,093
Frédéric Lemoine *Director*	Equity	Acquisition	March 22, 2018	€43.88	€18,649
	Equity	Acquisition	June 11, 2018	€40.99	€12,297
	Equity	Acquisition	July 29, 2018	€37.27	€18,639
	Equity	Acquisition	August 14, 2018	€36.00	€14,400
	Equity	Acquisition	October 11, 2018	€33.62	€6,725
	Equity	Acquisition	October 18, 2018	€32.50	€6,500
	Equity	Acquisition	October 24, 2018	€31.50	€9,450
Dominique Leroy *Director*	Equity	Acquisition	May 29, 2018	€43.18	€43,185
Jean-Dominique Senard *Director*	Equity	Acquisition	June 22, 2018	€39.18	€49,954
	Equity	Acquisition	July 30, 2018	€37.61	€49,645

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 21, 2019.

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)

With regard to compensation, the report must set out the draft resolution prepared by the Board of Directors relating to the principles of and criteria for determination, distribution and allocation of the fixed, variable and exceptional components of overall compensations and benefits of any kind, attributable to the Chairman and Chief Executive Officer and the Chief Operating Officer (Compensation policy).

Furthermore, the report must include the total compensation and benefits of any kind paid by Compagnie de Saint-Gobain to the Directors during the year, as well as commitments of any kind made by Compagnie de Saint-Gobain to the benefit of the Directors, corresponding to 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.

This information, set out in Chapter 3, Section 1.2, Chapter 5, Section 3.3.2, Chapter 4, Section 2.4 and Chapter 9, Section 3.3 and prepared on the basis of details provided by the Legal, Human Resources and Financial 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 225-37-5)

Lastly, the report must include information that may have an impact in case of a public offering (see Chapter 7, Section 2.6), related party agreements and undertakings (see Chapter 5, Section 5), and the specific formalities for shareholder participation in the General Shareholders' Meeting (Chapter 9, Section 1.1). It must also contain a summary table of the current delegations of authority granted by the General Shareholders' Meeting for purpose of completing share capital increases showing the use of these delegations during the 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 3.3.2, 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 AND UNDERTAKINGS

(Annual General Meeting for the approval of the financial statements for the year ended December 31, 2018)

This is a free translation into English of the Statutory Auditors' special report on related party agreements and undertakings 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 and undertakings.

It is our responsibility to report to you, based on the information provided to us, on the main terms and conditions of agreements and undertakings 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 or undertakings. 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 and undertakings 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 and undertakings 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 and undertakings to be submitted for the approval of the annual general meeting

Agreements and undertakings authorized during the year ended December 31, 2018

In accordance with article L.225-40 of the French Commercial Code *(Code de commerce)*, we were informed of the following agreements and undertakings, which have been subject to the prior authorization of your Board of Directors.

Undertakings given to Benoit Bazin concerning the compensation and benefits potentially due, in certain cases, on the termination of his duties as Chief Operating Officer

Nature and conditions

On the recommendation of the Nomination and Remuneration Committee, at its meeting of November 22, 2018, the Board of Directors authorized the insertion in Benoit Bazin's employment contract, which has been suspended since 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 the payment of the Indemnity related to the Employment Contract or (ii) by a resignation from his employment contract occurring after a Forced Resignation, provided that the notification of the termination of the employment contract 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. 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

The gross amount fo the Severance Indemnity 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 amount of the Reference Compensation (the "Overall Cap").

The gross amount of the Severance Indemnity shall be equal to the difference between, on the one hand, twice 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 all previous full fiscal years (not exceeding three) during which he held the position of Chief Operating Officer that ended prior to the date of termination of his duties, with a variable compensation portion at least equal to half of the maximum amount set for that variable portion. In the event that, at the date of termination of duties of Chief Operating Officer, there is not at least one full fiscal year during which he held the position of Chief Operating Officer that ended prior to the date of termination of his duties, the Board of Directors shall assess the performance condition as regards to the fulfillment of the objectives of the variable portion for the current fiscal year as of the date of termination of his duties as Chief Operating Officer, on a prorata temporis basis as appropriate.

The payment of the Severance Indemnity shall be subject to the prior recognition 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 of all proceedings and actions by Benoit Bazin.

On the recommendation of the Nomination and Remuneration Committee, at its meeting on November 22, 2018, the Board of Directors also authorized the insertion of a non-compete clause in Benoit Bazin's employment contract, which has been suspended since January 1, 2019 during the term of his 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 the 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 the sum of the fixed portion of his compensation, on an annual basis, as Chief Operating Officer received on the date of termination of his duties, and of the average of the variable portion of his annual compensation as Chief Operating Officer paid or to be paid for all previous full fiscal years in office (not exceeding three) 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 are 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 the 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 the implementation 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 relieved from any commitment and no sum would be due to him in this respect.

Person concerned

Benoit Bazin – Chief Operating Officer

Reason explaining why the undertakings are beneficial for the company

Your Board of Directors explained that these undertakings are beneficial for the company as Benoit Bazin's employment contract has been suspended since January 1, 2019 when he was appointed as Chief Operating Officer, which is why these undertakings were given since that date.

Pension plan for Benoit Bazin in his capacity as executive corporate officer

Nature and conditions

On the recommendation of the Nomination and Remuneration Committee, at its meeting on November 22, 2018, the Board of Directors decided that Benoit Bazin continues to fully benefit from the supplementary defined-benefit pension plan set up in 2012 under identical conditions to those applicable to all participants in the pension plan, subject to the following clarifications:

- Since Benoit Bazin joined the Saint-Gobain Group on September 1, 1999, he accumulated 19 years and 4 months of seniority under the "2012" pension plan when his term of office came into effect and his employment contract was suspended on January 1, 2019.
- In accordance with the law (7th and 8th paragraphs of article L.225-42-1 of the French Commercial Code), 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 shall be subject to a performance condition defined as follows: allocation by the Board of Directors, on average, for all previous full fiscal years (not exceeding three) 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, with a variable compensation portion at least equal to half of the maximum amount set for that variable portion (condition similar to the one applicable to the Severance Indemnity described above).
- The Board of Directors noted that the "2012" supplementary pension plan is more restrictive than required by article L.225-42-1, paragraph 8 of the French Commercial Code, according to which the potential rights attached to a supplementary pension plan cannot increase annually for executive corporate officers by more than 3% of the annual compensation used as a reference for calculating the pension paid under that plan.
- The satisfaction of the performance condition that determines the increase in Benoit Bazin's rights shall be assessed by the Board of Directors for the first time when one full fiscal year during which he has held the position of Chief Operating Officer is available. It shall be determined by the Board of Directors in the first quarter of each year until he reaches the 20-year seniority limit set by the "2012" supplementary pension plan.

Person concerned

Benoit Bazin – Chief Operating Officer

Reason why the undertaking is beneficial for the company

Your Board of Directors explained that this undertaking is beneficial for the company as Benoit Bazin's employment contract has been suspended since January 1, 2019 when he was appointed as Chief Operating Officer, which is why this undertaking was given since that date.

Benefits under the Group health and personal risk insurance contracts applicable to employees of Compagnie de Saint-Gobain to be maintained for Benoit Bazin in his capacity as executive corporate officer

Nature and conditions

On the recommendation of the Nomination and Remuneration Committee, at its meeting on November 22, 2018, the Board of Directors decided that Benoit Bazin continues to benefit in full from the Group's health and personal risk insurance policies entered into with GAN and Mutuelle Malakoff Médéric respectively during his term of office.

Person concerned

Benoit Bazin – Chief Operating Officer

Reason why the undertaking is beneficial for the company

Your Board of Directors explained that this undertaking is beneficial for the company as Benoit Bazin's employment contract has been suspended since January 1, 2019 when he was appointed as Chief Operating Officer, which is why this undertaking was given since that date.

Agreements and undertakings previously approved by an annual general meeting

Agreements and undertakings approved during the year ended December 31, 2018

a) Which were implemented during the year

Pursuant to article R.225-30 of the French Commercial Code, we were informed that the following agreements and undertakings, already approved by the Annual General Meeting of June 7, 2018, were implemented during the year.

Nature and date of approval by the Annual General Meeting	Person(s)/entity(ies) concerned	Implementation during the year ended December 31, 2018
Group health and personal risk insurance contract for employees and corporate officers ***Approved by the Annual General Meeting of :*** June 7, 2018 (Statutory Auditors' special report of March 12, 2018)	Chairman and Chief Executive Officer: Pierre-André de Chalendar	On the recommendation of the Nomination and Remuneration Committee, at its meeting on February 22, 2018, the Board of Directors decided that Pierre-André de Chalendar would continue to benefit in full from the Group health and personal risk insurance contracts entered into with GAN and Mutuelle Malakoff Médéric respectively. Payment of €9,122, made by the Company for Pierre André de Chalendar's insurance coverage in respect of 2018.

b) Which were not implemented during the year

Furthermore, we were informed that the following agreements and undertakings, already approved by the Annual General Meeting of June 7, 2018, remained in force but were not implemented during the year.

Undertakings given to Pierre-André de Chalendar concerning the compensation and benefits potentially due, in certain cases, on the termination of his duties as Chairman and Chief Executive Officer

Nature and conditions

On the recommendation of the Nomination and Remuneration Committee, at its meeting of February 22, 2018, the Board of Directors authorized the renewal of benefits payable to Pierre-André de Chalendar on the termination of his duties as Chairman and Chief Executive Officer ("compensation for termination of office") of Compagnie de Saint-Gobain ("the Company").

The terms and conditions of this compensation for termination of office are as follows:

1. The compensation for termination of office will be paid in the event of the forced termination of Pierre-André de Chalendar's duties as Chairman and Chief Executive Officer, irrespective of the form of termination under the following circumstances:

a. he is removed from office or his appointment as Chairman and Chief Executive Officer is not renewed, other than at his own initiative or as a result of gross or willful misconduct (by reference to case law relating to employment matters) or serious misconduct not related to his duties as Chief Executive Officer (in accordance with the case law definition), or

b. he is forced to resign within the twelve months following:

- the date of approval by the shareholders of a merger or a demerger affecting the Company, or
- the date on which a third party or group of third parties acquires control of the Company (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.

2. No compensation for termination of office will be due if Pierre-André de Chalendar leaves the Company (i) at his own initiative in circumstances other than those described in 1. above, or (ii) in one of the circumstances described in 1. above, if he would have been eligible to retire during the following twelve months and to receive a pension under the SGPM supplementary pension plan for engineers and managers.

3. The amount of the compensation for termination of office will be equal to no more than twice the amount of Pierre-André de Chalendar's total gross annual compensation as Chairman and Chief Executive Officer, defined as the sum of the fixed portion of the annual compensation of the Chairman and Chief Executive Officer received as of the date of termination of his duties, and the average annual variable bonus of the Chairman and Chief Executive Officer received or receivable in respect of his last three full fiscal years in office (this total gross annual compensation is defined hereinafter as the "Reference Compensation"). In any case, the sum of the compensation for termination of office and of the non-compete agreement compensation will not exceed twice the amount of the Reference Compensation.

4. Payment of the compensation for termination of office will be subject to fulfilment of a performance condition evidenced by the Board of Directors' decision to award him a variable bonus for the last three full fiscal years ended before the termination of his duties as Chairman and Chief Executive Officer at least equal to one half of the maximum bonus.

Payment of the compensation for termination of office will be dependent on the Board of Directors' acknowledgement, under the conditions set out by the legislation in force, of the fulfilment of this performance condition as of the date his duties are terminated.

On the recommendation of the Nomination and Remuneration Committee, at its meeting on February 22, 2018, the Board of Directors authorized the renewal of a firm and irrevocable non-compete undertaking between Pierre-André de Chalendar and the Company for a period of one year from the date on which his functions as Chairman and Chief Executive Officer are terminated in circumstances qualifying him for the compensation for termination of office. In consideration for this undertaking, Pierre-André de Chalendar will receive a compensation equal to the Reference Compensation, it being specified that the amount of the compensation for termination of office due to Pierre-André de Chalendar will, if necessary, be reduced so that the sum of the non-compete agreement compensation and the compensation for termination of office amount will not exceed twice the amount of the Reference Compensation. The Board of Directors reserves the right to unilaterally waive the implementation of the non-compete commitment no later than the day of termination of the Chairman and Chief Executive Officer's duties, in which case he would be released from any commitment and no amounts would be due to him on this account.

Approved by the Annual General Meeting of: June 7, 2018

(Statutory Auditors' special report of March 12, 2018)

Person concerned

Pierre-André de Chalendar – Chairman and Chief Executive Officer

Reason explaining why the undertakings are beneficial for the company

Your Board of Directors explained that these undertakings are beneficial for the company as Pierre-André de Chalendar waived his employment contract in 2010 to be appointed as Chairman and Chief Executive Officer, which is why these undertakings have been given and renewed since that date.

Pension plan for Pierre-André de Chalendar in his capacity as non-salaried executive corporate officer

Nature and conditions

On the recommendation of the Nomination and Remuneration Committee, at its meeting on February 22, 2018, the Board of Directors decided, in accordance with article 17 of the rules and regulations of the SGPM supplementary pension plan for engineers and managers, that Pierre-André de Chalendar would continue to benefit in full from the provisions of said rules and regulations under the same conditions as those applicable to all members of the pension plan, except for the following amendment. In accordance with law (article L.225-42-1, paragraphs 7 and 8 of the French Commercial Code), the Board of Directors has decided that, as from the renewal of the mandate of Pierre-André de Chalendar, the annual increase of his potential rights under the SGPM supplementary pension plan for engineers and managers will be subject to a performance condition defined as having been allocated by the Board of Directors a variable part of compensation at least equal to one half of the 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 condition being the same as for the compensation for termination of office described above).

Approved by the Annual General Meeting of: June 7, 2018

(Statutory Auditors' special report of March 12, 2018)

Person concerned

Pierre-André de Chalendar – Chairman and Chief Executive Officer

Reason explaining why the undertaking is beneficial for the company

Your Board of Directors explained that this undertaking was beneficial for the company as Pierre-André de Chalendar waived his employment contract in 2010 to be appointed as Chairman and Chief Executive Officer, which is why this undertaking has been given and renewed since that date.

Benefits under the Group health and personal risk insurance contracts applicable to employees of Compagnie de Saint-Gobain to be maintained for Pierre-André de Chalendar in his capacity as non-salaried executive corporate officer

Nature and conditions

On the recommendation of the Nomination and Remuneration Committee, at its meeting on February 22, 2018, the Board of Directors decided that Pierre-André de Chalendar will continue to benefit in full from the Group health and personal risk insurance contracts entered into with GAN and Mutuelle Malakoff Médéric respectively.

Approved by the Annual General Meeting of: June 7, 2018

(Statutory Auditors' special report of March 12, 2018)

Person concerned

Pierre-André de Chalendar – Chairman and Chief Executive Officer

Reason explaining why the undertaking is beneficial for the company

Your Board of Directors explained that this undertaking was beneficial fot the company as Pierre-André de Chalendar waived his employment contract in 2010 to be appointed as Chairman and Chief Executive Officer, which is why this undertaking has been given and renewed since that date.

Neuilly-sur-Seine and Paris La Défense, March 14, 2019

The Statutory Auditors

PricewaterhouseCoopers Audit		KPMG Audit Department of KPMG S.A	
Edouard Sattler	Cécile Saint-Martin	Jean-Paul Thill	Bertrand Pruvost

Risks and control 6

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 significant risks to which the Group believes it is exposed, as of the date of this Registration Document.

However, there are other risks which may exist or arise, of which the Group is not aware as of the date of this 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.

Within each of the risk categories mentioned below, the most important risk factors are mentioned in the first place, in line with an evaluation based on their impact and likelihood.

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 revenues depends on the level of investment in the construction market, which generally closely follows the cyclicity of economic trends. 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.

Further deterioration in the global economic environment and in financial markets conditions could have a material adverse effect on the Group's sales, results, cash flow 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. Specifically, it is active in Eastern Europe, Asia, the Middle East and emerging countries, particularly Brazil. In certain countries located in these regions, there is greater economic and political instability, as well as greater exposure to social disruption and infrastructure malfunctions than in the 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.

Moreover, legal or regulatory changes (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.

1.1.3 Risks associated with innovation and the digital revolution

The Group has made research and innovation the focus of its strategy, in order to remain competitive and maintain a high level of financial and non-financial performance and operational excellence. The emergence of new technologies, new products and new communication and distribution channels is driving rapid change in some of the Group's markets. The Group has 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.

This innovation policy requires significant spending on research and development, computer network infrastructure and logistics, with no guaranteed impacts.

The Group's sales, operating margins and results could be affected if it fails to invest in appropriate technologies or to rapidly bring new products to market, or if competing products are introduced or the Group's new products do not adequately address customer needs.

1.1.4 Intellectual property risk

Development of the Group's business relies on protecting its manufacturing secrets, patents, trademarks and models and other intellectual property rights. If the Group was unable to obtain, protect and preserve its intellectual property rights, this could result in the loss of its exclusive right to use technologies and processes, with a material adverse effect on results.

Since the Group's activities are, in part, in countries where the protection of intellectual property rights is not as developed as in Western Europe or North America, the Group cannot guarantee the level of protection that will be accorded to its portfolio of patents and brands, and must address risks of counterfeiting of its products, and the appropriation or illicit use of its intellectual property rights.

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 the cost and supply of raw materials

The Group's businesses, some of which are heavy consumers of energy, may be affected by a significant increase in prices and difficulties in obtaining a supply of raw materials and/or energy (such as natural gas). Its ability to pass on these cost increases to its customers depends to a large extent on market conditions and practices. If the Group's ability to immediately and/or fully pass on increases in raw materials and/or energy costs were limited, this could have a material adverse effect on its businesses, financial position or results.

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, Chapter 8, Section 1).

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, 2018, seven sites were classified under Directive 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).

In France, under the Law of July 30, 2003 on the prevention of technological and natural risks and the remediation of contaminated sites, specific risk prevention and safety policies have been implemented at all of the French sites listed above. 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 insurance program, except for the Bagneaux-sur-Loing plant, which is insured under a specific policy subscribed by the joint venture operating the facility.

In the event of a technological accident, compensation payments to victims would be organized jointly by the joint venture, 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 industrial sites or clean up the environment. 71 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.

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 operations.

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. The Group may, however, not be able to identify attractive targets or enter into transactions at the optimal time and/or under satisfactory conditions. 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.

1.1.8 Risks associated with information systems

Daily management of the Group's activities, specifically the conduct of its commercial, industrial 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 shutdown, 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.

To minimize the impact of this type of malfunction, the Information Systems Department has set strict rules for information systems governance and security, relating to infrastructure and applications, data backups and business continuity plans, rolled out at the Group level and controlled by the Internal Audit and Control Department.

The occurrence of such malfunctions may adversely affect the Group's operations, the protection of its know-how and its financial results.

1.1.9 Customer credit risk

The Group's exposure to customer credit risk is limited due to its wide range of businesses, worldwide presence and very large customer base. Past-due receivables are regularly analyzed and provisions are booked whenever necessary (see Note 4 to the Consolidated Financial Statements, Chapter 8, Section 1). Nevertheless, changes in the economic situation could lead to an increase in customer credit risk.

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. At December 31, 2018, total commitments under pension and other post-employment benefit plans were €10.9 billion.

The provision for pension plans recognized in the consolidated balance sheet (€2.5 billion at December 31, 2018) 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 and 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 program's targets will be fully met within the expected timeline.

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 €10.9 billion, respectively, at December 31, 2018. 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 (€11.5 billion at December 31, 2018) represent roughly one-quarter of total assets and may become impaired in the event of adverse development of the business.

1.3 Financial risks

1.3.1 Liquidity risk

a) 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 regional Treasury Department.

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 bonds, which are generally issued under the Medium Term Notes program. Saint-Gobain also uses perpetual bonds, participating securities, a long-term securitization program, bank borrowings and lease financing.

Short-term debt comprises 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 the Group's debts by type and maturity is provided in Note 9.3 to the consolidated financial statements (see Chapter 8, Section 1) 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 December 9, 2014.

Saint-Gobain's long-term debt issues have been rated Baa2 with a stable outlook by Moody's since December 9, 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.

b) 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 instruments.

1.3.2 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 by 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 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.

1.3.3 Market risks

a) 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. The hedging of purchases of fuel oil, gas and electricity is governed by the Group's purchasing policy.

Hedges of these energy purchases (excluding fixed-price purchases negotiated directly with suppliers by the Purchasing Department) are generally arranged by the Group Treasury and Financing Department (or with the 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, in accordance with the same principles as those outlined above for energy purchases.

Note 9.4 to the Consolidated Financial Statements (see Chapter 8, Section 1) provides a breakdown of instruments used to hedge energy and commodity risks.

b) Interest rate risks

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. Where subsidiaries use derivatives to hedge interest rate risks, their counterparty is generally Compagnie de Saint-Gobain, the Group's parent company.

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, 2018 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	4	12
Interest rate decrease of 50 basis points	(4)	(12)

Note 9.4 to the consolidated financial statements (see Chapter 8, Section 1) provides a breakdown of interest rate risk hedging instruments and of gross debt by rate type (fixed or variable) after hedging.

c) 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 their functional currencies. Compagnie de Saint-Gobain and its subsidiaries may use forward contracts and options to hedge exposures arising from current and forecast transactions.

The subsidiaries usually set up contracts through the Group's parent company, Compagnie de Saint-Gobain, which then carries out the corresponding forex hedging transaction, or through the regional Treasury Department, otherwise 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, 2018, 97% 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, 2018:

(in million of euro equivalent)	Long	Short
EUR	2	8
USD	13	7
Other currencies	0	5
TOTAL	**15**	**20**

The table below gives an analysis, as of December 31, 2018, 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 million of euro equivalent)*	Impact on pre-tax income
EUR	(0.6)
USD	0.6
Other currencies	(0.5)
TOTAL	**(0.5)**

Assuming that all other variables remained unchanged, a 10% fall in the exchange rates for these currencies at December 31, 2018 would have the opposite impact.

Note 9.4 to the Consolidated Financial Statements (see Chapter 8, Section 1) provides a breakdown of foreign exchange risk hedging instruments.

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 to the consolidated financial statements (see Chapter 8, Section 1) provides a breakdown of these share price risk hedging instruments.

1.4 Legal Risks

1.4.1 Risks associated with legal and administrative procedures

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. However, a provision for claims and litigation was recognized at December 31, 2015 in an amount equivalent to the fine (unchanged at December 31, 2018).

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.

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.

Investigation by the Anti-trust Division of the United States Department of Justice in the United States drywall industry

In July 2015, the Anti-trust Division of the United States Department of Justice opened a criminal investigation into potential anti-competitive practices, specifically a price agreement, in the United States drywall industry. This investigation followed complaints filed in late 2012 in the form of class actions in the civil courts against eight drywall manufacturers in the sector, including CertainTeed, by some of their customers.

On the basis of testimony and documents submitted in the civil proceedings, CertainTeed and its attorneys have not identified any element that might create liability for CertainTeed, and as a result filed a motion for summary judgment in May 2015 in order to end the civil proceedings. This application was accepted on February 18, 2016 by the competent court. In autumn 2018, the lawsuit was terminated: no liability was assigned to CertainTeed and no fine was levied.

b) Asbestos-related litigation

Current legal actions related to asbestos are described below.

Asbestos-related litigation in France

Inexcusable fault lawsuits

In France, seven further individual lawsuits were filed in 2018 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, 2018, a total of 822 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, 2018, 789 of these 822 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 €4.6 million.

Concerning the 33 lawsuits outstanding against Everite and Saint-Gobain PAM at December 31, 2018, five have been completed in terms of both liability and quantum, but are still pending on the determination of who will pay the compensation due.

Out of the 28 remaining lawsuits, at December 31, 2018 the procedures relating to the merits of 24 cases were at different stages, with three in the process of being investigated by the French Social Security authorities and 21 pending before the Social Security or Appeal Courts. The last four actions have been cancelled but the plaintiffs may

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request their restoration at any time within a two-year period following their cancellation.

In addition, as of December 31, 2018, 237 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, 2018, 211 lawsuits had been completed. In 129 of these cases, the employer was held liable for “inexcusable fault”.

At the same date, compensation paid by these companies totaled approximately €7.0 million.

As regards the 26 suits outstanding at December 31, 2018, two cases were still being investigated by the French Social Security authorities and 23 were being tried – including 20 pending before the Social Security Courts and three before the Appeal Courts. Lastly, for one lawsuit, a decision has been rendered on the finding of liability but is still pending regarding the determination of who will pay the compensation due.

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, 2018, a total of 822 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 822 lawsuits, 720 have been finally disposed of, representing total amount of compensation of €7.6 million at December 31, 2018. The remaining 102 lawsuits are pending before the competent labor tribunals.

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.

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, specialized insulation or gaskets, are 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 2018

Approximately 2,600 new asbestos-related claims were filed against CertainTeed in the United States in 2018 (compared to 3,100 new claims in 2017). The number of new claims is significantly down on the past few years.

Virtually all lawsuits involving CertainTeed have either been settled out of court or dismissed. Around 4,300 of the pending claims were settled in 2018, compared to 3,900 in 2017 and 3,700 in 2016. Taking into account the number of claims outstanding at the end of 2017 (34,300), new claims arising during the year and settled claims, some 32,600 claims remain outstanding at December 31, 2018. A large number of these pending claims were filed more than five years ago by individuals who have been unable to demonstrate any significant asbestos-related impairment, and it is likely that many of these claims will ultimately be dismissed.

Impact on the Group’s financial statements

The Group recorded a US$106 million charge in 2018 to cover future developments in relation to claims. This amount is stable compared to the amount recorded in 2017 and 2016. At December 31, 2018, the Group’s provision for asbestos-related litigation against CertainTeed in the United States amounts to US$568 million (compared to US$555 million at December 31, 2017 and US$562 million at December 31, 2016).

Cash flow impact

Compensation paid in respect of these claims against CertainTeed (including claims settled prior to 2018 but only paid out in 2018 as well as claims fully settled and paid out in 2018), as well as compensation paid in 2018 by other Group businesses in the United States in connection with asbestos litigation, amounted to US$67 million (compared to US$76 million in 2017 and US$97 million in 2016).

Situation in Brazil

In Brazil, former employees of Brasilit 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 a very 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) or state health advisories 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, 2018, the provision recorded by the Company in respect of this matter amounts to €30 million.

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. 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 twelve months, a significant impact on the financial position or profitability of the Company and/or Group. See note 8 to the consolidated financial statements, Chapter 8, Section 1, related to provisions for claims and litigation.

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. In France, for example, Group plants are subject to the laws and regulations applicable to classified sites.

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 IT risks has been implemented.

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 2017 policies were renewed as 2018 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.

1.5.3 Exceptions

Joint ventures and companies not controlled by the Group are excluded from the above programs and purchase separate insurance coverage.

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;
- anti-fraud.

Each level of the organization plays a role in implementing internal control:

- the Group's corporate departments help to define a common framework shared with local managerial structures [(1)];
- the companies are in the frontline when it comes to incorporating an internal control and risk management system tailored to their situation, at the instigation of the Chief Executive Officers;
- 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;
- ultimately, internal control and risk management are the responsibility of all Group employees.

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).

Supported by a continuous improvement process and an Internal Control Reference Framework, Saint-Gobain Group's internal control and risk management system is a whole set of means, 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) which are distributed to all employees;
- the Saint-Gobain Attitudes: being close to customers, acting as an entrepreneur, innovating, being flexible, building an open, engaging culture;

(1) *Local managerial structures: Regions, Countries and BUs following the change to the Group's organization announced at the end of November 2018. Previously, this role had been shared between the Sectors, Activities and General Delegations.*

- the Group's compliance program: law on antitrust, embargoes and trade sanctions, fight against corruption and fraud, professional associations, conflicts of interest, gifts policy, etc. (See Chapter 6, Section 2.5.6 – 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. Local managerial structures [1] 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 companies in the Saint-Gobain Group follow the security rules issued by the Group's Information Systems Department and Internal Control (ITAC).

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, *i.e.* factors which could hinder it meeting its objectives, as well as the dangers which 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 Chapter 6, Section 2.5.1 – 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.

(1) *Local managerial structures: Regions, Countries and BUs following the change to the Group's organization announced at the end of November 2018. Previously, this role had been shared between the Sectors, Activities and General Delegations.*

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

Regular reports on the Group's internal control and risk management are submitted to the Board of Directors after being reviewed by the Audit and Risks Committee (see Chapter 5 – Corporate Governance, Section 1.2.3).

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 examines significant internal control incidents, results of significant audits and oversees the corrective actions necessary to address failures.

It reports back regularly to the Board of Directors on its work and notifies the Board promptly of any issues encountered (see Chapter 5 – Corporate Governance, Section 1.2.3).

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.

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 2018, the Internal Audit and Business Control Department had 95 staff, working in the areas of audit, internal control and anti-fraud.

Audit and Internal Control Department	Main responsibilities	Reference standards and/or measures	2018 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 and associated practical data sheets or Group memos ■ Internal Control briefs ■ Webinars and training sessions (Business Control Forums) (1) ■ Intranet and Internal Control Community (My SG) ■ ACTT2 database (2) ■ Dashboard/QlikView (3)	■ 4,794 action plans open in the ACTT2 database at the end of 2018 ■ 2018 Compliance Statement update (699 questionnaires sent) ■ 768 corporate leaders and managers trained during 19 Business Control Forums in 18 different countries ■ 43 webinars delivered and 16 newsletters published ■ Approximately 1,138 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 ■ Risk mapping tool, containing the risk database	■ 68 existing maps, 34 of them (50%) updated in 2018
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 ■ 6 Essentials (4) ■ Best practices library ■ Process and data analysis tools ■ Auditor training Program	■ 167 audits completed including 92 with process and data analysis tools (Table and/or Celonis) ■ 11 new best practice briefs published ■ Entities covered every 5 years
Anti-fraud	■ Develop anti-fraud policies ■ Ensure fraud prevention ■ Investigate fraud incidents	■ Training and awareness ■ Fraud incident reports	■ 67 Directors and managers trained

(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) Central database for monitoring compliance statements and action plans.

(3) Online dashboard containing information on internal control (compliance statements results, implementation rate for action plans), audit assignments, computer security, risks and insurance, fraud reporting, and financial data.

(4) Fraud detection audit methodology.

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	2018 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 ■ Integrated EHS audits ■ Self-diagnostic tool ■ OHSAS 18001, ISO 14001 and ISO 50001 standards	■ Industry audits: ▪ 38 "12-stage" audits ▪ 41 "20-stage" audits (1) ▪ 50 "ISA" audits (2) ■ Distribution audits: ▪ 301 "ESPR" audits (3)
Information Systems Department	■ Define Group policy for information systems and computer network security ■ Promote and coordinate an annual self-assessment plan ■ Develop rules and best practices	■ Minimum security rules ■ Technical standards ■ Development standard for secure web applications ■ Note on the Cloud ■ Datacenter 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 focusing on purchasing performance, department professionalization and supplier innovation ■ Execute multi-business and multi-country purchasing ■ Coordinate the purchasing function in France and conduct multi-business purchasing activities in France	■ 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 2018 ■ 13 internal audits on local and technical purchases (incl. shipping and Capex) ■ 68 Buy/Techs executed in 25 different 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	■ 54 site visits by prevention engineers ■ 1,388 sites that have performed their Risk Grading self-assessment ■ 906 evaluations on sales outlets ■ 21 prevention/PCA training sessions ■ Regular field inspections

(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 Sector.

