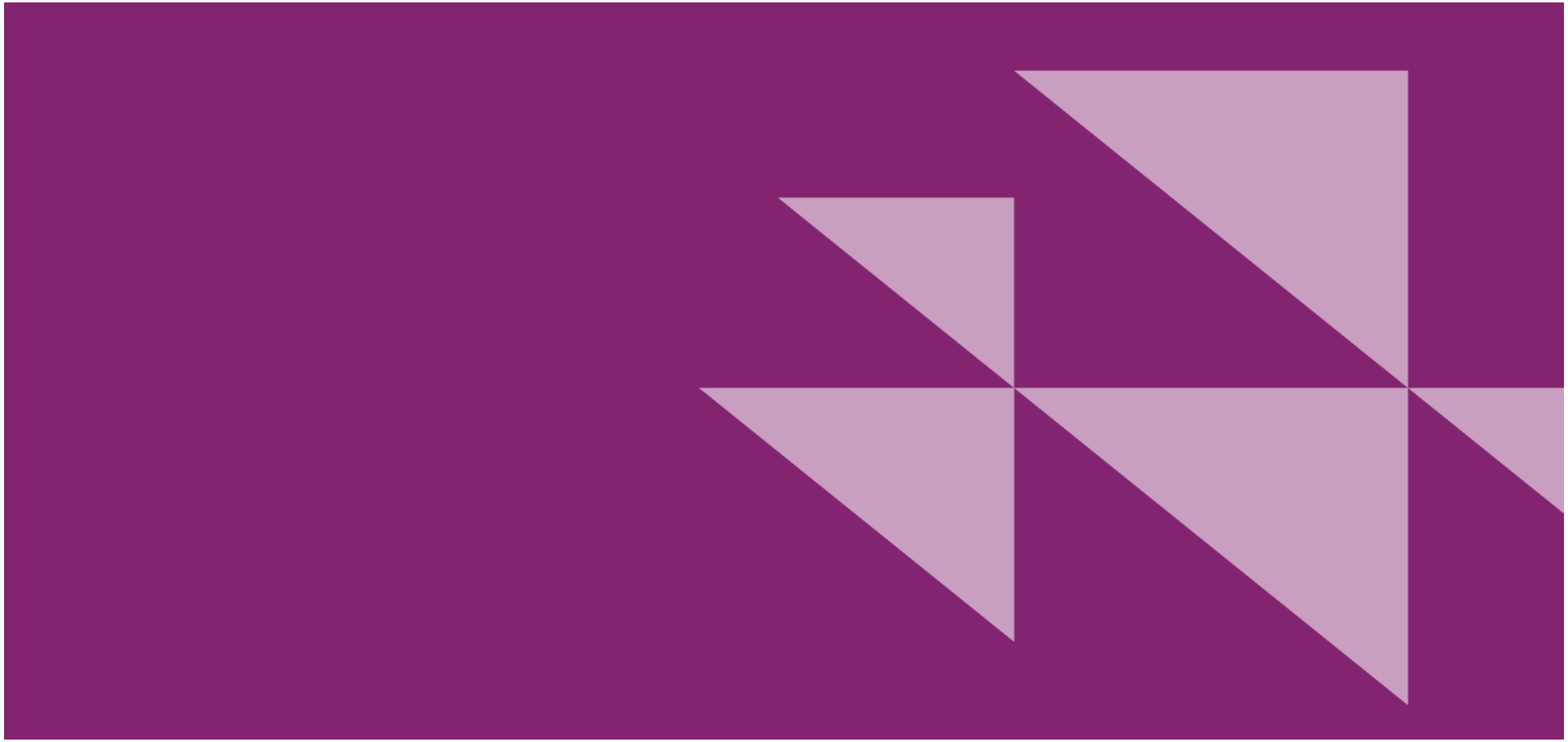
CDP Climate Change Questionnaire 2018



C0 Introduction

Introduction

(C0.1) Give a general description and introduction to your organization.

Change from 2017

No change (2017 CC0.1)

Response options

This is an open text question.
Please note that when copying from another document into the disclosure platform, formatting is not retained.

Saint-Gobain designs, manufactures and distributes innovative materials and high performance solutions that improve the wellbeing of both individuals and society as a whole. With more than 179,000 employees, Saint-Gobain is present in 67 countries and holds more than 100 brands. The Group is a worldwide leader in the habitat and construction markets, providing comfort, performance and safety while addressing the challenges of sustainable construction, resource efficiency and climate change all over the world.
As a growing number of countries pass new regulations in favor of more energy-efficient buildings, it encourages the introduction of innovative construction techniques for new buildings along with new insulation standards for renovation projects. At the same time, urbanization is a major trend that is affecting the construction market in both developed and emerging countries. The rapid exponential growth in infrastructure needs and increasing demand for energy-efficient solutions represent valuable opportunities for Saint-Gobain. With its unique positioning, Saint-Gobain is among the first to benefit from the environmentally led growth in the construction market.
Innovation is at the heart of Saint-Gobain's strategy. To support that vision and continuously improve its processes and products, Saint-Gobain invests heavily in R&D. For the past seven years, the Group has been ranked in the Top 100 Innovators by Clarivate.
Over 80% of the Group's sales occur in the construction markets, including new construction, renovation, civil engineering and infrastructure. Considerable change is on the way in interior and exterior insulation solutions. The major part of our products (flat glass, glass wool, plasterboard, exterior wall and floor coating mortars) already helps to make buildings more energy efficient for the end user and we intend to further improve their performance in the future.

The Group is organized in a regional organizational structure based with 14 general delegations representing the group in the countries where it is active and coordinates the various companies' actions. The company is rolling out its sustainable habitat strategy through three Sectors, each with its own growth drivers that contributes harmoniously to develop the strategy:

• The Innovative Materials Sector, comprising of the Flat Glass and High-Performance Materials Divisions, is spearheading Saint Gobain's advance in cutting-edge technologies. With its unique portfolio of materials and processes for the construction, transport, healthcare and industry markets, the Sector embodies the innovation-oriented culture and accounts for about two-thirds of its total research and development commitment.

• The Construction Products Sector offers acoustic and thermal insulation products, wall facings, roofing products, piping and interior and exterior building solutions that deliver a wide range of benefits, including energy savings. Its diversified business base provides a portfolio of high-profile brands like Isover, PAM, Weber, Placo®, Gyproc® and CertainTeed.

• The Building Distribution Sector, which is focused on delivering products and services to construction professionals and individuals. The Sector has a detailed knowledge of the customer's needs and expectations on new build, renovation and home improvement markets. It plays a key role in helping contractors embrace new building renovation techniques.

To showcase and monitor its strong engagement towards sustainability, Saint-Gobain has set for itself a number of ambitious targets in the areas of environment including CO_2 emissions and energy consumption. Those targets are set up for the plants being representative of the impact of the Group. In 2017, more than 500 plants are concerned. Saint Gobain's commitments to sustainability were recognized most by its integration in the Dow Jones Sustainability Index (DJSI), ranking in 2016 among the top-three global companies and the number one European company for building products. Saint-Gobain is also included on the MSCI World ESG Leaders, STOXX® Global ESG Leaders, Euronext-Vigeo Europe 120, Euronext Vigeo Eurozone 120, ESI Excellence Global d'Ethibel, ESI Excellence Europe d'Ethibel and since 2017 FTSE4Good.

We strongly recommend the reader to check our 2017 registration document before reading this full CDP document, particularly the pages: 12, 30, 36, 70-79, 109, 114-115, 140-141, 151, 167, 190, 326-329
Link to the document:
https://www.saint-gobain.com/sites/sgcom.master/files/saint-gobain_document_de_reference_2017_va.pdf

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(C0.2) State the start and end date of the year for which you are reporting data.

Change from 2017

No change (2017 CC0.2)

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Start date	End date
From: *[Sun 01 Jan 2017]*	To: *[Sun 31 Dec 2017]*

Indicate if you are providing emissions data for past reporting years

No

[Add Row]

(C0.3) Select the countries for which you will be supplying data.

Change from 2017

No change (2017 CC0.3)

Response options

Please complete the following table:

Country
Select country
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
New Zealand
Norway
Netherlands
Oman
Peru
Poland
Portugal
Qatar
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 of America
Venezuela
Vietnam
Zimbabwe

(C0.4) Select the currency used for all financial information disclosed throughout your response.

Change from 2017

Minor change (2017 CC0.4)

Response options

Please complete the following table:

Currency
Select from: €

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this value should align with your consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.

Change from 2017

Minor change (2017 CC8.1)

Response options

Select one of the following options:

- Financial control
- Operational control
- Equity share
- Other, please specify

Operational control

C1 Governance

Board oversight

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Change from 2017

Modified question (2017 CC1.1)

Response options

Select one of the following options:

- Yes
- No

Yes

(C1.1a) Identify the position(s) of the individual(s) on the board with responsibility for climate-related issues.

Question dependencies

This question only appears if you select “Yes” in response to C1.1.

Change from 2017

Modified question (2017 CC1.1a)

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Position of individual(s)	Please explain

Board/Executive board	*Climate change is a topic regularly discussed at Board level and for which the Board has full oversight. As illustration, over the reported year, the following issues related to climate change were assessed by the Board of Directors : carbon impact of Saint-Gobain solutions production, environment policy and CO_2 and energy roadmaps, CO_2 and energy R&D innovation programs.* *In addition, the directors of the Board participated, in February 2018, at a seminar organized specifically to their attention by the Chief Sustainability Officer, devoted to climate change and its consequences for businesses, with the support of external experts, recognized internationally. This seminar intended to enable each director to better understand the issues related to climate change for the Saint-Gobain Group and the consequences on its strategy.*
President	*It is the Chairman, the Chief Executive Officer and a Member of the Board. He is also member of the Strategy and CSR Committee which is responsible for reviewing the strategic plan, its potential for improvement and the strategic topics proposed by its members. He reports quarterly to the Executive Board.* *Saint-Gobain 's CEO has been very active during the COP21;in 2015, he published his book on climate change: "notre combat pour le climat".* *In 2016 he has been awarded the World GBC's David Gottfried prize. This award, created in 2011, rewards personalities who have made a unique, innovative and entrepreneurial contribution to the global cause of sustainable building development.*
Other, executive committee	*Senior Vice President in charge of Human Resources,who has the overall responsibility of the Sustainable Development department* *General Secretary of the Group in charge of Corporate Social Responsibility*

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Question dependencies

This question only appears if you select "Yes" in response to C1.1.

Change from 2017

New question

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Select from: ● Scheduled - all meetings ● *Scheduled - some meetings* ● Sporadic - as important matters arise ● Other, please specify	Select all that apply: ● *Reviewing and guiding strategy* ● *Reviewing and guiding major plans of action* ● *Reviewing and guiding risk management policies* ● Reviewing and guiding annual budgets ● Reviewing and guiding business plans ● *Setting performance objectives* ● *Monitoring implementation and performance of objectives* ● Overseeing major capital expenditures, acquisitions and divestitures ● *Monitoring and overseeing progress against goals and targets for addressing climate-related issues* ● Other, please specify	*The Board is in charge of the overall strategy regarding climate-related issues.* *The Strategy and CSR Committee of the Board of Directors, composed of three Directors including the CEO meets 6 times per year and regularly tracks the implementation of short-, medium- and long-term programs, covering also risks and opportunities. Leadership for this challenge is provided directly by the Vice President of Sustainable Development, who is a member of the Group’s Liaison Committee, which is an extended executive committee.*

Connection to other frameworks

TCFD

Governance recommended disclosure a) Describe the board’s oversight of climate related risks and opportunities.

(C1.1c) Why is there no board-level oversight of climate-related issues and what are your plans to change this in the future?

Question dependencies

This question only appears if you select “No” in response to C1.1.

Change from 2017

New question

Response options

Please complete the following table:

Text field	Select from: ● Yes, we plan to do so within the next two years ● No, we do not currently plan to do so	Text field

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(C1.2) Below board-level, provide the highest-level management position(s) or committee(s) with responsibility for climate-related issues.

Change from 2017

New question

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Sustainable Officer	Select from: ● Assessing climate-related risks and opportunities ● Managing climate-related risks and opportunities	Select from: ● *More frequently than quarterly* ● Quarterly ● Half-yearly

	• *Both assessing and managing climate-related risks and opportunities* • Other, please specify	• Annually • Less frequently than annually • As important matters arise • Not reported to the board

Connections to other frameworks

TCFD

Governance recommended disclosure b) Describe management's role in assessing and managing climate related risks and opportunities.

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored.

Change from 2017

New question

Response options

This is an open text question.

Please note that when copying from another document into the disclosure platform, formatting is not retained.

Connection to other frameworks

TCFD

Governance recommended disclosure b) Describe management's role in assessing and managing climate related risks and opportunities.

The Strategy and CSR Committee of the Board of Directors, composed of three Directors including Saint Gobain's CEO, meets 6 times per year and regularly tracks the implementation of short-, medium- and long-term programs, covering also risks and opportunities. In 2016, the Group developed its CSR dashboard under the supervision of the Board of Directors (see 2017 registration document page 109). Leadership for the climate change challenge is provided directly by the Vice President of Sustainable Development (CSO), who is a member of the Group's Liaison Committee, which is an extended executive committee.

The Chief Sustainability Officer, Vice-President, reports to the Senior Vice President in charge of Human Resources, who has the overall responsibility of the Sustainable Development department and is member of Saint-Gobain Executive Committee. This person reports to Saint-Gobain's CEO. The Chief Sustainability Officer is a member of the Group's Liaison Committee, which is an extended executive committee. The Sustainable Development department is responsible for managing the Group strategy in terms of Sustainable Development. This particularly includes, for climate change, topics such as carbon footprint of our products and achievement of our climate-related targets at production facility level.

In addition, each year, a mapping analysis of the Groups' major risks is made by the Internal Audit and Business Control Department. All the material risks that the Board of directors must be aware of are included into the mapping analysis. Climate change related risks are included in the mapping analysis of the Group's as potential material risks with the support of our CSO. The map is being reviewed by the Audit and Risks Committee and then validated by the board of directors.

Employee incentives

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

Change from 2017

No change (2017 CC1.2)

Response options

Select one of the following options:

- Yes
- No

Yes

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues.

Question dependencies

This question only appears if you select "Yes" in response to C1.3.

Change from 2017

Minor change (2017 CC1.2a)

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Who is entitled to benefit from these incentives?	Types of incentives	Activity incentivized	Comment
Select from: ● Board Chair ● Board/Executive board ● Director on board ● Corporate executive team ● Chief Financial Officer (CFO) ● Chief Operating Officer (COO) ● Chief Procurement Officer (CPO) ● Chief Risk Officer (CRO) ● Chief Sustainability Officer (CSO) ● Other C-Suite Officer ● President ● Executive officer ● Management group ● Business unit manager ● Energy manager ● Environmental, health, and safety manager ● Environment/Sustainability manager ● Facilities manager ● Process operation manager ● Procurement manager ● Public affairs manager	Select from: ● Monetary reward ● Recognition (non-monetary) ● Other non-monetary reward	Select from: ● Emissions reduction project ● Emissions reduction target ● Energy reduction project ● Energy reduction target ● Efficiency project ● Efficiency target ● Behavior change related indicator ● Environmental criteria included in purchases ● Supply chain engagement ● Other, please specify	

● Risk manager ● Buyers/purchasers ● All employees ● There are no incentives provided for the management of climate-related issues ● Other, please specify			
President	*Monetary reward*	*Emissions reduction target*	*One third of the CEO's total bonus is based on three qualitative targets, one of them being the deployment of the corporate social responsibility policy (including for climate change: sustainability of our products and CO_2 emissions targets at facility level corresponding to a 20% reduction by 2025 compared to 2010 at iso-production).*
Other, 2,105 Group officers and employees	*Monetary reward*	*Emissions reduction target*	*People entitled to that monetary reward are: high-potential managers and managers who have performed exceptionally well (260 grantees), key corporate and line executives in the Sectors and General Delegations (1,803 grantees), members of the Group Liaison Committee excluding the senior management team (31 grantees) and senior management (10 grantees), Chairman and Chief Executive Office. Since 2017, the following performance conditions are considered for CSR: the total recordable accident rate (more than 24 hours' lost and non lost time), the reduction rate of CO_2 emissions and the senior executives diversity index.*
Facility managers	*Recognition (non-monetary)*	*Efficiency project*	*Facility managers receive a recognition*

			letter in the framework of the internal program called CARE4 if they succeed in raising the energy performance of their building to the best national energy performance standard. In the end of 2017, 34 buildings were recognized as CARE4.
All employees	*Non-monetary*	*Emissions reduction project*	*The annual Emerald Awards reward Saint-Gobain sites around the world that carry out projects contributing to the reduction of their environmental impacts including energy and climate change as well as those of their manufactured products. The objectives with this competition are to raise the employee awareness on environmental stakes, enforce best practices and incentivize managers to launch and share their environmental projects. As example, in 2018, focusing on 2017 results, our Pasquill entity (Distribution Sector) in UK won the award in the category of energy efficiency for its general program on energy efficiency.*

C2 Risks and opportunities

Time horizons

(C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.

Change from 2017

New question

Response options

Please complete the following table:

Time horizon	From (years)	To (years)	Comment
Short-term	*0*	*3*	*Our environment medium-term target, including CO_2 and energy, is in 2025 compared to 2010. This 15 years period is cut in 5 periods of 3 years. During each 3 years period, the scope of sites is updated by considering the sites concerned by the environment (ie giving together an appropriate overview of the Group impact). We have entered in 2017 the 2017-2019 period with 2016 as reference year.*
Medium-term	*3*	*9*	*Our environment medium-term target, including CO_2 and energy, is in 2025 compared to 2010 at isoproduction (ie at constant production level). The target is -20% for CO_2 emissions and -15% for energy consumption.* *The Group also sets intermediate objectives for every three years period.*
Long-term	*9*	*34*	*Targets will be defined in the frame of the Science Based Targets (SBT) initiative that Saint-Gobain has officially entered in March of 2018*

Strategy recommended disclosure a) Describe the climate related risks and opportunities the organization has identified over the short, medium, and long term.

Management processes

(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.

Change from 2017

Modified question (2017 CC2.1)

Response options

Select one of the following options:

- *Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes*
- A specific climate change risk identification, assessment, and management process
- There are no documented processes for identifying, assessing, and managing climate-related issues

Connection to other frameworks

TCFD

Risk Management recommended disclosure c) Describe how processes for identifying, assessing, and managing climate related risks are integrated into the organization’s overall risk management.

(C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying, and assessing climate-related risks.

Question dependencies

This question only appears if you select “Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes” or “A specific climate change risk identification, assessment, and management process” in response to C2.2.

Change from 2017

Modified question (2017 CC2.1a)

Response options

Please complete the following table:

Frequency of monitoring	How far into the future are risks considered?	Comment
Select from: ● Six-monthly or more frequently ● Annually ● Every two years ● Not defined ● Never	Select from: ● Up to 1 year ● 1 to 3 years ● 3 to 6 years ● > 6 years ● Unknown	Text field
Six-monthly or more frequently	*> 6 years*	*The Group conducts risks assessment over the short, mid, and long term, taking into account the wide range of climate-change related risks.* *This assessment is mainly led by the Risk and Insurance department as well as at Business Control department.* *The Group deals with increased risks of loss due to climate change (flooding, rainfall or storm) within the scope of its industrial and distribution risks prevention policy. This takes into account the increase in extreme climate events, which specifically lead both to damage that may be caused to the facilities or stock and to interruptions in production or supplies. The degree of exposure and vulnerability of the sites to natural events is updated regularly together with the action plan with a view to improving their level of prevention and protection.* *Saint-Gobain internal control and risk management system is continuously updated, taking into account any additional risk that may emerge from climate change.*

(C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.

Question dependencies

This question only appears if you select “Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes” or “A specific climate change risk identification, assessment, and management process” in response to C2.2.

Change from 2017

New question

Response options

This is an open text question.
Please note that when copying from another document into the disclosure platform, formatting is not retained.

Connection to other frameworks

TCFD

Strategy recommended disclosure a) Describe the climate related risks and opportunities the organization has identified over the short, medium, and long term.
Risk Management recommended disclosure a) Describe the organization’s processes for identifying and assessing climate-related risks.

The Sustainability Chief Officer is in charge of the coordination of the climate-related risks (and opportunities). The Sustainable Development department is at the origin of the use of an internal carbon price whose aims at reducing financial risks by already applying a common carbon price at worldwide level, helping in identifying growth opportunities in low-carbon sectors, redirecting industrial and R & D investments, and prioritizing actions to reduce CO_2 emissions.

The Risk and Insurance department manages risks of property damage and related business interruption. The Group deals with increased risks of loss due to climate change (flooding, rainfall or storm) within the scope of its industrial and distribution risks prevention policy. This takes into account the increase in extreme climate events, which specifically lead both to damage that may be caused to the facilities or stock and to interruptions in production or supplies. The degree of exposure and vulnerability of the sites to natural events is updated regularly through adapted audits and self-assessments through an internal risk grading tool. This leads to definition and update of actions plan with a view to improving the level of prevention and protection. Facilities must apply the Group Loss Prevention Manual and Business Continuity Plans are defined at site level.