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)	■ 132,112 internal/external foreign exchange transactions in 2018 ■ 27,262 internal/external transfers issued in 2018
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 Delegations and Sectors [(1)] ■ Oversight of the network of Group controllers ■ Implementation of common analysis tools ■ Group reference base and notices to corporate departments and Sectors.	■ Over 150 meetings per year with Sectors and Delegations [(1)] ■ 12 training sessions with the participation of 172 employees ■ 210 DAC (Credit Authorization Requests) ■ 48 planned acquisitions, 39 of which have been completed ■ 34 divestments and mergers completed
Doctrine Department	■ Manage, update and distribute all financial, administrative and management procedures applicable to the Group's companies	■ Group organization and procedures ■ Financial and accounting standards ■ Group Intranet	■ 660 documents available on the Doctrine intranet ■ 449 questions addressed *via* the hotline ■ 1,459 employee subscribers to Doctrine News
Legal Department	■ Identify the main legal risks ■ Define and implement relevant policies and controls ■ Provide guidance to operational staff through the network of compliance and embargo correspondents	■ 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	■ More than 28,000 employees completed at least one online training session on corruption prevention or competition law ■ Almost 10,000 employees completed "Saint-Gobain Economic Sanctions and Embargoes" online training on economic sanctions and embargoes ■ Specialized legal counsel performed competition audits on 156 sites (since 2007) ■ Almost 500 in-person training sessions on compliance (competition law, anti-corruption rules, trade sanctions and embargoes) have been held since 2017

(1) As per the organization in place in 2018.

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 audits, specialized and external.

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 and is exercised with support from the functional and operational Directors in the company and from the site Directors.

To build an internal control system adapted to their activity, the Chief Executive Officers of the companies aim to:

- introduce the fundamentals of internal control and risk management;
- implement the controls described in the Internal Control Reference Framework;
- adapt the internal control and risk management system by analyzing the main risks and by enhancing the internal control system to include checks to control the risks identified;
- 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 these 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 compliance statements and action plans are centralized and tracked by the Internal Audit and Business Control Department, which also prepares an executive summary of the information. They form the subject of an annual report to the Group's General Management and the Audit and Risks 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 conformance-oriented tool for data analysis that is useful in targeted searches for inconsistencies with business control rules.

These two highly complementary tools thoroughly analyze the populations concerned (transactions, master data, 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.

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;
- 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

There are three parts to the Internal Control Reference Framework:

- part 1 – Internal control and risk management at Saint-Gobain;
- part 2 – Risk universe;
- part 3 – Internal control processes.

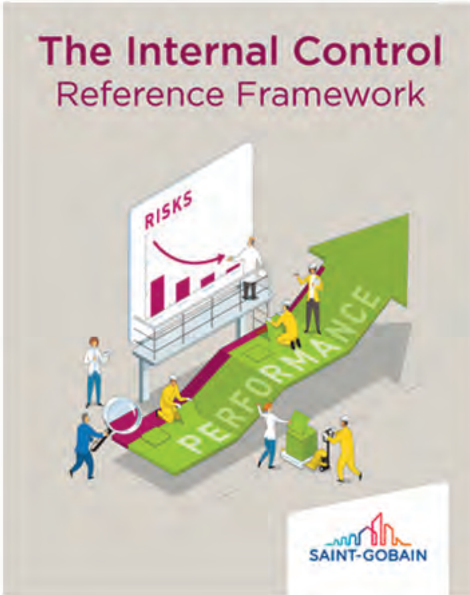
Part 1 describes the Group's internal control and risk management system, its implementation in the subsidiaries and the current oversight arrangements.

- R1. Strategy implementation
- R2. Innovation
- R3. Country and macro-economics
- R4. Treasury and financing
- R5. Financial Information
- R6. Legal
- R7. Tax
- R8. Communication
- R9. Human resources and social
- R10. Environment, Health and Safety
- R11. Operational
- R12. Information system and Digital
- R13. Fraud and Security

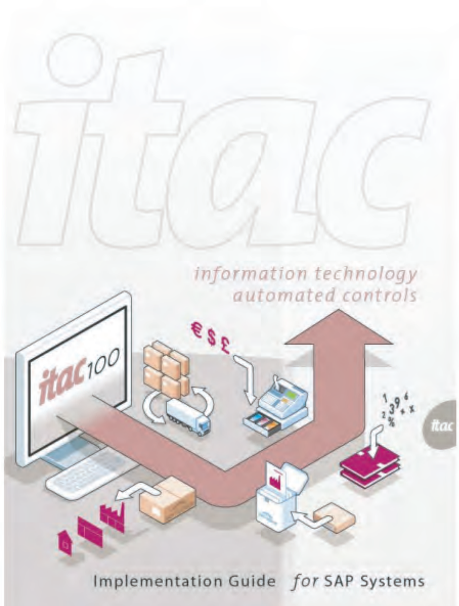
Part 2 introduces the Group's risk universe. It comprises 13 main categories of risk, covering 64 subcategories. The framework thus provides Directors with a means of identifying the risks for their entities.

Part 3 is structured by domain, identifying the main risks associated with the related processes and determining the key checks required to avoid or reduce them.

Each process contains a control/risk matrix used to refer specifically to risk types by control and contributing to understanding the control system.



The Internal Control Reference Framework is updated once a year by the Audit and Internal Control Department with support from the managers in each area. The results of the audits, compliance statements, incidents and risk mapping provide precious information which is used to periodically update the Internal Control Reference Framework .



At the same time, controls on the Sales & Customer Services, Inventories & Logistics, Purchases and Finance chapters, which can be fully or partially automated, are outlined in the complementary documentation "IT Automated Controls", or ITAC. Group companies are asked to include these automatic checks in their business applications.

A major update was done on the Internal Control Reference Framework at the end of 2018 to simplify it and include information on the Group's new organization.

Moreover, the Internal Control Reference Framework is available on the IABC (Internal Audit and Business Control) intranet and in the My SG collaborative room (My Business Control).

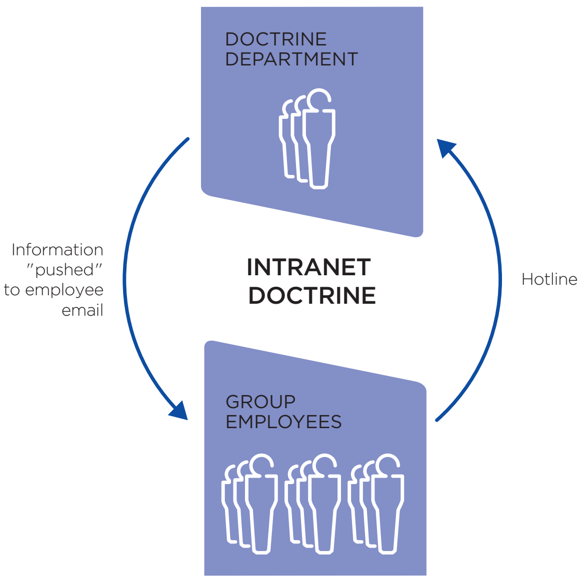
The intranet also has tools to help the entities carry out the controls (standard procedures, flow diagrams, risk and control libraries), although these good practices are not mandatory.

These tools are analyzed by the monitoring system which has been implemented:

- by the Internal Audit and Business Control Department;
- by entities that agree to share their tools;
- by the internal auditors in the course of their work.

2.5.2 Doctrine

The Doctrine Department is responsible for preparing all financial, administrative and management procedures applicable to Group companies.



These procedures, accessible on the Group's intranet, cover two main themes: Group Organization and Procedures, and Financial and Accounting Standards.

Reports on the Doctrine Department's activities are prepared twice a year for the Audit and Risks Committee.

2.5.3 Environment, Health and Safety (EHS) Reference Manual

The EHS Reference Manual describes the approach to be followed by all entities to introduce an EHS management system and contributes to meeting the objectives set by the Group in terms of environmental protection and prevention of workplace accidents and occupational illnesses. The approach is structured around the main steps of risk identification, preventive actions implementation, reduction and control of risks.

The EHS Reference Manual (2012 version) is accessible on the Group Intranet and is distributed to all sites. It is being revised to make it consistent with the most recent international standards ISO 14001:2015 and ISO 45001:2018, and with the Group's WCM (World Class Manufacturing) approach (see Chapter 3, Section 2). It serves as a reference to the EHS management systems (12- and 20-stage audits, and new ISA – Integrated System Assessment – audit launched in 2018). The option of better adapting the type of audit and the self-diagnostic tool to the type of site (size and complexity) will be examined in 2019.

In addition, the purpose of the EHS Handbook, updated in 2014, is to help all Group entities to develop and roll out an integrated EHS management system as required by the EHS Reference Manual. The EHS Handbook is intended as a tool to be available to all, and follows the continuous improvement cycle to describe and illustrate how to implement the chapters of the Reference Manual. Hence, it describes the requirements for each area and provides reference documents, examples of implementation or best practices.

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 Chapter 3, Section 1). 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. Ways of implementing these internal requirements more efficiently, while streamlining the procedures, will be examined in 2019.

2.5.4 General doctrine on information systems security

The Information Systems Department compiles rules and best practices concerning 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, 20 SGTS covering 450 entities);
- industrial information technology systems, with at least 28 security rules (48 control points, 305 entities with critical or large industrial IT systems);
- research and development centers, with at least 7 security rules (13 control points, 13 R&D centers);

- applications, with at least 25 security rules (63 control points, 67 competency centers);
- hosting of our resources in partner-operated Datacenters coordinated by the Group DSI or the SGTS (99 control points, 17 Datacenters).

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 defenses against new cyber- attacks. This framework is divided into four specific operational cyber defense v2 action plans covering global infrastructure, local infrastructure, application continuity plans and user-focused actions.

Lower-level technical standards are also issued as a supplement to these rules, and are updated periodically (17 new documents in 2018) to keep pace with technological advances and control infrastructure services.

The Information Systems Department has 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 25 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 SAP 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 set of security rules to annually monitor the security of the central and regional datacenters (Datacenter Security Rules 4 SG, the new version of the 55 Datacenter Rules);
- a technical standard for the security of applications hosted by Saint-Gobain partners for publication on the internet.

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 was updated for consistency with the update to the Internal Control Reference Framework (143 control points).

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 Sector;
- 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 13 companies.

In 2019 ITAC repository will be updated by the Internal Audit and Business Control Department. The Information Systems Department retains the responsibility as for the implementation guidelines for the Group's main ERP software.

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 the 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,
  - economic sanctions and embargos policy,
  - policy on sales agents and intermediaries,
  - policy on membership of professional associations,
  - the Group policy on management of the corruption risk by Human Resources;
- frequent dissemination of messages by Saint-Gobain's Chairman, and the Chief Executive Officers of the Saint-Gobain Group's countries and activities;
- a network of compliance officers and local embargoes.

2.6 Organization of internal control in preparing and processing financial and accounting information for 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 in accordance with current and generally accepted accounting standards and principles, including 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 revenue 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 doctrine 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 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 the Sectors [(1)].

2.6.5 Group standards

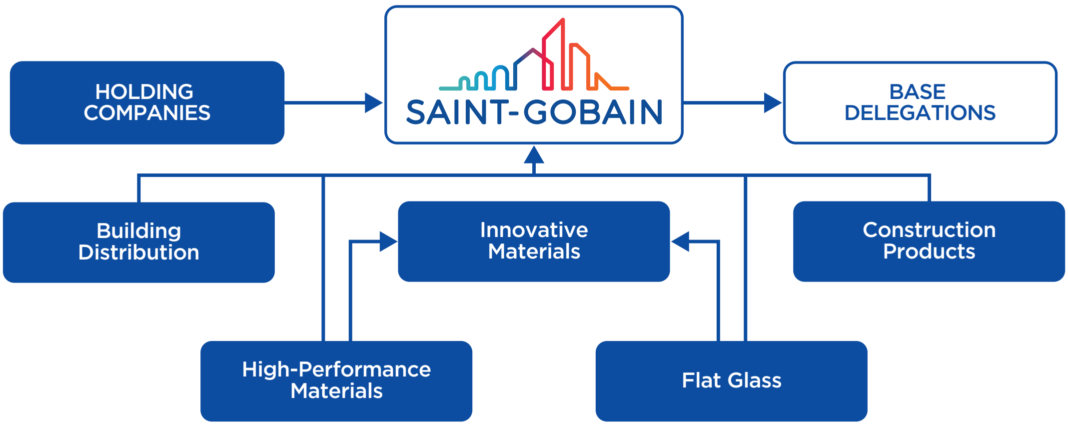
The Consolidation Department is responsible for providing information and periodic training to subsidiaries in conjunction with the Sectors and General Delegations [(1)].

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 Doctrine Department.

Each year, the Consolidation Department offers training sessions.

2.6.6 Organization of the Group's consolidation process [(1)]

For 2018, the Group's consolidation was organized by consolidation levels with hierarchical relationships with the head of each Sector, and reporting directly to the Group Consolidation and Reporting Department.



2.6.7 Processing information and control of the financial statements [(1)]

Each subsidiary submits its accounts in accordance with the timetable set by the Company. The account packages are checked and processed at Sector level, reviewed by the General Delegation concerned, then transmitted to the Consolidation Department, which performs an overall review of the Group's accounts 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.

(1) As per the organization in place in 2018.

It feeds data into a secure reporting system accessible on the Group's intranet for Group General Management and the management of the Sectors and General Delegations, contributing to internal control of information output [1].

2.6.9 A reporting process that makes the financial statements more reliable [1]

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, Sectors and General Delegations 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.

(1) As per the organization in place in 2018.

Capital and ownership structure

7

1. CAPITAL

1.1. Share capital

1.1.1 Share capital at December 31, 2018

At December 31, 2018, Compagnie de Saint-Gobain's share capital amounted to €2,186,340,016, represented by 546,585,004 common shares with par value of €4 (compared with 553,557,091 shares at the previous year-end) fully paid up and all of the same category.

At December 31, 2018, 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, 2015, Saint-Gobain's share capital has changed as follows:

Date	Type of transaction	share capital after transaction	Number of shares after transaction
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
12/2016	Issuance of 433,292 shares upon exercise of the same number of subscription options and allocation of 86 performance shares to employees	€2,221,121,432	555,280,358
05/2016	Capital reduction: cancellation of 10,984,088 shares	€2,219,387,920	554,846,980
05/2016	Group Savings Plan: issuance of 4,653,810 shares (at €29.42)	€2,263,324,272	565,831,068
04/2016	Allocation of 29,211 performance shares to employees	€2,244,709,032	561,177,258
03/2016	Issuance of 16,790 shares upon exercise of the same number of subscription options and allocation of 187,818 performance shares to employees	€2,244,592,188	561,148,047

1.1.3 Liens, guarantees and pledges

At December 31, 2018, 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' Meetings of June 2, 2016, June 8, 2017 and June 7, 2018 to the Board of Directors and the use made of these delegations during the 2018 fiscal year.

Purpose of the resolution and types of securities concerned	Source (resolution no.)	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)	2017 AGM 12th resolution	26 months (August 2019)	€444 million, excluding adjustments, *i.e.* approximately 20% of the share capital (1) (A)+(B)+(C)+(D)+(I) being limited to €444 million (the "**Global Cap**") (2)
Capital increase by incorporation of premiums, reserves, profits and free allocation of shares to shareholders (B)	2017 AGM 16th resolution	26 months (August 2019)	€111 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 compulsory 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 by subsidiaries would grant entitlement, where applicable by subsidiaries (C)	2017 AGM 13th resolution	26 months (August 2019)	€222 million (shares), excluding adjustments, *i.e.* approximately 10% of the share capital (1) Included in the Global Cap (2)
Capital increase (ordinary shares or securities giving access to shares in the Company with shares as primary securities) in compensation for contribution in kind (D)	2017 AGM 15th resolution	26 months (August 2019)	10% of the share capital, *i.e.* approximately €222 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 (E)	2017 AGM 17th resolution	26 months (August 2019)	€49 million, excluding adjustments, *i.e.* approximately 2.2% of the share capital (3)
Capital increase (equity securities) reserved for certain categories of beneficiaries to allow Group's employees outside France to benefit a mechanism equivalent to the Group Savings Plan (F)	2018 AGM 13th resolution	18 months (December 2019)	€880,000, excluding adjustments, *i.e.* approximately 0.04% of the share capital Allocation to the cap of (E) (2)
Allocation of stock options for new or existing shares (G)	2016 AGM 13th resolution	38 months (August 2019)	1.5% of the share capital on the date of the 2016 General Shareholders' Meeting, *i.e.* approximately €33.2 million with a sub-cap of 10% of this limit of 1.5% for executive corporate officers (4) (G) + (H) being limited to 1.5% of the share capital
Allocation of existing performance shares (H)	2016 AGM 14th resolution	38 months (August 2019)	1.2% of the share capital on the date of the 2016 General Shareholders' Meeting, i.e. approximately €26.6 million with a sub-cap of 10% of this limit of 1.2% for executive corporate officers (5) Allocation to the cap of (G)
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)	2017 AGM 14th resolution	26 months (August 2019)	For each issuance, legal limit of 15% of the initial issuance (1) Included in the Global Cap (2)
Share buyback program			**Features**
Share buyback (6)	2018 AGM 12th resolution	18 months (December 2019)	10% of the total number of shares making up the share capital at the date of the General Shareholders' Meeting (7) Maximum purchase price per share: €80
Cancellation of shares	2017 AGM 19th resolution	26 months (August 2019)	10% of the share capital per 24-month period (8)

(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 (A), (C) and (I) resolutions.

(2) No use of the delegation of authority in 2018.

(3) Confirmation of the issuance of 4,932,767 shares in May 2018 by the Chairman and Chief Executive Officer, acting pursuant to the delegation of authority granted by the Board of Directors on November 23, 2017 to implement a capital increase via the Group Savings Plan.

(4) Allocation of 290,500 options to purchase new or existing shares by the Board of Directors on November 22, 2018.

(5) Allocation of 1,219,619 existing performance shares by the Board of Directors on November 22, 2018.

(6) The purposes of the program are the following: cancellation, delivery of shares upon exercise of the rights attached to securities giving access in any way to the allocation of shares of the Company or in the context of external growth, merger, demerger and contribution transactions, market animation under a liquidity agreement, delivery of existing shares in the context of free shares allocations, upon exercise of stock options, or as part of an Employee Group Savings Plan or other similar schemes, hedging against the potential dilutive impact of free share allocations, the grant 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.

(7) See Chapter 7, Section 1.3 for a description of implementation of the share buyback program in 2018.

(8) Cancellation of (i) six million shares resulting in a reduction of the share capital by an aggregate face value of €24 million, decided by the Board of Directors of June 7, 2018, effective on June 15, 2018, and (ii) 6,461,449 shares resulting in a reduction of the share capital by an aggregate face value €25,845,796, decided by the Board of Directors of November 22, 20018, effective November 30, 2018 (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, 2018, Compagnie de Saint-Gobain directly held a total of 2,044,498 treasury shares, *i.e.* 0.37% of its share capital, with a par value of €4, acquired at an average purchase price of €42.38. At that date, it was not holding any treasury shares indirectly.

The following table shows, at December 31, 2018, 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 7, 2018:

Objective	Number of shares and percentage of capital	Average purchase price *(in EUR)*
Coverage of performance share plans and other allocations to employees (including stock options for existing shares)	1,927,939 shares (0.35% of share capital)	€43.08
Liquidity agreement	116,559 shares (0.02% of share capital)	€30.85
Cancellation	-	-

During the 2018 fiscal year, 438,468 treasury shares were remitted as part of existing performance share plans and 11,785 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 15, 2018 and 6,461,449 shares were cancelled on November 30, 2018. These share cancellations resulted in share capital reductions of an aggregate face value of €24,000,000 and €25,845,796 respectively.

1.3.2 Information on transactions involving own shares during the 2018 fiscal year (excluding liquidity agreement)

In 2018, as part of the authorizations granted by the General Shareholders' Meetings of June 8, 2017 and June 7, 2018 to the Board of Directors, the Company purchased, excluding the liquidity agreement, 12,773,437 shares, at an average price of €41.64, and did not sell any of its own shares. Total trading expenses, fees and taxes incurred by the Company in 2018 in connection with all transactions on its own shares (including the liquidity agreement) amounted to €2,094,000.

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, 2018.

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). 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 agreement and applied to the credit of the liquidity account were reduced from €6.7 million at December 31, 2013 to €5 million at June 26, 2014. At December 31, 2018, the liquidity account held 116,559 shares and had a credit balance of €0.9 million.

Cumulative purchases during the 2018 fiscal year under the liquidity agreement involved 1,276,808 shares at an average price of €39.07, while 1,203,749 shares were sold at an average price of €39.44. No shares allocated to the liquidity agreement were reallocated to another purpose of the share buyback program in 2018.

2. OWNERSHIP STRUCTURE

2.1 Major shareholders

At December 31, 2018, Compagnie de Saint-Gobain's share capital amounted to €2,186,340,016, represented by 546,585,004 common shares, corresponding to 614,917,077 theoretical voting rights.

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.

	December 31, 2018			December 31, 2017			December 31, 2016		
	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	43,948,473	8.0	13.4	40,898,426	7.4	12.8	42,736,720	7.7	12.7
BlackRock Inc.	26,820,586 (5)	4.9	4.4	31,494,449 (4)	5.7	5.1	28,199,633 (3)	5.1	4.4
Wendel	14,153,490	2.6	4.6 (6)	14,153,490	2.5	4.5	35,812,635	6.4	11.1
Treasury shares	2,044,498	0.4	0.0	2,110,133	0.4	0.0	1,230,716	0.2	0.0
Other shareholders (7)	459,617,957	84.1	77.6	464,900,593	84.0	77.6	447,300,654	80.6	71.8
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.*

(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 June 10, 2016.*

(4) *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.*

(5) *To the best of the Company's knowledge, based on the disclosure threshold statement prepared by BlackRock, Inc. on November 5, 2018. For further information, see Chapter 7, Section 2.2.1.*

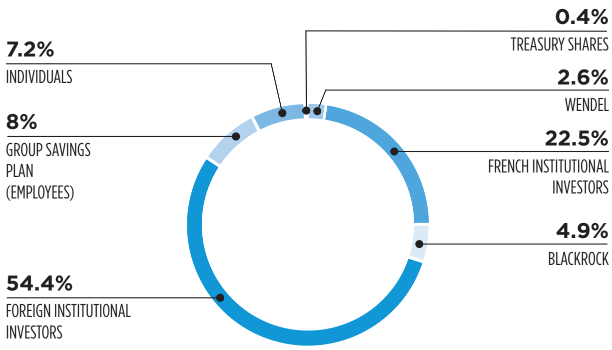
(6) *Excluding stock options (See Chapter 7, Section 2.2.2).*

(7) *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, 2018, 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, 2018, the number of shareholders was estimated at approximately 210,000.

The following graphic shows Compagnie de Saint-Gobain's ownership structure at December 31, 2018 by major shareholder category.



2.2 Disclosure thresholds in 2018

2.2.1 BlackRock

During the 2018 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 November 6, 2018, 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 November 5, 2018, it had dropped below the threshold of 5% of the share capital of Compagnie de Saint-Gobain, holding 4.85% of the share capital and 4.32% of the voting rights on behalf of those customers and funds.

BlackRock Inc. specified that this threshold crossing took into account the holding of 1,266,145 "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 3,618,923 Saint-Gobain shares on behalf of customers who have retained the exercise of voting rights.

2.2.2 Wendel

On August 6, 2018, Wendel informed the French Financial Markets Authority (*Autorité des marchés financiers* - "AMF") that, on August 1, 2018, it had directly and indirectly, through a company it controls, exceeded the threshold of 5% of Compagnie de Saint-Gobain's voting rights and directly and indirectly held 4.31% of the share capital and 6.11% of the voting rights. This threshold crossing was due to the acquisition by Wendel SE on August 1, 2018 of 9,619,085 Saint-Gobain stock options for the purpose of hedging Wendel SE's commitment to deliver Saint-Gobain shares within the context of the issuance of bonds exchangeable into Saint-Gobain shares by Wendel SE on May 12, 2016.

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, 2018, Group employees held 8% of the capital and 13.4% 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 2018, 4,932,767 shares were issued under a standard plan offering Group employees two classic formulae with a five- or ten-year lock-up, for a total of €179.1 million (compared with 4,593,807 shares and €168.7 million in 2017).

In France, 62.4% of employees invested in the PEG through Employee Mutual Funds (*fonds communs de placement d'entreprise*, "FCPE"). With employees in 27 other European countries and 19 countries outside Europe also given the opportunity to take part in the PEG, in all, 44,579 Group employees participated in the PEG during 2018.

A new plan will be launched in 2019, giving employees the opportunity to acquire up to six million 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;
- regarding 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 this number shall be reduced to one, and participation on the Board Committees; and
- coordination on any draft resolution to be submitted 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.

2.5 Control of the Company

At December 31, 2018, 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 contain a bearer protection clause in the event of change of control (a change of control put), allowing bearers to request the Company (at its discretion) for either their early redemption, or their purchase at par (plus accrued interest). This option is only available under the following scenarios: (i) the rating of the relevant bonds is lowered by a designated rating agency from a non-speculative ("investment grade") level to a speculative ("non-investment grade") level; (ii) a designated rating agency drops the "non-investment grade" rating of the relevant bonds by a notch (*e.g.* from BB+ to BB); (iii) the rating is withdrawn; – and, in each of these cases (i) to (iii) the action taken by the rating agency is expressly tied to the change in control - or (iv) at the time of the change in control, the relevant bonds had no rating. Total outstanding borrowings concerned at December 31, 2018 were €9,298 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$144,7 million at December 31, 2018.

3. STOCK MARKET/SECURITIES MARKET INFORMATION

3.1 The Saint-Gobain share

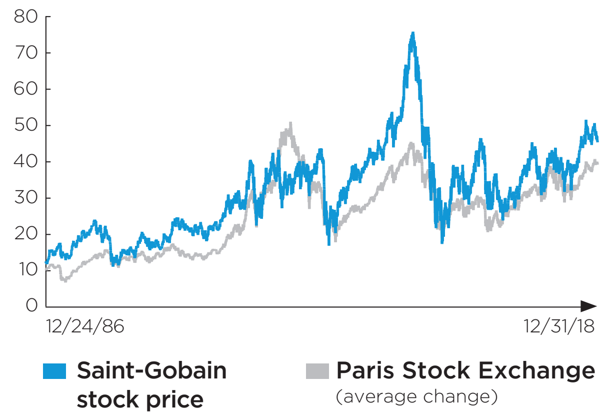
Compagnie de Saint-Gobain shares are traded on Compartment A of the Euronext market in Paris (ISIN FR0000125007). As of December 31, 2018, the Company represented the 32nd largest market capitalization of the CAC 40 (€15,941 million), and the 20th most actively traded stock on this market, with average daily trading volume of 2,104,915 shares during 2018. 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, Euronext Vigeo Europe 120, Euronext Vigeo Eurozone 120, 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, with MONEP trading volume representing 558,971 contracts in 2018, *versus* 517,108 in 2017.

SAINT-GOBAIN STOCK PRICE (EUR) (1)

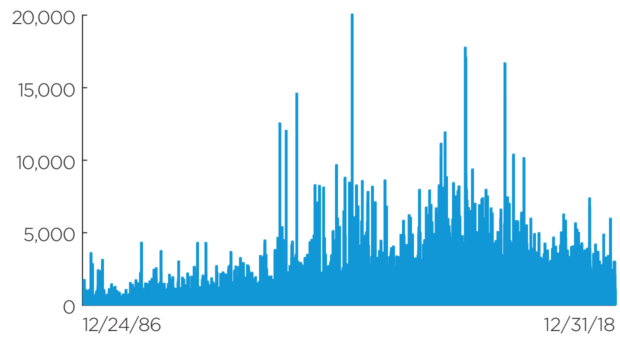


(Source: Euronext Paris)

(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) UNTIL THE END OF 2018(1)

Historical data of the number of shares traded per day (in thousands) until the end of 2018



(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
2016	44,255	31,470	44,255
2017	52,400	43,395	45,980
2018	48,600	27,985	29,165

(Source: Euronext Paris)

3.2 Total shareholder return (TSR)

The total shareholder return on Saint-Gobain shares amounts to:

- 6.8% per annum over the period from December 22, 1986 (date of privatization of Saint-Gobain) to December 31, 2018;
- -3.3% per annum over the last five years (from December 31, 2013 to December 31, 2018).

The TSR 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 2017

Paris Stock Exchange ISIN FR0000125007	Number of shares	Amount (in EUR)	Highest (in EUR)	Lowest (in EUR)
2017				
January	34,289,406	1,567,206,508	48.115	43.980
February	29,819,321	1,358,243,051	46.820	43.395
March	32,478,871	1,504,104,548	48.135	45.290
April	33,724,997	1,613,199,002	50.510	45.180
May	42,184,483	2,126,053,496	52.400	48.960
June	47,684,673	2,308,262,457	50.740	46.400
July	36,605,699	1,730,012,642	48.470	46.000
August	28,790,176	1,346,966,198	48.465	44.865
September	32,837,742	1,599,011,901	50.420	45.985
October	28,597,577	1,437,002,482	51.400	48.985
November	33,843,946	1,651,531,827	50.900	47.335
December	32,177,690	1,516,812,073	48.385	45.970
TOTAL	**413,034,581**	**19,758,406,184**		
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**		

(Source: Euronext Paris)

In 2018, 100,908,600 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), Izocam (Istanbul Stock Exchange) and Compañía Industrial El Volcan (Santiago de Chile 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, 2018, 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 yield (TMO), based on the Group's consolidated income. The amount paid out per bond in 2018 was €2.

Trading volume since January 2017 (1st tranche)

Paris Stock Exchange ISIN FR0000140030	Number of shares	Amount *(in EUR)*	Highest *(in EUR)*	Lowest *(in EUR)*
2017				
January	5,536	784,665	142.000	140.000
February	5,691	806,963	142.000	141.000
March	10,597	1,489,364	142.000	134.000
April	7,219	1,012,339	141.000	139.000
May	5,133	724,408	142.000	140.000
June	5,077	712,335	143.000	136.050
July	7,703	1,082,841	143.000	137.050
August	3,914	547,654	141.000	137.260
September	3,581	500,255	141.000	137.870
October	3,638	503,534	140.000	137.030
November	976	136,877	141.000	137.260
December	1,073	149,834	141.000	137.410
TOTAL	**60,138**	**8,451,070**		
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**		

(Source: Euronext Paris)

Trading volume since January 2017 (2nd tranche)

Paris Stock Exchange ISIN FR0000047607	Number of shares	Amount (in EUR)	Highest (in EUR)	Lowest (in EUR)
2017				
January	137	15,898	116.090	116.000
February	45	5,220	116.000	116.000
March	410	50,148	125.000	119.490
April	110	14,300	130.000	130.000
May	10	1,250	125.000	125.000
June	20	2,520	126.000	126.000
July	140	17,360	124.750	123.000
August	20	2,436	121.800	121.800
September	90	10,745	119.390	119.390
October	110	13,046	119.400	117.080
November	168	19,572	118.000	115.040
December	193	22,371	117.000	114.680
TOTAL	**1,453**	**174,867**		
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	0	-	-	-
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**		

(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 with a face value of ECU 1000 (€1,000 today).

A certain number of those securities have been repurchased over the years. At December 31, 2018, 77,516 securities were 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 2018 was €66.33, paid in two installments (€32.80 and €33.53).

Trading volume since March 2013

Luxembourg Stock Exchange ISIN LU0002804531	Number of shares	Amount (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**		

(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 2018, 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

Investor Relations Department

Les Miroirs

92400 Courbevoie Cedex (France)

Tel. +33 (0)1 47 62 33 33 - Fax: +33 (0)1 47 62 50 62

Toll-free number 0800 32 33 33

Numerous meetings were organized throughout 2018 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 (Bordeaux, Annecy and Strasbourg). 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

2019 financial calendar

2018 final results: February 21, 2019, after the market closes

First quarter 2019 sales: April 25, 2019 after the market closes

General Shareholders' Meeting: June 6, 2019 at 3:00 p.m., at Palais des Congrès (Porte Maillot), Paris 17 (France)

Dividend:

- ex-dividend date: June 10, 2019;
- dividend payment date: June 12, 2019;

First-half 2019 results: July 25, 2019, after the market closes.

Sales for the first nine months of 2019: October 24, 2019, after the market closes.

2020 financial calendar

General Shareholders' Meeting: June 4, 2020.

5. DIVIDENDS

Year	Number of shares with dividend rights	Net dividend per share (in EUR)	Adjusted yield based on year-end share price
2016	550,907,388 shares (1)	1.26	2.85%
2017	544,211,604 shares (2)	1.30	2.83%
2018	544,581,506 shares (3)	1.33	4.6%

(1) Based on 555,284,802 shares which entitled to dividend in respect of the fiscal year ending December 31, 2016 minus 4,377,414 treasury shares held on the ex-dividend date.

(2) Based on 553,557,091 shares which entitled to dividend in respect of the fiscal year ending December 31, 2017 minus 9,345,487 treasury shares held on the ex-dividend date.

(3) Estimated amount based on 546,585,004 shares entitled to dividend, on January 31, 2019, for the 2018 fiscal year less 2,003,498 treasury shares held at January 31, 2019.

Dividends not claimed within five years are time-barred and are paid over to the French State.

At its meeting of February 21, 2019, the Board of Directors of Compagnie de Saint-Gobain decided to recommend to the General Shareholders' Meeting of June 6, 2019, a dividend of €1.33 per share.

Financial and accounting information

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1. 2018 CONSOLIDATED FINANCIAL STATEMENTS

Consolidated balance sheet

Assets

(in EUR million)	Notes	At December 31, 2018	At December 31, 2017
Goodwill	(6)	9,988	10,575
Other intangible assets	(6)	2,526	2,603
Property, plant and equipment	(6)	11,335	11,590
Investments in equity-accounted companies	(7)	412	379
Deferred tax assets	(11)	837	938
Other non-current assets	(7)	2,527	774
NON-CURRENT ASSETS		**27,625**	**26,859**
Inventories	(4)	6,252	6,041
Trade accounts receivable	(4)	4,968	5,134
Current tax receivable	(11)	286	204
Other receivables	(4)	1,609	1,395
Assets held for sale	(2)	614	0
Cash and cash equivalents	(9)	2,688	3,284
CURRENT ASSETS		**16,417**	**16,058**
TOTAL ASSETS		**44,042**	**42,917**

Equity and liabilities

(in EUR million)	Notes	At December 31, 2018	At December 31, 2017
Capital stock	(10)	2,186	2,214
Additional paid-in capital and legal reserve	(10)	5,646	5,944
Retained earnings and consolidated net income	(10)	11,969	12,167
Cumulative translation adjustments		(1,640)	(1,756)
Fair value reserves		(124)	22
Treasury stock	(10)	(106)	(123)
SHAREHOLDERS' EQUITY		**17,931**	**18,468**
Minority interests		331	384
TOTAL EQUITY		**18,262**	**18,852**
Non-current portion of long-term debt	(9)	9,218	7,655
Provisions for pensions and other employee benefits	(5)	2,525	2,927
Deferred tax liabilities	(11)	472	427
Other non-current liabilities and provisions	(8)	1,036	1,053
NON-CURRENT LIABILITIES		**13,251**	**12,062**
Current portion of long-term debt	(9)	1,184	1,064
Current portion of other liabilities and provisions	(8)	465	412
Trade accounts payable	(4)	6,116	6,027
Current tax liabilities	(11)	104	157
Other payables	(4)	3,859	3,823
Liabilities held for sale	(2)	322	0
Short-term debt and bank overdrafts	(9)	479	520
CURRENT LIABILITIES		**12,529**	**12,003**
TOTAL EQUITY AND LIABILITIES		**44,042**	**42,917**

The accompanying notes are an integral part of the consolidated financial statements.

Consolidated income statement

(in EUR million)	Notes	2018	2017
Net sales	(4)	41,774	40,810
Cost of sales	(4)	(31,172)	(30,420)
General expenses including research	(4)	(7,510)	(7,395)
Share in net income of core business equity-accounted companies	(7)	30	33
OPERATING INCOME		**3,122**	**3,028**
Other business income	(4)	435	121
Other business expense	(4)	(2,759)	(638)
BUSINESS INCOME		**798**	**2,511**
Borrowing costs, gross		(300)	(298)
Income from cash and cash equivalents		22	23
Borrowing costs, net		(278)	(275)
Other financial income and expense		467	(173)
NET FINANCIAL EXPENSE	**(9)**	**189**	**(448)**
Share in net income of non-core business equity-accounted companies	(7)	0	0
Income taxes	(11)	(490)	(438)
NET INCOME		**497**	**1,625**
GROUP SHARE OF NET INCOME		**420**	**1,566**
Minority interests		77	59

	Notes	2018	2017
Earnings per share, Group share (*in EUR*)	**(10)**	**0.77**	**2.83**
Weighted average number of shares in issue		547,105,985	553,383,836
Diluted earnings per share, Group share (*in EUR*)	**(10)**	**0.76**	**2.81**
Weighted average number of shares assuming full dilution		550,016,438	556,655,598

The accompanying notes are an integral part of the consolidated financial statements.

Consolidated statement of recognized income and expense

(in EUR million)	Notes	2018	2017
NET INCOME		**497**	**1,625**
Items that may be subsequently reclassified to profit or loss			
Translation adjustments		(56)	(1,048)
Changes in fair value of financial instruments	(9)	(77)	(169)
Tax on items that may be subsequently reclassified to profit or loss		24	59
Items that will not be reclassified to profit or loss			
Changes in actuarial gains and losses	(5)	307	465
Tax on items that will not be reclassified to profit or loss	(11)	(69)	(89)
Changes in assets at fair value through equity	(7)	(69)	0
Liability method on items that will not be reclassified to profit or loss	(11)	(1)	(252)
Other		(45)	(2)
INCOME AND EXPENSE RECOGNIZED DIRECTLY IN EQUITY		**14**	**(1,036)**
TOTAL RECOGNIZED INCOME AND EXPENSE FOR THE YEAR		**511**	**589**
Group share		452	563
Minority interests		59	26

The accompanying notes are an integral part of the consolidated financial statements.

Consolidated statement of cash flows

(in EUR million)	Notes	2018	2017
GROUP SHARE OF NET INCOME		**420**	**1,566**
Minority interests in net income	(a)	77	59
Share in net income of equity-accounted companies, net of dividends received	(7)	(19)	(13)
Depreciation, amortization and impairment of assets	(4)	3,205	1,442
Gains and losses on disposals of assets	(4)	(20)	(46)
Non-recurring SWH/Sika net income	(2)	(781)	0
Unrealized gains and losses arising from changes in fair value and share-based payments		23	16
Restatement for hyperinflation in Argentina		(4)	0
Changes in inventory	(4)	(418)	(348)
Changes in trade accounts receivable and payable, and other accounts receivable and payable	(4)	98	139
Changes in tax receivable and payable	(4)	(133)	236
Changes in deferred taxes and provisions for other liabilities and charges	(5)(8)(11)	44	(286)
NET CASH FROM OPERATING ACTIVITIES		**2,492**	**2,765**
Acquisitions of property, plant and equipment [2018: (1,666), 2017: (1,538)] and intangible assets	(6)	(1,855)	(1,722)
Increase (decrease) in amounts due to suppliers of fixed assets	(4)	(19)	99
Acquisitions of shares in consolidated companies [2018: (669), 2017: (553)], net of cash acquired		(626)	(492)
Acquisitions of other investments	(7)	(937)	(84)
Increase in investment-related liabilities	(8)	39	17
Decrease in investment-related liabilities	(8)	(25)	(42)

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(in EUR million)	Notes	2018	2017
Investments		**(3,423)**	**(2,224)**
Disposals of property, plant and equipment and intangible assets	(6)	30	158
Disposals of shares in consolidated companies, net of cash divested		192	4
Disposals of other investments	(7)	3	1
(Increase) decrease in amounts receivable on sales of fixed assets	(4)	(108)	25
Divestments		**117**	**188**
Increase in loans, deposits and short-term loans	(7)	(268)	(183)
Decrease in loans, deposits and short-term loans	(7)	155	186
Changes in loans, deposits and short-term loans		(113)	3
NET CASH FROM (USED IN) INVESTMENT AND DIVESTMENT ACTIVITIES		**(3,419)**	**(2,033)**
Issues of capital stock	(a)	193	187
(Increase) decrease in treasury stock	(a)	(532)	(406)
Dividends paid	(a)	(707)	(693)
Transactions with shareholders of the parent company		**(1,046)**	**(912)**
Minority interests' share in capital increases of subsidiaries	(a)	16	7
Acquisitions of minority interests without gain of control	(7)	(93)	(4)
Disposals of minority interests without loss of control	(7)	0	25
Changes in investment-related liabilities following the exercise of put options of minority shareholders	(8)	0	(36)
Dividends paid to minority shareholders of consolidated subsidiaries	(a)	(55)	(27)
Change in dividends payable		11	(11)
Transactions with minority interests		**(121)**	**(46)**
Increase (decrease) in bank overdrafts and other short-term debt		(4)	(107)
Increase in long-term debt	(b) (9)	2,512	1,603
Decrease in long-term debt	(b) (9)	(962)	(1,655)
Changes in gross debt		1,546	(159)
NET CASH FROM (USED IN) FINANCING ACTIVITIES		**379**	**(1,117)**
INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS		**(548)**	**(385)**
Net effect of exchange rate changes on cash and cash equivalents		(39)	(70)
Net effect of changes in fair value on cash and cash equivalents		0	1
Cash and cash equivalents classified within assets held for sale		(9)	0
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR		**3,284**	**3,738**
CASH AND CASH EQUIVALENTS AT END OF YEAR		**2,688**	**3,284**

(a) Please refer to the consolidated statement of changes in equity.
(b) Including bond premiums, prepaid interest and issue costs.

In 2018, income tax paid amounted to €537 million (2017: €209 million) and interest paid net of interest received totaled €267 million (2017: €308 million).

The accompanying notes are an integral part of the consolidated financial statements.

Consolidated Statement of Changes in Equity

(number of shares)			**(in € millions)**								
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**	**Share-holders' equity**	**Minority interests**	**Total equity**
555,280,358	553,388,403	At December 31, 2016	2,221	6,090	11,077	(742)	191	(72)	18,765	375	19,140
		Income and expenses recognized directly in equity	0	0	180	(1,014)	(169)	0	(1,003)	(33)	(1,036)
		Net income for the year			1,566				1,566	59	1,625
		Total income and expense for the year	**0**	**0**	**1,746**	**(1,014)**	**(169)**	**0**	**563**	**26**	**589**
		Issues of capital stock									
4,593,807	4,593,807	Group Savings Plan	18	150					168		168
682,926	682,926	Stock option plans	3	16					19		19
		Other							0	7	7
		Dividends paid (€1.26 per share)			(693)				(693)	(27)	(720)
	(9,595,036)	Shares purchased			(15)			(462)	(477)		(477)
	1,715,619	Shares sold						71	71		71
(7,000,000)		Shares canceled	(28)	(312)				340	0		0
		Share-based payments			17				17		17
		Changes in Group structure and other			35				35	3	38
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 restatements*			(24)				(24)	0	(24)
		Restatement for hyperinflation in Argentina			(93)	154			61		61
553 557 091	**550 785 719**	**RESTATED AT JANUARY 1, 2018**	**2,214**	**5,944**	**12,050**	**(1,602)**	**22**	**(123)**	**18,505**	**384**	**18,889**
		Income and expenses recognized directly in equity	0	0	216	(38)	(146)	0	32	(18)	14
		Net income for the year			420				420	77	497
		Total income and expense for the year	**0**	**0**	**636**	**(38)**	**(146)**	**0**	**452**	**59**	**511**
		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
		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						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)
546, 585, 004	**543,879, 267**	**AT DECEMBER 31, 2018**	**2 186**	**5,646**	**11,969**	**(1,640)**	**(124)**	**(106)**	**17,931**	**331**	**18, 262**

* *The restatements are explained in Note 3 "Impact of new standards"*

The accompanying notes are an integral part of the consolidated financial statements.

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 21, 2019 by the Board of Directors and will be submitted to the Shareholders' Meeting of June 6, 2019 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, 2017, except for (i) the application of the new standards and interpretations described below and (ii) IAS 29, "Financial Reporting in Hyperinflationary Economies". 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, 2018. These 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, 2018

Certain new standards, interpretations and amendments to existing standards are applicable for the 2018 reporting period. The Group changed its accounting policies accordingly and recorded retrospective restatements following the adoption of:

- IFRS 9, "Financial Instruments";
- IFRS 15, "Revenue from Contracts with Customers".

The impact of adopting these standards is set out in Note 3.

- amendments to IFRS 2, "Share-based Payment";
- amendments to IFRS 4, "Insurance Contracts";
- amendments to IAS 40, "Investment Property";
- IFRIC 22, "Foreign Currency Transactions";
- annual improvements to IFRSs – 2014-2016 cycle.

The adoption of these amendments and interpretations did not have a material impact on the Group's 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, 2018

The new standards, interpretations and amendments to existing standards applicable to accounting periods starting on or after January 1, 2019 were not early adopted by the Group at December 31, 2018.

- IFRS 16, "Leases"

  Saint-Gobain has chosen to apply IFRS 16 using the full retrospective method with effect from January 1, 2019 and will restate all of its leases that fall within the scope of the standard. IFRS 16 provides for a number of recognition exemptions:

  - 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.

  After organizing its IFRS 16 projects in 2017, the Group continued to identify and compile data on its leases in 2018. The Group identified some 47,000 leases, including 5,500 property leases.

  In order to calculate the relevant impacts and monitor the leases from an operational standpoint, the Group put in place an IT solution enabling it to:

  - record and perform calculations for all leases,
  - update information in real time,
  - generate accounting entries,
  - manage forecast data,
  - analyze financial impacts.

  The estimated impact of applying IFRS 16 on the opening balance sheet at January 1, 2018 is as follows:

  - recognition of a right-of-use asset of between €2.8 billion and €3.0 billion,
  - recognition of a lease liability of between €3.0 billion and €3.3 billion,
  - decrease in equity of between €0.2 billion and €0.3 billion.

  The lease liability approximates the amount disclosed in off-balance sheet commitments for leases.

  The estimated impact of applying IFRS 16 on the 2018 income statement is as follows:

  - a positive impact of between €0.7 billion and €0.8 billion on EBITDA,
  - a negative impact of around €0.1 billion on net financial income (expense).

These amounts include assets and liabilities held for sale and any related gains and losses (see Section 2.3).

Leases of property assets: the Group has reviewed and analyzed all of its property leases in light of the lease definition criteria set out in IFRS 16. The lease term corresponds to the non-cancelable period of the lease, plus any renewal (termination) options that the Group is reasonably certain to exercise (not to exercise). The Group has adopted the position of the French accounting standard-setter (*Autorité des normes comptables* – ANC) in respect of "3/6/9-year" commercial leases in France, *i.e.*, limiting the term of such leases to nine years. The discount rate used to determine the right-of-use asset and the lease liability for each country and leased asset is calculated based on the incremental borrowing rate at inception of the lease. The Group calculated the rate applicable to each lease contract on the basis of the lease term.

Leases of non-property assets: the Group has reviewed and analyzed all of its non-property leases to ensure they meet the definition and recognition criteria set out in IFRS 16. Based on this analysis, the main leases identified correspond to leases of vehicles, machinery and production equipment.

- IFRIC 23, "Uncertainty over Income Tax Treatments"

  The Group is currently analyzing the impact of IFRIC 23 on its consolidated financial statements. It did not elect to early adopt IFRIC 23, which it does not expect to have a material impact on its consolidated financial statements.

- Amendments to IFRS 9, "Financial Instruments"

  The Group did not elect to early adopt IFRS 9, which it does not expect to have a material impact on its consolidated financial statements.

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 seen 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 and property, plant and equipment"), 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 (Note 9 "Financing and financial instruments"), and taxes (Note 11 "Taxes").

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

a) Full consolidation

Companies over which the Group exercises exclusive control, either directly or indirectly, are fully consolidated.

b) 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.

c) 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

a) 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 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.

b) 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.

c) 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 carrying amount. 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 balances and transactions 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 is classified as a hyperinflationary economy with effect from 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 terms of the measuring unit current at the reporting date. All non-monetary assets and liabilities must therefore be adjusted for inflation in order to reflect their "actual value" 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.

IAS 29 is to be applied as from the start of the reporting period during which the country concerned is classified as hyperinflationary. In the 2018 financial statements, the provisions of IAS 29 are applied with effect from January 1, 2018 as if Argentina had always been a hyperinflationary economy. Under IAS 21, published data for reporting periods prior to the adoption of hyperinflationary accounting cannot be restated. Accordingly, no restatement is required for 2017 financial data.

The Group does not have significant exposure to Argentina. The impacts of hyperinflationary accounting are included in certain non-cash balance sheet items.

2.2 Changes in Group structure

Significant changes in the Group's structure during 2018 and 2017 are presented below and a list of the main consolidated companies at December 31, 2018 is provided in Note 14 "Principal consolidated companies".

2.2.1 Transactions carried out in 2018

In 2018, Saint-Gobain continued to actively manage its portfolio of businesses, fully in line with its strategy. Various operations were completed in order to strengthen the Group's profile in high added-value businesses and growing markets. The Group carried out 27 acquisitions of consolidated companies for €669 million in 2018, plus €93 million in acquisitions of minority interests that did not involve taking control of the company concerned.

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 for high purity applications in the pharmaceutical and biopharmaceutical industries;
- 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 made from various types of glass fibers able to cover temperature resistance between 600°C and 1,000°C;
- 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 represent full-year sales of around €570 million.

In the first half of 2018, Saint-Gobain also pressed ahead with its plan to acquire a controlling interest in Sika (see Section 1.2, Chapter 3, of the 2017 Registration Document) A decision from the Zug Supreme Court was expected for the second half of 2018.

On May 11, 2018, Saint-Gobain, Sika and the Burkard family announced that they had found an overall agreement under which:

- Saint-Gobain acquired all outstanding shares of Schenker-Winkler Holding AG (SWH) from the Burkard family for a purchase price of CHF 3.22 billion;
- Sika purchased 6.97% of its own capital from SWH (representing a 23.7% voting interest in the company) for a total consideration of CHF 2.08 billion;
- Sika held an extraordinary general meeting on June 11, 2018 which decided to convert all of its shares into a single class of registered shares ("one share, one vote"), to eliminate the opting-out clause and the 5% share transfer restriction, and to cancel the 6.97% shares acquired from SWH;
- The two groups announced that they would also continue their existing business relationship and seek to further expand it into areas of mutual benefit, while preserving and respecting each group's economic and legal independence.

Saint-Gobain, through SWH, became Sika's largest shareholder, holding 10.75% of the share capital and voting rights. With regard to this stake, the parties agreed on a two-year lock-up period and on standstill obligations (up to 10.75% of Sika's capital for four years and up to 12.875% of its capital for the following two years). 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.

This overall agreement terminated and resolved the disputes between Sika, the Burkard family and Saint-Gobain to the common benefit of all parties involved and that of their respective shareholders and stakeholders.

For Saint-Gobain, the transaction results 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 subsequent changes in the fair value of the Sika shares held by SWH within income and expenses recognized directly in equity.

The Group's Venezuelan subsidiaries have been deconsolidated: 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 has 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).

2.2.2 Transactions carried out in 2017

In 2017, Saint-Gobain continued to actively manage its portfolio of businesses, fully in line with its strategy. Various operations were completed in order to strengthen the Group's profile in high added-value businesses and growing markets.

Saint-Gobain, supported by its Board of Directors, continued with the plan to acquire a controlling interest in Sika, a value-creating industrial project for all parties, pending the decision from the Zug Supreme Court initially expected at the start of 2018.

2.3 Assets and liabilities held for sale

The exhaustive review of the Group's business portfolio announced in November 2018 and currently in progress, has led Saint-Gobain to launch a process to divest the following businesses, the assets and liabilities of which are classified as held for sale at December 31, 2018:

Silicon carbide business: Saint-Gobain has entered into exclusive negotiations to sell its silicon carbide operations (part of the High-Performance Materials Sector). It granted exclusivity to private equity firm OpenGate Capital after having received a purchase offer from the latter for the Group's silicon carbide operations. This firm and binding offer is not subject to any financing conditions. The planned transaction may be finalized following the customary information and consultation procedures with the competent employee representative bodies. Completion of the deal is subject to clearance from the anti-trust authorities and should be effective in the first half of 2019.

Building Distribution business in Germany: as part of the acceleration of the rotation of its portfolio, in November 2018 the Group also announced it was planning to sell its Building Distribution operations in Germany.

As a result, since these businesses meet the qualifying criteria set out in IFRS 5 (see Section 2.1.3), 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, with the exception of debt owed to other Group companies and equity.

The breakdown of assets and liabilities held for sale at the end of the reporting period is as follows:

(in EUR million)	Total
Intangible assets, property, plant and equipment and goodwill	161
Inventories, trade accounts receivable, other receivables and other non-current assets	444
Cash and cash equivalents	9
Assets held for sale	**614**
Provisions for pensions and other employee benefits	82
Other current and non-current liabilities and provisions	22
Trade accounts payable, other payables and other current liabilities	195
Debt and bank overdrafts	23
Liabilities held for sale	**322**
NET ASSETS (LIABILITIES) HELD FOR SALE	**292**

2.4 Changes in the number of consolidated companies

At December 31, 2018, the number of consolidated companies was as follows:

	France	Outside France	Total
Fully consolidated companies			
At December 31, 2017	**143**	**628**	**771**
Newly consolidated companies	2	42	44
Merged companies	(5)	(14)	(19)
Deconsolidated companies	0	(29)	(29)
Change in consolidation method	0	1	1
AT DECEMBER 31, 2018	**140**	**628**	**768**
Equity-accounted companies and joint arrangements			
At December 31, 2017	**4**	**95**	**99**
Newly consolidated companies	0	6	6
Merged companies	0	0	0
Deconsolidated companies	0	(3)	(3)
Change in consolidation method	0	(1)	(1)
AT DECEMBER 31, 2018	**4**	**97**	**101**
TOTAL AT DECEMBER 31, 2017	**147**	**723**	**870**
TOTAL AT DECEMBER 31, 2018	**144**	**725**	**869**

2.5 Off-balance sheet commitments related to companies within the scope of consolidation

At December 31, 2017, non-cancelable purchase commitments included the commitment on equity holdings in the Sika Group totaling €2,369 million. On May 11, 2018, this commitment was terminated following Saint-Gobain's purchase of Sika Group shares from SWH.

The Group unwound the currency hedges taken out in connection with the acquisition of a controlling interest in Sika further to the purchase of shares in the company.

NOTE 3 IMPACT OF NEW STANDARDS

This note sets out the new accounting policies applied with effect from January 1, 2018 and explains the impact on the consolidated balance sheet of adopting IFRS 9, "Financial Instruments" and IFRS 15, "Revenue from Contracts with Customers".

The Group has chosen to apply the simplified retrospective method and has recorded the cumulative impact of IFRS 9 and IFRS 15 in equity at January 1, 2018.

The restatements made are described below in further detail.

3.1 Accounting policies applied as from January 1, 2018

- IFRS 9, "Financial Instruments" supersedes IAS 39, "Financial Instruments: Recognition and Measurement". It sets out new principles for recognizing financial instruments and in particular requires entities to apply an impairment model for trade accounts receivable based on expected losses. The impacts of IFRS 9 chiefly concern the impairment of trade accounts receivable. Debt was also adjusted for the remaining expenses to be amortized on one of the two undrawn credit lines. The total impact on equity net of tax was a negative €23 million, including a negative €20 million impact relating to the impairment of trade accounts receivable.
- IFRS 15 "Revenue from Contracts with Customers" supersedes IAS 18 "Revenue" and IAS 11 "Construction Contracts", along with the related interpretations, in terms of revenue recognition. The new revenue recognition rules did not lead to significant changes in the accounting policies at Group level.

The Group's sales generally comprise only one performance obligation. Saint-Gobain does not usually offer additional or optional warranties beyond the statutory or customary warranty period (resulting from market conditions) covering design or manufacturing defects of products delivered. As a result, no separate performance obligation was recognized in this respect.

Under IFRS 15, the estimated amount of any variable consideration is to be included in the transaction price.

Discounts, refunds and rebates, performance-based penalties or bonuses relating to late/early production/delivery, and rights of return granted to customers, have the effect of decreasing or increasing revenue provided that, in the case of performance-based bonuses, they are highly probable. Rights of return are recorded against a refund liability, which is classified within current items. An asset is recognized in inventories to reflect the Group's right to recover products. Saint-Gobain estimates any such variable consideration based on historical data and limits the amount recognized in this respect to the amount it deems highly probable it will receive.

In most cases, revenue is recognized for performance obligations at a point in time, *i.e.*, when control of the goods or services is transferred to the customer. This generally occurs upon delivery or installation of the goods, when the installation is not a separate performance obligation. When the installation is a separate performance obligation, the related revenue is recognized over time, based on costs incurred.

Revenue under some Group contracts is recognized over time. This is the case for sales of specific products to certain customers in the Innovative Materials Sector whenever an unconditional right to payment exists.

The application of IFRS 15 does not have a material impact on the financial statements, reducing equity by €1 million net of tax. This chiefly relates to adjustments concerning the recognition of rights to return goods in the Building Distribution Sector and adjustments concerning performance bonuses and the timing of revenue recognition applicable to specific products for certain customers in the Innovative Materials Sector.

3.2 Impact on the consolidated balance sheet

(in EUR million)	Dec. 31, 2017	Impact of IFRS 9 and IFRS 15	Jan. 1, 2018, restated
Assets			
Non-current assets	26,859	9	26,868
Inventories	6,041	9	6,050
Trade accounts receivable	5,134	(27)	5,107
Other receivables	1,395	6	1,401
Other current assets	3,488	0	3,488
TOTAL ASSETS	**42,917**	**(3)**	**42,914**
Equity and liabilities			
Shareholders' equity	18,468	(24)	18,444
Minority interests	384	0	384
Other non-current assets	12,062	4	12,066
Other payables	3,823	17	3,840
Other short-term debt	8,180	0	8,180
TOTAL EQUITY AND LIABILITIES	**42,917**	**(3)**	**42,914**

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 by reference to the stage of completion of the services, as calculated based on costs incurred. Similarly, within the Building Distribution Sector, 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 different sectors 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.

Discounts granted by suppliers to the Building Distribution Sector are included in operating income. 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.

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.

Business income is detailed by type below:

(in EUR million)	**2018**	**2017**
NET SALES	**41,774**	**40,810**
Personnel expenses:		
Salaries and payroll taxes	(8,243)	(8,110)
Share-based payments (1)	(35)	(38)
Pensions and employee benefit obligations (1)	(180)	(125)
Depreciation and amortization	(1,202)	(1,206)
Share in net income of core business equity-accounted companies	30	33
Other (2)	(29,022)	(28,336)
OPERATING INCOME	**3,122**	**3,028**
Other business income (3)	435	121
Other business expense (1)	(2,759)	(638)
OTHER BUSINESS INCOME AND EXPENSE	**(2,324)**	**(517)**
BUSINESS INCOME	**798**	**2,511**

(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 the Building Distribution Sector, and to transport costs, raw materials costs, and other production costs for the other sectors. This item also includes research and development costs recorded under operating expenses, amounting to €454 million in 2018 (2017: €450 million) and the settlement of one-off disputes in favor of the Group for around €70 million in 2018.

(3) "Other business income" mainly includes 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 Section 2.2).

4.1.3.1 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)	**2018**	**2017**
Restructuring costs (1)	(308)	(120)
Provisions and expenses relating to claims and litigation (2)	(116)	(150)
Other (3)	140	(67)
NON-OPERATING INCOME AND EXPENSE	**(284)**	**(337)**
Impairment of assets and other (4)	(2,060)	(226)
Other business expense (5)	(235)	(75)
IMPAIRMENT OF ASSETS AND OTHER BUSINESS EXPENSES	**(2,295)**	**(301)**
GAINS ON DISPOSALS OF PROPERTY, PLANT AND EQUIPMENT AND INTANGIBLE ASSETS	**255**	**121**
CAPITAL GAINS AND LOSSES ON DISPOSALS, ASSET IMPAIRMENT, ACQUISITION FEES AND CONTINGENT CONSIDERATION	**(2,040)**	**(180)**
OTHER BUSINESS INCOME AND EXPENSE	**(2,324)**	**(517)**

(1) Restructuring costs in 2018 mainly consist of retirement benefits totaling €127 million (2017: €65 million).

(2) In both 2018 and 2017, 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) In 2018, "Other" mainly includes the compensatory indemnity of €180 million in connection with SWH/Sika (see Section 2.2). In 2017, it mainly related to the cost of the June 27, 2017 cyber-attack.

(4) The "Impairment of assets and other business expense" line essentially includes (i) impairment of goodwill, other intangible assets and property, plant and equipment for €2,003 million in 2018 (2017: €236 million) (see Sections 6.1, 6.2 and 6.3), (ii) the impairment of other assets for €34 million (2017: €1 million), and (iii) acquisition fees and contingent consideration incurred in connection with business combinations, representing a net expense of €23 million in 2018 (net income of €11 million in 2017).

(5) Other business expense in 2018 relates primarily to capital losses on disposals, the impacts of deconsolidating the Group's Venezuelan subsidiaries, and assets that were 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 by sector and business in line with its internal reporting. There were no changes in the presentation of segment information in 2018 compared with prior years.

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 the cost of acquiring non-current assets under finance leases.

Segment information is presented by sector and by business as follows:

- Innovative Materials (IM) Sector:
  - Flat Glass,
  - High-Performance Materials (HPM);
- Construction Products (CP) Sector:
  - Interior Solutions: Insulation and Gypsum,
  - Exterior Solutions: Industrial Mortars, Pipe and Exterior Products;
- Building Distribution Sector (BD).

Management uses several different internal indicators to measure operational performance and to make resource allocation decisions. These indicators are based on the data used to prepare the consolidated financial statements and meet financial reporting requirements. Intragroup ("internal") sales are generally carried out on the same terms as sales to external customers and are eliminated in consolidation. The "Other" column includes holding companies and certain corporate support functions (tax, cash management, purchasing, etc.).

Following the announcement of the Group's "Transform & Grow" program in November 2018, changes in the Group's organizational structure in 2019 will alter the breakdown of reporting segments to be presented.