Saint-Gobain's internal control and risk management system is in charge of considering whether a risk has or not a - an impact on our business, including possible impacts on our business coming from the value chain (the impact being assessed from a financial, human, environmental and reputational perspectives). We use the internal control and risk management framework defined by the French securities regulator (Autorité des marchés financiers - AMF), as updated in July 2010, and on the 2013 update to the framework from the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The system complies with the legal requirements applicable to companies listed on the Euronext Paris regulated market.

Each year, a mapping analysis of the Groups' major risks is made by the Internal Audit and Business Control Department. All the material risks that the Board of directors must be aware of are included into the mapping analysis. Climate change related risks are included in the mapping analysis of the Group's as potential material risks. The map is being reviewed by the Audit and Risks Committee and then validated by the board of directors. In that context, the threshold of 50 million euros is considered as a substantial financial impact threshold.

(C2.2c) Which of the following risk types are considered in your organization's climate-related risk assessments?

Question dependencies

This question only appears if you select "Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes" or "A specific climate change risk identification, assessment, and management process" in response to C2.2.

Change From 2017

New question

Response options

Please complete the following table:

Risk type	Relevance & inclusion	Please explain
	Select from: ● Relevant, always included ● Relevant, sometimes included ● Relevant, not included ● Not relevant, included ● Not relevant, explanation provided ● Not evaluated	

Current regulation	*Relevant, always included*	*The Legal Department anticipates and monitors new environmental regulations, those are then considered if applicable at appropriate level.* *As we are present in 67 countries, current regulation related risks are assessed and managed locally by the Delegations and Activities. 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/local laws and regulations of the country where such sites are located.* *As illustration, we carry out a centralized monitoring to evaluate our CO_2 position in the EU-ETS: CO_2 emissions are estimated by our activities and communicated to our Purchasing Department which coordinates the operations on the registries.*
Emerging regulation	*Relevant, always included*	*The Legal Department anticipates and monitors new environmental regulations. As we are present in 67 countries, current regulation related risks are assessed and managed locally by the Delegations and Activities. 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. As illustration, we carry out a centralized monitoring to evaluate our CO_2 position in the EU-ETS: CO_2 emissions, not only current but also forecasted, are estimated by our activities and communicated to our Purchasing Department which coordinates the operations on the registries. The follow-up also includes the future regulation in terms of EU-ETS credits allocation.*
Technology	*Relevant, always included*	*Part of the answer for going to lower carbon content of Saint-Gobain products will need some changes related to*

		technology. This is today shared at each level (from plant to corporate) by energy&CO_2 experts for existing best practices. R&D is also fully involved not only for process breakthrough technologies (as illustration, a specific transversal CO_2&energy program is on-going) but also by considering eco-innovative solutions for new products.
Legal	*Not relevant, explanation provided*	*We are constantly raising our norms above the current regulation to lead the Group vision of sustainability construction. We regularly assess regulation evolution both internally and through business associations.* *We consider this risk as "Not relevant" because we have undertaken a comprehensive risk assessment and we consider the related consequences as appropriately managed.*
Market	*Relevant, always included*	*Market is an opportunity rather than a risk: market is growing especially for sustainable construction solutions which are one of our core businesses and one of our main activities. The trend is toward more insulation and reduced water stress which are opportunities for our insulating and pipe activities. It offers the Group a major opportunity for differentiation based on its portfolio of innovative, sustainable solutions for the construction and renovation markets.* *Nevertheless, we may face some risk related to the increase of raw material cost, such as energy utilities. Our Purchasing department manages such risk through a risk management policy detailed per energy including long-term contracts with suppliers whenever interesting and possible.*
Reputation	*Not relevant, explanation provided*	*We are promoting sustainable construction with the main actors of the sustainable construction such as Green Building Councils.* *Furthermore, we have a risk policy ensuring risk*

		assessment and management and action plans for each risk assessed, including climate change related risk therefore risk related to brand image is minimized. Moreover, we have set targets to contribute to the reduction of CO_2 emissions and energy consumption. We consider this risk as "Not relevant" because we have undertaken a comprehensive risk assessment and we consider the related consequences as appropriately managed.
Acute physical	*Relevant, always included*	*Although our facilities are spread over a large geographical perimeter, we may be concerned by acute physical events at local level. We assess our exposure to acute physical climate-related risks (such as floods and storms) through regular audits and self-assessment questionnaires updated on an annual basis. Facilities must apply the Group Loss Prevention Manual and Business Continuity Plans are defined for each. At corporate level, the Risk and Insurance department manages risks of property damage and related business interruption (loss prevention and loss management) As illustration, in 2017, it registered and managed claims amounting to 2,5 millions € of damages due to four storms.*
Chronic physical	*Relevant, always included*	*Despite our facilities are spread over a large geographical perimeter, we may be concerned by chronic physical events at local level. We assess our exposure to chronic physical climate-related risks (such as drought) as for our acute physical risks. Regarding water stressed areas, the level of risk of each facility has been assessed. Following issuance of our Water policy in 2011, our water target has been fixed (-80% of discharges between 2025 and 2010 at iso-*

		production) and covers the sites concerned by the environment (more than 500 plants representative of the Group impact). Water stress is a criteria for entering in the scope. In 2017, some 60 sites withdrawing more than 5,000 m^3 of water each year and representing around 15% of the Group's water withdrawals were located in high-risk or very high-risk areas.
Upstream	*Not relevant, explanation provided*	*There may be a risk for supplying our factories but we do not consider that this risk is relevant at company level.* *We indeed have undertaken a comprehensive risk assessment and we consider the related consequences as appropriately managed.* *The risks of purchasing categories integrate environmental performance in particular carbon and water footprints. The mapping evaluation is based on international and recognized sources. It allows for the identification and evaluation of risks connected to suppliers and thus determines priorities for action and engages a constructive dialogue for improvement.*
Downstream	*Not relevant, explanation provided*	*Downstream is mainly linked to the distribution of our products.* *We consider this risk as "Not relevant" because we have undertaken a comprehensive risk assessment and we consider the related consequences as appropriately managed.* *The magnitude of this type of risks is not significant due to the large geographical spread of our facilities.*

Connection to other frameworks

TCFD

Risk Management recommended disclosure a) Describe the organization's processes for identifying and assessing climate-related risks.

Risk Management recommended disclosure b) Describe the organization’s processes for managing climate related risks.

(C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

Question dependencies

This question only appears if you select “Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes” or “A specific climate change risk identification, assessment, and management process” in response to C2.2.

Change from 2017

Modified question (2017 CC2.1b, CC2.1c)

Response options

This is an open text question.
Please note that when copying from another document into the disclosure platform, formatting is not retained.

Connection to other frameworks

TCFD

Risk Management recommended disclosure b) Describe the organization’s processes for managing climate related risks.

The Strategy and CSR Committee of the Board of Directors regularly tracks the implementation of short-, medium- and long-term programs. Leadership for this challenge is provided directly by the Vice President of Sustainable Development, who is a member of the Group’s Liaison Committee; this covers risks and opportunities.

Below board level, climate related risks and opportunities processes are mainly managed by the following entities:

a) *The Sustainability Chief Officer, who is in charge of the coordination of the climate-related risks and opportunities.*
Tools used to reduce our CO_2 emissions are the following:

- an Energy, Atmospheric Emissions and Climate Change policy to reduce our energy consumption and greenhouse gas emissions, including medium-term targets, as well as corresponding organization, from facility to corporate. A water policy to reduce water withdrawal particularly for our sites located in water stressed areas.
- an internal carbon price to speed up the Group’s transition to low-carbon technologies. Saint-Gobain has set two internal carbon price levels. The first is fixed at €30 per ton and applies to industrial investments. 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. Setting such internal carbon price is a good case study for managing transition risk.

The CSO has also in charge opportunities related to climate change: the trend of more insulation in building construction and water stress offers opportunities for our insulating and pipe activities.
The Sustainable development team defines and coordinates the sustainable construction strategy, provides methodology and tools for sustainable solutions development. At country level, 38 Habitat Committees identify opportunities and define methods to manage them. Each Activity conducts opportunities identification processes through their own Marketing and R&D Departments. We have assessed that, after a use for an average of three months, the Saint-Gobain Group's insulation solutions offset the emissions linked to the whole of their life cycle.

b) entities in charge of assessing the risks associated with climate change and its consequences at Group level:
- the general objective of internal control is to make sure that the risks to which the Group is exposed are managed; for that purpose, a mapping analysis of the Groups' potential risk is updated on a yearly basis by the Internal Audit and Risk Management department. Climate change related risks are included in the mapping analysis of the Group's as material risk. The map of risks is presented to the Risk & Audit Committee and then validated by the Board of Directors
- The Risk and Insurance department manages risks of property damage and related business interruption (loss prevention and loss management). The Group deals with increased risks of loss due to climate change (flooding, rainfall or storm) within the scope of its industrial and distribution risks prevention policy. This takes into account the increase in extreme climate events, which specifically lead both to damage that may be caused to the facilities or stock and to interruptions in production or supplies. The degree of exposure and vulnerability of the sites to natural events is updated regularly through adapted audits and self-assessments. This leads to the definition and update of actions plan with a view to improving the level of prevention and protection. Facilities must apply the Group Loss Prevention Manual and Business Continuity Plans are defined at site level.
A good case study regarding natural event risk management is how we have managed the flooding from the Loing and Seine rivers in 2016, applying existing Continuity Plans and leading to update of risk action plans as well as better considering this risk in our future investments.

c) Transversal functions such as R&D and Purchasing include climate related risks and opportunities in their processes:
- Innovation is our key driver, with 75,2M€ million spent on environment-related R&D in 2017. From 2016, a cross-functional R&D program, "Improvement in our CO_2 footprint" coordinates and increases R&D efforts dedicated to improving the manufacturing processes, thus reducing GHG emissions. An Eco-Innovation approach and toolbox helps Activities increase market shares of our products with an improved environmental and social impact.
-The risks of purchasing categories integrate environmental performance in particular carbon and water footprints. The mapping evaluation is based on international and recognized sources. It allows for the identification and evaluation of risks connected to suppliers and thus determines priorities for action and engages a constructive dialogue for improvement.

(C2.2e) Why does your organization not have a process in place for identifying, assessing, and managing climate-related risks and opportunities, and do you plan to introduce such a process in the future?

Question dependencies

This question only appears if you select “There are no documented processes for identifying, assessing, and managing climate-related issues” in response to C2.2.

Change from 2017

Modified question (2017 CC2.1d)

Response options

Please complete the following table:

Select from: ● We are planning to introduce a risk identification, assessment, and management process in the next two years ● Important but not an immediate business priority ● Judged to be unimportant, explanation provided ● Lack of internal resources ● Insufficient data on operations ● No instruction from management ● Other, please specify	Text field

Risk disclosure

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Change from 2017

Modified question (2017 CC5.1)

Response options

Select one of the following options:

Yes

Connection to other frameworks

TCFD

Strategy recommended disclosure a) Describe the climate related risks and opportunities the organization has identified over the short, medium, and long term.

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Question dependencies

This question only appears if you select “Yes” in response to C2.3.

Change from 2017

Modified question (2017 CC5.1a, CC5.1b, CC5.1c)

Response options

Please complete the following table. The table is displayed over several rows for readability.You are able to add rows by using the “Add Row” button at the bottom of the table.

Identifier	Where in the value chain does the risk driver occur?	Risk type	Primary climate-related risk driver	Type of financial impact driver	Company- specific description	Time horizon
	Select from: ● Direct operations ● Supply	Select from: ● Transition risk ● Physical risk	See drop-down options below	See drop-down options below	Text field [maximum 2,400 characters]	Select from: ● Current ● Short-term ● Medium-

	chain ● Customer					term ● Long-term ● Unknown
1	*Direct operations*	*Transition risk*	*Policy and legal: Increased pricing of GHG emissions*	*Policy and legal: Increased operating costs (e.g., higher compliance costs, increased insurance premiums)*	*Since 2013, we have entered the Phase III of the EU-ETS (2013-2020). About 40% of our total scope 1 CO_2 emissions are concerned by the scheme. After the Phase III of the EU-ETS we can expect a decrease of the amount of free allocations we will receive, which would lead to increased operational costs. The uncertainty over the amount of quota allocated and the price of the carbon tons constitutes a risk. The cap and trade schemes outside Europe represent a minor part of our total scope 1 CO_2 emissions.*	*Long-term*
2	*Direct operations*	*Transition risk*	*Technology: Costs to transition to lower emissions technology*	*Technology: Capital investments in technology development*	*We have to lead the transition toward lower emission technology to reduce the carbon footprint of our products and solutions and also reach our target objectives for CO_2 emission reduction and energy consumption at facility level.*	*Current*
3	*Supply Chain*	*Transition risk*	*Market: Increased cost of raw materials*	*Market: Increased production costs due to changing input prices (e.g., energy, water) and output requirements (e.g., waste treatment)*	*We could face increase in costs of raw materials because of climate change (energy mix evolution, water scarcity, …). Energy shortage is a specific risk for activities that request a continuous process.*	*Medium-term*

4	*Direct operations*	*Physical risk*	*Acute: Increased severity of extreme weather events such as cyclones and floods*	*Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions)*	*This may affect some of our sites located in North and South America, Europe and northern Asia. Particularly at risk are the sites situated in floodplains in these areas , as well as those situated in areas prone to flash floods after torrential rains*	*Current*
5	*Direct operations*	*Physical risk*	*Chronic: Other*	*Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions)*	*Despite our facilities are spread over a large geographical perimeter, we may be concerned by chronic physical events at local level. We assess our exposure to chronic physical climate-related risks as for our acute physical risks. Drought is the main risk that we could face in the future.*	*Medium-term*

Likelihood	Magnitude of impact	Potential financial impact	Explanation of financial impact	Management method	Cost of management	Comment
Select from: ● Virtually certain ● Very likely ● Likely ● More likely than not ● About as likely as not ● Unlikely ● Very unlikely ● Exceptionally unlikely ● Unknown	Select from: ● High ● Medium-high ● Medium ● Medium-low ● Low ● Unknown	Numerical field [enter a number from 0 to 99,999,999,999 using up to 2 decimal places and no commas]	Text field [maximum 1,000 characters]	Text field [maximum 2,400 characters]	Numerical field [enter a number from 0-999,999,999,999 using a maximum of 2 decimal places and no commas]	Text field [maximum 1,000 characters]

Virtually certain	*Medium*	*30,000,000*	*Considering the lack of free credits using last updated knowledge of EU-ETS phase IV rules (still quite uncertain) and a cost of 25€/tCO_2 for EU allowance.* *Estimate on annual basis*	*We carry out a centralized monitoring to evaluate our CO_2 position in the EU-ETS. CO_2 emissions are estimated and communicated to our Purchasing Department which coordinates the operations on the registries. Environment, Purchasing, Finance and Doctrine functions are represented in a global steering committee covering all trading schemes. Our global CO_2 steering committee is in charge of analyzing our CO_2 position and managing the Group's allowances. An internal shadow carbon price for investment and R&D supports the development of low carbon technologies in order to reduce the potential financial risk.*	*2,500*	*This amount is devoted annually for the CO_2 steering committee*
Likely	*Medium*	*17,500,000*	*Based on "Cumulative Cost Assessment (CCA) of the EU Glass Industry, EU, June 2017" using internal activity data for our main industrial activity (Glass).* *Estimate on annual basis*	*Our facilities consider best available technologies and we have a specific cross-business R&D program for improving the CO_2 footprint of our manufacturing processes. We also have set an internal carbon price to move faster towards lower emissions technologies.* *We are using more and more green electricity (from energy certificates as well as from windfarm or solar projects for example in the US or in India)*	*75,200,000*	*This annual amount is linked to our R&D budget for environment*
Likely	*Medium*	*9,000,000*	*Potential impact for the Group when the brent cost increases by 1€/bbl*	*The impact for the Group is medium due to the large geographical spread of its activities. For energy, we develop long-term contracts linked to renewable energy. For water, we reduce our dependency through lower consumption levels with a specific focus on water stressed areas.*	*91,000*	*Considered as the cost of two full-time equivalent for managing energy purchasing contracts at*

						corporate level
Very Likely	*Medium*	*2,500,000*	*In total in 2017 we registered 2,5 millions € losses due to climate-related events (4 storms).* *Another cost indication can be found in the main last event for the Group regarding flooding, which affected particularly 10 sites along the Loing and the Seine rivers in June 2016 in France. In total, 3,1 million € were lost (600 000€ for operating losses and 2,5 million € of damage).*	*The Saint-Gobain Loss Prevention policy gives a firm focus to this category of risks, whether in terms of choice of locations, of facility design and layouts, or in terms of risk mitigation in existing locations.* *We are contracting with an external third party for prevention and engineering audits mapping the exposure of sites to natural hazards (flood, storm). The biggest sites are assessed annually and the others a bit less frequently.* *In addition, each site has to fill annually an auto-evaluation risk grading which is a 300 question survey, covering potential climate risks including the place of location, facility design etc. An action plan can be derived for each potential risk. We are also currently working with Axa to assess a flood risk mapping tool to identify priority sites and define action plans with those sites for 2018.* *The sites in exposed areas have to establish prevention, protection and reinforced Business continuity plan to reduce the closing time and to limit the loss of revenue.*	*50,000*	*The indicated cost is linked to the contract that we have with Axa for improving our risk mapping*
More likely than not	*Medium-high*	*6,100,000*	*This amount illustrates the cost of a major investment that we have achieved for re-using water and decreasing the Group withdrawal by*	*Particular attention is paid to limiting the Group's withdrawals in water stressed areas. Saint-Gobain uses the World Resources Institute's "Aqueduct" atlas of the world, which allows each of the sites to classify its water risk from "low" to*	*600,000*	*The cost is linked to the management of the project illustrating the potential financial impact. It is estimated*

			12%,	*“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 2017, some 60 sites withdrawing more than 5,000 m3 of water each year and representing around 15% of the Group’s water withdrawals were located in high-risk or very high-risk areas. .The Group aims at reducing water discharges by 80% between 2010 and 2025 at iso-production.* *This water target covers the sites concerned by the environment (more than 500 plants representative of the Group impact). Water stress is a criteria for entering in the scope* *In-house water recycling is encouraged, particularly through the use of closed-loops, as it considerably limits withdrawals from natural resources. Our Water standard also requires that all sites identify the sources of water affected by withdrawals and discharges. Where natural sources are significantly affected, a detailed environmental impact study must be available.*		*at around 10%.*

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Primary climate-related risk driver (column 4)

Select one of the following options:

Transition risks	Physical risks
● Policy and legal: Increased pricing of GHG emissions ● Policy and legal: Enhanced emissions-reporting obligations ● Policy and legal: Mandates on and regulation of existing products and services ● Policy and legal: Exposure to litigation ● Policy and legal: Other ● Technology: Substitution of existing products and services with lower emissions options ● Technology: Unsuccessful investment in new technologies ● Technology: Costs to transition to lower emissions technology ● Technology: Other ● Market: Changing customer behavior	● Acute: Increased severity of extreme weather events such as cyclones and floods ● Acute: Other ● Chronic: Changes in precipitation patterns and extreme variability in weather patterns ● Chronic: Rising mean temperatures ● Chronic: Rising sea levels ● Chronic: Other

• Market: Uncertainty in market signals • Market: Increased cost of raw materials • Market: Other • Reputation: Shifts in consumer preferences • Reputation: Stigmatization of sector • Reputation: Increased stakeholder concern or negative stakeholder feedback • Reputation: Other	

Type of financial impact driver drop-down options (column 5)

Select one of the following options:

Transition risks	Physical risks
• Policy and legal: Increased operating costs (e.g., higher compliance costs, increased insurance premiums) • Policy and legal: Write-offs, asset impairment, and early retirement of existing assets due to policy changes • Policy and legal: Increased costs and/or reduced demand for products and services resulting from fines and judgments • Technology: Write-offs and early retirement of existing assets due to technology changes • Technology: Reduced demand for products and services • Technology: Research and development (R&D) expenditures in new and alternative technologies • Technology: Capital investments in technology development • Technology: Costs to adopt/deploy new practices and processes • Market: Reduced demand for goods and/or services due to shift in consumer preferences • Market: Increased production costs due to changing input prices (e.g., energy, water) and output requirements (e.g., waste treatment) • Market: Abrupt and unexpected shifts in energy costs • Market: Change in revenue mix and sources resulting in decreased revenues • Market: Re-pricing of assets (e.g., fossil fuel reserves, land valuations, securities valuations) • Reputation: Reduced revenue from decreased demand for goods/services • Reputation: Reduced revenue from decreased production capacity (e.g., delayed planning approvals, supply chain interruptions) • Reputation: Reduced revenue from negative impacts on workforce management and planning (e.g., employee attraction and retention)	• Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions) • Reduced revenue and higher costs from negative impacts on workforce (e.g., health, safety, absenteeism) • Write-offs and early retirement of existing assets (e.g., damage to property and assets in "high-risk" locations) • Increased operating costs (e.g., inadequate water supply for hydroelectric plants or to cool nuclear and fossil fuel plants) • Increased capital costs (e.g., damage to facilities) • Reduced revenues from lower sales/output • Increased insurance premiums and potential for reduced availability of insurance on assets in "high-risk" locations • Other please specify,

• Reputation: Reduction in capital availability • Other, please specify	

Connection to other frameworks

TCFD

Strategy recommended disclosure a) Describe the climate related risks and opportunities the organization has identified over the short, medium, and long term.