Segment information for 2018 and 2017 by sector and by business is as follows:

2018

	Innovative Materials				Construction Products				Building Distribution	Other*	Total
(in EUR million)	Flat Glass	High-Performance Materials	Intra-segment eliminations	Total	Interior Solutions	Exterior Solutions	Intra-segment eliminations	Total			
External sales	5,593	4,824		10,417	6,475	5,472		11,947	19,397	13	41,774
Internal sales	39	96	(28)	107	692	317	(101)	908	3	(1,018)	0
Net sales	5,632	4,920	(28)	10,524	7,167	5,789	(101)	12,855	19,400	(1,005)	41,774
Operating income	501	803		1,304	756	436		1,192	634	(8)	3,122
Business income	320	564		884	698	(48)		650	(782)	46	798
Share in net income of equity-accounted companies	15	2		17	6	7		13	0	0	30
Depreciation and amortization	271	167		438	304	153		457	269	38	1,202
Impairment of assets	59	60		119	2	530		532	1,352		2,003
EBITDA	772	970		1,742	1,060	589		1,649	903	30	4,324
Capital expenditure	486	227		713	402	219		621	263	69	1,666
Cash flow from operations				1,186				1,030	583	224	3,023
Goodwill, net	201	1,826		2,027	3,804	2,182		5,986	1,975		9,988
Non-amortizable brands	0	0		0	732	89		821	1,080		1,901
Total segment assets and liabilities				8,242				12,140	6,431	255	27,068

* *"Other" corresponds to the elimination of intragroup transactions for internal sales, and holding company transactions for the other captions.*

2017

	Innovative Materials				Construction Products				Building Distribution	Other*	Total
(in EUR million)	Flat Glass	High-Performance Materials	Intra-segment eliminations	Total	Interior Solutions	Exterior Solutions	Intra-segment eliminations	Total			
External sales	5,633	4,588		10,221	6,246	5,527		11,773	18,797	19	40,810
Internal sales	39	150	(27)	162	638	307	(94)	851	3	(1,016)	0
Net sales	5,672	4,738	(27)	10,383	6,884	5,834	(94)	12,624	18,800	(997)	40,810
Operating income	571	715		1,286	652	491		1,143	631	(32)	3,028
Business income	580	608		1,188	556	394		950	493	(120)	2,511
Share in net income of equity-accounted companies	22	2		24	3	5		8	0	1	33
Depreciation and amortization	280	167		447	301	165		466	261	32	1,206
Impairment of assets	48	1		49	47	37		84	103	0	236
EBITDA	851	882		1,733	953	656		1,609	892	0	4,234
Capital expenditure	468	192		660	374	208		582	251	45	1,538
Cash flow from operations				1,188				1,015	653	164	3,020
Goodwill, net	189	1,602		1,791	3,615	2,399		6,014	2,770	0	10,575
Non-amortizable brands	0	0		0	735	89		824	1,191	0	2,015
Total segment assets and liabilities				7,389				12,209	7,645	120	27,363

* *"Other" corresponds to the elimination of intragroup transactions for internal sales, and holding company transactions for the other captions.*

4.3 Information by geographic area

Segment information for 2018 and 2017 by geographic area is as follows:

2018

(in EUR million)	France	Other Western European countries	North America	Emerging countries and Asia	Internal sales	Total
Net sales	10,935	18,265	5,536	9,127	(2,089)	41,774
Operating income	389	1,008	659	1,066		3,122
Business income	(415)	(196)	446	963		798
EBITDA	682	1,388	822	1,432		4,324
Capital expenditure	337	441	213	675		1,666
Cash flow from operations	363	1,039	539	1,082		3,023

2017

(in EUR million)	France	Other Western European countries	North America	Emerging countries and Asia	Internal sales	Total
Net sales	10,600	17,611	5,418	9,166	(1,985)	40,810
Operating income	331	1,034	611	1,052		3,028
Business income	187	865	388	1,071		2,511
EBITDA	624	1,398	777	1,435		4,234
Capital expenditure	293	431	201	613		1,538
Cash flow from operations	397	1,026	554	1,043		3,020

4.4 Performance indicators

4.4.1 EBITDA

EBITDA corresponds to operating income plus depreciation and amortization of property, plant and equipment and intangible assets.

EBITDA amounted to €4,324 million in 2018 (2017: €4,234 million), calculated as follows:

(in EUR million)	2018	2017
Operating income	3,122	3,028
Depreciation/amortization of property, plant and equipment and intangible assets	1,202	1,206
EBITDA	**4,324**	**4,234**

4.4.2 Operating free cash flow

Operating free cash flow (OFCF) represents the surplus cash generated from the entity's operations.

4.4.3 Return on capital employed

Return on capital employed (ROCE) corresponds to annualized operating income adjusted for changes in the scope of consolidation, 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.

4.4.4 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 €1,729 million in 2018 (2017: €1,631 million). Based on the weighted average number of shares outstanding at December 31 (547,105,985 shares in 2018 and 553,383,836 shares in 2017), recurring earnings per share amounted to €3.16 in 2018 and €2.95 in 2017.

The difference between net income and recurring net income corresponds to the following items:

(in EUR million)	2018	2017
GROUP SHARE OF NET INCOME	**420**	**1,566**
Less:		
Gains and losses on disposals of assets	20	46
Impairment of assets and other	(2,060)	(226)
Non-recurring SWH/Sika net income	781	0
Changes in provisions for non-recurring items and other	(139)	4
Impact of minority interests	2	(18)
Tax on disposal gains and losses, asset impairment and non-recurring charges to provisions	87	129
GROUP SHARE OF RECURRING NET INCOME	**1,729**	**1,631**

4.4.5 Cash flow from operations

Cash flow from operations corresponds to net cash generated from operating activities before the impact of changes in working capital, changes in current taxes and changes in provisions for pensions and other employee benefit obligations as well as for other liabilities and charges and deferred taxes. Cash flow from operations is adjusted for the effect of material non-recurring provision charges.

Cash flow from operations before tax on disposal gains and losses and non-recurring provisions corresponds to cash flow from operations less the tax effect of asset disposals, asset impairment and non-recurring provisions.

Cash flow from operations totaled €3,023 million in 2018 (€3,020 million in 2017) and cash flow from operations excluding income tax on disposal gains and losses and non-recurring provisions amounted to €2,936 million in the year (€2,891 million in 2017).

These amounts are calculated as follows:

(in EUR million)	2018	2017
GROUP SHARE OF NET INCOME	420	1,566
Minority interests in net income	77	59
Share in net income of equity-accounted companies, net of dividends received	(19)	(13)
Depreciation, amortization and impairment of assets	3,205	1,442
Gains and losses on disposals of assets	(20)	(46)
Changes in provisions for non-recurring items	122	(4)
Non-recurring SWH/Sika net income	(781)	0
Unrealized gains and losses arising from changes in fair value and share-based payments	23	16
Restatement for hyperinflation in Argentina	(4)	0
CASH FLOW FROM OPERATIONS	3,023	3,020
Tax on disposal gains and losses, asset impairment and non-recurring charges to provisions	(87)	(129)
CASH FLOW FROM OPERATIONS BEFORE TAX ON DISPOSAL GAINS AND LOSSES AND NON-RECURRING PROVISIONS	2,936	2,891

4.5 Working capital

Working capital can be analyzed as follows:

(in EUR million)	Dec. 31, 2018	Dec. 31, 2017
INVENTORIES, NET	6,252	6,041
TRADE RECEIVABLES, NET	4,968	5,134
Other operating receivables	1,407	1,278
Other non-operating receivables	202	117
OTHER RECEIVABLES	1,609	1,395
CURRENT TAX RECEIVABLE	286	204
TRADE ACCOUNTS PAYABLE	6,116	6,027
Other operating payables	3,284	3,286
Other non-operating payables	575	537
OTHER PAYABLES	3,859	3,823
CURRENT TAX LIABILITIES	104	157
Operating working capital	3,227	3,140
Non-operating working capital (including current tax receivables and liabilities)	(191)	(373)
WORKING CAPITAL	3,036	2,767

4.5.1 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, 2018 and 2017, inventories were as follows:

(in EUR million)	Dec. 31, 2018	Dec. 31, 2017
Gross value		
Raw materials	1,494	1,391
Work in progress	363	330
Finished goods	4,849	4,770
GROSS INVENTORIES	6,706	6,491
Provision for impairment		
Raw materials	(149)	(139)
Work in progress	(13)	(12)
Finished goods	(292)	(299)
TOTAL PROVISION FOR IMPAIRMENT	(454)	(450)
NET	6,252	6,041

The net value of inventories was €6,252 million at December 31, 2018 compared with €6,041 million at December 31, 2017. Impairment losses on inventories recorded in the 2018 income statement totaled €179 million (2017: €207 million). Reversals of impairment losses on inventories amounted to €159 million in 2018 (2017: €183 million).

4.5.2 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.

For trade receivables transferred under securitization programs, the contracts concerned are analyzed and if substantially all the risks associated with the receivables are not transferred in substance to the financing institutions, they remain on the balance sheet and a corresponding liability is recognized in short-term debt (further information is provided in Note 9.3.8).

a) Trade and other accounts receivable

Trade and other accounts receivable can be analyzed as follows:

(in EUR million)	Dec. 31, 2018	Dec. 31, 2017
Gross value	5,347	5,527
Provision for impairment	(379)	(393)
TRADE ACCOUNTS RECEIVABLE	**4,968**	**5,134**
Discounts and advances to suppliers	633	637
Prepaid payroll taxes	36	25
Other prepaid and recoverable taxes (other than income tax)	478	372
Miscellaneous operating receivables	269	250
Other non-operating receivables and provisions	204	117
Provision for impairment of other operating receivables	(9)	(6)
Provision for impairment of other non-operating receivables	(2)	0
OTHER RECEIVABLES	**1,609**	**1,395**

As a result of applying IFRS 9, the Group recognized an additional €28 million provision for impairment of trade accounts receivable at January 1, 2018 (€20 million net of tax).

Changes in impairment provisions for trade accounts receivable in 2018 primarily reflect €87 million in additions (2017: €98 million) and €114 million in reversals (2017: €111 million), resulting from recoveries as well as write-offs. Write-offs of doubtful and bad debts are also reported under this caption for €76 million (2017: €78 million).

Trade accounts receivable at December 31, 2018 and 2017 are analyzed below by maturity:

	Gross value		Impairment		Net value	
(in EUR million)	Dec. 31, 2018	Dec. 31, 2017	Dec. 31, 2018	Dec. 31, 2017	Dec. 31, 2018	Dec. 31, 2017
TRADE ACCOUNTS RECEIVABLE NOT YET DUE	**4,172**	**4,318**	**(32)**	**(30)**	**4,140**	**4,288**
Trade accounts receivable past due						
Less than 1 month	478	478	(22)	(12)	456	466
1-3 months	206	201	(25)	(21)	181	180
More than 3 months	491	530	(300)	(330)	191	200
TRADE ACCOUNTS RECEIVABLE PAST DUE	**1,175**	**1,209**	**(347)**	**(363)**	**828**	**846**
TRADE ACCOUNTS RECEIVABLE	**5,347**	**5,527**	**(379)**	**(393)**	**4,968**	**5,134**

b) Trade and other accounts payable

Trade and other accounts payable and accrued expenses can be analyzed as follows:

(in EUR million)	Dec. 31, 2018	Dec. 31, 2017
TRADE ACCOUNTS PAYABLE	**6,116**	**6,027**
Downpayments received and rebates granted to customers	1,161	1,133
Payables to suppliers of non-current assets	372	367
Grants received	87	78
Accrued personnel expenses	1,242	1,231
Accrued taxes other than on income	416	423
Other operating payables	465	499
Other non-operating payables	116	92
OTHER PAYABLES	**3,859**	**3,823**

4.6 Off-balance sheet commitments related to operating activities

4.6.1 Obligations under finance leases

Non-current assets acquired under finance leases are recognized as an asset and a liability in the balance sheet (see Note 6.4 for further information).

Future payment commitments under finance leases are as follows:

(in EUR million)	Dec. 31, 2018	Dec. 31, 2017
Future minimum lease payments		
Due within 1 year	25	19
Due in 1 to 5 years	51	43
Due beyond 5 years	15	17
TOTAL FUTURE MINIMUM LEASE PAYMENTS	**91**	**79**
Less finance charge	(16)	(13)
PRESENT VALUE OF FUTURE MINIMUM LEASE PAYMENTS	**75**	**66**

At December 31, 2018, future finance lease payment commitments represented €69 million under equipment and machinery leases and €22 million under leases of land and buildings.

4.6.2 Obligations under operating leases

The Group leases equipment, vehicles, offices, warehouses and production or sales premises. Lease terms generally range from one to nine years. The liability for total future minimum payments over the lease terms is discounted. The leases contain rollover options for varying periods of time and some include clauses covering the payment of real estate taxes and insurance. In most cases, management expects that these leases will be rolled over or replaced by other leases in the normal course of business.

Payments due under non-cancelable operating leases are as follows:

		Payments due by period			
(in EUR million)	Total 2018	Due within 1 year	Due in 1 to 5 years	Due beyond 5 years	Total 2017
Rental expense	3,248	697	1,550	1,001	3,209
Subletting revenue	(88)	(15)	(31)	(42)	(81)
TOTAL	**3,160**	**682**	**1,519**	**959**	**3,128**

In 2018, rental expenses amounted to €859 million, including €577 million for land and buildings, and revenue from subleases represented €19 million. Net rental expense was €840 million.

4.6.3 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 2018	Due within 1 year	Due in 1 to 5 years	Due beyond 5 years	Total 2017
Property, plant and equipment and intangible assets	43	42	1	0	48
Commodities and energy	1,501	396	860	245	1,308
Services	128	49	61	18	157
TOTAL	**1,672**	**487**	**922**	**263**	**1,513**

4.6.4 Guarantee commitments

In some cases, the Group grants seller's warranties to the buyers of divested businesses. A provision is set aside whenever a risk is identified and the related cost can be estimated reliably.

The Group also receives guarantees, amounting to €83 million at December 31, 2018 (December 31, 2017: €78 million).

4.6.5 Commercial commitments

The Group's commercial commitments are shown below:

		Commitment amounts by period			
(in EUR million)	Total 2018	Due within 1 year	Due in 1 to 5 years	Due beyond 5 years	Total 2017
Security for borrowings	48	21	18	9	39
Other commitments given	217	78	95	44	237
TOTAL	**265**	**99**	**113**	**53**	**276**

Guarantees given to the Group in respect of receivables totaled €107 million at December 31, 2018 (December 31, 2017: €104 million). At December 31, 2018, pledged assets represented €577 million (December 31, 2017: €330 million) and chiefly concerned fixed assets pledged in the United Kingdom. Other commitments given by the Group also include the €77.5 million take-up guarantee granted in connection with its future head office premises at La Défense up to April 6, 2020.

4.6.6 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 2018 represented approximately 3.2 million metric tons of CO_2. The new 2019 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.

NOTE 5 EMPLOYEES, PERSONNEL EXPENSES AND EMPLOYEE BENEFIT OBLIGATIONS

5.1 Employees of fully consolidated companies

	2018	2017
Managerial-grade employees	30,292	28,991
Administrative employees	77,416	75,664
Other employees	73,828	71,795
TOTAL AVERAGE NUMBER OF EMPLOYEES	**181,536**	**176,450**

The total number of Group employees for fully consolidated companies was 181,001 at December 31, 2018 and 179,149 at December 31, 2017.

5.2 Management compensation

Direct and indirect compensation and benefits paid to members of the Board of Directors and the Group's senior management were as follows in 2018 and 2017:

(in EUR million)	2018	2017
Attendance fees	1.1	1.1
Direct and indirect compensation (gross)		
Fixed portion	9.7	8.6
Variable portion	5.7	5.8
Estimated cost of pensions and other employee benefit obligations (IAS 19)	2.5	3.2
Share-based payment expense (IFRS 2)	9.2	11.1
Termination, retirement and other benefits	2.7	0.1
TOTAL	**30.9**	**29.9**

Total gross compensation and benefits paid in 2018 to Saint-Gobain management by the French and foreign companies in the Group (excluding any long-term cash settled compensation) amounted to €18.1 million (2017: €14.5 million), including €5.7 million in gross variable compensation (2017: €5.8 million) in respect of the gross variable portion and €2.7 million in termination benefits (2017: €0.1 million).

Provisions for pensions and other post-employment benefits (defined benefit obligations [DBO] in respect of length-of-service awards and pensions) accruing to Group management totaled €50.9 million at December 31, 2018 (December 31, 2017: €46.6 million).

5.3 Provisions for pensions and other employee benefits

5.3.1 Description of defined benefit plans

After retirement, 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.

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.

In the Netherlands, ceilings have been introduced for defined benefit supplementary pension plans, above which they are converted into defined contribution plans.

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, 2018.

To provide a more accurate estimate of the value of these commitments, the Group fine-tuned its estimation approach for the Eurozone as from June 30, 2018. In the yield curve model developed by the Mercer practice, two discount rates were calculated based on the term of the plans: 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 2018 for the Group's main plans are 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.*

The rates used in 2017 for the Group's main plans are the following:

(in %)	France	Eurozone	United Kingdom	United States
Discount rate	1.70%	1.70%	2.45%	3.60%
Salary increases	2.50%	1.50% to 2.40%	2.00%*	3.00%
Inflation rate	1.50%	1.40% to 1.80%	2.30%	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 a decrease in the obligation, and therefore the provision, in an amount of €816 million.

Returns on substantially all plan assets were a negative €258 million, which was €502 million below projected returns recognized based on the discount rates used to measure pension benefit obligations at the start of the period in accordance with IAS 19.

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 €170 million for the US plans, €190 million for the Eurozone plans and €400 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 €510 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 by 6.68% or 7.02% per year, depending on the age of the beneficiary. A 1-point increase in this rate would lead to an increase of around €32 million in the related projected benefit obligation.

These amounts include assets and liabilities held for sale.

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, 2018	Dec. 31, 2017
Pension obligations	1,732	2,076
Length-of-service awards	378	361
Post-employment healthcare benefits	276	350
TOTAL PROVISIONS FOR PENSIONS AND OTHER POST-EMPLOYMENT BENEFIT OBLIGATIONS	**2,386**	**2,787**
Healthcare benefits	27	25
Long-term disability benefits	11	15
Other long-term benefits	101	100
PROVISIONS FOR PENSIONS AND OTHER EMPLOYEE BENEFITS	**2,525**	**2,927**

Provisions for all other long-term benefits totaled €139 million at December 31, 2018 (€140 million at December 31, 2017).

The following table shows net obligations under pensions and other post-employment benefit plans, excluding other long-term benefits, and the related plan assets:

(in EUR million)	Dec. 31, 2018	Dec. 31, 2017
Provisions for pensions and other post-employment benefit obligations - liabilities	2,386	2,787
Pension plan surpluses - assets	(193)	(161)
NET PENSION AND OTHER POST-EMPLOYMENT BENEFIT OBLIGATIONS	**2,193**	**2,626**

5.3.3.2 Analysis of obligations

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	0	0	2	0	8	10
NET PENSION AND OTHER POST-EMPLOYMENT BENEFIT OBLIGATIONS	**706**	**968**	**(77)**	**377**	**219**	**2,193**

At December 31, 2017, 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)	**16**	**17**	**18**	**13**	**15**	**16**
Defined benefit obligations - funded plans	685	1,750	5,018	2,662	866	10,981
Defined benefit obligations - unfunded plans	297	116	0	315	188	916
Fair value of plan assets	(261)	(741)	(4,899)	(2,535)	(838)	(9,274)
DEFICIT/(SURPLUS)	**721**	**1,125**	**119**	**442**	**216**	**2,623**
Asset ceiling	0	0	0	0	3	3
NET PENSION AND OTHER POST-EMPLOYMENT BENEFIT OBLIGATIONS	**721**	**1,125**	**119**	**442**	**219**	**2,626**

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, 2016	**12,664**	**(9,246)**	**4**	**3,422**
Changes during the year				
Service cost	210			210
Interest cost/return on plan assets as per calculations	324	(247)		77
Employee contributions and plan administration costs		(1)		(1)
Past service cost	(89)			(89)
Plan curtailments/settlements	(67)	48		(19)
Pension contributions		(306)		(306)
Benefit payments	(626)	530		(96)
Actuarial gains and losses and asset ceiling	109	(573)	(1)	(465)
Currency translation adjustments	(674)	564		(110)
Changes in Group structure and reclassifications	46	(43)		3
TOTAL CHANGES	**(767)**	**(28)**	**(1)**	**(796)**
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)
Currency 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**

In the United States, plan amendments led to a reduction of around €29 million in pension obligations in 2018, recognized within "Past service cost".

5.3.3.4 Actuarial gains and losses

Actuarial gains and losses on provisions result from the following items:

(in EUR million)	2018	2017
Pension obligations	(816)	109
Fair value of plan assets	502	(573)
Asset ceiling	7	(1)
TOTAL MOVEMENTS	**(307)**	**(465)**

The obligation under the Guaranteed Minimum Pension (GMP) in the United Kingdom, which is designed to equalize benefits for men and women, is reflected in the provision for pensions and other post-employment benefit obligations at December 31, 2018. This additional obligation was included in the consolidated statement of recognized income and expense.

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 2018 totaled €205 million (2017: €306 million).

A 0.5-point increase or decrease in the actual return on plan assets would have an impact of approximately €43 million on equity.

Plan assets mainly comprise:

	Dec. 31, 2018	Dec. 31, 2017
Equities	23%	29%
Bonds	58%	48%
Other	19%	23%

Contributions to pension plans for 2019 are estimated at around €110 million.

5.3.3.6 Employee benefit expense

Provisions for pensions and other post-employment benefit plans are as follows:

(in EUR million)	2018	2017
Service cost	197	210
Interest cost	299	324
Return on plan assets	(244)	(247)
Past service cost, plan curtailments and settlements	(33)	(108)
Employee contributions and plan administration costs	(1)	(1)
PENSIONS, LENGTH-OF-SERVICE AWARDS AND OTHER POST-EMPLOYMENT BENEFITS	**218**	**178**

5.3.4 Defined contribution plans

Contributions to defined contribution plans are expensed as incurred.

Contributions to defined contribution plans for 2018 represented an estimated €667 million (2017: €644 million), including €442 million for government-sponsored basic pension schemes (2017: €434 million), €137 million for government-sponsored supplementary pension schemes, mainly in France (2017: €131 million), and €88 million for corporate-sponsored supplementary pension plans (2017: €79 million).

5.4 Share-based payments

5.4.1 Group Savings Plan

The Group Savings Plan (*Plan Epargne Groupe* - 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 2018, 4,932,767 new shares with a par value of €4 were issued to employees under the PEG at an average subscription price of €36.31 (2017: 4,593,807 shares at an average price of €36.72), representing a share capital increase of €179 million (€168 million in 2017), net of transaction fees.

No amount was expensed in respect of the plans in 2018 or 2017 owing to the lock-in cost.

The following table shows the main features of the standard plans, the amounts invested in the plans and the valuation assumptions applied in 2018 and 2017:

	2018	2017
Plan characteristics		
Date of Shareholders' Meeting	June 8, 2017 (17th Resolution)	June 4, 2015 (17th Resolution)
Date of the Chief Executive Officer's decision fixing the subscription price	March 19	March 20
Plan duration *(in years)*	5 or 10	5 or 10
Reference price *(in EUR)*	45.38	45.89
Subscription price *(in EUR)*	36.31	36.72
Discount *(in %)*	20.00%	20.00%
Total discount on the date of the Chief Executive Officer's decision *(in %)* **(a)**	20.76%	21.25%
Employee investments *(in EUR million)*	179.1	168.7
Total number of shares subscribed	4,932,767	4,593,807
Valuation assumptions (5-year maturity)		
Interest rate applicable to employees*	4.80%	4.80%
Risk-free interest rate	0.09%	0.19%
Repo rate	0.34%	0.47%
Lock-up discount *(in %)* **(b)**	20.93%	21.17%
Total cost to the Group *(in %)* **(a-b)**	-0.17%	0.08%

* *A 0.5-point decline in borrowing costs for the employee would have no material impact on the 2018 share-based payment expense as calculated in accordance with IFRS 2.*

5.4.2 Stock option plans

Compagnie de Saint-Gobain has stock option plans available to certain employees.

The Board of Directors grants 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, 2018, plans launched between 2009 and 2012 offer subscription options, while the 2013 and 2014 plans offer purchase options. For plans launched between 2015 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.

Until 2008, options were subject to a performance condition for certain grantees only. A performance condition applies for all grantees in plans awarded since 2009.

For options granted under the 2018 plan, the value used to calculate the 30% *contribution sociale* tax due by grantees employed by French companies in the Group is €1.88 per option granted.

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, 2016	**6,922,327**	**47.97**
Options granted	284,500	49.38
Options exercised	(689,997)	28.39
Options forfeited	(3,501,207)	63.99
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**

* *Including 655,186 subscription options granted under the 2008 plan that had not been exercised when the plan expired, and 234,550 purchase options granted under the 2014 plan that had lapsed because the performance condition had only partly been met.*

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 €2 million in 2018 (2017: €1 million). The fair value of options granted in 2018 amounted to €1 million.

The table below summarizes information about stock options outstanding at December 31, 2018, after taking into account partial fulfillment of the performance criteria attached to certain plans.

	Exercisable options			Non-exercisable options		Total options outstanding	
Grant date	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
2009	36.34	627,748	11			627,748	Subscription
2010	35.19	0	23			0	Subscription
2011	31.22	0	35			0	Subscription
2012	27.71	19,962	47			19,962	Subscription
2013	38.80	120,347	59			120,347	Purchase
2014	34.13		71			0	Purchase
2015			83	39.47	224,950	224,950	Subscription or purchase*
2016			95	40.43	280,000	280,000	Subscription or purchase*
2017			107	49.38	284,500	284,500	Subscription or purchase*
2018			119	32.24	290,500	290,500	Subscription or purchase*
TOTAL		**768,057**			**1,079,950**	**1,848,007**	

* 2015, 2016, 2017 and 2018 plans: see above.

For subscription options, the sum received by the Company when options are exercised is recorded in “Capital stock” for the portion representing the par value of the shares, with the balance – net of directly attributable transaction costs – recorded under “Additional paid-in capital”.

At December 31, 2018, 768,057 stock options were exercisable (at an average exercise price of €36.50) and 1,079,950 options (with an average exercise price of €40.38) had not yet vested.

5.4.3 Performance shares and performance unit grants

The Group set up a worldwide share grant plan in 2009 whereby each Group employee was awarded seven shares. This plan was fulfilled in the first half of 2014. 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.

a) Performance share plans

Various performance share plans have been set up by Saint-Gobain since 2009.

Four performance share plans were outstanding at December 31, 2018. The plan approved by the Board of Directors in 2015 solely concerns certain managerial-grade employees and senior managers of the Group outside France. The 2016 and 2017 plans and the plan approved by the Board of Directors on November 22, 2018 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 2015-2017 plans, and on the third day after the end of the vesting period for the 2018 plan.

The table below shows changes in the number of performance share rights:

	Number of rights
NUMBER OF PERFORMANCE SHARE RIGHTS AT DECEMBER 31, 2016	**2,803,125**
Performance share rights granted in November 2017	1,226,680
Shares issued/delivered	(458,795)
Lapsed and canceled rights	(83,570)
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**

* Including 56,160 option rights granted under the 2014 plan that had lapsed because the performance condition had only been partly met, and 35,442 option rights granted under 2014 plan that had lapsed after the service condition was considered.

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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 2018 for these plans amounted to €26 million (2017: €16 million).

The table below summarizes information about stock options outstanding at December 31, 2018, after taking into account partial fulfillment of the performance criteria attached to certain plans.

Grant date	Number of rights at December 31, 2018*	End of vesting and lock-up period	Type of shares
November 26, 2015	500,210	November 26, 2019	existing
November 24, 2016	1,230,680	November 24, 2020	existing
November 23, 2017	1,226,480	November 23, 2021	existing
November 22, 2018	1,219,619	November 22, 2022	existing
TOTAL	**4,176,989**		

* *Subject to fulfillment of the service and performance conditions applicable to each plan.*

b) 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 the Company'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 2018, 495,087 performance units under the 2014 plan vested, while 103,313 performance units under the same plan lapsed, including 81,172 units because the performance condition had only been partly met and 22,141 units because the service condition had not been met.

The table below shows historical data for the performance unit plans in the process of vesting at December 31, 2018:

Grant date	Number of performance units granted at inception of plan	Exercised early	Number of performance units at December 31, 2018*
November 26, 2015	556,340	0	556,340

* *Subject to fulfillment of the service and performance conditions applicable to each plan.*

The expense recorded in the income statement in 2018 for these plans amounted to €11 million (2017: €21 million).

NOTE 6 PROPERTY, PLANT AND EQUIPMENT AND INTANGIBLE ASSETS

6.1 Goodwill

When an entity is acquired by the Group, its identifiable assets and assumed liabilities are recognized at their fair value within a 12-month measurement period and retroactively at the acquisition date.

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 2018 and 2017 are detailed below:

(in EUR million)	2018	2017
At January 1		
Gross value	12,023	12,160
Accumulated impairment	(1,448)	(1,491)
NET VALUE	**10,575**	**10,669**
Changes during the year		
Impairment	(1,116)	(70)
Translation adjustments	30	(497)
Restatement for hyperinflation in Argentina	27	0
Changes in Group structure	476	473
Assets held for sale	(4)	0
TOTAL CHANGES	**(587)**	**(94)**
At December 31		
Gross value	12,394	12,023
Accumulated impairment	(2,406)	(1,448)
NET VALUE	**9,988**	**10,575**

In 2018, changes in Group structure relate mainly to newly consolidated companies in all sectors (see Section 2.2.1). Impairment recognized in 2018 is detailed in Note 6.5.3. The 2018 currency translation adjustments primarily reflect the impacts of fluctuations in the US dollar, Brazilian real, pound sterling, Argentine peso and Turkish lira.

In 2017, changes in Group structure related mainly to newly consolidated companies in the Construction Products Sector representing €474 million. Impairment tests performed in 2017 led to the recognition of goodwill impairment, primarily in the Flat Glass business in the United States and the United Kingdom. Currency translation adjustments primarily reflected the impacts of fluctuations in the US dollar, pound sterling, Norwegian krone and Brazilian real.

The net value of goodwill by sector and by business can be analyzed as follows:

(in EUR million)	Dec. 31, 2018	Dec. 31, 2017
Flat Glass	201	189
High-Performance Materials	1,826	1,602
Construction Products	5,986	6,014
Building Distribution	1,975	2,770
TOTAL	**9,988**	**10,575**

Goodwill is essentially allocated to the Construction Products Sector, mainly Gypsum (€3,304 million at December 31, 2018) and Industrial Mortars (€2,077 million at December 31, 2018), and to the Building Distribution Sector, primarily in France and Scandinavia.

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.

Acquired retail brands and certain manufacturing brands 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 2018 and 2017 are analyzed below:

(in EUR million)	Patents	Non-amortizable brands	Software	Development costs	Other	Total intangible assets
At December 31, 2016						
Gross value	165	2,731	1,066	147	451	4,560
Accumulated amortization and impairment	(139)	(587)	(846)	(111)	(215)	(1,898)
NET VALUE	**26**	**2,144**	**220**	**36**	**236**	**2,662**
Changes during the year						
Acquisitions	0	0	97	8	79	184
Disposals	0	0	(3)	0	(1)	(4)
Translation adjustments	(2)	(55)	(9)	(2)	(11)	(79)
Amortization and impairment	(4)	(80)	(74)	(13)	(11)	(182)
Changes in Group structure and other	0	6	8	2	6	22
TOTAL CHANGES	**(6)**	**(129)**	**19**	**(5)**	**62**	**(59)**
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	2	0	142	9	36	189
Disposals	(1)	0	(5)	(2)	(16)	(24)
Translation adjustments	0	(8)	(1)	0	(1)	(10)
Amortization and impairment	(4)	(109)	(108)	(12)	(90)	(323)
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**

Impairment recognized in 2018 is detailed in Note 6.5.3.

The breakdown of non-amortizable brands by sector is provided in the segment information tables in Note 4 “Information concerning the Group’s operating activities”.

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.

Changes in property, plant and equipment in 2018 and 2017 are analyzed below:

(in EUR million)	**Land and quarries**	**Buildings**	**Machinery and equipment**	**Assets under construction**	**Total property, plant and equipment**
At December 31, 2016					
Gross value	2,510	8,607	19,744	1,067	31,928
Accumulated depreciation and impairment	(560)	(5,068)	(14,596)	(50)	(20,274)
NET VALUE	**1,950**	**3,539**	**5,148**	**1,017**	**11,654**
Changes during the year					
Acquisitions	15	68	269	1,186	1,538
Disposals	(31)	(18)	(31)	(17)	(97)
Translation adjustments	(67)	(158)	(251)	(64)	(540)
Depreciation and impairment	(33)	(263)	(883)	(11)	(1,190)
Transfers	0	213	687	(900)	0
Changes in Group structure and other	43	61	53	68	225
TOTAL CHANGES	**(73)**	**(97)**	**(156)**	**262**	**(64)**
At December 31, 2017					
Gross value	2,454	8,558	19,575	1,335	31,922
Accumulated depreciation and impairment	(577)	(5,116)	(14,583)	(56)	(20,332)
NET VALUE	**1,877**	**3,442**	**4,992**	**1,279**	**11,590**
Changes during the year					
Acquisitions	12	72	286	1,296	1,666
Disposals	(29)	(13)	(25)	(7)	(74)
Translation adjustments	2	(32)	(43)	(10)	(83)
Restatement for hyperinflation in Argentina	2	12	13	4	31
Depreciation and impairment	(145)	(500)	(1,083)	(38)	(1,766)
Transfers	0	255	862	(1,117)	0
Changes in Group structure and other	71	(13)	73	(4)	127
Assets held for sale	(56)	(26)	(45)	(29)	(156)
TOTAL CHANGES	**(143)**	**(245)**	**38**	**95**	**(255)**
At December 31, 2018					
Gross value	2,463	8,331	19,802	1,421	32,017
Accumulated depreciation and impairment	(729)	(5,134)	(14,772)	(47)	(20,682)
NET VALUE	**1,734**	**3,197**	**5,030**	**1,374**	**11,335**

In 2018, "Changes in Group structure and other" related mainly to newly consolidated companies in the Construction Products and Innovative Materials Sectors and to deconsolidated items in the Construction Products Sector, mainly assets belonging to entities operating at the PAM Xuzhou plant (see Note 2). Impairment recognized in 2018 is detailed in Note 6.5.3.

6.4 Finance leases and operating leases

Assets held under finance leases that transfer to the Group substantially all of the risks and rewards of ownership are recognized as property, plant and equipment (land, buildings and equipment). They are recorded at the inception of the lease term at the lower of the fair value of the leased assets and the present value of the minimum lease payments.

Property, plant and equipment acquired under finance leases are depreciated on a straight-line basis over the shorter of the estimated useful life of the asset – determined using the same criteria as for assets owned by the Group – or the lease term. The corresponding liability is shown in the balance sheet net of related interest.

Rental payments under operating leases are expensed as incurred.

In 2018, other changes in property, plant and equipment include an amount of €24 million (2017: €15 million) relating to assets acquired under new finance leases not included in the cash flow statement in accordance with IAS 7. At December 31, 2018, total property, plant and equipment acquired under finance leases amounted to €99 million (December 31, 2017: €83 million).

6.5 Impairment review

6.5.1 Impairment of property, plant and equipment, intangible assets and goodwill

Property, plant and equipment, goodwill 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 and amortizable intangible 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 intangible assets (including brands with indefinite useful lives), an impairment test is performed at least annually based on the business plan. Goodwill is reviewed systematically and exhaustively at the level of each cash-generating unit (CGU). The Group's reporting segments are its business sectors, which may each include several CGUs. A CGU is a reporting sub-segment, generally defined as a core business of the segment in a given geographic area. It typically reflects the level at which the Group organizes its businesses and analyzes its results for internal reporting purposes.

The number of CGUs in both 2018 and 2017 was 30. Since the Building Distribution business in Germany is classified as held for sale (see Section 2.3), the assets and liabilities relating to the Building Distribution CGU in Germany are carried at the lower of their fair value less costs to sell and their carrying amount.

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 (generally 1.5%, except for emerging markets or businesses with a high organic growth potential where a 2% rate is used). Growth data are supported by external data issued by prominent organizations. In light of continued falling interest rates on the Group's borrowings, the discount rate was reduced to 6.85% in 2018 from 7.25% in 2017 and 2016. 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 2018 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, 2018, a 0.5-point increase in the discount rate for all CGUs would have led to approximately €147 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 €115 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 €105 million, while a 0.5-point decrease in the rate for distribution activities would have generated additional impairment of €223 million. The sensitivity for the Building Distribution Sector takes into account a no-deal Brexit risk assumption at the reporting date.

	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**
Flat glass			(2)	
High-Performance Materials				
Construction Products	(31)	(24)	(103)	
Building Distribution	(116)	(91)		(223)
TOTAL	**(147)**	**(115)**	**(105)**	**(223)**

6.5.3 Impairment recognized in the year

The Group reviewed its impairment tests in light of the current situation and the downward revision to the outlook for certain business and countries.

With the United Kingdom facing uncertainty due to Brexit in a more competitive environment which is weighing on margins, the Group recognized a €750 million impairment loss against goodwill relating to the Building Distribution business.

In the first half of 2018, impairment totaling €223 million was recognized in respect of the Pipe business. Following the closure of the PAM Xuzhou plant in China, the Group conducted impairment tests on assets allocated to the Pipe CGU, leading it to recognize impairment of €130 million against the corresponding goodwill. In the second half of 2018, Saint-Gobain completed the sale of the entities operating at the PAM Xuzhou plant and continued to restructure the Pipe business, recognizing additional impairment against the corresponding assets. Annual impairment totaled €511 million, including €224 million charged against goodwill.

Lapeyre continued to roll out restructuring measures, and an impairment loss was recognized against its assets in an amount of €372 million, including €131 million in respect of other intangible assets.

The value of the Building Distribution business in Germany was adjusted in the context of its sale (see Section 2.3) in an amount of €212 million, including €130 million relating to goodwill.

The breakdown of asset impairment by sector for 2018 and 2017 is provided in the segment information tables in Note 4 "Information concerning the Group's operating activities".

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 2018 and 2017 can be analyzed as follows:

(in EUR million)	Dec. 31, 2018	Dec. 31, 2017
At January 1		
Group share in:		
Associates	173	181
Joint ventures	187	183
TOTAL	**360**	**364**
Goodwill	19	12
INVESTMENTS IN EQUITY-ACCOUNTED COMPANIES	**379**	**376**
Changes during the year		
Group share in net income of:		
Associates	11	3
Joint ventures	19	30
TOTAL	**30**	**33**
Dividends paid	(11)	(20)
Translation adjustments	(2)	(18)
Transfers, share issues and other movements	16	6
Changes in Group structure	0	2
TOTAL CHANGES	**33**	**3**
At December 31		
Group share in:		
Associates	185	173
Joint ventures	207	187
TOTAL	**392**	**360**
Goodwill	20	19
INVESTMENTS IN EQUITY-ACCOUNTED COMPANIES	**412**	**379**

The principal financial aggregates of equity-accounted companies are as follows:

	2018			2017		
(in EUR million)	Associates	Joint ventures	Total	Associates	Joint ventures	Total
Net sales	774	670	1,444	789	709	1,498
Net income	52	41	93	28	67	95
Current assets	528	305	833	495	310	805
Non-current assets	480	372	852	533	337	870
Current liabilities	225	116	341	227	145	372
Non-current liabilities	783	561	1,344	801	502	1,303
Shareholders' equity	622	444	1,066	592	409	1,001

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, 2018	Dec. 31, 2017
Financial receivables	2	1
Inventories	0	0
Short-term receivables	9	7
Cash and cash equivalents	0	0
Provisions for asset impairment	0	0
Short-term debt	5	2
Cash advances	0	0

Purchases and sales with equity-accounted companies are as follows:

(in EUR million)	Dec. 31, 2018	Dec. 31, 2017
Purchases	2	2
Sales	33	40

7.3 Other non-current assets

As of January 1, 2018, the Group has elected to present changes in the fair value of equity investments in the consolidated statement of recognized income and expense. Up to December 31, 2017, equity investments were classified within the "available-for-sale" category.

Changes in other non-current assets in 2018 and 2017 are analyzed below:

(in EUR million)	Equity investments and other securities	Loans, deposits and surety	Pension plan surpluses	Total
At December 31, 2016				
Gross value	163	526	41	730
Provision for impairment	(15)	(5)		(20)
NET VALUE	**148**	**521**	**41**	**710**
Changes during the year				
Increases/(decreases)	82	(3)	123	202
Provisions for impairment	0	2		2
Translation adjustments	(10)	(11)	(3)	(24)
Transfers and other movements	3	0		3
Changes in Group structure	(122)	3		(119)
TOTAL CHANGES	**(47)**	**(9)**	**120**	**64**
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	(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**

Increases/(decreases) and changes in the fair value of equity investments and other securities in 2018 primarily reflect the SWH/Sika transaction (see Note 2).

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
At December 31, 2016									
Current portion	125	36	52	29	122	60	424	12	436
Non-current portion	475	122	47	76	111	221	1,052	190	1,242
TOTAL PROVISIONS FOR OTHER LIABILITIES AND INVESTMENT-RELATED LIABILITIES	**600**	**158**	**99**	**105**	**233**	**281**	**1,476**	**202**	**1,678**
Movements during the year									
Additions	155	12	49	62	64	73	415		415
Reversals	(3)	(3)	(9)	(13)	(23)	(25)	(76)		(76)
Utilizations	(135)	(12)	(58)	(34)	(54)	(99)	(392)		(392)
Changes in Group structure			2	1	3	6	12		12
Other movements (reclassifications and translation adjustments)	(71)	(1)	(4)	(6)	(25)	(1)	(108)	(64)	(172)
TOTAL MOVEMENTS	**(54)**	**(4)**	**(20)**	**10**	**(35)**	**(46)**	**(149)**	**(64)**	**(213)**
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**
Movements during the year									
Additions	122	10	150	35	71	51	439		439
Reversals	(3)	(2)	(9)	(14)	(23)	(53)	(104)		(104)
Utilizations	(126)	(13)	(47)	(31)	(54)	(49)	(320)		(320)
Changes in Group structure		2	(32)			1	(29)		(29)
Other movements (reclassifications and translation adjustments)	25		(4)	(2)	2	(6)	15	35	50
TOTAL MOVEMENTS	**18**	**(3)**	**58**	**(12)**	**(4)**	**(56)**	**1**	**35**	**36**
At December 31, 2018									
Current portion	127	27	106	19	102	73	454	11	465
Non-current portion	437	124	31	84	92	106	874	162	1,036
TOTAL PROVISIONS FOR OTHER LIABILITIES AND INVESTMENT-RELATED LIABILITIES	**564**	**151**	**137**	**103**	**194**	**179**	**1,328**	**173**	**1,501**

8

8.1.1 Provisions for claims and litigation

At December 31, 2018 and 2017, 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 €137 million at December 31, 2018 (December 31, 2017: €79 million), including net additions of €141 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 risks.

8.1.6 Provisions for other contingencies

At December 31, 2018, provisions for other contingencies amounted to €179 million (December 31, 2017: €235 million) and mainly concerned the United States (€39 million), Brazil (€34 million), Germany (€33 million), France (€29 million) and Italy (€13 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 2018, changes in investment-related liabilities primarily concerned minority shareholder puts.

8.2 Contingent liabilities and litigation

8.2.1 Asbestos-related litigation

Current legal actions related to asbestos are described below.

8.2.1.1 Asbestos-related litigation in France

a) Inexcusable fault lawsuits

In France, seven further individual lawsuits were filed in 2018 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, 2018, a total of 822 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, 2018, 789 of these 822 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 €4.6 million.

Concerning the 33 lawsuits outstanding against Everite and Saint-Gobain PAM at December 31, 2018, five have been completed in terms of both liability and quantum, but are still pending on the determination of who will pay the compensation due.

Out of the 28 remaining lawsuits, at December 31, 2018 the procedures relating to the merits of 24 cases were at different stages, with three in the process of being investigated by the French Social Security authorities and 21 pending before the Social Security or Appeal Courts. The last four actions have been canceled but the plaintiffs may request their restoration at any time within a two-year period following their cancellation.

In addition, as of December 31, 2018, 237 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, 2018, 211 lawsuits had been completed. In 129 of these cases, the employer was held liable for “inexcusable fault”.

At the same date, compensation paid by these companies totaled approximately €7.0 million.

As regards the 26 suits outstanding at December 31, 2018, two cases were still being investigated by the French Social Security authorities and 23 were being tried – including 20 pending before the Social Security Courts and three before the Appeal Courts. Lastly, for one lawsuit, a decision has been rendered on the finding of liability but is still pending regarding the determination of who will pay the compensation due.

b) 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, 2018, a total of 822 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 822 lawsuits, 720 have been finally disposed of, representing total amount of compensation of €7.6 million at December 31, 2018. The remaining 102 lawsuits are pending before the competent labor tribunals.

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.

8.2.1.2 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, specialized insulation or gaskets, are 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.

a) Developments in 2018

Approximately 2,600 new asbestos-related claims were filed against CertainTeed in the United States in 2018 (compared to 3,100 new claims in 2017). The number of new claims is significantly down on the past few years.

Virtually all lawsuits involving CertainTeed have either been settled out of court or dismissed. Around 4,300 of the pending claims were settled in 2018, compared to 3,900 in 2017 and 3,700 in 2016. Taking into account the number of claims outstanding at the end of 2017 (34,300), new claims arising during the year and settled claims, some 32,600 claims remain outstanding at December 31, 2018. A large number of these pending claims were filed more than five years ago by individuals who have been unable to demonstrate any significant asbestos-related impairment, and it is likely that many of these claims will ultimately be dismissed.

b) Impact on the Group's financial statements

The Group recorded a US$106 million charge in 2018 to cover future developments in relation to claims. This amount is stable compared to the amount recorded in 2017 and 2016. At December 31, 2018, the Group's provision for asbestos-related litigation against CertainTeed in the United States amounts to US$568 million (compared to US$555 million at December 31, 2017 and US$562 million at December 31, 2016).

c) Cash flow impact

Compensation paid in respect of these claims against CertainTeed (including claims settled prior to 2018 but only paid out in 2018 as well as claims fully settled and paid out in 2018), as well as compensation paid in 2018 by other Group businesses in the United States in connection with asbestos litigation, amounted to US$67 million (compared to US$76 million in 2017 and US$97 million in 2016).

8.2.1.3 Situation in Brazil

In Brazil, former employees of Brasilit 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 a very 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.

8.2.2 Anti-trust law and related proceedings

8.2.2.1 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. However, a provision for claims and litigation was recognized at December 31, 2015 in an amount equivalent to the fine (unchanged at December 31, 2018).

8.2.2.2 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.

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.

8.2.2.3 Investigation by the Anti-trust Division of the United States Department of Justice in the United States drywall industry

In July 2015, the Anti-trust Division of the United States Department of Justice opened a criminal investigation into potential anti-competitive practices, specifically a price agreement, in the United States drywall industry. This investigation followed complaints filed in late 2012 in the form of class actions in the civil courts against eight drywall manufacturers in the sector, including CertainTeed, by some of their customers.

On the basis of testimony and documents submitted in the civil proceedings, CertainTeed and its attorneys have not identified any element that might create liability for CertainTeed, and as a result filed a motion for summary judgment in May 2015 in order to end the civil proceedings. This application was accepted on February 18, 2016 by the competent court.

In autumn 2018, the lawsuit was terminated: no liability was assigned to CertainTeed and no fine was levied.

8.2.3 Environmental disputes

8.2.3.1 PFOA matters in the United States

Levels of PFOA (perfluorooctanoic acid) in excess of U.S. Environmental Protection Agency (EPA) or state health advisories 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, 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.

On December 31, 2018, the provision recorded by the Company in respect of this matter amounts to €30 million.

8.2.4 Other contingent liabilities

8.2.4.1 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. 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 Risk factors: 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 bonds, which are generally issued under the Medium Term Notes program. Saint-Gobain also uses perpetual bonds, participating securities, a long-term securitization program, bank borrowings and lease financing.

Short-term debt comprises 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 December 9, 2014.

Saint-Gobain's long-term debt issues have been rated Baa2 with a stable outlook by Moody's since December 9, 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 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 risk

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, 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. Where subsidiaries use derivatives to hedge interest rate risks, their counterparty is generally Compagnie de Saint-Gobain, the Group's parent company.

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, 2018 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	4	12
Interest rate decrease of 50 basis points	(4)	(12)

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, 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, 2018, 97% 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, 2018:

(in EUR million equivalent)	**Long**	**Short**
EUR	2	8
USD	13	7
Other currencies	0	5
TOTAL	**15**	**20**

The table below gives an analysis, as of December 31, 2018, 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 million equivalent)*	**Impact on pre-tax income**
EUR	(0.6)
USD	0.6
Other currencies	(0.5)
TOTAL	**(0.5)**

Assuming that all other variables remained unchanged, a 10% fall in the exchange rates for these currencies at December 31, 2018 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 expense

Net financial expense includes borrowing and other financing costs, income from cash and cash equivalents, interest cost for pensions and other post-employment benefit obligations, net of the return on plan assets, and other financial income and expense such as exchange gains and losses and bank charges.

Net financial income/expense in 2018 and 2017 includes:

(in EUR million)	2018	2017
Borrowing costs, gross	(300)	(298)
Income from cash and cash equivalents	22	23
BORROWING COSTS, NET	**(278)**	**(275)**
Interest cost – pensions and other post-employment benefit obligations	(303)	(327)
Return on plan assets	244	247
INTEREST COST – PENSION AND OTHER POST-EMPLOYMENT BENEFIT OBLIGATIONS, NET	**(59)**	**(80)**
Other financial expense	(107)	(118)
Other financial income*	633	25
OTHER FINANCIAL INCOME AND EXPENSE	**526**	**(93)**
NET FINANCIAL EXPENSE	**189**	**(448)**

* *Including €601 million relating to the SWH/Sika transaction.*

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 securitizations and all other types of long-term financial liabilities, including finance lease liabilities and 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

Short-term debt includes the current portion of long-term debt described above, short-term financing programs such as commercial paper, short-term securitizations, bank overdrafts and other short-term bank borrowings, 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 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, 2018	Dec. 31, 2017
Bond issues	8,309	6,757
Perpetual bonds and participating securities	203	203
Long-term securitization	400	400
Other long-term financial liabilities	306	295
NON-CURRENT PORTION OF LONG-TERM DEBT	**9,218**	**7,655**
CURRENT PORTION OF LONG-TERM DEBT	**1,184**	**1,064**
Short-term financing programs (NEU CP, US CP, Euro CP)	0	0
Short-term securitizations	160	174
Bank overdrafts and other short-term financial liabilities	319	346
SHORT-TERM DEBT AND BANK OVERDRAFTS	**479**	**520**
TOTAL GROSS DEBT	**10,881**	**9,239**
Cash at banks	(1,551)	(1,658)
Mutual funds and other marketable securities	(1,137)	(1,626)
CASH AND CASH EQUIVALENTS	**(2,688)**	**(3,284)**
TOTAL NET DEBT	**8,193**	**5,955**

Changes in the Group's long-term debt can be analyzed as follows:

(in EUR million)	Dec. 31, 2017	Cash impact Increases	Cash impact Decreases	No cash impact Changes in Group structure	No cash impact Translation adjustments	No cash impact Other	Dec. 31, 2018
Non-current portion of long-term debt	7,655	2,508	(93)	55	16	(923)	9,218
Current portion of long-term debt	1,064	4	(869)	33	(1)	953	1,184
TOTAL LONG-TERM DEBT	**8,719**	**2,512**	**(962)**	**88**	**15**	**30**	**10,402**

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) managed by Compagnie de Saint-Gobain amounted to €9.8 billion at December 31, 2018, for a carrying amount of €9.5 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 Debt repayment schedule

The schedule of the Group's gross debt as of December 31, 2018 is as follows:

(in EUR million)	Currency	Within 1 year	1 to 5 years	Beyond 5 years	Total
Bond issues	EUR	949	4,080	3,618	8,647
	GBP	0	0	611	611
Perpetual bonds and participating securities	EUR	0	0	203	203
Long-term securitization	EUR	100	400	0	500
Other long-term financial liabilities	All currencies	38	131	175	344
Accrued interest on long-term debt	All currencies	97	0	0	97
TOTAL LONG-TERM DEBT		**1,184**	**4,611**	**4,607**	**10,402**
TOTAL SHORT-TERM DEBT	**All currencies**	**479**	**0**	**0**	**479**
TOTAL GROSS DEBT		**1,663**	**4,611**	**4,607**	**10,881**

At December 31, 2018, future interest payments on gross long-term debt (including the current portion) managed by Compagnie de Saint-Gobain 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	213	593	604	1,410

Interest on perpetual bonds and on participating securities is calculated up to 2049.

9.3.3 Bonds

Compagnie de Saint-Gobain issued:

- €750 million worth of 1.125% bonds on March 23, 2018, maturing on March 23, 2026;
- a €20 million private placement on April 18, 2018, indexed to the 20-year CMS curve and maturing on April 18, 2033; a €60 million private placement on May 25, 2018, indexed to the 20-year CMS curve and maturing on May 25, 2033; the Group entered into swaps in order to fix the interest rate on these two private placements;
- two floating-rate 3-month Euribor +0.23% private placements on June 25, 2018, maturing on June 25, 2020, amounting to €180 million and €300 million, respectively;
- €500 million worth of 0.875% bonds on September 21, 2018, maturing on September 21, 2023, and €500 million worth of 1.875% bonds maturing on September 21, 2028. The nominal amount of the latter bond issue was increased to €700 million through two €100 million additions on October 11 and October 12, 2018, respectively.

These issues extended the average maturity of the Group's debt while also optimizing average borrowing costs.

Compagnie de Saint-Gobain also redeemed the following instruments at maturity:

- NOK 750 million worth of 4% bonds on March 27, 2018;
- €750 million worth of 4% bonds on October 8, 2018.

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 end-2018, 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 2018 was zero.

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, 2018, 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 2018 was €2.

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, 2018, 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 2018 was €66.33, paid in two installments (€32.80 and €33.53).

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, 2018, issuance under these programs was as follows:

(in EUR million)	**Authorized drawings**	**Authorized limits at Dec. 31, 2018**	**Balance outstanding at Dec. 31, 2018**	**Balance outstanding at Dec. 31, 2017**
Medium Term Notes		15,000	9,435	7,776
NEU CP	up to 12 months	3,000	0	0
US Commercial Paper	up to 12 months	873*	0	0
Euro Commercial Paper	up to 12 months	873*	0	0

* *Equivalent of US$1,000 million based on the exchange rate at December 31, 2018.*

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 expiring in December 2022 with two one-year rollover options. The first option was exercised, extending maturity until December 2023;
- a second €1.5 billion syndicated line of credit also expiring in December 2022 with two one-year rollover options. The first option was exercised, extending maturity until December 2023.

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, 2018.

9.3.8 Receivables securitization programs

The Group has set up two receivables securitization programs, one through its French subsidiary Point.P Finances GIE, and the other through its US subsidiary, Saint-Gobain Receivables Corporation.

The €500 million French program was rolled over on November 10, 2016. It amounted to €500 million at both December 31, 2018 and December 31, 2017. Based on observed seasonal fluctuations in receivables included in the program and on the contract's features, €400 million of this amount was classified as non-current and the balance as current.

The US program was renewed on December 19, 2018 for a maximum amount of US$400 million. Its euro-equivalent value at December 31, 2018 was €160 million (December 31, 2017: €174 million).

9.3.9 Collateral

At December 31, 2018, €9 million of Group debt was secured by various non-current assets (real estate and securities).

9.4 Financial instruments

The Group uses interest rate, foreign exchange and commodity derivatives to hedge its exposure to changes in interest rates, exchange rates and commodity 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 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.

a) 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 at the level of risk covered. 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.

b) 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.

c) 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.

d) 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.

Saint-Gobain has applied IFRS 9 in its entirety since January 1, 2018, including the standard's hedge accounting requirements. The Group's risk management and hedging documentation strategies are compliant with IFRS 9. Given the nature of the Group's transactions, applying IFRS 9 has no impact on hedge accounting at the transition or reporting date.

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, 2018	Dec. 31, 2017	Within 1 year	1 to 5 years	Beyond 5 years	Dec. 31, 2018
FAIR VALUE HEDGES			0	0				0
Cash flow hedges								
Currency	3	(1)	2	(17)	342	0	0	342
Interest rate	0	(85)	(85)	(71)	0	0	424	424
Energy and commodities	1	(8)	(7)	4	54	11	0	65
Other risks: equities	0	(13)	(13)	14	0	33	12	45
CASH FLOW HEDGES – TOTAL	4	(107)	(103)	(70)	396	44	436	876
Derivatives not qualifying for hedge accounting mainly contracted by Compagnie de Saint-Gobain								
Currency	3	(5)	(2)	72	1,424	3	0	1,427
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	3	(5)	(2)	72	1,424	3	0	1,427
TOTAL	7	(112)	(105)	2	1,820	47	436	2,303

9.4.1 Currency instruments

a) Currency swaps

The Group uses currency swaps mainly to convert euro-denominated funds into foreign currencies for cash management purposes.

b) 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

a) 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.

b) 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

a) 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 compensation 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, 2018, credit value adjustments were not material.

9.4.6 Impact on equity of financial instruments qualifying for cash flow hedge accounting

At December 31, 2018, the cash flow hedging reserve carried in equity in accordance with IFRS had a debit balance of €57 million, consisting mainly of:

- a debit balance of €38 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 €12 million corresponding to changes in the value of interest rate hedges classified as cash flow hedges;
- a debit balance of €7 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" represented a loss of €2 million in 2018 compared to a gain of €2 million in 2017.

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, 2018, no embedded derivatives deemed to be material at Group level were identified.

9.4.9 Group debt structure

The weighted average interest rate on total gross debt under IFRS and after hedging (interest rate swaps, currency swaps and cross-currency swaps) was 2.3% at December 31, 2018, compared with 2.8% at December 31, 2017.

The average internal rate of return on the Group's main component of long-term debt item before hedging (bonds) was 2.4% in 2018 compared to 3.2% in 2017.

The table below presents the breakdown by interest rate (fixed or variable) of the Group's gross debt at December 31, 2018, taking into account interest rate, currency and cross-currency swaps.

	Gross debt after hedging		
(in EUR million)	**Variable rate**	**Fixed rate**	**Total**
EUR	1,478	8,550	10,028
Other currencies	320	343	663
TOTAL	**1,798**	**8,893**	**10,691**
(in %)	17%	83%	100%
Accrued interest and other financial liabilities			190
TOTAL GROSS DEBT			**10,881**

9.5 Financial assets and liabilities

Financial assets and liabilities are classified as follows in accordance with IFRS 9:

At December 31, 2018

		Financial instruments				Financial instruments at fair value			
(in EUR million)	**Notes**	**Fair value through profit or loss**	**Fair value through the statement of recognized income and expense**	**Amortized cost**	**Total financial instruments**	**Level 1 inputs**	**Level 2 inputs**	**Level 3 inputs**	**Total financial instruments measured at fair value**
Trade and other accounts receivable	(4)			6,572	6,572				0
Loans, deposits and surety	(7)			620	620				0
Equity investments and other	(7)		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	1,551		2,688
TOTAL ASSETS		**1,140**	**1,718**	**8,743**	**11,601**	**2,822**	**1,558**	**29**	**4,409**
Trade and other accounts payable	(4)			(9,952)	(9,952)				0
Long- and short-term debt				(10,794)	(10,794)				0
Derivatives recorded in liabilities		(5)	(107)		(112)		(112)		(112)
TOTAL LIABILITIES		**(5)**	**(107)**	**(20,746)**	**(20,858)**	**0**	**(112)**	**0**	**(112)**
TOTAL		**1,135**	**1,611**	**(12,003)**	**(9,257)**	**2,822**	**1,446**	**29**	**4,297**

At December 31, 2017

		Financial instruments				Financial instruments at fair value according to the IFRS7 hierachy			
(in EUR million)	Notes	Fair value through profit or loss	Fair value through the statement of recognized income and expense	Amortized cost	Total financial instruments	Level 1 inputs	Level 2 inputs	Level 3 inputs	Total financial instruments measured at fair value
Trade and other accounts receivable	(4)			6,425	6,425				0
Loans, deposits and surety	(7)			512	512				0
Equity investments and other	(7)		101		101			101	101
Derivatives recorded in assets		83	24		107		107		107
Cash and cash equivalents		1,626		1,658	3,284	1,626	1,658		3,284
TOTAL ASSETS		**1,709**	**125**	**8,595**	**10,429**	**1,626**	**1,765**	**101**	**3,492**
Trade and other accounts payable	(4)			(9,818)	(9,818)				0
Long- and short-term debt				(9,169)	(9,169)				0
Derivatives recorded in liabilities		(11)	(94)		(105)		(105)		(105)
TOTAL LIABILITIES		**(11)**	**(94)**	**(18,987)**	**(19,092)**	**0**	**(105)**	**0**	**(105)**
TOTAL		**1,698**	**31**	**(10,392)**	**(8,663)**	**1,626**	**1,660**	**101**	**3,387**

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 Capital stock

As of December 31, 2018, the number of shares composing the capital stock of Saint-Gobain was 546,585,004 shares with a par value of €4 (553,557,091 shares at December 31, 2017).

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, 2018, 2,705,737 shares were held in treasury stock (December 31, 2017: 2,771,372 shares). In 2018, the Group acquired 14,050,245 shares (2017: 9,595,036 shares) directly on the market and sold 1,654,431 shares (2017: 1,715,619 shares). Lastly, 12,461,449 shares were canceled in 2018 and 7,000,000 shares in 2017.

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 7, 2018 approved the recommended dividend payout for 2017, representing €1.30 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:

	2018	2017
Group share of net income *(in EUR million)*	420	1,566
Weighted average number of shares in issue	547,105,985	553,383,836
BASIC EARNINGS PER SHARE, GROUP SHARE *(in EUR)*	**0.77**	**2.83**

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:

	2018	2017
Group share of net income *(in EUR million)*	420	1,566
Weighted average number of shares assuming full dilution	550,016,438	556,655,598
DILUTED EARNINGS PER SHARE, GROUP SHARE *(in EUR)*	**0.76**	**2.81**

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 200,702 and 2,709,751 shares, respectively, at December 31, 2018.

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)	2018	2017
Current taxes	**(404)**	**(445)**
France	(36)	(18)
Outside France	(368)	(427)
Deferred taxes	**(86)**	**7**
France	25	64
Outside France	(111)	(57)
TOTAL INCOME TAX EXPENSE	**(490)**	**(438)**

Theoretical tax expense was reconciled with current tax expense using a tax rate of 34.43% in 2018 and 2017, and can be analyzed as follows:

(in EUR million)	2018	2017
Net income	497	1,625
Less:		
Share in net income of equity-accounted companies	30	33
Income taxes	(490)	(438)
PRE-TAX INCOME OF CONSOLIDATED COMPANIES	**957**	**2,030**
French tax rate	34.43%	34.43%
Theoretical tax expense at French tax rate	(330)	(699)
Impact of different tax rates	136	161
Asset impairment, capital gains and losses on asset disposals	(297)	(37)
Deferred tax assets not recognized	(57)	(10)
Liability method	(7)	98
Research tax credit, tax credit for competitiveness and employment (CICE) and value-added contribution for businesses (CVAE)	6	9
Costs related to dividends	(10)	31
Other taxes and provision writebacks	69	9
TOTAL INCOME TAX EXPENSE	**(490)**	**(438)**

The contribution of countries with low tax rates explains the impact of the different tax rates applicable outside France. The main contributors are the United States, India, Germany and the United Kingdom.

11.2 Deferred tax

Deferred taxes 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, 2016	**825**
Deferred tax (expense)/benefit	7
Changes in deferred taxes relating to actuarial gains and losses (IAS 19)	(89)
Liability method on actuarial gains and losses	(252)
Translation adjustments	(40)
Changes in Group structure and other	60
AT DECEMBER 31, 2017	**511**
Deferred tax (expense)/benefit	(86)
Changes in deferred taxes relating to actuarial gains and losses (IAS 19)	(69)
Liability method on actuarial gains and losses	(1)
Translation adjustments	9
Assets and liabilities held for sale	(20)
Changes in Group structure and other*	21
AT DECEMBER 31, 2018	**365**

* *In 2018, the "Changes in Group structure and other" line mainly reflects the impact of applying IFRS 9 and IFRS 15 for €9 million.*

The table below shows the main deferred tax components:

(in EUR million)	Dec. 31, 2018	Dec. 31, 2017
Pensions	460	562
Brands	(397)	(425)
Depreciation and amortization, accelerated capital allowances and tax-driven provisions	(705)	(711)
Tax loss carry-forwards	562	633
Other	445	452
NET DEFERRED TAX	**365**	**511**
Of which:		
Deferred tax assets	837	938
Deferred tax liabilities	(472)	(427)

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 €837 million were recognized at December 31, 2018 (€938 million at December 31, 2017), primarily in France (€209 million), the United States (€197 million) and Germany (€153 million). Deferred tax liabilities of €472 million were recognized at December 31, 2018 (€427 million at December 31, 2017), including €179 million in the United Kingdom, €65 million in India, €58 million in Switzerland, and €42 million in Denmark. Deferred tax liabilities recognized in other countries represented considerably smaller amounts.