(C2.3b) Why do you not consider your organization to be exposed to climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Question dependencies

This question only appears if you select “No” in response to C2.3.

Change from 2017

Modified question (2017 CC5.1d, CC5.1e, CC5.1f)

Response options

Please complete the following table:

Select from: • Risks exist, but none with potential to have a substantive financial or strategic impact on business • Evaluation in process • Not yet evaluated • Other, please specify	Text field

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Opportunity disclosure

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Change from 2017

Modified question (2017 CC6.1)

Response options

Select one of the following options:

Yes

Connection to other frameworks

TCFD

Strategy recommended disclosure a) Describe the climate related risks and opportunities the organization has identified over the short, medium, and long term.

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Question dependencies

This question only appears if you select “Yes” in response to C2.4.

Change from 2017

Modified question (2017 CC6.1a, CC6.1b, CC6.1c)

Response options

Please complete the following table. The table is displayed over several rows for readability.You are able to add rows by using the “Add Row” button at the bottom of the table.

Identifier	Where in the value chain does the opportunity occur?	Opportunity type	Primary climate-related opportunity driver	Type of financial impact driver	Company-specific description	Time horizon
	Select from: ● Direct operations ● Supply Chain ● Customer	Select from: ● Resource efficiency ● Energy source ● Products and services ● Markets ● Resilience ● Other, please specify	See drop-down options below	See drop-down options below	Text field [maximum 2,400 characters]	Select from: ● Current ● Short-term ● Medium-term ● Long-term
1	*Direct operations*	*Resource efficiency*	*Use of recycling*	*Reduced operating costs (e.g., through efficiency gains and cost reductions*	*Faced with a decline in raw materials, the sustainable management of resources makes it possible to ensure the competitiveness and continuity of the Group's activities by securing supplies and anticipating changes in legislation and the depletion of natural resources.* *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.* *The use of recycled raw materials in processes makes it possible to reduce energy consumption, particularly for glass fusion. 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 will therefore have a positive effect on emissions.*	*Current*
2	*Direct operations*	*Resource efficiency*	*Reduced water usage and consumption*	*Reduced operating costs (e.g., through efficiency gains and cost reductions)*	*We have a water program policy aiming at reducing our water consumption. By consuming less water we are less dependent on the sites most exposed to water scarcity and*	*Medium-term*

					reduce the risk of production cost increase.	
3	*Customer*	*Products and services*	*Development of climate adaptation and insurance risk solutions*	*Increased revenue through new solutions to adaptation needs (e.g., insurance risk transfer products and services)*	*Changes in precipitation patterns will change the distribution of surface water. Several semi-arid countries (e.g. Mediterranean basin, West of USA, Austral Africa, North East of Brazil,…), will be affected by a diminution of water resources. Consequently, the need for new water infrastructure may increase. This represents a potential sales increase for our Pipe Division, which manufactures products for water-supply, irrigation and sewer networks.*	*short-term*
4	*Customer*	*Products and services*	*Development and/or expansion of low emission goods and services*	*Increased revenue through demand for lower emissions products and services*	*The demand for low emission goods and services is increasing through stricter regulations and a shift of consumer preferences.* *Our eco-innovation policy and our R&D investments are turned toward more product efficiency and low emission products.* *For example we are working on lighter windshield to reduce CO_2 emissions from cars.* *Another very relevant example is the strong benefit of using our building insulation products to decrease the energy consumption and its related CO_2 emissions, supported by local/regional regulation. Local conditions may also increase the demand particularly in emerging countries (rapid urbanization, changing temperatures, rising sea levels,…).* *After a use for an average of three months, the Saint-Gobain Group's insulation solutions offset the emissions linked to the whole of their life cycle.*	*Current*
5	*Direct operations*	*Resilience*	*Participation in renewable energy programs and adoption of energy-efficiency measures*	*Increased reliability of supply chain and ability to operate under various conditions*	*In the frame of our CO_2 and energy policy, we have a target of 15% reduction of energy consumption in 2025 compared to 2010 at iso-production. Reaching this target will help the Group being more resilient in a worldwide context of fuel mix evolution*	*Medium-term*

Likelihood	Magnitude of impact	Potential financial impact	Explanation of financial impact	Strategy to realize opportunity	Cost to realize opportunity	Comment
Select from: ● Virtually certain ● Very likely ● Likely ● More likely than not ● About as likely as not ● Unlikely ● Very unlikely ● Exceptionally unlikely ● Unknown	Select from: ● High ● Medium-high ● Medium ● Medium-low ● Low ● Unknown	Numerical field [enter a number from 0 to 99,999,999,999 using up to 2 decimal places and no commas]	Text field [maximum 1,000 characters]	Text field [maximum 2,400 characters]	Numerical field [enter a number from 0 to 99,999,999,999 using up to 2 decimal places and no commas]	Text field [maximum 1,000 characters]
Virtually certain	*Low*	*2,650,000*	*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. The financial potential given is based on a 1% saving of natural gas for our flat glass activity.*	*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 Flat Glass Activity has optimized its logistics to promote the recovery of cullet across the entire value chain where the Group is present and especially between glass processing sites (manufacturing windshields or windows, for example) and glass furnaces. In addition to this, systems for recovering windshields or windows are being promoted in the countries where glass furnaces are capable of melting the post-consumer cullet collected.*	*45,500*	*Cost of one full-time equivalent for managing the cullet recycling at French level*

				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. *On the international level, Saint-Gobain joined at the end of 2017 the Factor 10 program of the World Business Council for Sustainable Development relative to the circular economy.*		
Very likely	*Medium*	*22,000,000*	*As illustration, we have saved ~11Mm^3 per year of withdrawed water between 2015 and 2017 thanks to water recycling projects. Using a 2€/m^3 cost.*	*Through its signature of the CEO Water Mandate, Saint-Gobain forms part of the Alliance of Businesses for Water and Climate Change. This Alliance encourages signatories to measure their water footprint and to reduce their impact.* *Through its water policy deployment, the Group has defined medium-term target with the reduction of its discharge by 80% in 2025 vs 2010, at iso-production.*	*6,100,000*	*This amount illustrates the cost of a major investment that we have achieved for re-using water and being the main driver for the indicated potential cost.*
Very likely	*Medium*	*58,340,000*	*The provided data for the potential impact corresponds to 1% increase of our 2017 sales of our "exterior products" activity which includes the pipe activity.*	*Our Pipe division monitors marketing, technical and environmental developments to identify infrastructure needs, environmental changes or new regulations that may increase demand*	*0*	*There is no specific cost to realize opportunity. The opportunity comes from the need of our customers due to the consequences of the climate change.*
Very likely	*High*	*326,500,000*	*We are expecting increased demand for our wide range of sustainable products, notably for our products related to sustainable habitat solutions and energy efficiency. The habitat market currently represents around 80% of our total*	*For the past seven years, the Group has been ranked in the Top 100 Innovators by Clarivate. Since 2012, an eco-innovation approach is implemented to develop and distribute eco-friendly products. More than 700 employees,*	*446,000,000*	*We spent €446M on research and development expenses in 2017.*

			market, corresponding to sales of approximately 32650M€. An increase in demand of 1% could therefore increase Group sales by 326,5M€.	*mainly in the marketing and R&D teams, have received eco-innovation training in 2017. We perform a continuous strategic watch, which helps us anticipate customers' needs. We developed in 2017 the SCORE methodology analyzing a product over the entirety of its life cycle from two perspectives:* *- its environmental and social impacts, from the extraction of the raw materials until it leaves the factory;* *- its contribution to making the building more sustainable.* *The methodology covers a broad range of topics identified as priorities for stakeholders : global warming potential, energy consumption, energy savings, other carbon benefits (renewable energies, carbon capture).* *Saint-Gobain has been involved in local efforts to promote sustainable buildings by joining 42 Green Building Councils (GBCs). We are a World GBC Europe Regional Network Partner, and a sponsor of World GBC's Better Places for People campaign, as well as a Corporate Advisory Board member (through our Sustainable Development VP). Saint-Gobain provided active support for a number of WGBC campaigns, like NET0 (promoting and supporting the acceleration of net zero carbon buildings) and likeThe Energy Efficiency Mortgage Action Plan (creating a standardized energy efficient mortgage).*		*A large part of this amount was dedicated to energy efficient products. The cost for association actions limited to subscriptions.*

Likely	*Medium-Low*	*12,300,000*	*15% energy consumption reduction on natural gas (30€/MWh) and on electricity (50€/MWh). Plan of actions over 15 years.*	*To reach this target, we are using our industrial equipment more closely to the technical limit to eliminate energy waste. All possible energy waste is tracked to be eliminated.* *The deployment of the World Class Manufacturing (WCM) program to all of the Group's industrial sites is a driver for progress.* *The Group encourages energy audits on its sites and at the end of 2017, 90 sites of the "environment concerned scope" were certified to ISO 50001.* *In addition, the Insulation Activity has launched a process of energy audits 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 Available Techniques (BAT) and Practices and then progressively upgrade them at an economically acceptable cost, in accordance with the Group's environmental vision. A BAT deployment plan is defined, updated annually and included in the three-year strategic plan. For example, in the renovation of the flat glass float in Aniche, France, the industrial machinery was fully modernized at a cost of €30 million. Compared with the old facility, the resulting reduction in energy consumption is in the region of 20%; for CO_2 emissions, it is 38 %.*	*75,200,000*	*R&D investments related to environment/energy in 2017.*

Primary climate-related opportunity driver drop-down options (column 4)

Select one of the following options:

Resource efficiency ● Use of more efficient modes of transport ● Use of more efficient production and distribution processes ● Use of recycling	Products and services ● Development and/or expansion of low emission goods and services ● Development of climate adaptation and insurance risk solutions ● Development of new products or services through R&D and innovation

• Move to more efficient buildings • Reduced water usage and consumption • Other Energy source • Use of lower-emission sources of energy • Use of supportive policy incentives • Use of new technologies • Participation in carbon market • Shift toward decentralized energy generation • Other	• Ability to diversify business activities • Shift in consumer preferences • Other Markets • Access to new markets • Use of public-sector incentives • Access to new assets and locations needing insurance coverage • Other Resilience • Participation in renewable energy programs and adoption of energy-efficiency measures • Resource substitutes/diversification • Other

Type of financial impact driver drop-down options (column 5)

Select one of the following options:

Resource efficiency • Reduced operating costs (e.g., through efficiency gains and cost reductions) • Increased production capacity, resulting in increased revenues • Increased value of fixed assets (e.g., highly rated energy-efficient buildings) • Benefits to workforce management and planning (e.g., improved health and safety, employee satisfaction resulting in lower costs) Energy source • Reduced operational costs (e.g., through use of lowest cost abatement) • Reduced exposure to future fossil fuel price increases • Reduced exposure to GHG emissions and therefore less sensitivity to changes in cost of carbon • Returns on investment in low-emission technology • Increased capital availability (e.g., as more investors favor lower-emissions producers) • Reputational benefits resulting in increased demand for goods/services	Products and services • Increased revenue through demand for lower emissions products and services • Increased revenue through new solutions to adaptation needs (e.g., insurance risk transfer products and services) • Better competitive position to reflect shifting consumer preferences, resulting in increased revenues Markets • Increased revenues through access to new and emerging markets (e.g., partnerships with governments, development banks) • Increased diversification of financial assets (e.g., green bonds and infrastructure) Resilience • Increased market valuation through resilience planning (e.g., infrastructure, land, buildings) • Increased reliability of supply chain and ability to operate under various conditions • Increased revenue through new products and services related to ensuring resiliency

	Other, please specify

Connection to other frameworks

TCFD

Strategy recommended disclosure a) Describe the climate related risks and opportunities the organization has identified over the short, medium, and long term.

(C2.4b) Why do you not consider your organization to have climate-related opportunities?

Question dependencies

This question only appears if you select “No” or “Yes, we have identified opportunities but are unable to realize them” in response to C2.4.

Change from 2017

Modified question (2017 CC6.1d, CC6.1e, CC6.1f)

Response options

Please complete the following table:

Select from: • Opportunities exist, we are unable to realize them • Opportunities exist, but none with potential to have a substantive financial or strategic impact on business • Evaluation in progress • Judged to be unimportant • No instruction from management to seek out opportunities • Not yet evaluated • Other, please specify	Text field

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(C2.5) Describe where and how the identified risks and opportunities have impacted your business.

Change from 2017

New question

Response options

Please complete the following table:

Area	Impact	Description
	Select from: ● Impacted ● Impacted for some suppliers, facilities, or product lines ● Not yet impacted ● Not impacted ● Not evaluated ● We have not identified any risks or opportunities	Text field
Products and services	*Impacted for some suppliers, facilities, or product lines*	*We developed in 2017 lighter windshield to reduce vehicle weight and lower the CO_2 emissions of cars.* *Our acquisitions of building insulation products factories follow the needs of concerned countries. National schemes for building energy efficiency, such as energy certificates in France, boost the sales of insulation products, depending on what is subsidized.* *We are expecting increased demand for our wide range of sustainable products, notably for our products related to sustainable habitat solutions and energy efficiency. The habitat market currently represents around 80% of our total market, corresponding to sales of approximately 32650M€. An increase in demand of*

		1% could therefore increase Group sales by 326,5M€.
Supply chain and/or value chain	*Impacted for some suppliers, facilities, or product lines*	*The Flat Glass Activity has optimized its logistics to promote the recovery of cullet across the entire value chain where the Group is present and especially between glass processing sites (manufacturing windshields or windows, for example) and glass furnaces. In addition to this, systems for recovering windshields or windows are being promoted in the countries where glass furnaces are capable of melting the post-consumer cullet collected.* *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.* *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.*
Adaptation and mitigation activities	*Impacted for some suppliers, facilities, or product lines*	*Our acquisitions of building insulation products factories follow the needs of concerned countries. As example, in 2017, the Construction Products Sector increased its presence in Scandinavia with the acquisition of Glava, a major player in insulation in Norway.* *In 2017, Saint-Gobain's acquisitions represent a full-year net sales amount of over 550 million euros.* *The habitat market in emerging countries also offers significant growth opportunities for several reasons: rapid urbanization, increasing needs for infrastructure, consequences of rising sea levels.*
Investment in R&D	*Impacted*	*In 2017, the Group invested €446 million in research and development, and 3,700 employees worked on nearly 900 research projects, resulting in applications for nearly 400 new patents. For the seventh year running, Clarivate Analytics ranked Saint-Gobain among its Top 100 Global Innovators.* *We have the cross-business R&D program, "Improving our CO_2 footprint" to coordinate and expand research and development efforts devoted to improving*

		manufacturing processes with a view to reducing their greenhouse gas emissions. We have also other programs linked to oven combustion and raw material that are strongly linked to climate change and energy efficiency.
Operations	*Impacted*	*The deployment of our environment policies at our production units has already brought some results, linked to implementation of best practices and investments (74.1M€ spent for environment in 2017). 2017 results compared to 2025 target (baseline 2010, at iso-production):* - *Energy consumption: 2,8% reduction for a 15% target* - *CO_2 emissions: 7,6% reduction for a 20% target* - *Water discharge: 36,9% reduction for a 80% target* *In total in 2017 we registered 2,5 millions € of damage and subsequent operating losses due to climate-related events.*
Other, please specify		

Connection to other frameworks

TCFD

Strategy recommended disclosure b) Describe the impact of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning.

Financial planning assessment

(C2.6) Describe where and how the identified risks and opportunities have factored into your financial planning process.

Change from 2017

New question

Response options

Please complete the following table:

Area	Relevance	Description
	Select from: ● Impacted ● Impacted for some suppliers, facilities, or product lines ● Not impacted ● Not yet impacted ● Not evaluated ● We have not identified any risks or opportunities	
	● Not impacted	
	● Impacted for some suppliers, facilities, or product lines	
Revenues	*Impacted for some suppliers, facilities, or product lines*	*Currently, 75% of European buildings have been constructed before the implementation of energy efficiency standards. We can get more revenues from an increased number of sales. We can also increase our sales through the access to emerging markets: in 2017, we realized our higher growth rates in emerging countries: we reported 9,9% organic growth in Asia, 16,3% in Africa and 7,7% in Latin America. We have examples of insulation products for which national schemes for building energy*

Operating costs	*Impacted for some suppliers, facilities, or product lines*	*efficiency boost the demand, and for which further development are/have been planned.* *The habitat market currently represents around 80% of our total market, corresponding to sales of approximately 32650M€. An increase in demand of 1% could therefore increase Group sales by 326,5M€.* *Our eco-innovation policy and our R&D investments are turned toward more product efficiency and low emission products. Means are put within the Group to train R&D and marketing teams, and eco-innovation is an input of our R&D investments planning. As this is a strategic priority for the Group, more than 700 employees (80 more than in 2016), mainly in the marketing and R&D teams, have received eco-innovation training in 2017.* *Changes in precipitation patterns will change the distribution of surface water. Consequently, the need for new water infrastructure may increase. This represents a potential sales increase for our Pipe Division, which manufactures products for water-supply, irrigation and sewer networks. 58,340M€ corresponds to 1% increase of our 2017 sales of our "exterior products" activity which includes the pipe activity.* *Note that we have not yet been impacted by EU-ETS (Emissions Trading Scheme). Our position, including forecast, is constantly updated by Purchasing department and shared with the CO_2 committee to manage the related risk. More generally, carbon prices, originated from different regional regulations in force, such as EU-ETS, are integrated into our 5-years business plans by the Corporate Planning and Economic Research Department.* *The Flat Glass Activity has optimized its logistics to promote the recovery of cullet across the entire value chain where the Group is present and especially between glass processing sites (manufacturing windshields or windows, for example) and glass furnaces. In addition to this, systems for recovering windshields or windows are being promoted in the countries where glass furnaces are capable of melting the post-consumer cullet collected. The recycling rate is an input for the need of raw material. A 1% saving of natural gas for our flat glass activity corresponds to a 2,65M€ saving.* *Regarding energy supply cost, we are developing long-term energy contracts based on renewables (as example from windfarm or solar projects in the US or in India). Such possible contracts are now considered by our energy purchasers.*
Capital expenditures/capital allocation	*Impacted*	*The deployment of our environment policies at our production units has already brought some results, linked to implementation of best practices and investments (74.1M€ spent for environment in 2017). 2017 results compared to 2025 target (baseline 2010, at iso-production):* *- Energy consumption: 2,8% reduction for a 15% target* *- CO_2 emissions: 7,6% reduction for a 20% target* *- Water discharge: 36,9% reduction for a 80% target* *The investment planning is made by considering those results as input. We develop several programs, as for example ORC*

		turbines installation for energy recovery of our Glass activity. *In addition, our process of validating investment has integrated the use of an internal carbon price to speed up the Group's transition to low-carbon technologies. It allows for the assessment of the current or potential impact of a regulatory carbon price on the Group's activities, identification of opportunities for growth in low-carbon sectors, refocusing investments in manufacturing and R&D, and ranking actions to reduce CO_2 emissions. Saint-Gobain has set two internal carbon price levels. 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 more than 10GWh. The second carbon price level of €100 per ton is used for R&D investment in breakthrough technology.*
Acquisitions and divestments *Access to capital*	*Impacted for some suppliers, facilities, or product lines* *We have not identified any risks or opportunities*	*Our acquisitions of building insulation products factories follow the needs of concerned countries.* *Indeed, the habitat market offers significant growth opportunities for several reasons: rapid urbanization, increasing needs for infrastructure, consequences of rising sea levels.* *In 2017, Saint-Gobain's acquisitions represent a full-year net sales amount of over 550 million euros.* *As illustration, the Construction Products Sector has increased its presence in Scandinavia with the acquisition of Glava, a major player in insulation in Norway.*
Assets	*Impacted for some suppliers, facilities, or product lines*	*Some of our assets such as plants or facilities could be severely affected by the increased severity of extreme weather events such as cyclones and floods. We have a large number of facilities located in 67 countries so the risk is diversified and the financial impact moderated in relation to the global value of assets and business. The Saint-Gobain Loss Prevention policy gives a firm focus to this category of risks, whether in terms of choice of locations, of facility design and layouts, or in terms of risk mitigation in existing locations.* *We are contracting with an external third party for prevention and engineering audits mapping the exposure of sites to natural hazards (flood, storm). In addition, each site has to fill annually an auto-evaluation risk grading. An action plan can be derived for each potential risk. We are also currently working with Axa to assess a flood risk mapping tool to identify priority sites and define action plans. The sites in exposed areas have to establish prevention, protection and reinforced Business continuity plan to limit the closing time and to limit the loss of revenue. In total in 2017 we registered 2,5 millions € damage and related business interruption due to climate –related events(4 storms).*
	We have not identified any risks or opportunities	

Liabilities		
Other		

Connection to other frameworks

TCFD

Strategy recommended disclosure b) Describe the impact of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning.