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 plan projections 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 €562 million at December 31, 2018 and €633 million at December 31, 2017. 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, 2018, deferred tax assets whose recovery is not considered probable totaled €451 million (December 31, 2017: €330 million) and a provision had been accrued for the full amount. Unrecognized deferred tax assets chiefly relate to France, China, Spain and the United States.

NOTE 12 SUBSEQUENT EVENTS

None.

NOTE 13 FEES PAID TO THE STATUTORY AUDITORS

Total fees paid to the Statutory Auditors and recognized in the income statement in 2018 and 2017 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.

Innovative Materials Sector

		Dec. 31, 2018	
FLAT GLASS	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 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%
Freeglass GmbH & Co. KG, Schwaikheim*	Germany	Full consolidation	99.99%
Saint-Gobain Autover Deutschland GmbH, Kerpen*	Germany	Full consolidation	99.99%
Freudenberger Autoglas GmbH, München*	Germany	Full consolidation	99.99%
Saint-Gobain Glassolutions Objekt-Center GmbH, Radeburg*	Germany	Full consolidation	99.99%
Saint-Gobain Construction Products Belgium	Belgium	Full consolidation	100.00%
Cebrace Cristal Plano Ltda	Brazil	Full consolidation	50.00%
Saint-Gobain Do Brasil Ltda	Brazil	Full consolidation	100.00%
SG Hanglas Sekurit (Shanghai) Co., Ltd	China	Full consolidation	98.99%
Hankuk Glass Industries Inc.	South Korea	Full consolidation	97.98%
Hankuk Sekurit Limited	South Korea	Full consolidation	97.87%
Saint-Gobain Cristaleria 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%
Saint-Gobain Sekurit France	France	Full consolidation	100.00%
Eurofloat	France	Full consolidation	100.00%
Saint-Gobain India Private Limited	India	Full consolidation	99.03%
Saint-Gobain Glass Italia S.p.a	Italy	Full consolidation	100.00%
Saint-Gobain Mexico	Mexico	Full consolidation	99.83%
Saint-Gobain Polska Sp Zoo	Poland	Full consolidation	99.90%
Saint-Gobain Innovative Materials Polska Sp Zoo	Poland	Full consolidation	99.85%
Saint-Gobain Sekurit CZ, Spol S.R.O	Czech Republic	Full consolidation	100.00%
Saint-Gobain Glass (United Kingdom) Limited	United Kingdom	Full consolidation	100.00%
Vetrotech Saint-Gobain International	Switzerland	Full consolidation	100.00%

		Dec. 31, 2018	
HIGH-PERFORMANCE MATERIALS	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%
Saint-Gobain Innovative Materials Belgium	Belgium	Full consolidation	100.00%
Saint-Gobain Do Brasil Ltda	Brazil	Full consolidation	100.00%
Saint-Gobain Performance Plastics (Shanghai) Co., Ltd	China	Full consolidation	100.00%
Saint-Gobain Abrasives (Shanghai) Co., Ltd	China	Full consolidation	100.00%
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%
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 Abrasives BV	Netherlands	Full consolidation	100.00%
Saint-Gobain HPM Polska Sp Zoo	Poland	Full consolidation	100.00%
Saint-Gobain Adfors CZ S.R.O.	Czech Republic	Full consolidation	100.00%

Construction Products Sector

INTERIOR SOLUTIONS	Country	Dec. 31, 2018 Consolidation method	Dec. 31, 2018 Percentage held directly and indirectly
Saint-Gobain Construction Products South Africa Ltd	South Africa	Full consolidation	100.00%
Saint-Gobain Isover G+H Aktiengesellschaft	Germany	Full consolidation	99.91%
Saint-Gobain Rigips GmbH	Germany	Full consolidation	100.00%
Saint-Gobain Construction Products Belgium	Belgium	Full consolidation	100.00%
CertainTeed Gypsum Canada, Inc.	Canada	Full consolidation	100.00%
Saint-Gobain Denmark A/S	Denmark	Full consolidation	99.97%
Saint-Gobain Placo Iberica	Spain	Full consolidation	99.83%
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%
Saint-Gobain Finland OY	Finland	Full consolidation	100.00%
Placoplatre SA	France	Full consolidation	99.75%
Saint-Gobain Isover	France	Full consolidation	100.00%
Saint-Gobain India Private Limited	India	Full consolidation	99.03%
Saint-Gobain Construction Products (Ireland) Limited	Ireland	Full consolidation	100.00%
Saint-Gobain PPC Italia S.p.a	Italy	Full consolidation	100.00%
Mag-Isover K.K.	Japan	Full consolidation	99.98%
Glava As	Norway	Full consolidation	100.00%
Saint-Gobain Byggevarer AS	Norway	Full consolidation	100.00%
Saint-Gobain Construction Products Nederland BV	Netherlands	Full consolidation	100.00%
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 Construction Products United Kingdom 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%
Izocam Ticaret VE Sanayi A.S.	Turkey	Full consolidation	47.53%
Vinh Tuong Industrial Corporation	Vietnam	Full consolidation	98.65%

EXTERIOR SOLUTIONS	Country	Dec. 31, 2018 Consolidation method	Dec. 31, 2018 Percentage held directly and indirectly
Saint-Gobain Weber GmbH	Germany	Full consolidation	100.00%
Saint-Gobain PAM Deutschland GmbH	Germany	Full consolidation	100.00%
Saint-Gobain Argentina S.A	Argentina	Full consolidation	100.00%
Saint-Gobain Do Brasil Ltda	Brazil	Full consolidation	100.00%
Saint-Gobain Canalizaçao Ltda	Brazil	Full consolidation	100.00%
Saint-Gobain Pipelines Co., Ltd	China	Full consolidation	100.00%
CertainTeed Corporation	United States	Full consolidation	100.00%
Saint-Gobain Finland OY	Finland	Full consolidation	100.00%
Saint-Gobain Weber	France	Full consolidation	100.00%
Saint-Gobain PAM	France	Full consolidation	100.00%
Saint-Gobain Construction Products United Kingdom Ltd	United Kingdom	Full consolidation	100.00%
Saint-Gobain Sweden AB	Sweden	Full consolidation	100.00%
Saint-Gobain Weber AG	Switzerland	Full consolidation	100.00%

Building Distribution Sector

		Dec. 31, 2018	
	Country	Consolidation method	Percentage held directly and indirectly
Saint-Gobain Building Distribution Deutschland GmbH, Offenbach/Main*	Germany	Full consolidation	100.00%
Fliesen Discount GmbH, Berlin*	Germany	Full consolidation	100.00%
Chr.Balzer GmbH & Co. KG, Marburg*	Germany	Full consolidation	67.34%
Balzer & Nassauer GmbH & Co. KG, Herborn*	Germany	Full consolidation	67.34%
Christian Balzer Beteiligungs GmbH & Co. KG, Allendorf (Eder)*	Germany	Full consolidation	67.34%
Balzer GmbH & Co. KG, Allendorf (Eder)*	Germany	Full consolidation	67.34%
Muffenrohr Tiefbauhandel GmbH, Ottersweier*	Germany	Full consolidation	67.34%
Platten-Peter Fliesenzentrum Nord GmbH, Münster*	Germany	Full consolidation	67.34%
Dr. Sporkenbach GmbH Holz- und Baufachhandel, Magdeburg*	Germany	Full consolidation	67.34%
Saint-Gobain Distribuiçao Brasil Ltda	Brazil	Full consolidation	100.00%
Saint-Gobain Distribution Denmark	Denmark	Full consolidation	100.00%
Saint-Gobain Idaplac, S.L.	Spain	Full consolidation	99.83%
Saint-Gobain Distribucion Construccion, S.L	Spain	Full consolidation	99.83%
Distribution Sanitaire Chauffage	France	Full consolidation	100.00%
Lapeyre	France	Full consolidation	100.00%
Saint-Gobain Distribution Bâtiment France	France	Full consolidation	100.00%
Optimera As	Norway	Full consolidation	100.00%
Saint-Gobain Distribution The Netherlands B.V.	Netherlands	Full consolidation	100.00%
Saint-Gobain Building Distribution Ltd	United Kingdom	Full consolidation	100.00%
Saint-Gobain Distribution Nordic Ab	Sweden	Full consolidation	100.00%
Sanitas Troesch Ag	Switzerland	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, 2018

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, 2018.

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, 2018 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, 2018 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 on January 1, 2018 of IFRS 15 – "Revenue from Contracts with Customers" and IFRS 9 – "Financial Instruments".

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, 2018, amounting to €9,988 million, €2,526 million and €11,335 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 amount.

The impairment tests and analyses of fair value less costs to sell performed by Management using the method described in Note 6.5 to the consolidated financial statements led to the recognition of impairment losses of €2,003 million in the fiscal year ended December 31, 2018, as indicated in Note 4 to the consolidated financial statements.

Determining the assets' recoverable amount is a key audit matter given the potentially significant nature of any impairment, the importance of estimates and the level of 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 by Group Management for impairment testing and analysis purposes, verified the consistency of the method used for impairment testing, and tested the effectiveness of the controls performed by Management to ensure the quality and reliability of the impairment testing process and its consistency with budget data and the strategic plan prepared by General Management and presented to the Board of Directors in September 2018. We assessed the consistency and relevance of the modifications made to certain forecast data in the September 2018 strategic plan in light of subsequent events, such as the announcement of the "Transform & Grow" plan and developments in Brexit negotiations.

We also assessed the consistency and relevance of Management's approach to determine the cash-generating units for asset impairment testing. 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 and analysis purposes, in particular the discount rate and average annual growth rate to infinity of future cash flows, 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, our knowledge of the business, confirmed by interviews with the Heads of the relevant Sectors and Activities and, where available, external market or competition data. We carefully reviewed the calculation of the normalized amount of the terminal cash flows projected until 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 amount 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 €1,328 million were recognized at December 31, 2018 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, the importance of estimates and the level of judgment required by Management in determining those provisions. Judgment was required, in particular, in estimating the number and cost of future disputes.

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 matters of judgment, we held discussions with Management at Group, Sector and Delegation level as well as at the main subsidiaries.

In addition, we:

- reviewed 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;
- carried out a critical review of internal analyses relating to the probability and possible impact of these liabilities and items of litigation, examining the available information relating to the proceedings (correspondence, claims, judgments, notifications, etc.). We also reviewed the legal or technical opinions of the law firms or external specialists chosen by Management, as well as their responses to confirmation letters. We 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;
- measured the asbestos-related provisions, based on a statistical model, verified that the consistency principle was complied with and checked the relevance and reliability of the source data and calculation formulas used. Where applicable, we compared the amounts paid with previously recognized provisions in order to form an opinion on the quality of Management's estimates.

We assessed the appropriateness of the disclosures provided in the notes to the consolidated financial statements regarding these items of litigation and contingent liabilities identified.

Agreement relating to the purchase of Sika shares

Description of risk

As indicated in Notes 2.2 and 2.5 to the consolidated financial statements, the Saint-Gobain Group announced on May 11, 2018 that it had entered into an overall agreement with Sika and the Burkard family under which, following several successive transactions over the year 2018, Saint-Gobain, through SWH, became Sika's largest shareholder, holding 10.75% of the share capital and voting rights, and agreed to certain lock-up periods on shares and standstill obligations over specific time frames. This overall agreement terminated and resolved the disputes between Sika, the Burkard family and Saint-Gobain.

For Saint-Gobain, the agreement resulted in total income of €781 million, including 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 subsequent changes in the fair value of the Sika shares held by SWH within income and expenses recognized directly in equity.

The allocation of the overall amount from this agreement to the various lines in the income statement, the presentation of the shares in the balance sheet and the accounting treatment of the transaction in Swiss francs are a key audit matter given the amounts at stake, the complex nature of the components making up the overall agreement, the multiple accounting impacts and the degree of judgment required by Management in the choice and use of the applicable accounting standards.

How our audit addressed this risk

In order to obtain a thorough understanding of the various components making up the overall agreement, including its terms and conditions, and to assess the accounting treatment of the agreement, we:

- analyzed the various contracts entered into by the Group: firstly those between the Group and Sika and the Burkard family, and secondly those entered into as part of the financing and currency hedges associated with the agreement;
- familiarized ourselves with the minutes of the related Board of Directors' meetings;
- performed a critical assessment of the methods used to determine the fair value of the Sika shares at the time of the transaction; and
- conducted interviews with the main Group departments involved.

We familiarized ourselves with the procedures implemented by the Group to ensure that the agreement and related transactions were properly accounted for in the consolidated financial statements and to determine the disclosures to be provided in the notes to the consolidated financial statements.

With regard to how the overall amount of the agreement was determined and presented in the consolidated income statement and the consolidated statement of cash flows, we:

- assessed compliance with IFRS;
- corroborated the amounts with the items in the underlying contracts; and
- verified the accuracy of the calculations.

We ensured that the presentation and subsequent accounting and valuation rules applied to the shares held by the Group following the transaction complied with IFRS.

We assessed the appropriateness of the disclosures provided in the notes to the consolidated financial statements regarding the agreement and its accounting impact.

Measurement of supplier discounts in the Building Distribution Sector

Description of risk

The Building Distribution Sector accounted for 46% of the Group's sales for fiscal year 2018. The profitability of the Sector's business activities varies depending on supplier discounts received, which lower the cost price of negotiated goods. As indicated in Notes 4.1.2, 4.5.1 and 4.5.2 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 Building Distribution Sector, 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 Sector 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 for brands in the Building Distribution Sector is also a significant audit matter.

How our audit addressed this risk

We gained an understanding of the process used by the Sales and Finance Departments of the Building Distribution Sector 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 brand and country, confirmed by interviews with the Sales and Finance Departments at various levels within the Sector. 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 for brands in the Building Distribution Sector, we verified that the accounting methods were applied consistently across all the brands. 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 was appropriate.

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 provided in the management report comprises 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 Auditor of Compagnie de Saint-Gobain by the Shareholders' Meetings held on June 26, 1986 for Petiteau Scacchi (subsequently PricewaterhouseCoopers Audit) and on June 10, 2004 for KPMG Audit.

As of December 31, 2018, PricewaterhouseCoopers Audit and KPMG Audit were in the thirty-third year and the fifteenth 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 and related disclosures made by Management in 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 21, 2019

The Statutory Auditors

PricewaterhouseCoopers Audit		KPMG Audit *Department of KPMG SA*	
Edouard Sattler	Cécile Saint-Martin	Jean-Paul Thill	Bertrand Pruvost

3. COMPAGNIE DE SAINT-GOBAIN 2018 ANNUAL FINANCIAL STATEMENTS (PARENT COMPANY)

Income statement

(in EUR thousand)		Dec. 31, 2018	Dec. 31, 2017
Operating revenue			
Royalties and license fees		109,057	106,158
Other services		79,552	74,916
Net revenue		**188,609**	**181,074**
Write-backs of depreciation, amortization, impairment and provisions		9,164	4,691
Expense transfers		8,458	17,726
Other operating income		1,663	1,050
	TOTAL I	**207,894**	**204,541**
Operating expenses			
Other purchases and external charges		(131,034)	(137,116)
Taxes other than on income		(7,510)	(7,332)
Wages and salaries		(49,375)	(49,133)
Payroll taxes		(17,124)	(16,903)
Depreciation, amortization, impairment and provisions		(19,401)	(14,933)
Other operating expenses		(2,097)	(2,250)
	TOTAL II	**(226,541)**	**(227,667)**
OPERATING LOSS (NOTE 2)		**(18,647)**	**(23,126)**
Share in profits/losses of joint ventures			
Profits	**TOTAL III**		
Losses	**TOTAL IV**		
Financial income			
Income from investments in subsidiaries and affiliates		894,948	845,058
Income from loans and other investments		296,228	290,148
Income from other non-current investment securities		11	11
Other interest income		2,398	3,075
Write-backs of impairment and provisions, expense transfers		33	
Foreign exchange gains		7,642	5,461
Net income from sales of marketable securities		556	10
	TOTAL V	**1,201,817**	**1,143,763**
Financial expense			
Amortization, impairment and provisions		(389,272)	(21,264)
Interest expense		(259,744)	(260,670)
Foreign exchange losses		(16)	
Net losses on sales of marketable securities		(3,336)	(891)
	TOTAL VI	**(652,369)**	**(282,825)**
NET FINANCIAL INCOME (NOTE 3)		**549,448**	**860,938**

(in EUR thousand)		Dec. 31, 2018	Dec. 31, 2017
INCOME BEFORE TAX AND EXCEPTIONAL ITEMS		**530,801**	**837,812**
Exceptional income			
On revenue transactions		16,912	27,957
On capital transactions		3,081	417
Write-backs of depreciation, amortization, impairment and provisions		41,611	45,597
	TOTAL VII	**61,604**	**73,971**
Exceptional expense			
On revenue transactions		(30,589)	(33,212)
On capital transactions		(5,933)	(347)
Depreciation, amortization, impairment and provisions		(40,912)	(52,760)
	TOTAL VIII	**(77,434)**	**(86,319)**
NET EXCEPTIONAL INCOME/(EXPENSE) (NOTE 4)		**(15,830)**	**(12,348)**
INCOME TAXES (NOTE 5)	**TOTAL IX**	**154,213**	**14,032**
TOTAL INCOME		**1,471,315**	**1,422,275**
TOTAL EXPENSES		**(802,131)**	**(582,779)**
NET INCOME		**669,184**	**839,496**

Balance sheet

Assets

(in EUR thousand)	Dec. 31, 2018 GROSS	Dec. 31, 2018 Depreciation, amortization and impairment	Dec. 31, 2018 NET	Dec. 31, 2017
NON-CURRENT ASSETS				
Intangible fixed assets (Note 6)				
Goodwill [(1)]	567	(567)	-	-
Other intangible assets	51,578	(44,643)	6,935	8,858
Intangible assets in progress	3,376		3,376	3,545
Property, plant and equipment (Note 7)				
Land	51		51	51
Buildings	1,400	(740)	660	725
Other	13,936	(8,757)	5,179	5,430
Assets under construction	36,288		36,288	8,982
Financial investments [(2)] (Note 8)				
Investments in subsidiaries and affiliates	13,105,069	(401,068)	12,704,001	13,074,998
Loans and advances to subsidiaries and affiliates	14,359,317		14,359,317	13,461,488
Other investment securities	5,979	(2,383)	3,596	12,612
Loans	1,328,907		1,328,907	378,729
Other financial investments	1,587		1,587	1,415
TOTAL I	**28,908,055**	**(458,158)**	**28,449,897**	**26,956,833**
CURRENT ASSETS (NOTE 9)				
Other receivables [(3)]	1,717,857		1,717,857	1,236,609
Marketable securities	974,574	(132)	974,442	1,368,954
Cash and cash equivalents	857,658		857,658	541,724
Accruals				
Prepayments [(3)]	2,326		2,326	1,707
TOTAL II	**3,552,415**	**(132)**	**3,552,283**	**3,148,994**
Deferred charges TOTAL III	48,281	-	48,281	57,487
Translation losses TOTAL IV	-	-	-	-
TOTAL ASSETS	**32,508,751**	**(458,290)**	**32,050,461**	**30,163,314**
(1) including leasehold rights			-	-
(2) of which due within one year			3,768,770	2,788,313
(3) of which due beyond one year			309	347

Liabilities

(in EUR thousand)		Dec. 31, 2018	Dec 31, 2017
SHAREHOLDERS' EQUITY (NOTE 10)			
Capital stock		2,186,340	2,214,228
Additional paid-in capital		5,427,333	5,722,606
Revaluation reserve		45,023	45,023
Other reserves:			
Legal reserve (a)		218,634	221,423
Untaxed reserves		2,617,758	2,617,758
Other reserves		301,428	301,428
Unappropriated retained earnings		5,580,381	5,448,361
Net income for the year		669,184	839,496
Untaxed provisions (Note 12)		3,247	3,247
	TOTAL I	**17,049,328**	**17,413,570**
OTHER EQUITY (NOTE 11)			
Non-voting participating securities	TOTAL I bis	170,035	170,035
PROVISIONS (Note 12)			
Provisions for contingencies		20,120	29,613
Provisions for charges		258,392	241,826
	TOTAL II	**278,512**	**271,439**
DEBT AND PAYABLES (1) (Note 13)			
Bonds		9,424,470	7,742,616
Bank borrowings (2)		8,034	35,559
Other borrowings		4,970,017	4,204,668
Tax and social charges payable		60,931	192,681
Other payables		88,830	132,674
Accruals			
Deferred income		304	72
	TOTAL III	**14,552,586**	**12,308,270**
Translation gains	TOTAL IV	0	0
TOTAL LIABILITIES		**32,050,461**	**30,163,314**
(a) of which long-term capital gains reserve		14,225	14,225
(1) of which due beyond one year		8,381,073	6,826,143
of which due within one year		6,171,513	5,482,127
(2) of which short-term bank loans and overdrafts		8,034	35,559

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Statement of cash flows

(in EUR thousand)	2018	2017
NET INCOME	**669,184**	**839,496**
Depreciation and amortization	22,320	26,244
Changes in provisions	378,010	12,423
Gains and losses on disposals of assets, net	23,774	(66)
CASH FLOW FROM OPERATIONS	**1,093,288**	**878,097**
(Increase) decrease in other receivables	(481,248)	928,140
(Increase) decrease in deferred charges and prepaid expenses	4,093	(17,046)
Increase (decrease) in taxes and social charges payable	(131,750)	152,668
Increase (decrease) in other payables	(43,845)	(152,867)
NET CHANGE IN WORKING CAPITAL	**(652,750)**	**910,895**
NET CASH FROM OPERATING ACTIVITIES	**440,538**	**1,788,992**
Acquisition of intangible assets	(2,698)	(3,048)
Acquisition of property, plant and equipment	(30,127)	(10,427)
Acquisition of investments in subsidiaries and affiliates and other investment securities	3	(39,306)
Acquisition of treasury stock	(531,855)	(403,344)
Proceeds from disposals of property, plant and equipment and intangible assets	3,834	416
(Increase) decrease in loans and advances to subsidiaries and affiliates	(897,830)	(903,750)
(Increase) decrease in long-term loans	(950,177)	(18,587)
(Increase) decrease in other financial investments	(172)	(263)
NET CASH FROM/(USED IN) INVESTING ACTIVITIES	**(2,409,022)**	**(1,378,309)**
Issue of capital stock	192,914	187,230
Dividend paid	(707,475)	(694,143)
Increase (decrease) in provisions for contingencies and charges	509	(36,161)
Increase (decrease) in short- and long-term debt	1,673,843	(133,462)
Increase (decrease) in bank overdrafts and other short-term debt	745,835	(576,385)
Decrease (increase) in marketable securities	378,791	662,757
Increase (decrease) in translation adjustments		
NET CASH FROM/(USED IN) FINANCING ACTIVITIES	**2,284,417**	**(590,164)**
INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	**315,933**	**(179,481)**
Cash and cash equivalents at January 1	541,724	721,205
Cash and cash equivalents at December 31	857,657	541,724
Analysis of cash and cash equivalents at December 31		
Cash at bank	857,657	541,724
Cash on hand		
Total	857,657	541,724

Notes to the 2018 annual financial statements

The financial statements cover the twelve-month period from January 1 to December 31, 2018.

The following notes form an integral part of the annual financial statements.

These financial statements were approved by the Board of Directors on February 21, 2019.

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
Computer equipment	3 years	Straight-line or declining-balance

Investments in subsidiaries and affiliates, 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, in particular when an inventory is done. Fair value is estimated based on various criteria: Company's equity in the underlying net assets, proportion of consolidated net assets, net present value of future cash flows, excluding interest expense but after tax, based on business plans (or long-term budget projections), or 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 at year-end 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 provided for.

Receivables

Receivables are stated at nominal value. A provision is set aside for impairment when inventory value is less than book value.

Marketable securities

Marketable securities mainly include units in money market funds (OPCVM and FCP) and are stated at acquisition cost or at market value at year end, if the latter is lower than the acquisition cost.

This item also includes treasury shares held by the company other than those classified as investment securities.

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 converted 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 renewal of its financings at an optimal cost. Long-term debt therefore systematically represents a high proportion of overall debt. Similarly, the long-term debt maturity schedule is set so that the financing raised through the markets when the debt is renewed is spread over several years.

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. In addition, on its own behalf and for its subsidiaries, Compagnie de Saint-Gobain 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. 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 price risks (energy and raw materials) 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 ANC regulation 2015-05 of July 2, 2015 (ANC 2015-05) on forward financial instruments and hedging operations to all outstanding operations.

Tax consolidation agreements

Compagnie de Saint-Gobain is the consolidating 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

Operating income improved by €4.5 million in 2018 (loss of €18.6 million versus an operating loss of €23.1 million in 2017).

NOTE 3 NET FINANCIAL INCOME

Net financial income decreased by €311.5 million, from €860.9 million in 2017 to €549.4 million, which can be explained as follows:

- a €50 million increase in income from investments in subsidiaries and affiliates (dividends received from subsidiaries and 2018 profit transferred from the subsidiaries of the German branch);
- a €6.3 million increase in income from loans and investments net of interest expense incurred;
- a €368 million increase in amortization, impairment and provisions (expense of €389.3 million in 2018 versus €21.3 million in 2017). 2018 expense includes a €371 million provision for impairment of investments, of which €333 million relates to investment in Saint-Gobain Materiaux de Construction (gross book value €2,124 million, net book value €1,791 million), €8 million relates to investment in Saint-Gobain Innovative Materials (Belgium) and €30 million relates to investment in Saint-Gobain PAM;
- a foreign exchange gain increase of €2.1 million.

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NOTE 4 EXCEPTIONAL INCOME AND EXPENSE

The Company reported a net exceptional expense of €15.8 million primarily due to exceptional costs incurred as part of the “Transform and Grow” program, and to the accounting charge related to long-term compensation plans, partially offset by a €17.3 million tax provision reversal coming from the German branch.

NOTE 5 INCOME TAXES

The Company recorded an income taxes profit of €154.2 million, explained as follows:

- a net tax profit of €130.5 million under the 2018 tax consolidation regime (France);
- a net tax profit of €23.7 million for the German branch.

The French tax group generated a tax loss in 2018. The Group also has unused tax loss carry-forwards. At December 31, 2018, unused tax loss carry-forwards represented €991 million.

Compagnie de Saint-Gobain's permanent German establishment, which is the Group's leading entity under the Organschaft local consolidation regime, reported a tax credit in 2018. At December 31, 2018, future tax savings corresponding to the branch's unused tax loss carry-forwards amounted to €33.2 million.

In both cases, 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 at Dec. 31, 2018
(in EUR thousand)	Gross at Jan. 1, 2018	Additions	Disposals	Gross at Dec. 31, 2018	Accumulated at Jan. 1, 2018	Increases	Decreases	Accumulated at Dec. 31, 2018	end of period
Purchased goodwill	567			567	567			567	0
Other intangible assets	50,892	712	(26)	51,578	42,034	2,633	(24)	44,643	6,935
Intangible assets in progress	3,545	2,562	(2,731)	3,376	0			0	3,376
TOTAL	**55,004**	**3,274**	**(2,757)**	**55,521**	**42,601**	**2,633**	**(24)**	**45,210**	**10,311**

NOTE 7 PROPERTY, PLANT AND EQUIPMENT

	Property, Plant and Equipment				Amortization				Net at Dec. 31, 2018
(in EUR thousand)	Gross at Jan 1, 2018	Additions	Disposals	Gross at Dec. 31, 2018	Accumulated at Jan. 1, 2018	Increases	Decreases	Accumulated at Dec. 31, 2018	end of period
Land	51			51	0			0	51
Buildings	1,400			1,400	675	65	0	740	660
Other	12,768	2,821	(1,653)	13,936	7,338	2,568	(1,149)	8,757	5,179
Assets under construction	8,982	27,538	(232)	36,288	0			0	36,288
Prepayments	0			0	0			0	0
TOTAL	**23,201**	**30,359**	**(1,885)**	**51,675**	**8,013**	**2,633**	**(1,149)**	**9,497**	**42,178**

Additions to assets under construction are mostly expenditures related to the construction of Compagnie de Saint-Gobain future headquarters which are the responsibility of the lessee.

NOTE 8 FINANCIAL INVESTMENTS

	Financial investments			
(in EUR thousand)	Gross at January 1, 2018	Additions	Disposals	Gross at December 31, 2018
Investments in subsidiaries and affiliates	13,105,066	3	0	13,105,069
Loans and advances to subsidiaries and affiliates	13,461,488	8,485,445	(7,587,616)	14,359,317
Other investment securities	14,026	0	(8,047)	5,979
Loans	378,729	1,274,789	(324,611)	1,328,907
Other financial investments	1,415	829	(657)	1,587
TOTAL	**26,960,724**	**9,761,066**	**(7,920,931)**	**28,800,859**

Changes in investments in subsidiaries and affiliates

(in EUR thousand)	Additions	Disposals
Purchase of Saint-Gobain Cristaleria shares	3	0
TOTAL	**3**	**0**

In 2018, a €371 million charge was recorded for impaiment of investments (see Note 3 above).

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	14,359,317	2,440,513	11,918,804
Loans	1,328,907	1,328,257	650
Other financial investments	1,587	0	1,587
TOTAL	**15,689,811**	**3,768,770**	**11,921,041**

Changes in other investment securities

(in EUR thousand)	Additions	Disposals
Purchase of treasury shares for cancellation	511,392	
Cancellation of treasury shares		(518,865)
Sale of treasury shares under stock option plans		(457)
Provision on treasury shares held under stock option plans		(1,086)
TOTAL	**511,392**	**(520,408)**

Changes in treasury shares classified as financial investments

	No. of shares held	Gross value *(in EUR thousand)*	Net value *(in EUR thousand)*
AT DECEMBER 31, 2016	**0**	**0**	**0**
Shares purchased in 2017	7,293,489	353,977	352,613
Shares sold in 2017	(7,071)	(344)	(275)
Shares cancelled in 2017	(7,000,000)	(339,738)	(339,738)
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 cancelled in 2018	(12,461,449)	(518,865)	(518,865)
Provision on treasury shares			(1,086)
AT DECEMBER 31, 2018	**120,347**	**5,849**	**3,584**

During 2018, Compagnie de Saint-Gobain bought back, excluding the liquidity agreement, 12,773,437 treasury shares with a par value of €4 each, for a total amount of €531.8 million (€51.1 million aggregate par value).

Of these 12,773,437 treasury shares:

- 12,307,163 shares bought for cancellation have been recorded under "Financial investments" for a gross amount of €511.4 million, of which €49.2 million par value;
- the balance of 466,274 shares, bought for the coverage of performance share plans has been recorded under "Marketable securities" for an amount of €20.4 million, of which €1.9 million par value.

6,000,000 shares were cancelled on June 15, 2018 and 6,461,449 shares were cancelled on November 30, 2018.

In 2018, 438,468 treasury shares were remitted as part of existing performance share plans and 11,785 treasury shares were remitted as part of stock option plans for existing shares (respectively 458,795 and 7,071 shares in 2017). In addition, 429 shares were remitted in adjustment for former plans.

At December 31, 2018, Compagnie de Saint-Gobain held 2,044,498 treasury shares, of which:

- 116,559 treasury shares held in connection with a liquidity agreement (see Note 9 "Marketable securities");
- 120,347 treasury shares held for coverage of stock option plans (see above);
- 1,807,592 treasury shares held for coverage of 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	1,717,857	1,717,616	241
Prepayments	2,326	2,258	68
TOTAL	**1,720,183**	**1,719,874**	**309**
Provision for doubtful receivables	-	-	-

Analysis of "Other receivables"

(in EUR thousand)	2018	2017
Current account advances to subsidiaries	1,653,199	1,128,524
Mark-to-market adjustments to swaps and options (1)	1,979	60,139
Accounts receivable - Group	34,098	25,848
Accruals for income and credit notes receivable	19,874	16,732
Tax receivables	1,638	1,954
Accruals for income and credit notes receivable - Group	1,168	799
Accounts receivable - External companies	1,229	769
Prepayments to suppliers	291	417
Income tax prepayments	570	374
Other	3,811	1,053
TOTAL	**1,717,857**	**1,236,609**

(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 €974 million at December 31, 2018.