C3 Business strategy

Business strategy

(C3.1) Are climate-related issues integrated into your business strategy?

Change from 2017

Minor Change (2017 CC2.2)

Response options

Yes

Connection to other frameworks

TCFD

Strategy recommended disclosure b) Describe the impact of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning.

(C3.1a) Does your organization use climate-related scenario analysis to inform your business strategy?

Question dependencies

This question only appears if you select “Yes” in response to C3.1.

Change from 2017

New question

Response options

Select one of the following options:

- Yes, qualitative
- Yes, quantitative
- Yes, qualitative and quantitative
- *No, but we anticipate doing so in the next two years*
- No, and we do not anticipate doing so in the next two years

Connection to other networks

TCFD

Strategy recommended disclosure c) Describe the resilience of the organization's strategy, taking into consideration different climate related scenarios, including a 2°C or lower scenario.

(C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.

Question dependencies

This question only appears if you select "Yes" in response to C3.1.

Change from 2017

Minor Change (2017 CC2.2a)

Response options

This is an open text question.

Please note that when copying from another document into the disclosure platform, formatting is not retained.

Our ambition is to become the leader in sustainable construction by leading the decarbonization of the construction sector. The Group has set ambitious targets to tackle climate change, seize the opportunities linked to a more sustainability-oriented market and accelerate its transition to low-carbon technologies in its operations.

The challenge of climate change is one of the Group's strategic challenges and the first long term priority area for CSR. Given our markets and our strategic focus on sustainable construction, this challenge presents both risks and opportunities. The Strategy and CSR Committee of the Board of Directors regularly tracks the implementation of short-, medium- and long-term programs. Leadership for this challenge is provided directly by the Vice President of Sustainable Development, who is a member of the Group's Liaison Committee; this covers risks and opportunities. 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 its Activities. The Group's strategy is thereby embedding a transition to a low-carbon economy through control of risk and the development of new market opportunities.

The Group responds to market opportunities associated with the challenge of climate change through its sustainable construction strategy. Priority lines of action, like reducing our carbon footprint or improving energy efficiency, have been defined in line with Group policies and market expectations with the objective to reduce our CO_2 emissions of our operations by 20% by 2025 (2010 baseline at iso-production) and our energy consumption by 15% (2010 baseline at iso-production).

Risk management involves four major actions:
- a cross-business R&D program, "Improving our CO_2 footprint": to coordinate and expand research and development efforts devoted to improving manufacturing processes with a view to reducing their greenhouse gas emissions. Innovation is our key driver, with 75,2M€ million spent on environment-related R&D in 2017.
- an internal carbon price: to speed up the Group's transition to low-carbon technologies. It allows for the assessment of the current or potential impact of a regulatory carbon price on the Group's activities, identification of opportunities for growth in low-carbon sectors, refocusing investments in manufacturing and R&D, and ranking actions to reduce CO_2 emissions. Saint-Gobain has set two internal carbon price levels. 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 more 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;
- an Energy, Atmospheric Emissions and Climate Change policy: to reduce the energy consumption and the greenhouse gas emissions of its industrial processes, its infrastructures and its transport on all of its sites;
- an assessment of the risks associated with climate change and its consequences at Group level.

Saint-Gobain fully supports the Paris Agreement, including the implementation of the 2°C scenario. Two years after having signed the Paris Agreement, we co-signed the « French Business Climate Pledge » during the One Planet Summit on December 12, 2017 engaging ourselves to reinforce our climate engagements for 2020 and to lead the transition to a low-carbon economy.
Furthermore, we also fully support the establishment of SBT trajectory for the Construction sector and we committed to set science-based targets for 2020.
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.
Saint-Gobain has mobilized and committed as part of the Global Alliance for Building and Construction, in tandem with other players in the construction value chain, and the support of "We Mean Business" and the CDP to develop a SBT compliant methodology for the construction sector. This approach should allow for the definition of an approach to a low-carbon trajectory for the construction market. We also support TCFD recommendations and we are currently working on setting scenarios.

As a global leader in sustainable construction, Saint-Gobain intends to fully contribute to these objectives through the Global Alliance for Building Construction. In 2015, Saint-Gobain has developed a methodology to estimate GHG emissions saved when using its insulation solutions in Europe. In 2017 we updated the results for 2016 not only for Europe but worldwide. Results show that from 3 months' use, our solutions, on average, offset production-related emissions. Beyond those 3 months, the savings continue to accumulate. This study demonstrates our positive contribution to reducing global GHG emissions. Thus, the benefits provided by the Group's thermal insulation and insulating glazing, in terms of energy consumption and greenhouse gas emissions, significantly exceed their production-related emissions.

We are also putting the emphasis on the acceleration of circular economy; each Activity and General Delegation must define, a roadmap for developing the circular economy with three priorities: have maximum recycled content in their products; generate a minimum of production residues; recover internally or externally the waste resulting from these processes. At the international level, at the end of 2017, Saint-Gobain joined the circular economy World Factor 10 program from the World Business Council for Sustainable Development.

Connection to other frameworks

TCFD

Strategy recommended disclosure b) Describe the impact of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning.

(C3.1d) Provide details of your organization’s use of climate-related scenario analysis.

Question dependencies

This question only appears if you select “Yes, qualitative”, “Yes, quantitative” or “Yes, qualitative and quantitative” in response to C3.1a.

Change from 2017

New question

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Select from: • 2DS • IEA 450 • Greenpeace • DDPP • IRENA • RCP 2.6 • IEA B2DS • IEA Sustainable development scenario • Nationally determined contributions (NDCs) • Other, please specify	Organizations should disclose their inputs, assumptions and analytical methods used for this scenario. For existing scenarios (e.g. IEA 450 etc.), organizations should disclose how they have altered/changed the inputs, assumptions or analytical methods to cater to their needs.

Connection to other frameworks

TCFD

Strategy recommended disclosure c) Describe the resilience of the organization's strategy, taking into consideration different climate related scenarios, including a 2°C or lower scenario.

(C3.1f) Why are climate-related issues not integrated into your business objectives and strategy?

Question dependencies

This question only appears if you select "No" in response to C3.1.

Change from 2017

Minor Change (2017 CC2.2b)

Response options

This is an open text question.
Please note that when copying from another document into the disclosure platform, formatting is not retained.

(C3.1g) Why does your organization not use climate-related scenario analysis to inform your business strategy?

Question dependencies

This question only appears if you select "No, but we anticipate doing so in the next two years" or "No, and we do not anticipate doing so in the next two years" in response to C3.1a.

Change from 2017

New question

Response options

This is an open text question.
Please note that when copying from another document into the disclosure platform, formatting is not retained.

We committed to Science Based Target in March 2018.
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 through the Global Alliance for Building and Construction, and together with the other actors in the construction value chain and the financial support of "We Mean Business" and the CDP, to develop a specific methodology. We are actively involved in this work, jointly with the WBCSD, the World Green Building Council, the International Energy Agency and other players of the value chain. This approach should allow for the definition of an approach to a low-carbon trajectory for the construction market.

C4 Targets and performance

Targets

(C4.1) Did you have an emissions target that was active in the reporting year?

Change from 2017

Modified question (2017 CC3.1)

Response options

Select one of the following options:

- Absolute target
- *Intensity target*
- Both absolute and intensity targets
- No target

Connection to other frameworks

TCFD

Metrics & Targets recommended disclosure c) Describe the targets used by the organization to manage climate related risks and opportunities and performance against targets.

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Question dependencies

This question only appears if you select “Absolute target” or “Both absolute and intensity targets” in response to C4.1.

Change from 2017

Modified question (2017 CC3.1a, CC3.1e)

Response options

Please complete the following table. The table is displayed over several rows for readability.You are able to add rows by using the “Add Row” button at the bottom of the table.

Select from: Abs1-Abs15	Select from drop-down options below	Percentage field	Percentage field	Numerical field	Numerical field	Numerical field

Numerical field	Select from drop-down options below	Percentage field	Select from: • Underway • Retired • Expired • New • Replaced	Text field

[Add Row]

Scope drop-down options:

Select one of the following options:

- Scope 1
- Scope 2 (location-based)
- Scope 2 (market-based)
- Scope 1+2 (location-based)
- Scope 1+2 (market-based)
- Scope 1+2 (location-based) +3 (upstream)

- Scope 1+2 (location-based) +3 (downstream)
- Scope 1+2 (location-based) +3 (upstream & downstream)
- Scope 1+2 (market-based) +3 (upstream)
- Scope 1+2 (market-based) +3 (downstream)
- Scope 1+2 (market-based) +3 (upstream & downstream)
- Scope 3: Purchased goods and services
- Scope 3: Capital goods
- Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)
- Scope 3: Upstream transportation and distribution
- Scope 3: Waste generated in operations
- Scope 3: Business travel
- Scope 3: Employee commuting
- Scope 3: Upstream leased assets
- Scope 3: Investments
- Scope 3: Downstream transportation and distribution
- Scope 3: Processing of sold products
- Scope 3: Use of sold products
- Scope 3: End-of-life treatment of sold products
- Scope 3: Downstream leased assets
- Scope 3: Franchises
- Other, please specify

Is this a science-based target? drop-down options:

Select one of the following options:

- Yes, this target has been approved as science-based by the Science-Based Targets initiative
- Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science-Based Targets initiative
- No, but we are reporting another target that is science-based
- No, but we anticipate setting one in the next 2 years
- No, and we do not anticipate setting one in the next 2 years

Connection to other frameworks

TCFD

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Question dependencies

This question only appears if you select “Intensity target” or “Both absolute and intensity target” in response to C4.1.

Change from 2017

Modified question (2017 CC3.1b, CC3.1c, CC3.1e)

Response options

Please complete the following table. The table is displayed over several rows for readability. You are able to add rows by using the “Add Row” button at the bottom of the table.

Target reference number	Scope	% emissions in Scope	% reduction from baseline year	Metric	Base year	Start year
Select from: Int1-Int15	Select from drop-down options below	Percentage field	Percentage field	Select from drop-down options below	Numerical field	Numerical field
Int1	Scope 1+2 (location-based)	100%	20%	Metric tons CO2e per unit of production	2010	2011

Normalized baseline year emissions covered by target (metric tons CO2e)	Target year	Is this a science-based target?	% achieved (emissions)	Target status	Please explain	% change anticipated in absolute Scope 1+2 emissions	% change anticipated in absolute Scope 3 emissions
Numerical field	Numerical field	Select from drop-down options below	Percentage field	Select from: ● Underway ● Retired ● Expired	Text field	Percentage fiel	Percentage field

				• New • Replaced			
17,438,524	2025	No, but we anticipate setting one in the next 2 years	38%	Underway	*We recently committed to set Science Based targets for 2020 and we are currently working on that subject. We are actually contributing to these objectives through the GABC. Saint-Gobain has set mid-term objectives to reduce CO_2 emissions by 20% by 2025 compared to 2010, at iso-production. We have achieved a 7,6% reduction over 2010-2017*	-35%	0%

[Add Row]

Scope drop-down (column 2)

Select one of the following options:

- Scope 1
- Scope 2 (location-based)
- Scope 2 (market-based)
- Scope 1+2 (location-based)
- Scope 1+2 (market-based)
- Scope 1+2 (location-based) +3 (upstream)
- Scope 1+2 (location-based) +3 (downstream)
- Scope 1+2 (location-based) +3 (upstream & downstream)
- Scope 1+2 (market-based) +3 (upstream)
- Scope 1+2 (market-based) +3 (downstream)
- Scope 1+2 (market-based) +3 (upstream & downstream)
- Scope 3: Upstream transportation and distribution
- Scope 3: Waste generated in operations
- Scope 3: Business travel
- Scope 3: Employee commuting
- Scope 3: Upstream leased assets
- Scope 3: Investments
- Scope 3: Downstream transportation and distribution
- Scope 3: Processing of sold products
- Scope 3: Use of sold products
- Scope 3: End-of-life treatment of sold products
- Scope 3: Downstream leased assets

• Scope 3: Purchased goods and services • Scope 3: Capital goods • Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)	• Scope 3: Franchises • Other, please specify

Metric drop-down options (column 5)

Select one of the following options from the drop-down menu below. Those with an asterisk (*) are the metrics that can be evaluated against science-based target setting methods (see Technical Note on Science-Based Targets:

• Grams CO2e per revenue passenger kilometer* • Metric tons CO2e per USD($) value-added* • Metric tons CO2e per square meter* • Metric tons CO2e per metric ton of aluminum* • Metric tons CO2e per metric ton of steel* • Metric tons CO2e per metric ton of cement* • Metric tons CO2e per metric ton of cardboard* • Grams CO2e per kilometer* • Metric tons CO2e per unit revenue • Metric tons CO2e per unit FTE employee • Metric tons CO2e per unit hour worked • Metric tons CO2e per metric ton of product • Metric tons of CO2e per liter of product • Metric tons CO2e per unit of production	• Metric tons CO2e per unit of service provided • Metric tons CO2e per square foot* • Metric tons CO2e per kilometer • Metric tons CO2e per passenger kilometer* • Metric tons CO2e per megawatt hour (MWh)* • Metric tons CO2e per barrel of oil equivalent (BOE) • Metric tons CO2e per vehicle produced* • Metric tons CO2e per metric ton of ore processed • Metric tons CO2e per ounce of gold • Metric tons CO2e per ounce of platinum • Metric tons of CO2e per metric ton of aggregate • Metric tons of CO2e per billion (currency) funds under management • Other, please specify

Is this a science-based target? drop-down options (column 10)

Select one of the following options:

• Yes, this target has been approved as science-based by the Science Based Targets initiative • Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science Based Targets initiative	• No, but we are reporting another target that is science-based • No, but we anticipate setting one in the next 2 years • No, and we do not anticipate setting one in the next 2 years

Connection to other frameworks

TCFD

Metrics & Targets recommended disclosure c) Describe the targets used by the organization to manage climate related risks and opportunities and performance against targets.

(C4.1c) Explain why you do not have an emissions target, and forecast how your emissions will change over the next five years.

Question dependencies

This question only appears if you select “No target” in response to C4.1.

Change from 2017

Modified question (2017 CC3.1f)

Response options

Please complete the following table:

Select from: • We are planning to introduce a target in the next two years • Important but not an immediate business priority • Judged to be unimportant, explanation provided • Lack of internal resources • Insufficient data on operations • No instruction from management • Other, please specify	Text field	Text field

Other climate-related targets

(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.

Change from 2017

Modified question (2017 CC3.1d)

Response options

Please complete the following table. The table is displayed over several rows for readability. You are able to add rows by using the “Add Row” button at the bottom of the table.

Target	KPI – Metric numerator	KPI – Metric denominator (intensity targets only)	Base year	Start year	Target year
Select from: ● Energy productivity ● Renewable energy consumption ● Renewable energy production ● Renewable fuel ● Waste ● Zero/low-carbon vehicle ● Energy usage ● Land use ● Methane reduction target ● Engagement with suppliers ● R&D investments ● Other, please specify	Text field	Text field	Numerical field	Numerical field	Numerical field
Energy usage	*MWh*	*Unit of production*	*2010*	*2011*	*2025*
Waste	*Ton of waste*	*Unit of production*	*2010*	*2011*	*2025*

KPI in baseline year	KPI in target year	% achieved in the reporting year	Target status	Please explain	Part of emissions target	Is this target part of an overarching initiative?
Numerical field	Numerical field			Text field	Text field [emissions reduction target ID]	Select from: • RE100 • EP100 • EV100 • Below50 – sustainable fuels • Science-based targets initiative • Reduce short-lived climate pollutants • Remove deforestation • Low-Carbon Technology Partnerships initiative • No, it's not part of an overarching initiative • Other, please specify
0.035	*0.030*	*19*	*Underway*	*The objective is to reduce by 15% our energy consumption between 2010 and 2025 at iso-production. The indicated KPI for baseline and target year are only indicative, considering our 2010 reference. Indeed, our scope of activities may largely vary between 2010-2025 and our methodology of target achievement calculation is different, considering appropriate comparison*	*Reducing our energy consumption leads in decreasing our CO_2 emissions (target Int1). Utilities (ex: electricity or natural gas) as well as some other process-related fuels (ex coal and coke) enter the scope of this target and represent the biggest part of our emissions. Some raw material leading to*	*No, it's not part of an overarching initiative*

				between 2010 and 2025.	*emissions, such as soda ash, are excluded.*	
0.00051	*0.00026*	*26*	*Underway*	*The objective is to reduce our non-recovered waste by 50% between 2010 and 2025 at iso-production.* *The indicated KPI for baseline and target year are only indicative, considering our 2010 reference. Indeed, our scope of activities may largely vary between 2010-2025 and our methodology of target achievement calculation is different, considering appropriate comparison between 2010 and 2025.*	*The impact of reaching this target is minor regarding our CO_2 emissions (target Int1). Nevertheless, reducing cullet being sent to landfill by recycling it into the glass ovens, decreases energy consumption and related CO_2 emissions. Energy consumption is reduced by 3% when the percentage of cullet is increased from 20% to 30% of raw materials.*	*No, it's not part of an overarching initiative*

[Add Row]

Connection to frameworks

TCFD

Metrics & Targets recommended disclosure a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.

Emissions reduction initiatives

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Change from 2017

No change (2017 CC3.3)

Response options

Select one of the following options:

Yes

(C4.3a) Identify the total number of projects at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

Question dependencies

This question only appears if you select “Yes” in response to C4.3.

Change from 2017

No change (2017 CC3.3a)

Response options

Please complete the following table:

Stage of development	Number of projects	Total estimated annual CO2e savings in metric tons CO2e (only for rows marked *)
Under investigation	*68*	
To be implemented*	*0*	*0*
Implementation commenced*	*2*	*12,140*
Implemented*	*6*	*4,205*
Not to be implemented	*0*	*0*

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Question dependencies

This question only appears if you select “Yes” in response to C4.3.

Change from 2017

Minor change (2017 CC3.3b)

Response options

Please complete the following table. The table is displayed over several rows for readability. You are able to add rows by using the “Add Row” button at the bottom of the table.

Activity type	Description of activity	Estimated annual CO2e savings (metric tons CO2e)	Scope	Voluntary/ Mandatory
Select from: ● Energy efficiency: Building fabric ● Energy efficiency: Building services ● Energy efficiency: Processes ● Fugitive emissions reductions ● Low-carbon energy purchase ● Low-carbon energy installation ● Process emissions reductions ● Other, please specify	Select from drop-down options below	Numerical field	Select from: ● Scope 1 ● Scope 2 (location-based) ● Scope 2 (market-based) ● Scope 3	Select from: ● Voluntary ● Mandatory
Energy efficiency: Processes	*Heat recovery*	*542*	*Scope 1*	*Voluntary*
Energy efficiency: Processes	*Heat recovery*	*2,200*	*Scope 1*	*Voluntary*
Energy efficiency: Processes	*Compressed air*	*388*	*Scope 2 (location-based)*	*Voluntary*
Energy efficiency: Processes	*Compressed air*	*345*	*Scope 2 (location-based)*	*Voluntary*
Energy efficiency: Processes	*Compressed air*	*550*	*Scope 2 (location-based)*	*Voluntary*
Energy efficiency: Processes	*Process optimization*	*180*	*Scope 2 (location-based)*	*Voluntary*

Annual monetary savings (unit currency, as specified in C0.4)	Investment required (unit currency, as specified in C0.4)	Payback period	Estimated lifetime of the initiative	Comment
Numerical field	Numerical field	Select from: ● <1 year ● 1-3 years ● 4-10 years ● 11-15 years ● 16-20 years ● 21-25 years ● >25 years	Select from: ● <1 year ● 1-2 years ● 3-5 years ● 6-10 years ● 11-15 years ● 16-20 years ● 21-30 years ● >30 years ● Ongoing	Text field
70,000	*130,000*	*1-3 years*	*6-10 years*	*Thermal treatment of the fume replaced by a water washing treatment with water recirculation (natural gas saving). The decrease of the temperature of the fume avoid to use the fans that were used to air circulation (electricity saving).*
254,240	*20,000*	*<1 year*	*6-10 years*	*Conversion of Electrical heaters into Steam heaters through heat recovered from Flue Gas*
200,000	*31,500*	*<1 year*	*Ongoing*	*Leakage tracking:* *Establishment of an organization for the regular collection and elimination of compressed air leaks with corresponding documentation : the plant is divided into sectors and all the equipment contained within each of them is listed. One sector is checked every week all year round. The leaks are detected using a sonaphone. Once a leak is found, it is immediately fixed and an entry is created in the project's spreadsheet specifying the location of the leak*

				and its diameter.
120,000	*80,000*	*<1 year*	*16-20 years*	*Adaptation of the pressure level in a process area to Minimum. Installation of the mass flow measurement for atomized air. By adapting the pipe geometry it was possible to use the pressure level of 2bar instead of 3,5 - 5,0 bar. In addition, individual air flow volume control is implemented on all machines.*
83,000	*170,000*	*1-3 years*	*16-20 years*	*Central compressor station for Combustion air replaced by decentralized single blower. Pressure reduction from 0.8 bar to 0.2-0.4 bar. Significant improvement in process stability.*
25,000	*7,500*	*<1 year*	*6-10 years*	*Shutdown of pump circuits during unproductive periods. Optimization of ventilation, thus switching off air conditioning systems.*

Description of activity drop-down options (column 2)

Select one of the following options:

Energy efficiency:Building fabric ● Insulation ● Maintenance program ● Other, please specify Energy efficiency:Building services ● Building controls ● HVAC ● Lighting ● Motors and drives	Low-carbon energy purchase ● Biomass ● Biogas ● Fuel Cells ● Geothermal ● Hydro ● Solar Hot Water ● Solar PV ● Solar CPV ● Natural Gas

• Combined heat and power • Other, please specify Energy efficiency:Processes • Heat recovery • Cooling technology • Refrigeration • Process optimization • Fuel switch • Compressed air • Combined heat and power • Waste water treatment • Water reuse • Reuse of steam • Machine replacement • Other, please specify Fugitive emissions reductions • Agriculture methane capture • Agriculture N2O reductions, • Landfill methane capture, • Oil/natural gas methane leak capture/prevention • Refrigerant leakage reduction • Other, please specify	• Nuclear • Carbon Capture & Storage • Other, please specify Low-carbon energy installation • Biomass • Biogas • Fuel Cells • Geothermal • Hydro • Solar Hot Water • Solar PV • Solar CPV • Natural Gas • Carbon Capture & Storage • Other, please specify Process emissions reductions • New equipment • Changes in operations • Process materials selection • Process water • Other, please specify

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Question dependencies

This question only appears if you select “Yes” in response to C4.3.