They consist mainly of €894 million worth of units in money market funds, 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 1,807,592 treasury shares held to cover performance share plans.

Finally, 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 issued by the Association française des marches financiers (AMAFI), which is recognized by the *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.

Under this liquidity agreement, at December 31, 2018 the Company held:

- €0.9 million worth of units in a euro-denominated money market fund;
- 116,559 treasury shares.

In 2018, 1,276,808 shares were purchased under this agreement (2017: 1,293,253 shares) and 1,203,749 shares were sold (2017: 1,249,753 shares).

Deferred charges

(in EUR thousand)	2018	2017
Bond issuance costs	40,173	47,216
Syndicated credit facility arrangement fees	8,108	10,271
DEFERRED CHARGES	**48,281**	**57,487**

In 2018, new debt issuance costs recorded under "Deferred charges" totaled €11.1 million and amortization for the year amounted to €20,3 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, 2017: €4 Par value at December 31, 2018: €4	Number of shares	Amount *(in EUR thousand)*
CAPITAL STOCK AT JANUARY 1, 2018	553,557,091	2,214,228
Shares issued under the Group Savings Plan on May 16, 2018	4,932,767	19,731
Shares cancelled on June 15, 2018	(6,000,000)	(24,000)
Shares cancelled on November 30, 2018	(6,461,449)	(25,845)
Shares issued upon exercise of stock options on December 31, 2018	556,595	2,226
CAPITAL STOCK AT DECEMBER 31, 2018	546,585,004	2,186,340

At December 31, 2018, capital stock amounted to €2,186,340 thousand, represented by 546,585,004 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 12/31/2017 BEFORE APPROPRIATION OF 2017 NET INCOME	17,413,570
Shares issued under the Group Savings Plan on May 16, 2018	178,230
Payment of the 2017 dividend	(707,475)
Shares cancelled on June 15, 2018	(271,244)
Shares cancelled on November 30, 2018	(247,621)
Shares issued upon exercise of stock options on December 31, 2018	14,685
Net income for 2018	669,184
SHAREHOLDERS' EQUITY AT 12/31/2018 BEFORE APPROPRIATION OF 2018 NET INCOME	17,049,328

10.3 Significant events

The principal events that contributed to changes in capital stock and shareholders' equity were as follows:

- **the May 2018 increase in capital stock through the subscription of 4,932,767 shares under the Group Savings Plan at a price of €36.31**. The issue proceeds amounted to €179,109 thousand (€178,230 thousand after deducting the issue costs, net of tax, from the premium);
- **the capital reductions of June 15, 2018 and November 30, 2018 through the cancellation of respectively 6,000,000 and 6,461,449 shares** for a total gross and net amount of €518,865 thousand;
- **finally, 556,595 shares were issued in December at an average price of €26.38** upon exercise of stock options. Gross as well as net issue proceeds amounted to €14,685 thousand.

These various transactions had the effect of decreasing capital stock by €27,888 thousand, the **legal reserve** by €2,789 thousand and **additional paid-in capital** by €295,274 thousand.

Changes in unappropriated retained earnings during the year were as follows

Changes pursuant to 3rd Resolution of the AGM of June 7, 2018 (appropriation of income):

(in EUR thousand)	
AT DECEMBER 31, 2017 (BEFORE APPROPRIATION OF 2017 NET INCOME)	5,448,361
Net income 2017	839,496
Less final dividend taking into account the actual number of treasury shares held	(707,475)
AT DECEMBER 31, 2018 (BEFORE APPROPRIATION OF 2018 NET INCOME)	5,580,381

10.4 Stock option plans

Compagnie de Saint-Gobain has stock option plans available to certain employees.

The Board of Directors grants 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 vesting period. During this period, none of the options received may be exercised. Options must be exercised within ten 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, 2018, plans launched between 2009 and 2012 offer subscription options while the 2013 and 2014 plan offer purchase options. For plans launched between 2015 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.

Until 2008, options were subject to a performance condition for certain grantees only. A performance condition applies for all grantees in plans awarded since 2009.

For options granted under the 2018 plan, the value used to calculate the 30% *contribution sociale* tax due for grantees employed by French companies in the Group is €1,88 per option granted.

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, 2016	**6,922,327**	**47.97**
Options granted	284,500	49.38
Options exercised	(689,997)	28.39
Options forfeited	(3,501,207)	63.99
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**

* *Including 655,186 subscription options granted under the 2008 plan that had not been exercised when the plan expired, and 234,550 purchase options granted under the 2014 plan that had lapsed because the performance condition had not been met.*

The table below summarizes information about stock options outstanding at December 31, 2018, after taking into account partial fulfillment of the performance criteria attached to certain plans:

	Exercisable options			Options not yet exercisable		Total options outstanding	
Grant date	**Exercise price** *(in EUR)*	**Number of options**	**Weighted avg. residual life** *(in months)*	**Exercise price** *(in EUR)*	**Number of options**	**Number of options**	**Type of options**
2009	36.34	627,748	11	-	-	627,748	Subscription
2010	35.19	-	23	-	-	-	Subscription
2011	31.22	-	35	-	-	-	Subscription
2012	27.71	19,962	47	-	-	19,962	Subscription
2013	38.80	120,347	59	-	-	120,347	Purchase
2014	34.13	-	71	-	-	-	Purchase
2015	-	-	83	39.47	224,950	224,950	see 10.4 above
2016	-	-	95	40.43	280,000	280,000	see 10.4 above
2017	-	-	107	49.38	284,500	284,500	see 10.4 above
2018	-	-	119	32.24	290,500	290,500	see 10.4 above
TOTAL	**-**	**768,057**	**-**	**-**	**1,079,950**	**1,848,007**	**-**

At December 31, 2018, 768,057 stock options were exercisable at an average exercise price of €36.50, and 1,079,950 options at an average exercise price of €40.38 had not yet vested.

10.5 Performance share plans

Various performance share plans have been set up by Saint-Gobain since 2009.

Four performance share plans were outstanding at December 31, 2018. The plan approved by the Board of Directors in 2015 solely concern certain managerial-grade employees and senior managers of the Group outside France. The 2016 and 2017 plans and the plan approved by the Board of Directors on November 22, 2018 concern 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 2015-2017 plans, and on the third day after the end of the vesting period for the 2018 plan.

The table below shows changes in the number of performance share rights:

	Number of rights
NUMBER OF PERFORMANCE SHARE RIGHTS AT DECEMBER 31, 2016	**2,803,125**
▪ performance share rights granted in November 2017	1,226,680
▪ shares issued/delivered	(458,795)
▪ lapsed and canceled rights	(83,570)
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**

* *Including 56,160 performance share rights granted under the 2014 plan that had lapsed because the performance condition had only been partly met, and 35,442 performance share rights granted under 2014 plan that had 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, 2018 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, 2018*	Nov.26, 2019	Nov.24, 2020	Nov.23, 2021	Nov.25, 2022	Type of shares
November 26, 2015	500,910	700	500,210	500,210				existing
November 24, 2016	1,231,320	640	1,230,680		1,230,680			existing
November 23, 2017	1,226,680	200	1,226,480			1,226,480		existing
November 22, 2018	1,219,619	0	1,219,619				1,219,619	existing
TOTAL	**4,178,529**	**1,540**	**4,176,989**	**500,210**	**1,230,680**	**1,226,480**	**1,219,619**	

* *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 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 the Company'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 (see above).

In 2018, 495,087 performance units under the 2014 plan vested, while 103,313 performance units under the same plan lapsed, including 81,172 units because the performance condition had only been partly met and 22,141 units because the service condition had not been met.

The table below shows historical data for the performance unit plans in the process of vesting at December 31, 2018:

Grant date	Mumber of performance units granted at inception of plan	Exercised early	Number of performance units outstanding at Dec 31, 2018*
November 26, 2015	556,340		556,340
TOTAL	**556,340**	**0**	**556,340**

* *Subject to fulfillment of the service and performance conditions applicable to each plan.*

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 years 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.

In 2018, 4,932,767 new shares with a par value of €4 were issued to employees under the PEG at an average subscription price of €36.31 (4,593,807 shares at an average price of €36.72 in 2017), representing a share capital increase of €179 million (€169 million in 2017).

10.8 Potential number of shares

At the **Annual General Meeting of June 2, 2016**, shareholders authorized the Board of Directors of Compagnie de Saint-Gobain to:

- grant stock options exercisable for new or existing shares, subject to performance conditions, representing up to 1.5% of the share capital on the day the AGM was held, with a sub-limit of 10% of this limit for corporate Directors of Compagnie de Saint-Gobain, *i.e.* 8,322,705 options, including a maximum of 832,270 options for corporate Directors (13th Resolution/38-month authorization commencing June 2, 2016). The Board of Directors made partial use of this authorization on November 24, 2016, by granting 280,000 options (including 58,000 for corporate Directors), on November 23, 2017, by granting 284,500 options (including 58,000 for corporate Directors), and on November 22, 2018, by granting 290,500 options (including 58,000 for corporate Directors) (see Section 10.4);
- grant free performance existing shares, subject to performance conditions, representing up to 1.2% of the share capital on the day the AGM was held, with a sub-limit of 10% of this limit for corporate Directors of Compagnie de Saint-Gobain, *i.e.* 6,658,164 performance shares, including a maximum of 665,816 performance shares for corporate Directors (14th Resolution/38-month authorization commencing June 2, 2016). The limit of 1.2% and sub-limit of 10% are being set off against the limits specified under the 13th Resolution of the Annual General meeting referred to above regarding stock options. The Board of Directors made partial use of this authorization on November 24, 2016, by granting 1,231,320 performance shares (including 67,000 for corporate Directors), on November 23, 2017, by granting 1,226,680 performance shares (including 67,000 for corporate Directors), and on November 22, 2018, by granting 1,219,619 performance shares (including 67,000 for corporate Directors) (see Section 10.5).

At the **Annual General meeting of June 8, 2017,** shareholders authorized the Board of Directors of Compagnie de Saint-Gobain to:

- issue, on one or several occasions, up to 111,000,000 new shares or securities giving access to the share capital of the Company or subsidiaries, with preferential subscription rights, or without preferential subscription rights but with a compulsory priority period for existing shareholders, or to issue new shares through the capitalization of premiums, reserves, profits and free allocation of shares to the existing shareholders, or without preferential subscription rights in consideration for contributions in kind (12th to 16th Resolutions/26-month authorization commencing June 8, 2017);
- issue, on one or several occasions, up to 12,225,000 new shares to members of the Group Savings Plan (17th Resolution/26-month authorization commencing June 8, 2017); In 2018, the Board of Directors made partial use of this authorization by issuing 4,932,767 shares under the 2018 Group Savings Plan.

At the **Annual General meeting of June 7, 2018,** shareholders authorized the Board of Directors of Compagnie de Saint-Gobain to:

- issue, on one or several occasions, directly or indirectly, up to 220,000 new shares to certain employees of the Saint-Gobain Group companies with headquarters based outside France (13th Resolution/18-month authorization commencing June 7, 2018). The number of shares issued under this authorization is to be set off against the limit the ceiling of 12,225,000 specified under the 17th Resolution of the Annual General meeting of June 8, 2017 referred to above.

If all outstanding stock options were to be exercised with the issue of new shares, this would potentially have the effect of increasing the number of shares outstanding to 548,312,664 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 670,394,983 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 conversion to euros in 1999.

A certain number of these securities have been bought back over the years. At December 31, 2018, 606,883 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. Interest paid in 2018 amounted to €2 per security.

In April 1984, 194,633 non-voting participating securities were issued with a face value of ECU 1,000, now €1,000.

A certain number of those securities have been repurchased over the years. At December 31, 2018, 77,516 were outstanding with an aggregate face value of €77.5 million.

Interest on these securities comprises (i) a fixed portion of 7.5% 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 security, which is linked to consolidated net income of the previous year and to the Libor EUR 6 month reference rate +7/8%. The amount paid per security in 2018 totaled €66.33 paid in two installments (€32.8 + €33.53).

None of these securities are redeemable and the remuneration paid to investors is qualified as interest expense.

NOTE 12 PROVISIONS

(in EUR thousand)	At Jan. 1, 2018	Charge for the year	Write-backs of utilized provisions	Write-backs of surplus provisions	Other (transfers)	At Dec. 31, 2018
Untaxed provisions						
Reinvested capital gains	3,247					3,247
Other	0					0
	3,247	**0**	**0**	**0**	**0**	**3,247**
Provisions for contingencies						
Provisions for taxes	28,183	5,084		(17,274)	1,058	17,051
Provisions for other contingencies	1,430	2,646	(549)		(458)	3,069
	29,613	**7,730**	**(549)**	**(17,274)**	**600**	**20,120**
Provisions for charges						
Provisions for pensions and other post-employment benefit obligations (1)	136,325	12,025	(7,053)		2,118	143,415
Provisions for performance share and performance unit plan costs	104,903	24,433	(23,672)			105,664
Provisions for other charges	598	8,768			(53)	9,313
	241,826	**45,226**	**(30,725)**	**0**	**2,065**	**258,392**
Provisions for impairment						
Investments in subsidiaries and affiliates	30,068	371,000				401,068
Other investment securities	1,413	1,086	(115)			2,383
Doubtful receivables	0					0
Marketable securities	33	132	(33)			132
	31,514	**372,218**	**(148)**	**0**	**0**	**403,583**
Impact on operating income		**12,025**	**(7,053)**	**0**	**2,118**	
Impact on net financial income		**372,218**	**(33)**	**0**	**0**	
Impact on exceptional items		**40,931**	**(24,336)**	**(17,274)**	**546**	

(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 2018 was 1.80% for terms of 14 years or less, and 2.15% for terms over 14 years. In 2017 the discount rate was 1.70% for all terms.

NOTE 13 DEBT AND PAYABLES

Total debt and payables (€14,553 million) recorded a net increase of €2,244 million, which is largely explained by the increase of bonds of €1,681 million, and by the increase of €765 million in other borrowings.

Analysis of debt and payables

		Due	
(in EUR thousand)	**Gross**	**Within 1 year**	**Beyond 1 year**
Bonds [(1)]	9,424,470	1,043,602	8,380,868
Bank Borrowings [(1) and (2)]	8,034	8,034	
Other borrowings [(3)]	4,970,017	4,969,812	205
SUB-TOTAL DEBT	**14,402,521**	**6,021,448**	**8,381,073**
Tax and social charges payable	60,931	60,931	
Other payables [(3)]	88,830	88,830	
Deferred income	304	304	
TOTAL DEBT AND PAYABLES [(4)]	**14,552,586**	**6,171,513**	**8,381,073**
(1) New debt for the year	2,510,000		
Debt repaid during the year	828,449		
(2) of which:			
■ debt with original maturity of up to two years	8,034		
■ debt with original maturity of more than two years	0		
(3) of which:			
■ shareholders' loans	NIL		
■ new loans from subsidiaries	787,986		
■ loans from subsidiaries repaid during the year*	19,487		
(4) Debt due beyond five years	4,289,073		

* *Including net variation of current accounts with Group entities.*

Long- and short-term debt

(in EUR thousand)	**2018**	**2017**
1. Medium- and long-term debt		
LONG-TERM PORTION		
Due between January 1 and December 31:		
2019		950,000
2020	1,480,000	1,000,000
2021	750,000	750,000
2022	1,000,000	1,000,000
2023	862,000	362,000
2024 and beyond	4,256,348	2,731,407
No fixed maturity	32,725	32,736
TOTAL LONG- AND MEDIUM-TERM DEBT EXCLUDING SHORT-TERM PORTION:	**8,381,073**	**6,826,143**
SHORT-TERM PORTION:	**1,043,602**	**924,689**
TOTAL:	**9,424,675**	**7,750,832**
2. Short-term debt		
Borrowings from Group entities	4,966,497	4,193,114
Bank overdrafts and other short-term borrowings	8,034	35,559
Other	3,315	3,338
TOTAL:	**4,977,846**	**4,232,011**
TOTAL LONG- AND SHORT-TERM DEBT	**14,402,521**	**11,982,843**

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Long-term debt can be analyzed as follows by currency:

(in EUR thousand)	2018	2017
Euro	8,804,218	7,038,705
Pound sterling	620,252	625,355
Norwegian krone		78,556
Yen		
TOTAL	**9,424,470**	**7,742,616**

Note that the amortization of expenses in respect of borrowing placements is prorated over the life of the borrowings in question. This is shown on the "Deferred charges" line on the balance sheet (see Note 9, deferred charges).

13.1 Perpetual bonds

In 1985, Compagnie de Saint-Gobain issued 25,000 perpetual bonds each with a face value of ECU 5,000, now €5,000.

As at December 31, 2018, 18,496 perpetual bonds had been bought back and canceled, and 6,504 perpetual bonds were outstanding, representing a total face value of €33 million.

The bonds bear interests at a variable rate (average of interbank rates offered by five reference banks for euro six-month deposits). The amount paid per security in 2018 was €0.

The bonds are not redeemable and interest on them is classified as a component of finance costs.

13.2 Main changes in bond debt in 2018

Compagnie de Saint-Gobain issued:

- €750 million worth of 1.125% bonds on March 23, 2018, maturing on March 23, 2026;
- a €20 million private placement on April 18, 2018, indexed to the 20-year CMS curve and maturing on April 18, 2033,
- a €60 million private placement on May 25, 2018, indexed to the 20-year CMS curve and maturing on May 25, 2033.

The Group entered into swaps in order to fix the interest rate on these two private placements:

- two floating-rate 3-month Euribor +0.23% private placements on June 25, 2018, maturing on June 25, 2020, amounting to €180 million and €300 million, respectively;
- €500 million worth of 0.875% bonds on September 21, 2018, maturing on September 21, 2023, and €500 million worth of 1.875% bonds maturing on September 21, 2028. The nominal amount of the latter bond issue was increased to €700 million through two €100 million additions on October 11 and October 12, 2018, respectively.

These issues extended the average maturity of the Group's debt while also optimizing average borrowing costs.

Compagnie de Saint-Gobain also redeemed the following instruments at maturity:

- NOK 750 million worth of 4% bonds on March 27, 2018;
- €750 million worth of 4% bonds on October 8, 2018.

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, 2018, issuance under these programs was as follows:

(in EUR million)	**Maturities**	**Authorized program at Dec. 31, 2018**	**Balance outstanding issues at Dec. 31, 2018**	**Balance outstanding issues at Dec. 31, 2017**
Medium term notes		15,000	9,435	7,776
NEU CP	Up to 12 months	3,000	0	0
US Commercial paper	Up to 12 months	873*	0	0
Euro Commercial paper	Up to 12 months	873*	0	0

** Equivalent to US$1,000 million based on the exchange rate at December 31, 2018.*

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 expiring in December 2022 with two one-year rollover options. The first option was exercised, extending maturity until December 2023;
- a second €1.5 billion syndicated line of credit also expiring in December 2022 with two one-year rollover options. The first option was exercised, extending maturity until December 2023.

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, 2018.

NOTE 14 RELATED PARTY TRANSACTIONS

14.1 Transactions with related companies

	Net amount concerning related companies			
(in EUR thousand)	[1] Subsidiaries	[2] Other related companies	Other companies	Net balance sheet amount at Dec. 31, 2018
Balance sheet items				
Investments in subsidiaries and affiliates	12,704,001			12,704,001
Loans and advances to subsidiaries and affiliates	14,359,317			14,359,317
Other investment securities	3,584	12		3,596
Loans	1,264,315		64,592	1,328,907
Other receivables	1,688,483		29,373	1,717,856
Marketable securities	80,729		893,713	974,442
Cash and cash equivalents			857,658	857,658
Bonds			9,424,470	9,424,470
Bank borrowings			8,034	8,034
Other borrowings	4,964,989	1,846	3,182	4,970,017
Tax and social charges payable			60,931	60,931
Other payables	8,247		141,514	149,761
Income statement items				
Income from investments in subsidiaries and affiliates	894,948			894,948
Income from loans and other investments	296,228			296,228
Other interest income			2,398	2,398
Interest expense	18,377		277,367	295,744

(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 not entered into under normal market 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 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	3,660,366
Saint-Gobain Building Distribution Deutschland	Germany	194,609	100.00	100,000,000
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 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	733	8.10	360,255
SCI Ile de France	France	3,428	94.00	22,560
Miscellaneous French companies		-	-	-
Miscellaneous foreign companies		299	-	-
INVESTMENTS IN SUBSIDIARIES AND AFFILIATES		**12,704,001**		
Cie de Saint-Gobain (treasury shares)	France	3,584	-	120,347
Cie de Saint-Gobain (treasury shares held for cancellation)	France		-	
Miscellaneous French companies		12	-	1,300
OTHER INVESTMENT SECURITIES		**3,596**		
TOTAL		**12,707,597**		

NOTE 16 INFORMATION ABOUT DIRECT INVESTMENTS IN SUBSIDIARIES AND AFFILIATES WITH A CARRYING AMOUNT REPRESENTING OVER 1% OF THE COMPANY'S CAPITAL STOCK

				Book value of shares held						
COMPANIES *(in EUR thousand: EUR k or local currency)*	**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)*	**2018 net sales**	**2018 net income (loss)**	**Dividends received by the Company in 2018** *(in EUR thousand)* [(1)]
1 - SUBSIDIARIES										
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	4,015,733	100.00	5,768,287	5,768,287	88,301		-	(97,712)	539,681
Partidis										
18, avenue d'Alsace	EUR k	EUR k						EUR k	EUR k	
92400 Courbevoie	893,616	89,737	100.00	2,065,919	2,065,919	1,155,000		4,701	(1,315,211)	94,342
S.G. Matériaux de Construction										
18, avenue d'Alsace	EUR k	EUR k						EUR k	EUR k	
92400 Courbevoie	476,619	(90,655)	100.00	2,123,712	1,790,712	4,753,800		37,182	291,452	-
Vertec										
18, avenue d'Alsace	EUR k	EUR k						EUR k	EUR k	
92400 Courbevoie	188,651	691,899	100.00	891,512	891,511	-		-	120,298	91,732
S. G. Benelux	EUR k	EUR k						EUR k	EUR k	
6, Avenue Einstein,	812,345	198,249	100.00	812,345	812,345	-		-	4,274	4,000
1300 Wavre, Belgium										
Saint-Gobain Building Distrib Deutsch										
Hafeninsel 9	EUR k	EUR k						EUR k	EUR k	
D-63067, Offenbach/Main	100,000	94,600	100.00	194,609	194,609	-		1,468,414	(8,653)	(8,653)
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	-		356,974	(63)	(63)
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	-		13,618	87,765	87,765
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	-		390,004	38,858	16,954
S G Do Brasil										
482, avenida Santa Marina										
Agua Branca	k BRL	k BRL						k BRL	k BRL	
05036-903 São Paulo-SP, Brésil	1,697,564	780,450	55.31	259,292	259,292	-		3,674,842	249,597	10,172
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	-		-	53,355	53,355
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	-		52,552	(7,880)	(7,880)

COMPANIES *(in EUR thousand: EUR k or local currency)*	**Capital stock**	**Reserves**	**% interest**	**Book value of shares held**		**Loans and advances granted by the Company** *(in EUR thousand)*	**Guarentees given by the Company** *(in EUR thousand)*	**2018 net sales**	**2018 net income (loss)**	**Dividends receivd by the Company in 2018** *(in EUR thousand)* [(1)]
				Gross *(in EUR thousand)*	**Net** *(in EUR thousand)*					
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	787,823	16.35	211,253	211,253	320,000		376,796	237,803	10,540
S. G. Innovative Materials										
6, Avenue Einstein,	EUR k	EUR k						EUR k	EUR k	
1300 Wavre, Belgium	390,566	(38,584)	15.00	160,880	124,080	-		190,144	22,394	-
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		174,539	13,282	3,400
OTHER COMPANIES										
Subsidiaries (over 50%-owned)										
Total French companies				3,428	3,428					
Total foreign companies				382	299					(473)
Affiliates (10%- to 50%-owned)										
Total French companies										
Total foreign companies										
Other investments				**31,511**	**744**	**1,270,000**				
Treasury stock				**5,849**	**3,584**					
Treasury stock held for cancellation										
TOTAL				**13,111,049**	**12,707,596**	**7,597,101**				**894,872**

(1) The amounts shown for subsidiaries of the German branch corresponds to 2018 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	2018 amount (in EUR thousand)	2017 amount (in EUR thousand)
Commitment related to the project of acquisition of Schenker Winkler Holding AG (1)	2018	Schenker Winkler Holding AG shareholders	0	2,368,622
Guarantee issued in connection with the planned lease of the new Saint-Gobain headquarter following its completion (2)	04/06/2020	SCI Iris La Défense	77,507	77,507
Guarantee given on behalf of Saint-Gobain Isover (electricity purchases)	12/31/2025	Exeltium	17,950	19,900
Guarantee issued in connection with disputes between members of the tax group and the French tax authorities	indefinite	Tax authorities	10,466	10,466
Guarantee given to French companies whose employees have received performance units	multiple	multiple	0	7,865
Commitments towards other members of economic interest groupings (GIE)	indefinite	GIE counterparts	4,892	5,020
Commitment given to employees of the Company who have received performance units	multiple	multiple	0	4,234
Rent guarantee (Les Miroirs headquarters building)	06/30/2023	Miroirs A & B	3,000	3,000
Commitment towards the Saint-Gobain Initiatives foundation	multiple	SG Initiatives counterparts	0	1,000
Commitment to employees of the German companies in the Group (early retirement plan)	05/31/2022	Sparkasse Aachen	1,606	1,478
Other commitments given	multiple	multiple	33	86

(1) *As part of its plan to acquire a controlling interest in Sika, Compagnie de Saint-Gobain signed on December 5, 2014 a contract to purchase the Company Schenker-Winkler Holding AG ("SWH") and signed on December 22, 2014 with its direct subsidiary SPAFI an agreement to transfer to the latter the benefits and obligations of this contract. The payment of the purchase price remained guaranteed by Compagnie de Saint-Gobain. On May 11, 2018, Saint-Gobain, Sika and the Burkard family announced that they had found an overall agreement under which SPAFI acquired all outstanding shares of SWH, and Saint-Gobain, through SWH, became Sika's largest shareholder, holding 10.75% of the share capital and voting rights.*

(2) *Within the frame of the off-plan lease, Compagnie de Saint-Gobain benefits jointly with SCI Iris La Defense from a full completion bank guarantee given by the property developer.*

Financing-related off-balance sheet commitments

Financing-related off-balance sheet commitments given	Date	Counterparty	2018 amount (in EUR thousand)	2017 amount (in EUR thousand)
Liquidity agreement guarantee	January 2019	Exane		393
Euro equivalent of forward currency sale contracts	multiple	multiple	1,492,659	11,163,895
Euro equivalent of forward currencies payable under currency swaps	multiple	multiple	1,428,575	6,330,508
Equity swaps acquired as hedges of performance units	multiple	multiple	11,936	

Financing-related off-balance sheet commitments received	Date	Counterparty	2018 amount (in EUR thousand)	2017 amount (in EUR thousand)
Liquidity agreement guarantee	January 2019	Exane	172	233
Euro equivalent of forward foreign currency purchase contracts	multiple	multiple	1,491,877	11,163,413
Euro equivalent of foreign currencies receivable under currency swaps	multiple	multiple	1,462,248	6,364,366
2013/2022 undrawn line of credit	12/20/2023	multiple	2,480,000	2,480,000
2017/2022 undrawn line of credit	12/20/2023	multiple	1,520,000	1,520,000
Equity swaps acquired as hedges of performance units	multiple	multiple		14,480

Financing-related off-balance sheet commitments given and received	Date	Counterparty	2018 amount (in EUR thousand)	2017 amount (in EUR thousand)
Interest-rate swaps Fixed-rate borrower/Fixed-rate lender	multiple	multiple	279,476	281,776
Interest-rate swaps Variable-rate borrower/Fixed-rate lender	multiple	multiple	175,000	95,000
Commodity swaps Fixed-price buyer/Variable-price seller	multiple	multiple	1,038	9,634
Commodity swaps Variable-price buyer/Fixed-price seller	multiple	multiple	1,038	9,634

Operations-related off-balance sheet commitments: None.

As part of tax litigations the tax administration has been granted liens on assets in its favor in the amount of €16,273 thousand, and delivered a notice confirming that these amounts were contended. In exchange for a stay of payment for part of these litigations, Compagnie de Saint-Gobain has obtained tax bonds from its banks in the amount of €10,466 thousand.

Given the favorable outcome of some of these litigations for the Group, these amounts are in the process of being reduced.

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 auditors for 2018, as reflected in the income statement, may be broken down as follows:

- statutory audit fees of €2.2 million;
- fees for audit-related advice and services of €0.4 million.

The nature of non-audit services provided by the Statutory Auditors to Compagnie de Saint-Gobain is mainly composed of audit procedures, as independent third party, on the management report on the consolidated human resources, environmental and social information, of due diligence work in the context of acquisition or divestiture projects, as well as of procedures related to the issuance of comfort letters in the case of new bond issues.

NOTE 19 INFORMATION ON EMPLOYEES

Number of employees

Paris Head Office (Les Miroirs, La Défense)	2018	2017
Managers	165	159
Supervisors	27	31
Administrative staff	8	9
TOTAL	200	199
of which, employees under fixed-term contracts	5	5

German branch (Aachen)	2018	2017
Managers	91	92
Supervisors	121	122
Administrative staff	1	0
TOTAL	213	214
of which, employees under fixed-term contracts	15	10

Management compensation

Total gross compensation and benefits paid in 2018 to Saint-Gobain management by the French and foreign companies in the Group (excluding any long-term cash settled compensation) amounted to €18.1 million (2017: €14.5 million), including €5.7 million in gross variable compensation (2017: €5.8 million) and €2.7 million in termination benefits (2017: €0.1 million).

Provisions for pensions and other post-employment benefits (defined benefit obligations (DBO) in respect of length-of-service awards and pensions) accruing to Group management totaled €50.9 million at December 31, 2018 (December 31, 2017: €46.6 million).

Attendance fees paid to members of the Board of Directors for 2018 totaled €1.1 million, the same as in 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 Asbestos-related litigation

Asbestos-related litigation in France

Inexcusable fault lawsuits

In France, seven further individual lawsuits were filed in 2018 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, 2018, a total of 822 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, 2018, 789 of these 822 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 €4.6 million.

Concerning the 33 lawsuits outstanding against Everite and Saint-Gobain PAM at December 31, 2018, five have been completed in terms of both liability and quantum, but are still pending on the determination of who will pay the compensation due.

Out of the 28 remaining lawsuits, at December 31, 2018 the procedures relating to the merits of 24 cases were at different stages, with three in the process of being investigated by the French Social Security authorities and 21 pending before the Social Security or Appeal Courts. The last four actions have been canceled but the plaintiffs may request their restoration at any time within a two-year period following their cancellation.

In addition, as of December 31, 2018, 237 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, 2018, 211 lawsuits had been completed. In 129 of these cases, the employer was held liable for "inexcusable fault".

At the same date, compensation paid by these companies totaled approximately €7.0 million.

As regards the 26 suits outstanding at December 31, 2018, two cases were still being investigated by the French Social Security authorities and 23 were being tried – including 20 pending before the Social Security Courts and three before the Appeal Courts. Lastly, for one lawsuit, a decision has been rendered on the finding of liability but is still pending regarding the determination of who will pay the compensation due.

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, 2018, a total of 822 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 822 lawsuits, 720 have been finally disposed of, representing total amount of compensation of €7.6 million at December 31, 2018. The remaining 102 lawsuits are pending before the competent labor tribunals.

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.

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, specialized insulation or gaskets, are 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 2018

Approximately 2,600 new asbestos-related claims were filed against CertainTeed in the United States in 2018 (compared to 3,100 new claims in 2017). The number of new claims is significantly down on the past few years.

Virtually all lawsuits involving CertainTeed have either been settled out of court or dismissed. Around 4,300 of the pending claims were settled in 2018, compared to 3,900 in 2017 and 3,700 in 2016. Taking into account the number of claims outstanding at the end of 2017 (34,300), new claims arising during the year and settled claims, some 32,600 claims remain outstanding at December 31, 2018. A large number of these pending claims were filed more than five years ago by individuals who have been unable to demonstrate any significant asbestos-related impairment, and it is likely that many of these claims will ultimately be dismissed.

Impact on the Group's financial statements

The Group recorded a US$106 million charge in 2018 to cover future developments in relation to claims. This amount is stable compared to the amount recorded in 2017 and 2016. At December 31, 2018, the Group's provision for asbestos-related litigation against CertainTeed in the United States amounts to US$568 million (compared to US$555 million at December 31, 2017 and US$562 million at December 31, 2016).

Cash-flow impact

Compensation paid in respect of these claims against CertainTeed (including claims settled prior to 2018 but only paid out in 2018 as well as claims fully settled and paid out in 2018), as well as compensation paid in 2018 by other Group businesses in the United States in connection with asbestos litigation, amounted to US$67 million (compared to US$76 million in 2017 and US$97 million in 2016).

Situation in Brazil

In Brazil, former employees of Brasilit 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 a very 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.

20.2 Antitrust law and related proceedings

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. However, a provision for claims and litigation was recognized at December 31, 2015 in an amount equivalent to the fine (unchanged at December 31, 2018).

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.

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.

Investigation by the Anti-trust Division of the United States Department of Justice in the United States drywall industry

In July 2015, the Anti-trust Division of the United States Department of Justice opened a criminal investigation into potential anti-competitive practices, specifically a price agreement, in the United States drywall industry. This investigation followed complaints filed in late 2012 in the form of class actions in the civil courts against eight drywall manufacturers in the sector, including CertainTeed, by some of their customers.

On the basis of testimony and documents submitted in the civil proceedings, CertainTeed and its attorneys have not identified any element that might create liability for CertainTeed, and as a result filed a motion for summary judgment in May 2015 in order to end the civil proceedings. This application was accepted on February 18, 2016 by the competent court.

In autumn 2018, the lawsuit was terminated: no liability was assigned to CertainTeed and no fine was levied.

20.3 Environmental related litigation

PFOA matters in the United States

Levels of PFOA (perfluorooctanoic acid) in excess of U.S. Environmental Protection Agency (EPA) or state health advisories 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, 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.

On December 31, 2018, the provision recorded in respect of this matter amounts to €30 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. 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

No material events have occurred since the balance sheet date.

4. STATUTORY AUDITORS' REPORT ON THE FINANCIAL STATEMENTS

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.

For the year ended December 31, 2018

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 financial statements of Compagnie de Saint-Gobain for the year ended December 31, 2018.

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, 2018 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, 2018 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, 2018, the carrying amount of the Company's financial investments, chiefly comprising investments in subsidiaries and affiliates and related loans and advances, stood at €27,063 million, or 84% of the Company's net assets. 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 Notes 3 and 8 to the financial statements, impairment losses in a total amount of €371 million were recognized as a result of the impairment tests performed by Management for the year ended December 31, 2018.

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 until 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.

Concerning the information given in accordance with the requirements of article L.225-37-5 of the French Commercial Code relating to those items your Company has deemed liable to have an impact in the event of a takeover bid or exchange offer, we have verified its consistency with the underlying documents that were disclosed to us. Based on this work, we have no matters to report with regard to 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 General Meeting held on June 26, 1986 for Petiteau Scacchi and subsequently PricewaterhouseCoopers Audit and on June 10, 2004 for KPMG Audit.

As of December 31, 2018, PricewaterhouseCoopers Audit and KPMG Audit were in the thirty-third year and the fifteenth 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 21, 2019

The Statutory Auditors

PricewaterhouseCoopers Audit		KPMG Audit *Department of KPMG SA*	
Edouard Sattler	Cécile Saint-Martin	Jean-Paul Thill	Bertrand Pruvost

5. MANAGEMENT REPORT COMPAGNIE DE SAINT-GOBAIN ANNUAL FINANCIAL STATEMENTS

Compagnie de Saint-Gobain's net income totaled €669.2 million in 2018 (2017: €839.5 million). This income consisted largely of financial income from subsidiaries and shareholdings (dividends and income transfers from subsidiaries of the German branch) totaling €894.9 million in 2018 (2017: €845.1 million), and of a €154 million tax profit (€14 million in 2017) from the French and German tax consolidation groups, partially offset by a €371 million provision for impairment of investments (nil in 2017).

Shareholders' equity before allocation of income for the year totaled €17,049 million at December 31, 2018 (December 31, 2017: €17,414 million).

Significant events during the year

1.1 Transactions involving shareholders' equity

The main changes in shareholders' equity included:

- an increase in shareholders' equity on May 16, 2018 of €178.2 million, through the subscription of 4,932,767 shares at a price of €36.31 under the Group Savings Plan;
- a reduction in shareholder's equity of €518.9 million, following the cancellation of 6,000,000 shares on June 15, 2018 and of 6,461,449 shares on November 30, 2018;
- the payment on June 13, 2018, of the 2017 company dividend of €707.5 million.

1.2 Acquisition plans

In the first half of 2018, Saint-Gobain pressed ahead with its plan to acquire a controlling interest in Sika. A decision from the Zug Supreme Court was expected for the second half of 2018.

On May 11, 2018, Saint-Gobain, Sika and the Burkard family announced that they had found an overall agreement under which:

- Saint-Gobain acquired all outstanding shares of Schenker-Winkler Holding AG (SWH) from the Burkard family for a purchase price of CHF 3.22 billion; This acquisition was made through SPAFI, a direct subsidiary of Compagnie de Saint-Gobain;
- Sika purchased 6.97% of its own capital from SWH (representing a 23.7% voting interest in the company) for a total consideration of CHF 2.08 billion.
- Sika held an extraordinary general meeting on June 11, 2018 which decided to convert all of its shares into a single class of registered shares ("one share, one vote"), to eliminate the opting-out clause and the 5% share transfer restriction, and to cancel the 6.97% shares acquired from SWH;
- the two groups announced that they would also continue their existing business relationship and seek to further expand it into areas of mutual benefit, while preserving and respecting each group's economic and legal independence.

Saint-Gobain, through SWH, became Sika's largest shareholder, holding 10.75% of the share capital and voting rights. With regard to this stake, the parties agreed on a two-year lock-up period and on standstill obligations (up to 10.75% of Sika's capital for four years and up to 12.875% of its capital for the following two years). 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.

This overall agreement terminated and resolved the disputes between Sika, the Burkard family and Saint-Gobain to the common benefit of all parties involved and that of their respective shareholders and stakeholders.

1.3 Future Saint-Gobain headquarters

In April 2015, Compagnie de Saint-Gobain signed with the Company "SCI Iris La Défense" an off-plan lease regarding the occupation of its future headquarters. Construction work has continued in 2018, with a completion due in H2 2019.

1.4 "Transform and Grow"

In November 2018, Saint-Gobain announced the launch, starting January 1, 2019, of an ambitious transformation program, named "Transform and Grow", aimed at fully leveraging its strength to bolster its competitiveness and fully unleash its growth potential.

This transformation plan is structured around two key components:

- a new type of structure, organized per market and in closer contact with customers, in order to seize all opportunities, integrating the digital dimension at all levels to better adapt to the new modes of consumption and increase productivity. A structure that is more streamlined and agile to speed up decision-making;
- an acceleration of portfolio rotation: continuation of the policy of value creating acquisitions, and acceleration of divestments before end of 2019, representing sales of at least €3 billion. In particular, a divestment process has been launched for the Building Distribution activity in Germany, a direct subsidiary of Compagnie de Saint-Gobain.

As a result of this transformation program, the Group expects a positive impact on its operating margin of more than 100 basis points by 2021, and new cost savings of €250 million.

1.5 Financing activities

In 2018, Compagnie de Saint-Gobain issued:

- €750 million worth of 1.125% bonds on March 23, 2018, maturing on March 23, 2026;
- a €20 million private placement on April 18, 2018, indexed to the 20-year CMS curve and maturing on April 18, 2033,

  A €60 million private placement on May 25, 2018, indexed to the 20-year CMS curve and maturing on May 25, 2033,

  The Group entered into swaps in order to fix the interest rate on these two private placements;
- two floating-rate 3-month Euribor +0.23% private placements on June 25, 2018, maturing on June 25, 2020, amounting to €180 million and €300 million, respectively;
- €500 million worth of 0.875% bonds on September 21, 2018, maturing on September 21, 2023, and €500 million worth of 1.875% bonds maturing on September 21, 2028. The nominal amount of the latter bond issue was increased to €700 million through two €100 million additions on October 11 and October 12, 2018, respectively.

These issues extended the average maturity of the Group's debt while also optimizing average borrowing costs.

Compagnie de Saint-Gobain also redeemed the following instruments at maturity:

- NOK 750 million worth of 4% bonds on March 27, 2018;
- €750 million worth of 4% bonds on October 8, 2018.

Other required information

2.1 Maturity date of debt to suppliers and from customers

Pursuant to Article D.441-4, the breakdown of its debt to non Group suppliers and from non Group customers by maturity date, is the following:

	Article D.441 I.-1°: Overdue invoices from suppliers not paid at Dec. 31, 2018						Article D.441 I.-2°: Overdue invoices to customers not paid at Dec. 31, 2018					
	0 day (for information)	1 to 30 days	31 to 60 days	61 to 90 days	91 days and more	Total (1 day and more)	0 day (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												
Quantity of invoices	103					76	0					100
Total value of invoices TTC	1,834	76	3	0	36	115	0	202	151	24	89	466
Percentage of 2018 total purchases TTC	2.25	0.09	0.00	0.00	0.04	0.14						
Percentage of 2018 total sales turnover							0.0	6.2	4.6	0.7	2.7	14.2
(B) INVOICES EXCLUDED FROM (A) DUE TO DISPUTE OR NOT RECORDED IN THE ACCOUNTS												
Quantity of invoices						0						0
(C) METHOD FOR THE CALCULATION OF THE OVERDUE (BY CONTRACT OR LEGAL DELAY - ARTICLE L.441-6 OR ARTICLE L.443-1 FROM FRENCH TRADE REGULATION)												
Method for the calculation of the overdue	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 litigation and classified as awaiting decision, and invoices that were received late.

2.2 Branch of the company

Compagnie de Saint-Gobain has a German branch.

6. FIVE YEAR FINANCIAL SUMMARY

(in EUR thousand)	2018	2017	2016	2015	2014
1 - CAPITAL STOCK AT YEAR-END					
Share capital	2,186,340	2,214,228	2,221,121	2,243,774	2,247,582
Number of common shares outstanding	546,585,004	553,557,091	555,280,358	560,943,439	561,895,566
2 - RESULTS OF OPERATIONS					
Net sales	188,609	181,074	175,762	176,004	166,988
Income before tax, depreciation, amortization and provisions	914,931	864,136	952,078	967,838	1,045,415
Income tax	154,213	14,032	128,412	147,122	165,867
Income after tax, depreciation, amortization and provisions (Net income)	669,184	839,496	1,048,738	1,070,854	1,129,366
Dividends	724,293 (1)	707,475 (2)	694,143 (3)	680,584 (4)	695,017 (5)
3 - EARNINGS PER SHARE *(IN EUR)*					
Income before tax, depreciation, amortization and provisions	1.67	1.56	1.71	1.73	1.86
Income after tax, depreciation, amortization and provisions (Net income)	1.22	1.52	1.89	1.91	2.01
Net dividend per share	1.33	1.30	1.26	1.24	1.24
4 - EMPLOYEE INFORMATION (6)					
Average number of employees during the year	200	199	205	209	210
Total payroll for the year	30,788	29,867	33,059	32,165	28,431
Total benefits for the year	14,756	14,612	15,572	14,573	12,911

(1) Estimated amount based on 546,585,004 shares entitled to dividend in respect of 2018 financial year, at January 31, 2019, less 2,003,498 treasury shares held at January 31, 2019.

(2) Based on 553,557,091 shares entitled to dividend in respect of 2017 financial year, less 9,345,487 treasury shares held on the ex-dividend date

(3) Based on 555,284,802 shares entitled to dividend in respect of 2016 financial year, less 4,377,414 treasury shares held on the ex-dividend date.

(4) Based on 549,959,351 shares entitled to dividend in respect of 2015 financial year, less 1,101,621 treasury shares held on the ex-dividend date.

(5) Based on 561,895,566 shares entitled to dividend in respect of 2014 financial year, less 1,397,640 treasury shares held on the ex-dividend date.

(6) (6)Employee information only include staff at the company's head office and exclude the German branch

8

Additional information and cross-reference tables

9

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 Saint-Gobain Compagnie'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 1st to December 31.

d) Share capital and disclosure thresholds (Articles 6 and 7)

At December 31, 2018, the share capital was set at €2,186,340,016, divided among 546,585,004 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.

In addition, the Company may request disclosure of information about its ownership structure and ownership of its securities pursuant to the relevant 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 is 70 for a Director and 68 for the Chairman of the Board. The Board may decide to combine the functions of Chairman of the Board and Chief Executive Officer, in which case the holder's 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).

A Director representing employee shareholders shall be appointed at the General Meeting, upon proposal of 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)

Each year, 5% of net income for the year less any losses carried forward from prior years, is credited to the legal reserve, until such time as the legal reserve represents 10% of the share capital. If the share capital is increased, the same transfer requirement applies until the legal reserve represents 10% of the new 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 used to pay a second dividend.

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 1st, 2019 describe the Board's organization and functioning. The Internal Rules were last updated by the Board of Directors on June 8, 2017.

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. Board activities

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.
- a meeting is held at least once a year to review and decide on the Saint-Gobain Group's overall strategy.
- 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.

The Board's practices are reviewed during at least one meeting each year and a formal assessment of its organization and practices is conducted periodically on the initiative of the Lead independent Director; the results of this assessment are reviewed at the next Board of Directors' meeting.

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 6, 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 the executive Directors' compensation);
- 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. Attendance fees and reimbursement of expenses

The attendance fees approved by the shareholders at the General Meeting are allocated by the Board of Directors among its members.

The Chairman and Chief Executive Officer does not receive any attendance fees.

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

If he or she considers it necessary, each Director may receive additional training about the Saint-Gobain Group's specific characteristics, businesses and operating segments.

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, Directors attend General Meetings."

1.2 Documents on display

For the lifetime of this Registration Document, the following documents (or a copy of them) relating to the Company may be consulted through the Financial Communications 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 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 Registration Document.

1.3 Persons responsible for the Registration Document

1.3.1 Appointment of the person responsible for the 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 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 Registration Document is, to the best of my knowledge, in accordance 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 Registration Document and listed in the Cross-reference Table in Chapter 9, Section 3.2 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.

I obtained a completion letter from the Statutory Auditors in which they state that they have audited the information relating to the financial position and the financial statements included in this Registration Document, and that they have read this Registration Document in its entirety.

Courbevoie, March 14, 2019

Pierre-André de Chalendar

Chairman and Chief Executive Officer

1.4 Information about the Statutory Auditors

1.4.1 Statutory Auditors and Substitute Auditors

As at December 31, 2018, 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. Jean-Paul Thill 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 2018

	PricewaterhouseCoopers				KPMG			
	2018		2017		2018		2017	
(in € million)	Amount before tax	%	Amount before tax	%	Amount before tax	%	Amount before tax	%
Accounts certification services								
Issuer	1.2	8%	1.0	7%	1.1	12%	1.1	12%
Fully consolidated subsidiaries	8.6	59%	7.7	58%	7.9	85%	7.4	83%
Subtotal	**9.8**	**68%**	**8.7**	**65%**	**9.0**	**97%**	**8.5**	**95%**
Services other than accounts certification[2]								
Issuer	0.4	3%	0.3	2%	0.0	0%	0.1	1%
Fully consolidated subsidiaries	4.3	30%	4.4	33%	0.3	3%	0.3	4%
Subtotal	**4.7**	**33%**	**4.7**	**35%**	**0.3**	**3%**	**0.4**	**5%**
TOTAL	**14.5**	**100%**	**13.4**	**100%**	**9.3**	**100%**	**8.9**	**100%**

(1) Members of the Versailles branch of the French Regional Auditors' Association.
(2) The nature of non-audit services provided by statutory auditors to the parent company and its subsidiaries is composed of mainly audit procedures, as independent third party, on the management report on the consolidated or statutory human ressources, environmental and social information, compliance services on accounting, tax and regulatory issues, as well as training.

1.5 Main addresses

COMPAGNIE DE SAINT-GOBAIN

France General Management Headquarters

Les Miroirs
18 avenue d'Alsace
92400 Courbevoie France
Tel: +33 (1) 47 62 30 00
www.saint-gobain.com

NORTHERN EUROPE

Germany

Krefelder Straße 195
52070 Aachen
Germany
Tel.: +49 (241) 400 20-0
www.saint-gobain.de

Nordic countries and Baltic States

Robert Jacobsens Vej 62A
2300 Copenhagen S
Denmark
Tel.: +45 70 300 688

United Kingdom and Republic of Ireland

Saint-Gobain House
Binley Business Park
Coventry CV3 2TT
United Kingdom
Tel.: +44 (0) 2476 56 0700
www.saint-gobain.co.uk

Poland

Iris B,
ul. Cybernetyki 9
02-677 Warszawa,
Poland
Tel.: +48 (22) 653 79 00
www.saint-gobain.pl

Czech Republic

Smrčkova 2485/4
Prague 180 00 8
Czech Republic
Tel.: +420 724 738 135
www.saint-gobain.cz

Russia, Ukraine and CIS countries

PREO 8 Business Center, 19th floor
8, Preobrazhenskaya ploschad 107061,
Moscow Russia
Tel.: +7 (495) 775 15 10
www.saint-gobain.ru

SOUTHERN EUROPE, MIDDLE EAST, AFRICA

Spain

Princípe de Vergara 132
28002 Madrid
Spain
Tel.: +34 (91) 397 20 55
www.saint-gobain.es

Italy

Via Ettore Romagnoli, 6
20146 Milan
Italie
Tel.: +39 02 42431
www.saint-gobain.it

Sub-saharan Africa

No. 1 Shale Road
N1 Business Park
Cnr. Old Johannesburg and Tlokwa Roads
Kosmosdal Ext. 7
Samrand 0157
South Africa
Tel.: +27 12 657 2800

Middle East

Mitsulift Bldg 3rd Floor,
Dbayeh Main road
Lebanon
P.O. Box 55-44
Beirut
Lebanon
Tel: +961 4 546 870/1/2

ASIA-PACIFIC

China

17&18F, Shanghai Point
No. 1158, East DaMing Rd.
Shanghai 200082
China
Tel.: +86 (21) 63 61 88 99
www.saint-gobain.com.cn

Office in Japan

Saint-Gobain Bldg
3-7 Kojimachi, Chiyoda-ku 102-0083 Tokyo
Japan
Tel.: +81 3 6272 6250
www.saint-gobain.co.jp

Office in South Korea

10F, KFAS Bldg.
211, Teheran-ro
Gangnam-gu
Seoul 06141
South Korea
Tel.: +82 2 3706 9073
www.hanglas.co.kr

Office in Thailand

12F, Gypsum Metropolitan Tower
539/2, Si Ayutthaya Road
Thanonphayathai, Ratchathewi
Bangkok 10400
Thailand
Tel.: +(66)2 640 8721

Office in Australia

60 Hume Hwy,
Somerton, VIC 3062
Australia
Tel.: +61 3 9930 7852
www.saint-gobain.com.au

India

General Delegation
Level 5, Leela Business Park
Andheri Kurla Road
Andheri (East)
Mumbai – 400059
India
Tel.: +91 (022) 40 21 21 21
www.saint-gobain.co.in

AMERICAS

North America

Saint-Gobain Corporation
20 Moores Road
Malvern, PA 19355
United States
Tel.: +1 610-893-5000
www.saint-gobain-northamerica.com

Brazil

Avenida Santa Marina, 482
Agua Branca
SP 05036-903 São Paulo
Brazil
Tel.: +55 (11) 2246-7000
www.saint-gobain.com.br

Mexico

Legaria 549,
torre 1, piso
14, Colonia
10 de abril. Delegación Miguel Hidalgo,
11250, Mexico City
Mexico
Tel.: +52 (55) 52 79 16 00
www.saint-gobain.com.mx

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.

In-house, the Sectors, Activities, General Delegations and a number of corporate departments (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 reference bases used for social reporting, EHS reporting and for defining indicators have been prepared in accordance with the United Nations' Global Compact and the French New Economic Regulations (NRE) Act of 2001, as well as with the 2012 Grenelle II law.

In order to have a global reference framework, since 2011 these reference bases follow GRI indicators (Global Reporting Initiative).

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 Management Committee level twice a year.

The data published on Saint-Gobain's CSR, following the GRI methodology, 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

Following the integration of the management tool, a significant modification was made to the consolidation system. Social reporting has a total of 651 consolidated companies at the end of 2017 and is no longer based on specific reporting entities.

- The system used to count the number of employees (SIS), which is updated monthly, includes the 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.
- The annual social report, created in 2002 to account for the Group's social performance, is based on a limited scope of reporting, representing 98.5% of the consolidated number of employees. All other social indicators are calculated on this basis.

Newly integrated companies are accounted for in accordance with their financial integration, and companies sold during the past year are not included.

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 91.5% of the Group's employees and manually for those entities not incorporated into the shared service centers (8.5% 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 countries and the activities in France and also with the reporting contributors (651) 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 report allows spreadsheets to be generated as management tools for the Group's Human Resources Department and at all levels of the structure, both for individual companies and for individual General Delegations.

e) Absenteeism indicator

The absence data of certain entities is 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 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: USA, Canada, Austria, India, Bhutan, Philippines, South Korea and Finland.

The absence data is in the process of being rendered reliable and forms part of our measure for improving the quality of data.

f) 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, for example, with the concepts of training or permanent employment contracts. To make the training data report reliable, the Group redefined the principles for these indicators in 2016. The data collected now include all training hours appropriately substantiated as such. In France, training for apprentices is no more integrated in the global reporting, in hours or in associated cost.

When it comes to security, for most entities permanent subcontractors worked hours and reported on the basis of partners' declarations or on estimations.

Further, data on local contexts is sometimes impossible to collect. Therefore, certain indicators are calculated over a more limited scope of reporting than the scope of the annual social reporting campaign. This scope is defined each time.

2.1.3 EHS reporting

a) Basis

Scope of reporting

The EHS report covers 1,513 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, including, 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 accidents involving fatalities or lost time
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 98% 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 840 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 508 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 (72 sites covered, across 73 entities);
- the Pipe Systems activity sub-scope of the construction products Sector (concerning 17 sites out of 20 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 419 sites out of 747 entities). This sub-scope also includes the 102 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.

b) 2010-2025 and 2014-2016 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 2014-2016 emissions and consumption are recalculated based on 2016 production.

Progress achieved over these 5 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 Sector;
- 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

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, 2018

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 December 31st, 2018 (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 31 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 2018 and February 2019 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 General Secretary, Human Resources, Corporate Social Responsibility, Responsible Procurement, Environment, Health and Safety, Fiscal and Sustainability departments.

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 21st, 2019

One of the Statutory Auditors

PricewaterhouseCoopers Audit

Cécile Saint-Martin
Partner

Émilie Bobin
Sustainable Development Partner

(1) Our work was performed in 32 EHS entities, corresponding to 29 HR entities, representative of the Group's activities and geographical implementation: Brazil (1), China (2), Czech Republic (1), Denmark (2), Egypt (2), France (4), Germany (3), India (1), Mexico (1), Poland (2), Russia (1), Thailand (1), United Kingdom (4), United States (6).

Appendix: List of the information we considered most important

Selection of qualitative and quantitative information, associated to the policies, actions and results relating to the eight 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 in the organisation and inclusion	Chapter III, Sections 3.2 and 3.3.2 Chapter IV, Sections 2.1 and 2.4 *Including the KPIs :* *Percentage of women in management and top management positions* *Diversity index*
Energy efficiency and carbon intensity of operations	Chapter III, Sections 1.1.4, 2.2, 2.4.2, and 4.1.2 Chapter IV, Sections 2.1 and 2.4 *Including the KPI "Evolution of carbon emissions"*
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 KPI "% of new managers trained to the Adhere, Comply and Act programs"*
Management of skills and talents	Chapter III, Sections 2.2, 3.2, and 3.3 Chapter IV, Sections 2.1 and 2.4 *Including KPI "Percentage of employees trained"*
Integration of recycled materials	Chapter III, Sections 1.1.3, 2.1.3, 2.4.1, and 4.2 Chapter IV, Sections 2.1, and 2.4 *Including the KPI "Avoided withdrawals of virgin raw materials"*
Energy and carbon performance of products and services	Chapter III, Sections 1.1.3, 2.1.2, 2.1.3, 2.4.2, 4.1.1, and 4.1.3 Chapter IV, Sections 2.1, and 2.4 *Including the KPI "HICE Indicator (Health Indicator for Occupational Exposure)"*
Workplace health and safety	Chapter III, Sections 1.1.3, 1.2, 2.2, and 3.1 Chapter IV, Sections 2.1 and 2.4 *Including the KPI "TRAR of Saint-Gobain employees, temporary workers and permanent contractors"*
Product safety	Chapter III, Sections 1.1.3, 1.2, 2.1, 2.2, and 3.1

N.B.: All actions and results presented in the "correspondence table of social and environmental information", available in section 3.3 of Chapter IX of the Group's 2018 Management Report, were subject to a fairness review.

3. CROSS-REFERENCE TABLES

3.1 Cross-reference table for the Registration Document

For the convenience of readers of this Registration Document, the following table provides an index to the main disclosures required by Annex 1 of European Commission (EC) Regulation No. 809/2004.

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Incorporation by reference

Pursuant to Article 28 of European (EC) Regulation No. 809/2004 of April 29, 2004, this Registration Document incorporates the following information by reference which the reader is invited to refer to:

- 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, which are included in the Registration Document filed with the French Financial Markets Authority (*Autorité des marchés financiers*) on March 19, 2018 under number D.18-0146;
- in relation to the fiscal year ended December 31, 2016: the management report, the consolidated financial statements, the annual financial statements, and the related reports of the Statutory Auditors, which are included in the Registration Document filed with the French Financial Markets Authority (*Autorité des marchés financiers*) on March 15, 2017 under number D.17-0171.

The information included in these two Registration Documents, other than the information referred to above, is replaced or updated by the information included in this Registration Document. These two Registration Documents are available at the head offices of the Company and on its website at 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 Ordinance of 19 July 2017 (Ordinance No. 2017-1180) which transposes the Directive 2014/95/EU of the European Parliament and of the Council of 22 October 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 1.4 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 1.5).

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.

8 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;
- 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).

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	III – 3.2
	Actions:	
	OPEN 4.0 program	III – 3.3.2
	Quantitative objectives:	
	Diversity index	IV – 2.1
	25% of women managers in 2020	IV – 2.1
	25% of women senior managers in 2025	IV – 2.1
	Indicators:	
	22,5% of women in the 20 137 highest positions that is 11,2% of the Group's positions	IV - 2.4
	Other diversity indicators	IV – 2.4
	Other non-discrimination indicators	
Energy efficiency and carbon intensity of operations	**Commitment:**	
	EHS charter and policy	III – 1.1.4
	Energy – climate policy	III – 2.4.2
	Actions:	
	WCM program	III – 2.2
	Energy – climate network	III – 2.4.2
	Transversal programs including internal carbon pricing, R&D programs and scope 3 control	III – 4.1.2
	Quantitative objectives:	
	Reduce carbon emissions by 20% by 2025 (base 2010)	IV – 2.1
	Reduce energy consumption by 15% by 2025 (base 2010)	IV – 2.4
	Indicators:	
	GHG emissions indicators	IV – 2.4
	Energy indicators	IV - 2.4
Business ethics *This risk includes human rights and the fight against corruption.*	**Commitment:**	I – 1.3
	Code of ethics : the Principles of Conduct and Action	III – 1.1.1
	Actions:	
	Compliance culture and training programs for employees	III – 1.1.2
	Duty of vigilance plan	III – 1.2
	Quantitative objective:	
	Train 100% of new managers to the Adhere, Comply et Act program during their first year of integration	IV – 2.1
	Indicators:	
	Group Values Indicators	IV – 2.4
	Responsible Purchasing Indicators	IV – 2.4
	Non-discrimination indicators	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.		

Risk or opportunity identified	Management of the risk or opportunity	Section
Management of skills and talents	**Commitment:**	
	Saint-Gobain Attitudes and Human Resources policy	III – 3.2
	Actions:	
	WCM Program	III – 2.2
	OPEN 4.0 Program	III – 3.3
	SG Talents Program	III – 3.3.4
	L&N Program	III – 3.3.4
	Indicators:	
	Percentage of employees trained	IV – 2.1
	Training indicators in talent development	IV – 2.4
	Talent retention	III – 3.3.4
Integration of recycled materials into products	**Commitment:**	
	EHS charter and policy	III – 1.1.3
	Sustainable resource management policy	III – 2.4.1
	Actions:	
	Obtain a maximum recycled content	III – 2.4.1. a)
	SCORE tool for the evaluation of the sustainable performance of products	III – 2.1.3
	Circular economy	III – 4.2
	Indicators:	
	Avoided withdrawals of natural raw materials	IV – 2.1
	Raw materials and production waste indicators	IV – 2.4
Energy and carbon efficiency of products and services	**Commitment:**	
	EHS charter and policy	III – 1.1.3
	Energy and climate policy	III – 2.4.2
	Actions:	III – 2.1.2
	Design sustainable, comfortable and performing solutions including product transparency and evaluation and improvement of the sustainable performance of products	III – 2.1.3
	Seize the opportunities linked to the transition to a low carbon economy	III – 4.1.1
	Actions that support a strong and low carbon economic growth	III – 4.1.3 b)
	Train clients locally, inform the end user	III – 4.1.3 c)
	Indicators:	
	Provision of EPDs	III – 2.1.2
	Carbon avoidance linked to insulation solutions	III – 4.1.1 b)
Health and safety at work	**Commitment:**	
	EHS charter and policy	III – 1.1.3
	Health Policy	III – 3.1
	Actions:	
	Duty of vigilance plan	III – 1.2
	WCM Program	III – 2.2
	Safety at work Program	III – 3.1.2
	Health at work Program	III – 3.1.1
	Quantitative objectives:	
	Reach a TRAR of 2.3 in 2019	IV – 2.1
	Indicators:	
	HICE (Health Indicator for occupational Exposure)	III – 3.1.1 b)
	Health and Safety indicators	IV – 2.4

Risk or opportunity identified	Management of the risk or opportunity	Section
Product safety	**Commitment:**	
	EHS charter and policy	III – 1.1.3
	Health Policy	III – 3.1
	Actions:	
	Duty of vigilance plan	III – 1.2
	Innovation program, including the EHS check-list	III – 2.1.1
	WCM program	III – 2.2
	Product transparency	III – 2.1.2
	SCORE program for the evaluation of the sustainable performance of products	III – 2.1.3
	Management of chemical risks	III – 3.1.1
	Indicators:	
	Deployment of chemical risk management tools	III- 3.1.1 b)
	Complementary work on the possibility of defining a performance indicator on product safety will be carried out in 2019	

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.

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www.saint-gobain.com

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SAINT-GOBAIN

Communications Department
Les Miroirs
18, avenue d'Alsace
92096 la Défense Cedex - France
www.saint-gobain.com