Change from 2017

No change (2017 CC3.3c)

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Method	Comment
Select from: ● Compliance with regulatory requirements/standards ● Dedicated budget for energy efficiency ● Dedicated budget for low-carbon product R&D ● Dedicated budget for other emissions reduction activities ● Employee engagement ● Financial optimization calculations ● Internal price on carbon ● Internal incentives/recognition programs ● Internal finance mechanisms ● Lower return on investment (ROI) specification ● Marginal abatement cost curve ● Partnering with governments on technology development ● Other	Text field
Compliance with regulatory requirements/standards	*Compliance with regulatory requirements is of course a key driver to invest in emissions reduction activities. The Corporate Legal Department ensures general environmental regulatory watch while the Corporate Environment, Health and Safety Department works on anticipating the specific climate change regulations and assessing the related impacts on the Group activities. At asset level, the facility EHS representatives are informed by their Legal and Tax Department about any new law or regulation related to environment, including climate change.* *Saint-Gobain places all its sites in a phase of continuous improvement. In this respect, they aim to identify and evaluate the Best Available Techniques (BAT) and Practices Available and then progressively upgrade them at an economically acceptable cost, in accordance with the Group's environmental vision. A BAT deployment plan is defined, updated annually and included in the three-year strategic plan.*
Dedicated budget for energy efficiency	*The Group has defined research and development programs to especially improve the energy efficiency of our manufacturing processes such as our "Innovative Furnaces and Glass" program. We also have a "Green Chemistry" program that may improve energy efficiency through raw material management and above all the "Improving our CO_2 footprint» program aiming to coordinate and expand research and development efforts devoted to improving manufacturing processes with a view to reducing their greenhouse gas emissions. In total, we invested 75,2 million € in 2017 in our environment cross-business R&D programs.*

	We are also leading actions on sites to reach our target of minus 15% energy consumption in 2025 like the Tip check deployment (audits regarding industrial tools insulation), specific energy investments (as the Glass activity program to invest in ORC turbines to maximize energy efficiency by limiting waste heat recovery). *Finally, 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 2017, 90 sites of the "environment concerned perimeter" were certified to ISO 50001, compared with 85 a year earlier.*
Dedicated budget for low carbon product R&D	*The cross-functional R&D program, "Improvement in our CO_2 footprint", also includes an energy component: recovery of lost energy and research into the use of new, low-carbon forms of energy (such as biogas or hydrogen).* *Saint-Gobain also initiated R&D programs to improve the environmental performance of its products portfolio. The "Low Carbon Cement-based Materials" program is one of the best example.*
Dedicated budget for other emissions reduction activities	*In addition of its environmental targets (CO_2, energy, water discharges and non-recovered waste), the Group has set emissions target for dust, NOx and SO_2 emissions (-20% in 2025 vs 2010 at iso-production). This leads to the allocation of R&D budget (for example through the program: "Innovative Furnaces and Glass") and to some investments in plant to upgrade/install depollution units.*
Internal incentives/recognition programs	*The Environment Emerald Awards, launched in 2010, is a ceremony that rewards Saint-Gobain sites or delegations for carrying out projects that reduce their environmental impact and/or that of their manufactured products. Those projects have to address one of the following environmental issues: climate change, water, waste, atmospheric emissions, other (such as biodiversity, soil, noise, smell or visual Impacts). As example, in 2018, focusing on 2017 results, our Pasquill entity (Distribution Sector) in UK won the award in the category of energy efficiency for its general program on energy efficiency.*
Internal incentives/recognition programs	*The CARE:4 label project aims to tackle four challenges: to reduce the carbon footprint of the Group's buildings, to improve the comfort and well-being at work of the Group's employees, to develop a customer-oriented culture through real-life laboratories and to inspire the market with success stories showcasing the Group's solutions. Each project's objectives are defined in alignment with the best local standard if there is one (i.e. Passivehaus in Germany, Effinergie in France) and based on a locally devised benchmark. In 2017, 2 new Saint-Gobain buildings received the CARE:4® label, bringing to 34 the number of buildings recognized internally for their energy performance.* *The new headquarters of the Group ("La Tour Saint-Gobain") are being built to become operational in 2019. It should become the best tower of La Défense in terms of energy efficiency and targets to meet criteria of several certifications (HQE, BREEAM, LEED).*
Internal incentives/recognition programs	*From 2007, Saint-Gobain applies the World Class Manufacturing (WCM) program, an integrated management system designed to improve business performance by seeking industrial excellence in accordance with world standards. Its ambition is to enhance the performances of each industrial sites of the Group, through the implementation of high*

	safety standards, high product quality, their economic performance, but also through their energy/environmental impact and involvement. On-site performance is measured by quantitative indicators but also through satisfaction assessments of all stakeholders involved, particularly the Group's employees and customers. In regards to energy/environmental standards, the WCM program is compliant with ISO 14001 and 50001. 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; More than 5,800 managers are trained today in the WCM program and 60% of employees of the industrial sites are involved in the application of this program.
Internal price on carbon	*To speed up the Group's transition to low-carbon technologies, an internal carbon price is in place since beginning of 2016. It allows for the assessment of the current or potential impact of a regulatory carbon price on the Group's activities, identification of opportunities for growth in low-carbon sectors, refocusing investments in manufacturing and R&D, and ranking actions to reduce CO_2 emissions. Saint-Gobain has set two internal carbon price levels. 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 more 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.*
Employee engagement	*The Sustainable Development department organizes every two years a day to sensibilize all the employees to Environment, Security and Hygiene through workshops.* *We also launched the initiative "Big little moves" which is a guidebook and also a group on Saint Gobain's internal online portal with all environmental friendly actions which can be easily implemented on every Saint Gobain's sites. Everyone can share their best practices on the online group and can be featured in the actionbook.* *Since 2017, more than 2,100 top managers have seen CO_2 emission reduction target (as well as 2 other CSR criteria) being part of the evaluation of their remuneration bonus.*

(C4.3d) Why did you not have any emissions reduction initiatives active during the reporting year?

Question dependencies

This question only appears if you select "No" in response to C4.3.

Change from 2017

Minor change (2017 CC3.3d)

Response options

This is an open text question.

Please note that when copying from another document into the disclosure platform, formatting is not retained.

Question C4.4 only applies to organizations with activities in the following sectors:

- Agricultural commodities
- Food, beverage & tobacco
- Paper & forestry

Low-carbon products

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?

Change from 2017

No change (2017 CC3.2)

Response options

Select one of the following options:

Yes

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Question dependencies

This question only appears if you select “Yes” in response to C4.5.

Change from 2017

Modified question (2017 CC3.2a)

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Level of aggregation	Description of product/ Group of products	Are these low-carbon product(s) or do they enable avoided emissions?	Taxonomy, project, or methodology used to classify product(s) as low-carbon or to calculate avoided emissions	% revenue from low-carbon product(s) in the reporting year	Comment
Select from: ● Product ● Group of products ● Company-wide	Text field	Select from: ● Low-carbon product ● Avoided emissions ● Low-carbon product and avoided emissions	Select from: ● Low-Carbon Investment (LCI) Registry Taxonomy ● Climate Bonds Taxonomy ● Addressing the Avoided Emissions Challenge-Chemicals sector ● Evaluating the carbon reducing impacts of ICT ● Other, please specify	Numerical field	Text field
Company-wide	*The products considered in the calculation are insulation products for the exterior walls (opaque and glazed) of a building: - Glass wool, stone wool and expanded polystyrene (EPS) insulation -“Low-e” insulating glazing. Other products used for fire protection, industrial heating systems, partition walls, interior design, decoration, etc. are not included in the calculations. The sales data considered are those of the calendar year 2016. The calculation only covers energy savings made on heating requirements and excludes cooling and air-conditioning*	*Avoided emissions*	*Other: EY and Saint-Gobain methodology*	*80*	*The products sold worldwide in 2016 allowed an avoidance of 1251.1 million tons eq CO_2 over their entire lifetime. The construction of the calculation methodology together with the selection of different calculation parameters were made in association with EY’s Sustainable Performance & Transformation department. GHG net saving is calculated as the difference between: - GHG emission savings obtained by using Saint-Gobain-type products compared to the use of a reference product - Emissions associated with the lifecycle of the Saint-Gobain product in question. WHERE: -The baseline for calculating the*

	gains.				*gain is the absence of insulation, ie non insulated wall or a simple or double glazing without coating. -The emissions related to the Saint-Gobain product's lifecycle are available via the LCA models developed by Saint-Gobain, or directly in the Environmental Product Declarations (EPD). Products sold and installed in 2016 will enable savings over a period which exceeds one year. The period thus considered is based on the reference service life used for the lifecycle assessment of the insulation products considered, namely: -30 years for glazing - 50 years for wall insulation products. During three months' use the Group's solutions, on average offset production-related emissions. Beyond those three months, the savings continue to accumulate.* *The % of revenues provided corresponds to our % of sales linked to habitat products.*
Group of products	*SageGlass® is an electronically tintable glass for windows, skylights and curtain walls.*	*Avoided emissions*	*Other: EY and Saint-Gobain methodology*		*SageGlass® is highly energy efficient to operate, using less energy than necessary to power a 60-watt incandescent light bulb to control 2,000 square feet of SageGlass® glazing. With 20% cooling energy savings, 30% and up to 60% lighting reduction, SageGlass® glazing achieves increasing levels of energy performance, beyond the prerequisite standards.*
Group of products	*Panoramic lightweight windshields*	*Avoided emissions*	*Other: EY and Saint-Gobain methodology*		*The weight of the windshield has been reduced by 30%, allowing to reduce the energy*

					consumption of the equipped vehicles. For instance, SGS Coolcoat windshields have approximately twice the performance as today's heat-reflecting products. The amount of heat entering a car with green tinted standard glazing is 65%, whereas it is only 40% with CoolCoat. Consequently, the interior stays cooler, the air conditioning runs less and comfortable temperatures are reached faster. SGS CoolCoat reduces the AC load and saves fuel by about 0.1 liter per 100 km corresponding to 1.6 grams CO_2 per km.
Group of products	*Internal thermal insulation*	*Avoided emissions*	*Other: EY and Saint-Gobain methodology*		*Isoduo 36 is a good example being the first composite insulation material with wood fiber reinforced with glass wool. Isoduo 36 contains a low quantity of binder and 40% of recycled glass. Isoduo 36 saves 130 times more energy than conventional products during its entire lifetime.*
Group of products	*Plaster board insulation solutions*	*Avoided emissions*	*Other: EY and Saint-Gobain methodology*		*For example, Rigitone Climafit boards have a unique thermal conductivity level of 0.52 W/(m · K) in accordance with DIN EN 12664. This increases the efficiency of the temperature control effect in the magnitude of 15 - 35% (in watts). Climafit ceiling boards also offer the usual advantages of Rigips boards: they are easy to install, highly flexible, tested for building biology aspects, clean and environmentally friendly.*

Group of products	*External thermal insulation*	*Avoided emissions*	*Other: EY and Saint-Gobain methodology*		*In the mortars division, ETICS (External Thermal Insulation Compounds System) is an insulating solution for the building envelope. Weber ETICS provides active insulation by preventing heat flow through walls and around windows, doors and other openings. The product cuts energy consumption and CO_2 emissions from heating and cooling.*
Group of products	*Energy Evaluation Services*	*Avoided emissions*	*Other: EY and Saint-Gobain methodology*		*The Building Distribution sector also provides innovative services such as Cap Renov+, a simulator that provides the option of immediate energy efficiency evaluation and calculation of the tax incentives for which the end customer may be eligible.*

C5 Emissions methodology

Base year emissions

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Change from 2017

No change (2017 CC7.1)

Response options

Please complete the following table:

Scope	Base year start	Base year end	Base year emissions (metric tons CO2e)	Comment
Scope 1	*Fri 01 Jan 2010*	*Fri 31 Dec 2010*	*12,976,886*	
Scope 2 (location-based)	*Fri 01 Jan 2010*	*Fri 31 Dec 2010*	*4,461,638*	
Scope 2 (market-based)				

Emissions methodology

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.

Change from 2017

No change (2017 CC7.2)

Response options

Select all that apply from the following options:

- ABI Energia Linee Guida
- Act on the Rational Use of Energy
- American Petroleum Institute Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry, 2009
- Australia - National Greenhouse and Energy Reporting Act
- Bilan Carbone
- Brazil GHG Protocol Programme
- Canadian Association of Petroleum Producers, Calculating Greenhouse Gas Emissions, 2003
- China Corporate Energy Conservation and GHG Management Programme
- Defra Voluntary 2017 Reporting Guidelines
- ENCORD: Construction CO2e Measurement Protocol
- Energy Information Administration 1605B
- Environment Canada, Sulphur hexafluoride (SF6) Emission Estimation and Reporting Protocol for Electric Utilities
- Environment Canada, Aluminum Production, Guidance Manual for Estimating Greenhouse Gas Emissions
- Environment Canada, Base Metals Smelting/Refining, Guidance Manual for Estimating Greenhouse Gas Emissions
- Environment Canada, Cement Production, Guidance Manual for Estimating Greenhouse Gas Emissions
- Environment Canada, Primary Iron and Steel Production, Guidance Manual for Estimating Greenhouse Gas Emissions
- Environment Canada, Lime Production, Guidance Manual for Estimating Greenhouse Gas Emissions
- Environment Canada, Primary Magnesium Production and Casting, Guidance Manual for Estimating Greenhouse Gas Emissions
- Environment Canada, Metal Mining, Guidance Manual for Estimating Greenhouse Gas Emissions
- EPRA (European Public Real Estate Association) guidelines, 2011
- European Union Emission Trading System (EU ETS): The Monitoring and Reporting Regulation (MMR) – General guidance for installations
- European Union Emissions Trading System (EU ETS): The Monitoring and Reporting Regulation (MMR) – General guidance for aircraft operators
- Hong Kong Environmental Protection Department, Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings, 2010

- ICLEI Local Government GHG Protocol
- India GHG Inventory Programme
- International Wine Industry Greenhouse Gas Protocol and Accounting Tool
- IPCC Guidelines for National Greenhouse Gas Inventories, 2006
- IPIECA's Petroleum Industry Guidelines for reporting GHG emissions, 2003
- IPIECA’s Petroleum Industry Guidelines for reporting GHG emissions, 2nd edition, 2011
- ISO 14064-1
- Japan Ministry of the Environment, Law Concerning the Promotion of the Measures to Cope with Global Warming, Superceded by Revision of the Act on Promotion of Global Warming Countermeasures (2005 Amendment)
- Korea GHG and Energy Target Management System Operating Guidelines
- New Zealand - Guidance for Voluntary, Corporate Greenhouse Gas Reporting
- Philippine Greenhouse Gas Accounting and Reporting Programme (PhilGARP)
- Programa GEI Mexico
- Regional Greenhouse Gas Initiative (RGGI) Model Rule
- Smart Freight Centre: GLEC Framework for Logistics Emissions Methodologies
- Taiwan - GHG Reduction Act
- Thailand Greenhouse Gas Management Organization: The National Guideline Carbon Footprint for organization
- The Climate Registry: Electric Power Sector (EPS) Protocol
- The Climate Registry: General Reporting Protocol
- The Climate Registry: Local Government Operations (LGO) Protocol
- The Climate Registry: Oil & Gas Protocol
- The Cool Farm Tool
- The GHG Indicator: UNEP Guidelines for Calculating Greenhouse Gas Emissions for Businesses and Non-Commercial Organizations
- The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
- The Greenhouse Gas Protocol Agricultural Guidance: Interpreting the Corporate Accounting and Reporting Standard for the Agricultural Sector
- The Greenhouse Gas Protocol: Public Sector Standard
- The Tokyo Cap-and Trade Program
- US EPA Climate Leaders: Direct Emissions from Iron and Steel Production1
- US EPA Climate Leaders: Direct Emissions from Municipal Solid Waste Landfilling1
- US EPA Climate Leaders: Direct HFC and PFC Emissions from Manufacturing Refrigeration and Air Conditioning Equipment1

- US EPA Climate Leaders: Direct HFC and PFC Emissions from Use of Refrigeration and Air Conditioning Equipment1
- US EPA Climate Leaders: Indirect Emissions from Purchases/ Sales of Electricity and Steam1
- US EPA Climate Leaders: Direct Emissions from Stationary Combustion1
- US EPA Climate Leaders: Direct Emissions from Mobile Combustion Sources1
- US EPA Mandatory Greenhouse Gas Reporting Rule
- WBCSD: The Cement CO2 and Energy Protocol
- World Steel Association CO2 emissions data collection guidelines
- Other, please specify

Bilan Carbone
European Union Emission Trading System (EU ETS): The Monitoring and Reporting Regulation (MMR) – General guidance for installations
IPCC Guidelines for National Greenhouse Gas Inventories, 2006
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
Other

(C5.2a) Provide details of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.

Question dependencies

This question only appears if you select “Other, please specify” in response to C5.2.

Change from 2017

No change (2017 CC7.2a)

Response options

This is an open text question.
Please note that when copying from another document into the disclosure platform, formatting is not retained.

For our reporting we are following the recommendations given by the GRI G4. Concerning the national electricity emission factors, we are using the IEA (International Energy Agency) program.

C6 Emissions data

Scope 1 emissions data

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Change from 2017

No change (2017 CC8.2)

Response options

Complete the following table:

Gross global Scope 1 emissions (metric tons CO2e)	Comment
9,564,450	*Our global Scope 1 emissions increased by 0,7% at isoproduction between 2016 and 2017 for the sites belonging to the environment concerned perimeter (sites covering more than 95% of the Group environmental impact).*

Connection to other frameworks

TCFD

Metrics & Targets recommended disclosure b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.

Scope 2 emissions reporting

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Change from 2017

No change (2017 CC8.3)

Response options

Please complete the following table:

Scope 2, location-based	Scope 2, market-based	Comment
We are reporting a Scope 2, location-based figure	*We have operations where we are able to access electricity supplier emissions factors or residual emissions factors, but are unable to report a global Scope 2, market-based figure*	*We use a market-based approach only for purchased green electricity whenever we have a Renewable Energy Certificate.*

Scope 2 emissions data

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Change from 2017

No change (2017 CC8.3a)

Response options

Please complete the following table:

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment
3,390,501	*Not applicable*	*Our global Scope 2 emissions decreased by 2.9% at isoproduction between 2016 and 2017 for the sites belonging to the environment concerned perimeter (sites covering more than 95% of the Group environmental impact).*

Connection to other frameworks

TCFD

Metrics & Targets recommended disclosure b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

Change from 2017

No change (2017 CC8.4)

Response options

Select one of the following options:

No

(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.

Question dependencies

This question only appears if you select “Yes” in response to C6.4.

Change from 2017

No change (2017 CC8.4a)

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Text field	Select from: • No emissions excluded • No emissions from this source • Emissions are not relevant • Emissions are relevant but not yet calculated • Emissions are relevant and calculated, but not disclosed • Emissions excluded due to recent acquisition • Emissions are not evaluated	Select from: • No emissions excluded • No emissions from this source • Emissions are not relevant • Emissions are relevant but not yet calculated • Emissions are relevant and calculated, but not disclosed • Emissions excluded due to a recent acquisition • Emissions are not evaluated	Select from: • No emissions excluded • No emissions from this source • Emissions are not relevant • Emissions are relevant but not yet calculated • Emissions are relevant and calculated, but not disclosed • Emissions excluded due to a recent acquisition • Emissions are not evaluated	Text field
GHG gases other than CO2	Emissions are not relevant	Emissions are not relevant	Emissions are not relevant	Through our processes, the greenhouse gas we emit is mainly CO2 (energy consumption and decarbonizing). Other GHG emissions are negligible, according to the GHG assessments we made.

Scope 3 emissions data

(C6.5) Account for your organization's Scope 3 emissions, disclosing and explaining any exclusions.

Change from 2017

No change (2017 CC14.1)

Response options

Please complete the following table:

Sources of Scope 3 emissions	Evaluation status	Metric tons CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or	Explanation

				value chain partners	
	Select from: • Relevant, calculated • Relevant, not yet calculated • Not relevant, calculated • Not relevant, explanation provided • Not evaluated	Numerical field [enter a number from 0-999,999,999,999 using a maximum of 2 decimal places and no commas]	Text field [maximum 2,400 characters]	Numerical field [enter a number from 0-100 using a maximum of 2 decimal places and no commas]	Text field [maximum 2,400 characters]
Purchased goods and services	*Relevant, calculated*	*4,655,000*	*1- Types and sources of data: based on raw materials cartography. Emission factors for raw material based on LCA software (Team and GaBi) or supplier data or production data. 2- Data quality : medium quality 3- Methodology : Saint-Gobain internal method Assumption : only the most emissive raw material are counted*	*60.00%*	*Compared to last year, one raw material has been added.*
Capital goods	*Not relevant, explanation provided*	*0*	*Not relevant*	*0.00%*	*The most emissive capital goods (ovens) are purchased to companies belonging to our Group; their main emissions are already accounted within our scope 1 and 2.*
Fuel-and-energy-related activities (not included in Scope 1 or 2)	*Relevant, calculated*	*1,615,000*	*1- Types and sources of data - Activity data: energy consumption - Emission factors: for fuel from Ademe; for electricity national emission factor (ADEME) and T&D losses % (World data bank) - GWP: IPCC Fourth report 2- Data quality - high quality internal accounting 3- Methodology - Saint-*	*0.00%*	*The methodology used for this category is the same as last year*

			Gobain internal method based on ISO 14064-1 - Assumption: same emission factor in all countries for fuels		
Upstream transportation and distribution	*Relevant, calculated*	*340,000*	*1- Types and sources of data: Purchasing and activity data: money spend for transportation and fuel consumption - Emission factors: ADEME 2- Methodology: Saint-Gobain internal method. 3-data quality: medium- Assumption: 20% of our transportation cost relate to the upstream transportation.*	*0.00%*	*Compared to last year, transport from rail/air/sea has been added*
Waste generated in operations	*Not relevant, explanation provided*	*0*	*Not relevant*	*0.00%*	*As we mainly produce inert waste recycled for the main part in internal processes we do not consider "Waste generated in operations" in our Scope 3 emissions. Emissions due to generated waste are not significant.*
Business travel	*Relevant, calculated*	*90,000*	*1- Types and sources of data - Activity data: distances for air train and road (only rental car) provided by our travel agency - Emission factors: GHG Protocol v2 - GWP: IPCC Fourth report 2- Data quality - high quality 3- Methodology - Saint-Gobain internal method based on ISO 14064-1*	*100.00%*	*Data is provided by our suppliers. Data has been completed with geographical areas not covered in the previous year*
Employee commuting	*Relevant, calculated*	*240,000*	*1- Types and sources of data - Activity data: the number of employees and their trips in France - Emission factors: GHG*	*0.00%*	*No change compared to last year*

			protocol v2 - GWP: IPCC Fourth report 2- Data quality - poor quality 3- Methodology - Saint-Gobain internal method based on ISO 14064-1 - Assumption: we make an automatic calculation based on the number of employees that is using a motorized vehicle and the context of the sites (rural or urban) and we make an extrapolation from France data.		
Upstream leased assets	*Relevant, calculated*	*230,000*	*1- Types and sources of data - Activity data: % of leased building - energy consumption for this building - Ademe emissions factors 2- Data quality: Medium quality 3- Methodology: Saint-Gobain internal method.- We only consider the building.*	*0.00%*	*In this category, we consider the leased buildings as the only leased asset. These buildings are part of the distribution sector.*
Downstream transportation and distribution	*Relevant, calculated*	*1,360,000*	*1- Types and sources of data: Purchasing and activity data : money spend for transportation and fuel consumption - Emission factors : ADEME 2- Methodology : Saint-Gobain internal method. 3- data quality : medium- Assumption : 80% of the road transportation relate to downstream transportation*	*0.00%*	*Compared to last year, transport from rail/air/sea has been added*
Processing of sold products	*Not relevant, explanation provided*	*0*	*Not relevant*	*0.00%*	*Saint-Gobain does not sell intermediary products to be manufactured by third parties This source of emission is therefore not relevant.*

Use of sold products	*Relevant, calculated*	*3,840,000*	*1- Types and sources of data- Customers data: % of our products in the final product and emission of their products. 2- Data quality: medium quality 3- Methodology: Saint-Gobain internal method - Assumption : only one type of products (glass for car) has an important CO_2 emission during its use. We made a global extrapolation from the Europe's sales of our product*	*50.00%*	*This category is calculated only for a specific type of products (glass for car, extended to truck this year) because of the great variability of our products. Nevertheless the majority of our products do not have a significant impact in term of CO_2 emission during their use.*
End of life treatment of sold products	*Relevant, calculated*	*910,000*	*1- Types and sources of data - Activity data: annual production coupled to Ademe emissions factors and hypothesis of end of life per product 2- Data quality: Medium quality 3- Methodology: Saint-Gobain internal method.- We only consider construction and flat glass products*	*0.00%*	*This category has been calculated this year.*
Downstream leased assets	*Not relevant, explanation provided*	*0*	*Not relevant*	*0.00%*	*Saint-Gobain does not lease a significant number of assets to third parties.*
Franchises	*Not relevant, explanation provided*	*0*	*Not relevant*	*0.00%*	*Saint-Gobain does not operate a significant number of franchises.*
Investments	*Not relevant, explanation provided*	*0*	*Not relevant*	*0.00%*	*Saint-Gobain does not operate as a financial institution. The main investments in new businesses are accounted under Scope 1 or Scope 2.*
Other (upstream)	Not evaluated				

Other (downstream)	Not evaluated				

Connection to other frameworks

TCFD

Metrics & Targets recommended disclosure b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.

Carbon dioxide emissions from biologically sequestered carbon

(C6.7) Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

Change from 2017

No change (2017 CC8.9)

Response options

Select one of the following options:

No

(C6.7a) Provide the emissions from biologically sequestered carbon relevant to your organization in metric tons CO2.

Question Dependencies

This question only appears if you select “Yes” in response to C6.7.

Change from 2017

No change (2017 CC8.9a)

Response options

Numerical field

Questions C6.8 and C6.9 only apply to organizations with activities in the following sectors:

- Agricultural commodities
- Food, beverage & tobacco
- Paper & forestry

Emissions intensities

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Change from 2017

Modified question (2017 CC12.2, CC12.3)

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Intensity figure	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change	Reason for change
Numerical field [enter a number from 0-99,999,999,999 using a maximum of 10 decimal places and no	Metric tons CO2e Numerical field [enter a number from 0-99,999,999,999 using a maximum of 2	Select from: ● unit total revenue ● barrel of oil equivalent (BOE) ● billion (currency) funds	Numerical field [enter a number from 0-10,000,000,000,000,000 using a maximum of 2 decimal places	Select from: ● Location-based ● Market-based	Numerical field [enter a number from -0 to 999 using a maximum of 2 decimal places]	Select from: ● Increased ● Decreased ● No change	Text field [maximum 2,400 characters]

commas]	decimal places and no commas]	under management • full time equivalent (FTE) employee • kilometer • liter of product • megawatt hour generated (MWh) • megawatt hour transmitted (MWh) • metric ton of product • ounce of gold • ounce of platinum • passenger kilometer • room night produced • square foot • square meter • metric ton of aggregate • metric ton of aluminum • metric ton of coal • metric ton of ore processed • metric ton of steel • unit hour worked • unit of production • unit of service provided • vehicle produced • Other, please specify	and no commas]				
0,00032	*12,954,951*	*unit total revenue*	*40,810,000,000*	*Location-based*	*5,9%*	*decreased*	*Emission reduction activity : Improved CO_2 performance and higher revenues. Our global Scope 1+2 emissions decreased by 0,3% at isoproduction between 2016 and 2017 for the sites belonging to the environment concerned*

							perimeter (sites covering more than 95% of the Group environmental impact).

C7 Emissions breakdown

Scope 1 breakdown: GHGs

(C7.1) Does your organization have greenhouse gas emissions other than carbon dioxide?

Change from 2017

New question

Response options

Select one of the following options:

- Yes
- *No*
- Don’t know

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type providing the used global warming potential (GWP), and the source of each GWP.

Question Dependencies

This question only appears if you select “Yes” in response to C7.1.

Change from 2017

Modified question (2017 CC7.3, CC9.2c)

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Select from: • CO2 • CH4 • N2O • HFCs • PFCs • SF6 • NF3 • Other, please specify	Numerical field	Select from: • IPCC Fifth Assessment Report (AR5 – 100 year) • IPCC Fourth Assessment Report (AR4 - 100 year) • IPCC Third Assessment Report (TAR - 100 year) • IPCC Second Assessment Report (SAR - 100 year) • IPCC Fourth Assessment Report (AR4 - 50 year) • IPCC Third Assessment Report (TAR - 50 year) • IPCC Second Assessment Report (SAR - 50 year) • IPCC Fifth Assessment Report (AR5 – 20 year) • IPCC Fourth Assessment Report (AR4 - 20 year) • IPCC Third Assessment Report (TAR - 20 year) • IPCC Second Assessment Report (SAR - 20 year) • Other, please specify

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Change from 2017

No change (2017 CC9.1a)

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Country/Region	Scope 1 emissions (metric tons CO2e)
Select from a drop-down list of countries and regions. Please see the Technical Note “Country Regions” for details around the available regions and their constituent countries.	Numerical field
Albania	*15.36*

Algeria	*30,855.11*
Argentina	*16,785.57*
Australia	*292.63*
Austria	*29,213.65*
Belgium	*38,529.82*
Bhutan	*26,482*
Botswana	*0*
Brazil	*482,276.04*
Bulgaria	*595.65*
Canada	*185,005.50*
Chile	*0*
China	*1,429,641.28*
Colombia	*105,734.36*
Czech Republic	*188,546.16*
Denmark	*131,634.16*
Egypt	*181,843.10*

Estonia	*49.16*
Finland	*67,943.19*
France	*1,087,057.33*
Germany	*848,269.55*
Ghana	*0*
Greece	*2,535*
Hungary	*18,030.20*
India	*660,376.86*
Indonesia	*50,591.19*
Ireland	*38,356.75*
Italy	*169,589.86*
Japan	*80,494.61*
Jordan	*10.95*
Kuwait	*429.55*
Latvia	*0*
Lebanon	*1,694.19*

Lithuania	*469.95*
Luxembourg	*141.84*
Malaysia	*16,544.54*
Mexico	*279,572.98*
Morocco	*51.54*
Netherlands	*61,304.18*
New Zealand	*0*
Norway	*88,642.14*
Oman	*0*
Peru	*0*
Poland	*360,827.20*
Portugal	*46,204.47*
Qatar	*469.08*
Romania	*148,957.77*
Russia	*195,803.47*
Saudi Arabia	*2,687.77*

Serbia	*431.14*
Singapore	*0*
Slovakia	*1,859.37*
Slovenia	*0*
South Africa	*53,286.27*
South Korea	*283,545.86*
Spain	*340,258.92*
Sweden	*76,471.00*
Switzerland	*15,113.63*
Tanzania	*0*
Thailand	*68,308.28*
Turkey	*159,371.13*
United Arab Emirates	*28,197.74*
United Kingdom	*379,276.13*
United States of America	*987,479.12*
Venezuela	*65,696.97*

Vietnam	*28,177.63*
Zimbabwe	*2,421.15*

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

Change from 2017

Modified question (2017 CC9.2)

Response options

Select all that apply from the following options:

By activity

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Question dependencies

This question only appears if you select “By business division” in response to C7.3.

Change from 2017

No change (2017 CC9.2a)

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Text field	Numerical field

(C7.3b) Break down your total gross global Scope 1 emissions by business facility.

Question Dependencies

This question only appears if you select “By facility” in response to C7.3.

Change from 2017

No change (2017 CC9.2b)

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Text field	Numerical field	Enter the latitude of your facility here using numbers between 90.000000 and -90.000000, e.g. 51.524810	Enter the longitude of your facility using numbers between 180.000000 and -180.000000, e.g. -0.106958

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Question Dependencies

This question only appears if you select “By activity” in response to C7.3.

Change from 2017

No change (2017 CC9.2d)

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Activity	Scope 1 emissions (metric tons CO2e)
Glass Activity	*4,515,623*
Pipe Activity	*1,749,312*
Other	*3,299,515*

Question C7.4 only applies to organizations with activities in the following sectors:

- Agricultural commodities
- Food, beverage & tobacco
- Paper & forestry
- Coal
- Electric utilities
- Oil and gas
- Cement
- Chemical
- Metals and mining
- Steel
- Transport OEMs
- Transport services

Scope 2 breakdown: country

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Change from 2017

No change (2017 CC10.1a)

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based

				approach (MWh)
Select from a drop-down list of countries and regions. Please see the Technical Note “Country Regions”, for details around the available regions and their constituent countries.	Numerical field	Numerical field	Numerical field	Numerical field
Albania	*1.75*		*250*	
Algeria	*956.20*		*1,787.29*	
Argentina	*10,808.65*		*28,378.71*	
Australia	*1,786.19*		*2,365.82*	
Austria	*5,066.72*		*31,389.50*	
Belgium	*5,159.57*		*22,829.98*	
Bhutan	*2,497.30*		*86,114*	
Botswana	*0*		*0*	
Brazil	*108,002.67*		*803,637.18*	*58,773.18*
Bulgaria	*572.37*		*1,149.34*	
Canada	*26,783.49*		*159,296.27*	
Chile	*0*		*0*	

China	*502,082.97*		*764,251.02*	
Colombia	*9,748.36*		*44,141.58*	
Czech Republic	*150,241.22*		*288,800.53*	
Denmark	*14,791.51*		*82,596.10*	
Egypt	*22,916.10*		*48,551.06*	
Estonia	*33,102.54*		*32,263.68*	
Finland	*13,674.22*		*127,796.50*	
France	*57,779.32*		*1,256,064.49*	
Germany	*327,937.89*		*728,750.88*	
Ghana	*0*		*0*	
Greece	*804.30*		*1,377.24*	
Hungary	*1,798.87*		*6,565.22*	
India	*270,839.28*		*351,283.11*	
Indonesia	*10,477.91*		*14,294.55*	
Ireland	*9,387.56*		*22,458.28*	
Italy	*74,153.12*		*208,184.19*	

Japan	*61,778.23*		*119,486.50*	
Jordan	*0.03*		*0.05*	
Kuwait	*106.25*		*170*	
Latvia	*0*		*0*	
Lebanon	*23.40*		*33.33*	
Lithuania	*126.38*		*679.46*	
Luxembourg	*555.86*		*1,978.18*	
Malaysia	*18,301.23*		*26,886.18*	
Mexico	*153,341.98*		*333,352.14*	
Morocco	*23,420.89*		*33,363.10*	
Netherlands	*33,228.48*		*67,951.90*	
New Zealand	*0*		*0*	
Norway	*2,066.60*		*229,622.86*	
Oman	*0*		*0*	
Peru	*0*		*0*	
Poland	*322,729.57*		*441,639.80*	

Portugal	*12,511.49*		*36,056.19*	
Qatar	*349.92*		*720*	
Romania	*22,320.25*		*83,146.19*	
Russia	*51,875.52*		*127,826.20*	
Saudi Arabia	*8,497.18*		*11,704.11*	
Serbia	*665.70*		*879.4*	
Singapore	*0*		*0*	
Slovakia	*741.21*		*4,385.87*	
Slovenia	*17.04*		*64.33*	
South Africa	*38,452.27*		*38,840.68*	
South Korea	*118,506.11*		*225,296.80*	
Spain	*54,819.29*		*340,095.49*	*102,554.16*
Sweden	*2,007.44*		*194,965.86*	*12,471*
Switzerland	*1,175.97*		*48,999.11*	
Tanzania	*0*		*0*	
Thailand	*31,871.48*		*62,370.80*	

Turkey	*47,853.22*		*108,510.71*	
United Arab Emirates	*5,793.6*		*10,200*	
United Kingdom	*600.71*		*330,958.79*	*329,237.54*
United States of America	*647,378.42*		*1,263,367.11*	
Venezuela	*55,564.53*		*197,037.36*	
Vietnam	*11,544.05*		*24,247.12*	
Zimbabwe	*907.22*		*1,236*	

Scope 2: business breakdowns

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

Change from 2017

No change (2017 CC10.2)

Response options

Select all that apply from the following options:

By activity

(C7.6a) Break down your total gross global Scope 2 emissions by business division.

Question dependencies

This question only appears if you select “By business division” in response to C7.6.

Change from 2017

No change (2017 CC10.2a)

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Text field	Numerical field	Numerical field

[Add Row]

(C7.6b) Break down your total gross global Scope 2 emissions by business facility.

Question dependencies

This question only appears if you select “By facility” in response to C7.6.

Change from 2017

No change (2017 CC10.2b)

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Text field	Numerical field	Numerical field

[Add Row]

(C7.6c) Break down your total gross global Scope 2 emissions by business activity.

Question dependencies

This question only appears if you select “By activity” in response to C7.6.

Change from 2017

No change (2017 CC10.2c)

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Glass Activity	*1,226,621*	
Pipe Activity	*254,436*	
Other	*1,909,444*	

Question C-CE7.7/C-CH7.7/C-CO7.7/C-EU7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7 only applies to organizations with activities in the following sectors:

- Cement
- Chemicals
- Coal
- Electric utilities
- Metals & mining
- Oil & gas
- Steel
- Transport OEMS
- Transport services

Question C7.8 only applies to organizations with activities in the following sectors:

- Chemicals
- Transport manufacturers

Emissions performance

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Change from 2017

Minor change (2017 CC12.1)

Response options

Select one of the following options:

Increased

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

Question dependencies

This question only appears if you select “Increased”, “Decreased” or “Remained the same overall” in response to C7.9.

Change from 2017

Modified question (2017 CC12.1a)

Response options

Please complete the following table:

Reason	Change in emissions (metric tons	Direction of change	Emissions value (percentage)	Please explain calculation

	CO2e)			
Change in renewable energy consumption				
Other emissions reduction activities	*628,710*	*Decreased*	*4.8%*	*In 2017, our emissions reduction actions reduced the combined scope 1 & 2 emissions by approximately 628710 tCO2e compared to 2016. Our total scope 1 and 2 emissions in 2016 were 12,94MtCO2e, so we estimated a decrease of 4.8% through (0.628710/12.94)*100=4.8%*
Divestment				
Acquisitions	*329,419*	*Decreased*	*2.5%*	*In 2017, our acquisitions/disvestments reduced the combined scope 1 & 2 emissions by approximately 329419 tCO2e compared to 2016. Our total scope 1 and 2 emissions in 2016 were 12,94MtCO2e, so we estimated a decrease of 2,5% through (0.329419/12.94)*100=2.5%*
Mergers				
Change in output	*1,134,772*	*Increased*	*8.7%*	*In 2017, our change in output increased the combined scope 1 & 2 emissions by approximately 1134772 tCO2e compared to 2016. Our total scope 1 and 2 emissions in 2016 were 12,94MtCO2e, so we estimated a increase of 8,7% through (1.134772/12.94)*100=8.7%*
Change in methodology	*159,690*	*Decreased*	*1.2%*	*In 2017, our change in methodology (Difference with national emission factor from IEA) decreased the combined scope 1 & 2 emissions by approximately 159690tCO2e compared to 2016. Our total scope 1*

				*and 2 emissions in 2016 were 12,94MtCO2e, so we estimated a decrease of 1,2% through (0.159690/12.94)*100=1.2%*
Change in boundary				
Change in physical operating conditions				
Unidentified				
Other				

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Question dependencies

This question only appears if you select “Increased”, “Decreased” or “Remained the same overall” in response to C7.9.

Change from 2017

No change (2017 CC12.1b)

Response options

Select one of the following options:

Location-based

C8 Energy

Energy spend

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

Change from 2017

No change (2017 CC11.1)

Response options

Select one of the following options:

- 0%
- More than 0% but less than or equal to 5%
- *More than 5% but less than or equal to 10%*
- More than 10% but less than or equal to 15%
- More than 15% but less than or equal to 20%
- More than 20% but less than or equal to 25%
- More than 25% but less than or equal to 30%
- More than 30% but less than or equal to 35%
- More than 35% but less than or equal to 40%
- More than 40% but less than or equal to 45%
- More than 45% but less than or equal to 50%
- More than 50% but less than or equal to 55%
- More than 55% but less than or equal to 60%
- More than 60% but less than or equal to 65%
- More than 65% but less than or equal to 70%

- More than 70% but less than or equal to 75%
- More than 75% but less than or equal to 80%
- More than 80% but less than or equal to 85%
- More than 85% but less than or equal to 90%
- More than 90% but less than or equal to 95%
- More than 95% but less than or equal to 100%
- Don’t know

Energy-related activities

(C8.2) Select which energy-related activities your organization has undertaken.

Question Dependencies

The energy-related activities that you select in response to C8.2 determine which energy breakdowns you will be prompted to respond to in the proceeding questions. Please note, if your response to C8.2 is amended, data in dependent questions may be erased.

Change from 2017

New question

Response options

Please complete the following table:

Activity	Indicate whether your organization undertakes this energy-related activity
Consumption of fuel (excluding feedstocks)	*Yes*
Consumption of purchased or acquired electricity	*Yes*

Consumption of purchased or acquired heat	*Yes*
Consumption of purchased or acquired steam	*Yes*
Consumption of purchased or acquired cooling	*No*
Generation of electricity, heat, steam, or cooling	*Yes*

(C8.2a) Report your organization’s energy consumption totals (excluding feedstocks) in MWh.

Question dependencies

This question only appears if you select “Yes” to any of the activities listed in C8.2. A row will appear in this table for each energy-related activity selected in C8.2. The "Total energy consumption" row will always appear.

Change from 2017

Modified question (2017 CC11.2, CC11.5)

Response options

Please complete the following table:

Energy carrier	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh

Consumption of fuel	Select from: • LHV (lower heating value) • HHV (higher heating value)	Numerical field	Numerical field	Numerical field
Consumption of fuel	*LHV (lower heating value)*	*1,223,417*	*35,077,579*	*36,300,996*
Consumption of purchased or acquired electricity	*LHV (lower heating value)*	*503,035*	*8,822,004*	*9,325,039*
Consumption of purchased or acquired heat	*LHV (lower heating value)*	*0*	*9,518*	*9,518*
Consumption of purchased or acquired steam	*LHV (lower heating value)*	*0*	*146,091*	*146,091*
Consumption of self-generated non-fuel renewable energy	*LHV (lower heating value)*	*5,057*	*0*	*5,057*
Total energy consumption	*LHV (lower heating value)*	*1,731,509*	*44,055,194*	*45,786,703*

(C8.2b) Select the applications of your organization’s consumption of fuel.

Question Dependencies

This question only appears if you select "Yes" to “Consumption of fuel” in response to C8.2. Each option that you select in this table will appear as an additional column in C8.2c.

Change from 2017

New question

Response options

Please complete the following table:

Fuel application	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	*Yes*
Consumption of fuel for the generation of steam	*Yes*
Consumption of fuel for the generation of cooling	*No*
Consumption of fuel for co-generation or tri-generation	*Yes*

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Question dependencies

This question only appears if you select “Consumption of fuel” in C8.2 and a column appears in the table for each fuel application selected in C8.2b. The “Total MWh consumed by the organization” and “MWh consumed for the generation of heat” columns will always appear.

Change from 2017

Modified question (2017 CC11.3, CC11.3a)

Response options

Please complete the following table. The table is displayed over several rows for readability. You are able to add rows by using the “Add Row” button at the bottom of the table.

Fuels	Heating value	Total MWh consumed by the organization	MWh consumed for the generation of electricity

Select from: Acetylene; Agricultural Waste; Alternative Kiln Fuel (Wastes); Animal Fat; Animal/Bone Meal; Anthracite Coal; Asphalt; Aviation Gasoline; Bagasse; Bamboo; Basic Oxygen Furnace Gas (LD Gas); Biodiesel; Biodiesel Tallow; Biodiesel Waste Cooking Oil; Bioethanol; Biogas; Biogasoline; Biomass Municipal Waste; Biomethane; Bitumen; Bituminous Coal; Black Liquor; Blast Furnace Gas; Brown Coal Briquettes (BKB); Burning Oil; Butane; Butylene; Charcoal; Coal; Coal Tar; Coke; Coke Oven Gas; Coking Coal; Compressed Natural Gas (CNG); Condensate; Crude Oil; Crude Oil Extra Heavy; Crude Oil Heavy; Crude Oil Light; Diesel; Distillate Oil; Dried Sewage Sludge; Ethane; Ethylene; Fuel Gas; Fuel Oil Number 1; Fuel Oil Number 2; Fuel Oil Number 4; Fuel Oil Number 5; Fuel Oil Number 6; Gas Coke; Gas Oil; Gas Works Gas; GCI Coal; General Municipal Waste; Grass; Hardwood; Heavy Gas Oil; Hydrogen; Industrial Wastes; Isobutane; Isobutylene; Jet Gasoline; Jet Kerosene; Kerosene; Landfill Gas; Light Distillate; Lignite Coal; Liquefied Natural Gas (LNG); Liquefied Petroleum Gas (LPG); Liquid Biofuel; Lubricants; Marine Fuel Oil; Marine Gas Oil; Metallurgical Coal; Methane; Motor Gasoline; Naphtha; Natural Gas; Natural Gas Liquids (NGL); Natural	Select from: • LHV (lower heating value) • HHV (higher heating value)	Numerical field	Numerical field

Gasoline; Non-Biomass Municipal Waste; Non-Biomass Waste; Oil Sands; Oil Shale; Orimulsion; Other Petroleum Gas; Paraffin Waxes; Patent Fuel; PCI Coal; Peat; Pentanes Plus; Petrochemical Feedstocks; Petrol; Petroleum Coke; Petroleum Products; Pitch; Plastics; Primary Solid Biomass; Propane Gas; Propane Liquid; Propylene; Refinery Feedstocks; Refinery Gas; Refinery Oil; Residual Fuel Oil; Road Oil; SBP; Shale Oil; Sludge Gas; Softwood; Solid Biomass Waste; Special Naphtha; Still Gas; Straw; Subbituminous Coal; Sulphite Lyes; Tar; Tar Sands; Thermal Coal; Thermal Coal Commercial; Thermal Coal Domestic; Thermal Coal Industrial; Tires; Town Gas; Unfinished Oils; Vegetable Oil; Waste Oils; Waste Paper and Card; Waste Plastics; Waste Tires; White Spirit; Wood; Wood Chips; Wood Logs; Wood Pellets; Wood Waste; Other, please specify			
Charcoal	*LHV (lower heating value)*	*1,223,417*	*0*
Coke	*LHV (lower heating value)*	*3,777,847*	*0*
Diesel	*LHV (lower heating value)*	*638,240*	*569*
Heavy Gas Oil	*LHV (lower heating value)*	*2,348,874*	*77,853*
Lignite Coal	*LHV (lower heating value)*	*1,798,317*	*0*

Liquefied Petroleum Gas (LPG)	*LHV (lower heating value)*	*426,217*	*52*
Natural Gas	*LHV (lower heating value)*	*26,088,084*	*80,507*

MWh consumed for the generation of heat	MWh consumed for the generation of steam		MWh consumed for cogeneration or trigeneration
Numerical field	Numerical field		Numerical field
1,223,417	*0*		*0*
3,775,696	*2,151*		*0*
637,671	*0*		*0*
2,233,367	*0*		*37,654*
1,798,317	*0*		*0*
425,077	*0*		*1,088*
25,784,545	*0*		*223,032*

(C8.2d) List the average emission factors of the fuels reported in C8.2c.

Question dependencies

This question only appears if you input data into C8.2c. A corresponding row will appear for each fuel that you reported in C8.2c.

Change from 2017

Modified question (2017 CC7.4)

Response options

Please complete the following table:

Fuel	Emission factor	Unit	Emission factor source	Comment
Select from: (Options for this column driven by fuel's selected in C8.2c)	Numerical field	Select from: ● metric tons CO2e per m3 ● metric tons CO2 per m3 ● metric tons CO2e per liter ● metric tons CO2 per liter ● metric tons CO2e per MWh ● metric tons CO2 per MWh ● kg CO2e per liter ● kg CO2 per liter ● kg CO2e per MWh ● kg CO2 per MWh ● metric tons CO2e per GJ ● metric tons CO2 per GJ ● metric tons CO2e per metric ton ● metric tons CO2 per metric ton ● lb CO2e per 1000 ft3 ● lb CO2 per 1000 ft3 ● lb CO2e per gallon ● lb CO2 per gallon ● lb CO2e per barrel ● lb CO2 per barrel ● lb CO2e per million BTU ● lb CO2 per million BTU ● lb CO2e per short ton ● lb CO2 per short ton	Text field	Text field

		• lb CO2e per MWh • lb CO2 per MWh		
Charcoal	*0*	*kg CO2e per MWh*	*IPCC 2006 guidelines for National Greenhouse Gas Inventories*	
Diesel	*267*	*kg CO2e per MWh*	*IPCC 2006 guidelines for National Greenhouse Gas Inventories*	
Lignite coal	*354*	*kg CO2e per MWh*	*IPCC 2006 guidelines for National Greenhouse Gas Inventories*	
coke	*385*	*kg CO2e per MWh*	*IPCC 2006 guidelines for National Greenhouse Gas Inventories*	
Liquefied Petroleum Gas (LPG)	*227*	*kg CO2e per MWh*	*IPCC 2006 guidelines for National Greenhouse Gas Inventories*	
Natural gas	*202*	*kg CO2e per MWh*	*IPCC 2006 guidelines for National Greenhouse Gas Inventories*	
Heavy Gas Oil	*279*	*kg CO2e per MWh*	*IPCC 2006 guidelines for National Greenhouse Gas Inventories*	

(C8.2e) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

Question Dependencies

This question only appears if you select “Generation of electricity, heat, steam, or cooling” in response to C8.2.

Change from 2017

Modified question (2017 CC11.5)

Response options

Please complete the following table:

Energy Carrier	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)

	Numerical field	Numerical field	Numerical field	Numerical field
Electricity	*167,545*	*68,650*	*103,952*	*5,057*
Heat	*35,878,090*	*35,878,090*	*1,223,417*	*1,223,417*
Steam	*2,151*	*0*	*0*	*0*
Cooling	*0*	*0*	*0*	*0*

(C8.2f) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a low-carbon emission factor in the market-based Scope 2 figure reported in C6.3.

Question Dependencies

This question only appears if you select “Consumption of purchased or acquired electricity”, “Consumption of purchased or acquired heat”, “Consumption of purchased or acquired steam” or “Consumption of purchased or acquired cooling” in response to C8.2.

Change from 2017

Modified question (2017 CC11.4)

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Basis for applying a low-carbon emission factor	Low-carbon technology type	MWh consumed associated with low-carbon electricity, heat, steam or cooling	Emission factor (in units of metric tons CO2e per MWh)	Comment
Select from:	Select all that apply:		Numerical field	Text field

• No purchases or generation of low-carbon electricity, heat, steam or cooling accounted with a low-carbon emission factor • Off-grid energy consumption from an on-site installation or through a direct line to an off-site generator owned by another company • Direct procurement contract with a grid-connected generator or Power Purchase Agreement (PPA), supported by energy attribute certificates • Direct procurement contract with a grid-connected generator or Power Purchase Agreement (PPA), where electricity attribute certificates do not exist or are not required for a usage claim • Contract with suppliers or utilities, supported by energy attribute certificates • Contract with suppliers or utilities, with a supplier-specific emission rate, not backed by electricity attribute certificates • Energy attribute certificates, Guarantees of Origin • Energy attribute certificates, Renewable Energy Certificates (RECs) • Energy attribute certificates, I-RECs • Other, please specify	• Solar PV • Concentrated solar power (CSP) • Wind • Hydropower • Nuclear • Biomass (including biogas) • Tidal • Other low-carbon technology, please specify			
Energy attribute certificates, Renewable Energy Certificates (RECs)	*Other low-carbon technology, generally a mix of solar and wind*	*503,035*	*0*	*REC from almost all of our UK sites and some sites in Spain*

Off-grid energy consumption from an on-site installation or through a direct line to an off-site generator owned by another company	*Solar PV*	*5,057*	*0*	
Other, please specify: use of biomass in production processes	*Biomass (including biogas)*	*1,223,417*	*0*	

Other climate-related metrics

(C9.1) Provide any additional climate-related metrics relevant to your business.

Change from 2017

New question

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Description	Metric value	Metric numerator	Metric denominator (intensity metric only)	% change from previous year	Direction of change	Please explain
Select from: Waste; Energy usage; Land use; Other, please specify	Numerical field	Text field	Text field	Numerical field	Select from: Increased Decreased No change	Text field
waste	557,868	Tons of non-recovered-waste in 2017	Not relevant	5,75%	Decreased	We have a target of -50% of non-recovered waste of the environment concerned perimeter between 2025 and 2010 at iso-production. We are at -13,2%, with a decrease of 5,75 between 2016 and 2017
Energy usage	44,887,689	MWh consumed in 2017	Not relevant	0,36%	Decreased	We have a target of -15% of energy consumption of the environment

						concerned perimeter between 2025 and 2010 at iso-production. We are at -2,8%, with a decrease of 0,36 between 2016 and 2017

C10 Verification

Verification

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

Change from 2017

Modified question (2017 CC8.6, CC8.7, CC14.2)

Response options

Please complete the following table:

Scope	Verification/assurance stats
Scope 1	*Third-party verification or assurance process in place*
Scope 2 (location-based or market-based)	*Third-party verification or assurance process in place*
Scope 3	*No third-party verification or assurance*

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 and/or Scope 2 emissions and attach the relevant statements.

Question dependencies

This question only appears if you select “Third-party verification or assurance process in place” for Scope 1 and/or Scope 2 emissions in response to C10.1.

Change from 2017

Modified question (2017 CC8.6a, CC8.7a)

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Scope	Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported emissions verified (%)
Select from: ● Scope 1 ● Scope 2 location-based ● Scope 2 market-based	Select from: ● Annual process ● Biennial process ● Triennial process	Select from: ● No verification or assurance of current reporting year ● Underway but not complete for current reporting year – first year it has taken place ● Underway but not complete for reporting year – previous statement of process attached ● Complete	Select from: ● Not applicable ● Limited assurance ● Moderate assurance ● Reasonable assurance ● High assurance ● Third party verification/assurance underway	Attach your document here.	Text field	Select from:	Numerical field
Scope 1	*Annual process*	*Complete*	*Limited assurance*	*Registration document*	*pages 324 – 329*	*ISAE 3000+ Compagnie Nationale des Commissaires aux Comptes (CNCC)*	*90%*
Scope 2 location-based	*Annual process*	*Complete*	*Limited assurance*	*Registration document*	*pages 324 - 329*	*ISAE 3000 +Compagnie Nationale des*	*90%*

						Commissaires aux Comptes (CNCC)	

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Question dependencies

This question only appears if you select “Third-party verification or assurance process in place” for Scope 3 emissions in response to C10.1.

Change from 2017

Modified question (2017 CC14.2a)

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Select from: ● Scope 3- all relevant categories ● Scope 3- at least one applicable category	Select from: ● Annual process ● Biennial process ● Triennial process	Select from: ● No verification or assurance of current reporting year ● Underway but not complete for current reporting year – first year it has taken place ● Underway but not complete for reporting year – previous statement of process attached ● Complete	Attach your document here.	Text field	Select from: ● AA1000AS ● Advanced technologies promotion Subsidy Scheme with Emission reduction Target (ASSET) ● Airport Carbon Accreditation (ACA) des Airports Council International Europe ● Alberta Specified Gas Emitters Regulation (SGER) ● ASAE3000 ● Attestation standards established by AICPA (AT101) ● Australian National GHG emission regulation (NGER)

					• California Mandatory GHG Reporting Regulations (CARB) • Canadian Institute of Chartered Accountants (CICA) Handbook: Assurance Section 5025 • Certified emissions measurement and reduction scheme (CEMARS) • Chicago Climate Exchange (CCX) verification standard • Compagnie Nationale des Commissaires aux Comptes (CNCC) • Corporate GHG verification guidelines from ERT • DNV Verisustain Protocol/ Verification Protocol for Sustainability Reporting • Earthcheck Certification • ERM GHG Performance Data Assurance Methodology • European Union Emissions Trading System (EU ETS) • IDW PS 821: IDW Prüfungsstandard: Grundsätze ordnungsmäßiger Prüfung oder prüferischer Durchsicht von Berichtenim Bereich der Nachhaltigkeit • IDW AsS 821: IDW Assurance Standard: Generally Accepted Assurance Principles for the Audit or Review of

					Reports on Sustainability Issues • ISAE3000 • ISAE 3410 • ISO14064-3 • Japan voluntary emissions trading scheme (JVETS) guideline for verification • Korean GHG and energy target management system • NMX-SAA-14064-3-IMNC: Instituto Mexicano de Normalización y Certificación A.C • RevR6 procedure for assurance of sustainability report • Saitama Prefecture Target-Setting Emissions Trading Program • SGS Sustainability Report Assurance • Spanish Institute of Registered Auditors (ICJCE) • Standard 3810N Assurance engagements relating to sustainability reports of the Royal Netherlands Institute of Registered Accountants • State of Israel Ministry of Environmental Protection, Verification of GHG and emissions reduction in Israel Guidance Document • Swiss Climate CO2 Label for Businesses • Thai Greenhouse Gas Management Organisation

					(TGO) Greenhouse Gas (GHG) Verification Protocol • The Climate Registry's General Verification Protocol • Tokyo cap-and-trade guideline for verification • Verification as part of Carbon Trust standard certification • Other, please specify

[Add Row]

Other verified data

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

Change from 2017

Modified question (2017 CC8.8)

Response options

Select one of the following options:

Yes

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Question dependencies

This question only appears if you select “Yes” in response to C10.2.

Change from 2017

Modified question (2017 CC8.8)

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Disclosure module verification relates to	Data verified	Verification standard	Please explain
Select from: ● C0. Introduction ● C1. Governance ● C2. Risks and opportunities ● C3. Business Strategy ● C4. Targets and performance ● C5. Emissions performance ● C6. Emissions data ● C7. Emissions breakdown ● C8. Energy ● C9. Additional metrics ● C11. Carbon pricing ● C12. Engagement ● C13. Other land management ● C14. Sign off ● SC. Supply chain module	Select from: ● Year on year change in emissions (Scope 1) ● Year on year change in emissions (Scope 2) ● Year on year change in emissions (Scope 1 and 2) ● Year on year change in emissions (Scope 3) ● Year on year emissions intensity figure ● Financial or other base year data points used to set a science-based target ● Progress against emissions reduction target ● Change in Scope 1 emissions against a base year (not target related) ● Change in Scope 2 emissions against a base year (not target related) ● Change in Scope 3 emissions against a base year (not target related) ● Product footprint verification ● Emissions reduction activities ● Renewable energy products ● Don’t know ● Other, please specify	Text field	Text field
C4 Targets and performance .	*Progress against emissions reduction target*	*ISAE 3000* *● Compagnie Nationale des Commissaires aux Comptes (CNCC)*	*We ask from our auditors, in their mission statement, to verify as well our progress against our set of targets as well as the year on year variation of our emissions. See registration document page 327*

C11 Carbon pricing

Carbon pricing systems

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

Change from 2017

New question

Response options

Select one of the following options:

- *Yes*
- No, but we anticipate being regulated in the next three years
- No, and we do not anticipate being regulated in the next three years

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.

Question dependencies

This question only appears if you select “Yes” in response to C11.1.

Change from 2017

New question

Response options

Select all that apply from the following options:

- *Alberta carbon tax*
- Alberta SGER
- Australia ERF Safeguard Mechanism

- *BC carbon tax*
- BC GGIRCA
- *Beijing pilot ETS*
- California CaT
- Chile carbon tax
- China national ETS
- Chongqing pilot ETS
- Colombia carbon tax
- Denmark carbon tax
- Estonia carbon tax
- *EU ETS*
- Finland carbon tax
- *France carbon tax*
- Fujian pilot ETS
- Guangdong pilot ETS
- Hubei pilot ETS
- Iceland carbon tax
- Ireland carbon tax
- Japan carbon tax
- Kazakhstan ETS
- *Korea ETS*
- Latvia carbon tax
- Liechtenstein carbon tax
- Mexico carbon tax
- New Zealand ETS
- Norway carbon tax
- Ontario CaT
- Poland carbon tax
- Portugal carbon tax
- Québec CaT

- RGGI
- Saitama ETS
- *Shanghai pilot ETS*
- Shenzhen pilot ETS
- Slovenia carbon tax
- Sweden carbon tax
- Switzerland carbon tax
- Switzerland ETS
- Tianjin pilot ETS
- Tokyo CaT
- UK carbon price floor
- Ukraine carbon tax
- Washington CAR
- Other, please specify : *Quebec ETS, California ETS, Ontario carbon tax*

(C11.1b) Complete the following table for each of the emissions trading systems in which you participate.

Question dependencies

This question only appears if you select an emissions trading option in response to C11.1a.

Change from 2017

Modified question (2017 CC13.1a)

Response options

Please complete the following table. The table is displayed over several rows for readability. You are able to add rows by using the “Add Row” button at the bottom of the table.

System name	% of Scope 1 emissions covered by the ETS	Period start date	Period end date
Fixed table rows are populated by selection in C11.1a	Numerical field [enter a number from 0-100 using a maximum of 2 decimal places and no commas]	Use the calendar button or enter dates manually in the format DD/MM/YYYY. Please note that the period reported should overlap	Use the calendar button or enter dates manually in the format DD/MM/YYYY. Please note that the period reported should overlap

		with the reporting year.	with the reporting year.
Other, Quebec	*0,3*	*01/01/2017*	*31/12/2017*
Other, California	*0,6*	*01/01/2017*	*31/12/2017*
EU ETS	*38,7*	*01/01/2017*	*31/12/2017*
Shanghai pilot ETS	*1,1*	*01/01/2017*	*31/12/2017*
Beijing pilot ETS	*0,2*	*01/01/2017*	*31/12/2017*
Korea ETS	*3,6*	*01/01/2017*	*31/12/2017*

Allowances allocated	Allowances purchased	Verified emissions in metric tons CO2e	Details of ownership	Comment
Numerical field [enter a number from 0-99,999,999,999 using a maximum of 2 decimal places and no commas]	Numerical field [enter a number from 0-99,999,999,999 using a maximum of 2 decimal places and no commas]	Numerical field [enter a number from 0-99,999,999,999 using a maximum of 2 decimal places and no commas]	Select from: ● Facilities we own and operate ● Facilities we own but do not operate ● Facilities we operate but do not own ● Other, please specify	
24,796	*4,278*	*29,074*	*Facilities we own and operate*	*Provided data are given for the concerned reporting year. Previous years were given in previous CDP questionnaires.*
32,162	*21,353*	*53,515*	*Facilities we own and operate*	*Provided data are given for the concerned reporting year. Previous years were given in*

				previous CDP questionnaires.
3,163,925	*0*	*3,703,326*	*Facilities we own and operate*	*Provided data are given for the concerned reporting year. Previous years were given in previous CDP questionnaires.*
121,234	*0*	*108,961*	*Facilities we own and operate*	*Provided data are given for the concerned reporting year. Previous years were given in previous CDP questionnaires.*
17,008	*0*	*15,745*	*Facilities we own and operate*	*Provided data are given for the concerned reporting year. Previous years were given in previous CDP questionnaires.*
276,507	*0*	*345,466*	*Facilities we own and operate*	*Provided data are given for the concerned reporting year. Previous years were given in previous CDP questionnaires.*

(C11.1c) Complete the following table for each of the tax systems in which you participate.

Question dependencies

This question only appears if you select a carbon tax system in response to C11.1a.

Change from 2017

New question

Response options

Please complete the following table

Pricing system	Period start date	Period end date	% of emissions covered by tax	Total cost of tax paid	Comment
Fixed table rows are populated by selection in C11.1a	Enter the start date that applies to the data in the row. Please note that the period reported should overlap with the reporting year. Use the calendar button or enter dates manually in the format DD/MM/YYYY	Enter the finish date that applies to the data in the row. Please note that the period reported should overlap with the reporting year. Use the calendar button or enter dates manually in the format DD/MM/YYYY	Numerical field [enter a number from 0-100 using a maximum of 2 decimal places and no commas]	Numerical field [enter a number from 0-999,999,999,999 using a maximum of 2 decimal places and no commas]	Text field [maximum 2,400 characters]
Alberta Carbon tax	*01/01/2017*	*31/12/2017*	*0,3*	*352,074*	*Data provided for the first year*
British Columbia carbon tax	*01/01/2017*	*31/12/2017*	*0,3*	*507,537*	*Data provided for the first year*
France carbon tax	*01/01/2017*	*31/12/2017*	*0,6*	*1,120,000*	*Data provided for the first year*
Other, Ontario carbon tax	*01/01/2017*	*31/12/2017*	*0,1*	*105,607*	*Data provided for the first year*

(C11.1d) What is your strategy for complying with the systems in which you participate or anticipate participating?

Question dependencies

This question only appears if you select “Yes” or “No, but we anticipate being regulated in the next three years” in response to C11.1

Change from 2017

No change (2017 CC13.1b)

Response options

Our general strategy is to reduce our CO_2 emissions through several tools: CO_2 targets at Group level, energy management systems and WCM, R&D programs, investments, use of low carbon energy. We purchase allowances for the remaining gap. This strategy applies at Group level, that means not only for systems to which we participate but also for the ones that we shall participate in the future.

The answer to question C4.3b provides several examples of energy efficient projects that we have implemented in 2017 such as compressed air consumption reduction or heat recovery.
In 2017, we have purchased green electricity in several countries such as UK sites and Spain.
At the end of 2017, 90 sites of the "environment concerned perimeter" were certified to ISO 50001, compared with 85 a year earlier.

Project-based carbon credits

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

Change from 2017

No change (2017 CC13.2)

Response options

Select one of the following options:

No

(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.

Question dependencies

This question only appears if you select "Yes" in response to C11.2.

Change from 2017

No change (2017 CC13.2a)

Response options

Please complete the following table. The table is displayed over several rows for readability. You are able to add rows by using the “Add Row” button at the bottom of the table.

Select from: • Credit origination • Credit purchase	Select from: • Agriculture • Biomass energy • Cement • CO2 usage • Coal mine/bed CH4 • Energy distribution • Energy efficiency: households • Energy efficiency: industry • Energy efficiency: own generation • Energy efficiency: service • Energy efficiency: supply side • Forests • Fossil fuel switch • Fugitive • Geothermal • HFCs • Hydro • Landfill gas • Methane avoidance • N2O • PFCs and SF6 • Solar • Tidal • Transport • Wind • Other, please specify	Text field	Select from: • CDM (Clean Development Mechanism) • JI (Joint Implementation) • Gold Standard • VCS (Verified Carbon Standard) • VER+ (TÜV SÜD standard) • CAR (The Climate Action Reserve) • CCBS (developed by the Climate, Community and Biodiversity Alliance, CCBA) • Plan Vivo • Not yet verified • Other, please specify

Numerical field	Numerical field	Select from: • Yes • No • Not relevant	Select from: • Compliance • Voluntary Offsetting • Not applicable • Other, please specify

[Add Row]

Internal price on carbon

(C11.3) Does your organization use an internal price on carbon?

Change from 2017

No change (2017 CC2.2c)

Response options

Select one of the following options:

Yes

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Question dependencies

This question only appears if you select “Yes” in response to C11.3.

Change from 2017

Modified question (2017 CC2.2d)

Response options

Please complete the following table:

Objective for implementing an internal carbon price	GHG Scope	Application	Actual price(s) used (Currency /metric ton)	Variance of price(s) used	Type of internal carbon price	Impact & implication
Select all that apply: ● Navigate GHG regulations ● Stakeholder expectations ● Change internal behavior ● Drive energy efficiency ● Drive low-carbon investment ● Stress test investments ● Identify and seize low-carbon opportunities ● Supplier engagement ● Other, please specify	Select all that apply: ● Scope 1 ● Scope 2 ● Scope 3	Corporate structure that price is applied to (i.e. business units, corporate divisions, facilities) Text field [maximum 1,000 characters]	Numerical field [enter a number from 0-99,999,999,999 using a maximum of 2 decimal places and no commas]	Text field [maximum 2,400 characters]	Select all that apply: ● Shadow price ● Internal fee ● Internal trading ● Implicit price ● Offsets ● Other, please specify	Text field [maximum 2,400 characters]
Drive low-carbon investment	*Scope 1* *Scope 2*	*Internal carbon price of 30€/ton 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 more than 10 GWh. The internal carbon*	*30*	*No variance*	*Shadow price*	*The internal carbon price mechanism, implemented at the beginning of 2016, has the objective of accelerating the transition to low-carbon technologies at Group level. The internal carbon price covers scope 1 and scope 2 CO_2 emissions of the Group. The efficiency of the carbon price for investment is highly dependent of the project specificity. In any case the carbon price has a strong*

		price is applicable by all Activities in each of the 67 countries where we operate. Activities can apply a higher rate to help drive the transition and weight on the investment decisions. This internal price of carbon is public.				*impact in terms of awareness of CO_2 cost within the Group.*
Drive low-carbon investment	*Scope 1* *Scope 2* *Scope 3*	*The other internal price of carbon is much higher (100€ per ton) and is used to guide R&D budgets with a long-term orientation. The internal carbon price is applicable by all Activities in each of the 67 countries where we operate. Activities can apply a higher rate to help drive the transition and weight on the investment decisions. This internal price of carbon is public.*	*100*	*No variance*	*Shadow price*	*The internal carbon price mechanism, implemented at the beginning of 2016, has the objective of accelerating the transition to low-carbon technologies at Group level and for R&D to invest in breakthrough low-carbon technology. For R&D, the internal carbon price covers scope 1, scope 2 and 3 CO_2 emissions of the Group. This price level has already demonstrated value in supporting low-carbon R&D projects in particular.*

C12 Engagement

Value chain engagement

(C12.1) Do you engage with your value chain on climate-related issues?

Change from 2017

Minor change (2017 CC14.4)

Response options

Select all that apply from the following options:

- *Yes, our suppliers*
- *Yes, our customers*
- Yes, other partners in the value chain

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Question dependencies

This question only appears if you select “Yes, our suppliers” in response to C12.1.

Change from 2017

Modified question (2017 CC14.4b)

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Type of engagement	Details of engagement	% of suppliers by number	% total procurement spend (direct	% Scope 3 emissions as reported in	Rationale for the coverage of your engagement	Impact of engagement, including measures of success	Comment

			and indirect)	C6.5			
Select from: ● Compliance & onboarding ● Information collection (understanding supplier behavior) ● Engagement & incentivization (changing supplier behavior) ● Innovation & collaboration (changing markets) ● Other, please specify	Select all that apply: Compliance & onboarding ● Included climate change in supplier selection / management mechanism ● Code of conduct featuring climate change KPIs ● Climate change is integrated into supplier evaluation processes ● Other, please specify Information collection (understanding supplier behavior) ● Collect climate change and carbon information at least annually from suppliers ● Other, please specify Engagement & incentivization (changing supplier behavior) ● Run an engagement campaign to educate suppliers about climate change ● Climate change performance is featured in supplier awards scheme ● Offer financial incentives for suppliers who reduce your operational emissions (Scopes 1 &2) ● Offer financial incentives for suppliers who reduce your downstream emissions (Scopes 3) ● Offer financial incentives for	Percentage field	Percentage field	Percentage field	Text field	Text field	Text field

	suppliers who reduce your upstream emissions (Scopes 3) ● Other, please specify Innovation & collaboration (changing markets) ● Run a campaign to encourage innovation to reduce climate impacts on products and services ● Other, please specify Other ● Other, please specify						
Compliance & onboarding	*Other, Charter with climate change principles*	*17*	*73.4*	*44.0*	*43,899 suppliers signed our Responsible Purchasing Charter. They represent 73.4% of our spent and 17% of the total number of suppliers (258,043). We track these data through the R-Net online platform, a private website entirely dedicated to the subject of responsible purchasing.*	*Responsible purchasing is part of Saint-Gobain's responsible development policy. For both the industrial and distribution activities of Saint-Gobain, a common Suppliers Charter explains Saint-Gobain's requirements and suppliers' obligations in the area of corporate social responsibility. As measure of success, we can state that 43,899 suppliers signed our Responsible Purchasing Charter.* *An online platform called R-Net has been set up to facilitate responsible purchasing. Industrial activities suppliers have access to R-Net to acknowledge receipt of Supplier Charter of Saint-Gobain, electronically transmit essential proofs (timber certificates, quality certificates, ISO standards), answer self-assessment questionnaires, get all the information on Saint-Gobain's responsible purchasing directives and access to details of their CSR assessments.* *At the end of 2017, 40,363 contacts of suppliers are registered on our online platform, 48,414 suppliers' subsidiaries are covered by a fulfilled questionnaire and 7,593 of them have completed a voluntary self-assessment. About 65% of all suppliers which have answered to the questionnaire have notified that they have implemented in its production the necessary measurements to limit or even to remove greenhouse gas emissions.*	

					For scope 3 emissions, we made the hypothesis that 73.4% of our suppliers of the following categories signed our charter: Purchase of goods and services, fuels and energy related activities and transportation.		
Information collection (understanding supplier behaviour)	*Other, Collect information (sometimes annually)*	*19.7*	*31.5*	*3.3*	*The responsible purchase program of our industrial activities is applicable to suppliers who represent more than 100k€ per year in spent and represent around 84% of Saint-Gobain's spent. 5015 of them are considered as potentially risky regarding CSR and 31.5% of them in spent*	*The Group has set a target 2017-2021 of having evaluated the CSR performance of almost all reputable suppliers with CSR risk and annual sales of more than 100,000€ with the Group. Regarding CSR audits, the goal is to achieve from 120 to 150 audits per year, mainly in emerging countries. These audits may lead to de-references if the necessary corrective plans are not implemented within the agreed deadlines.* *As measure of success, we can state that 986 suppliers have been concerned by documentation reviews by a third party or by our buyers.* *The suppliers with unsatisfactory grades to those CSR evaluations have to work to improve their overall performance according to the detailed scorecard evaluation recommendation.* *As action led to reduce our carbon footprint, we can mention the following:* *For Saint Gobain's industrial activities, a CO2 action plan was launched to reduce our scope 3 carbon footprint. We have identified two sectors which have the most Scope 3 emissions : purchased goods (raw material) and upstream*	

					(19.7% by number) have been concerned by documentation reviews. *For scope 3 emissions, we made the hypothesis that 5.4% of our suppliers (in spent) of the following categories were concerned by documentation reviews: Purchase of goods and services, fuels and energy related activities and transportation.*	*transportation. For the raw materials, 2 of them are the main contributors to our scope 3 carbon footprint. Industrial Mortars, the activity directly concerned by one of these raw materials, is working to reduce the carbon footprint of this material, mainly through raw materials substitution. For the second raw material, an action plan was put in place at Group level to exchange with suppliers on CO2 emissions and reference in a dashboard the carbon intensity of each supplier. Regarding transportation, the CO2 action plan also targets it. Best practices are catalogued and passed on our transport committee. Our buyers can then self-declare the application of those best practices. The central purchasing department works with some of the biggest transport suppliers to gather their measured CO2 emissions.*	

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Question dependencies

This question only appears if you select “Yes, our customers” in response to C12.1.

Change from 2017

Modified question (2017 CC14.4a)

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Engagement category	Engagement type	Size of engagement	% Scope 3 emissions as reported in C6.5	Please explain the rationale for selecting this group of customers and scope of engagement	Impact of engagement, including measures of success
Select from: ● Education/information sharing ● Collaboration & innovation ● Other, please specify	Select from: Education/ information sharing ● Run an engagement campaign to education customers about your climate change performance and strategy ● Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services ● Share information about your products and relevant certification schemes (i.e. Energy STAR) Collaboration & Innovation ● Run a campaign to encourage innovation to reduce climate change impacts ● Other – please provide information in column 5	Percentage field	Percentage field	Text field	Text field
Education/information sharing	*Run an engagement campaign to educate customers about the*	*75*	*0*	*These education/information/promotion actions are carried out for all our*	*We can measure the success through the diversity and amount of the following initiatives that we have in the*

	climate change impacts of (using) your products, goods, and/or services			*habitat activities that represent around 75% of our sales.* *The use of our products in that context helps to avoid emissions, meaning that there is no link with scope 3 emissions.*	*education domain.* *Among the training courses delivered by local teams , some are dedicated to energy efficiency and to the reduction of 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 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 the Building Distribution Sector, 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. *Every year, Weber offers over 200,000 training sessions worldwide, allowing installers to access new sustainable construction technologies.* *Finally, we are also participating to major trade shows, such as Greenbuild in the United States, Ecobuild in the United Kingdom, Batimat in France, and the Big 5 in the United Arab Emirates, which provide opportunities to showcase. Saint-Gobain experts are usually giving talks on topics such as eco-innovation and sustainable construction or on new building techniques during such events.*
Collaboration & innovation	*Run a campaign to encourage innovation to reduce climate change impacts*	*17*	*96*	*Eco-innovation applies to all our products.* *Related scope 3 emissions are all categories except business travels, employees commuting and upstream leased assets.* *Size of engagement has been measured through our environment R&D expenses vs our total R&D expenses.*	*Our bond with our customers helps us better understand demand and develop innovative, high value-added products that contribute to reduce the environmental impact of buildings. A product is considered eco-innovative if it contributes to reduce the use of resources in buildings and infrastructure and/or if it has a reduced environmental impact across its life cycle. The industrial activities are in charge of developing and promoting eco-innovative products and systems, while the building distribution sector raises awareness on them and trains clients.*

					For glass activities, for example, we are working on low-weight glass for the automotive industry to reduce our Scope 3 emissions and our clients' Scope 1 emissions. *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 for R&D project leaders. It is also covered by a specific one-day training course primarily for marketing and R&D teams; as measure of success, more than 650 people have attended this session since it was launched.*

(C12.1c) Give details of your climate-related engagement strategy with other partners in the value chain.

Question dependencies

This question only appears if you select "Yes, other partners in the value chain" in response to C12.1.

Change from 2017

Modified question (2017 CC14.4a)

Response options

This is an open text question.
Please note that when copying from another document into the disclosure platform, formatting is not retained.

Scoring:
Management scoring criteria

- A case study/example of your climate-related engagement strategy with other partners in the value chain - 1 point

(C12.1d) Why do you not engage with any elements of your value chain on climate-related issues, and what are your plans to do so in the future?

Question dependencies

This question only appears if you select “No, we do not engage” in response to C12.1.

Change from 2017

No change (2017 CC14.4c)

Response options

This is an open text question.

Please note that when copying from another document into the disclosure platform, formatting is not retained.

Public policy engagement

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

Change from 2017

No change (2017 CC2.3)

Response options

Select all that apply from the following options:

- *Direct engagement with policy makers*
- *Trade associations*
- Funding research organizations
- Other
- No

(C12.3a) On what issues have you been engaging directly with policy makers?

Question dependencies

This question only appears if you select “Direct engagement with policy makers” in response to C12.3.

Change from 2017

No change (2017 CC2.3a)

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Select from: • Mandatory carbon reporting • Cap and trade • Carbon tax • Energy efficiency • Clean energy generation • Adaptation resiliency • Climate finance • Regulation of methane • Emissions • Other, please specify	Select from: • Support • Support with minor exceptions • Support with major exceptions • Neutral • Oppose • Undecided	Text field	Text field
Energy efficiency	*Support*	*Saint Gobain has followed the progress of the 2016 EU Clean Energy Package for all Europeans very actively. In particular The Group has engaged at European and national levels to*	*On the revision of the Energy Efficiency Directive (EED), Saint-Gobain has been supporting of an ambition binding target for energy efficiency by 2030, as well as a solid scheme to support the deployment of energy efficiency obligation schemes for the period of 2021 to 2030, as these have a positive impact on energy renovation.*

		support the revisions of the Energy Efficiency Directive (EED) and the Energy Performance for Building Directive (EPBD). *At European level, activities have notably included input and support to the position of our key partners, including EuroACE, EU-ASE, Eurima, Glass For Europe, the Renovate Europe Campaign, The World GBC Europe Regional Network, and the Coalition for Energy Savings. These positions were further explained and echoed at national level, notably through the national partners of the Renovate Europe Campaign.*	*Regarding the Energy Performance of Buildings Directive, Saint-Gobain has been a long-standing advocate of stronger national renovation strategies leading to implementing actions. Other key points of our position included a clear ambition for a near zero energy building stock (nZEB) by 2050, backed by concrete milestones for 2030 and 2040; evolving the Energy Performance Certificates (EPCs) into Building Renovation Passport; an adequate consideration of the role of measures improving the building envelope (insulation / glazing); and a solid Annex to support transparent calculation methodologies for assessing the energy performance of buildings.* *Most of these suggestions were included in the new Directive agreed on 19th December 2017 following tripartite negotiations under the Estonian Presidency.*
Energy efficiency	*Support*	*In France, Saint-Gobain has joined the "Commitment to Green Growth" programs set up by the authorities via the professional associations that it is a member of. 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.*	*The Flat Glass Activity optimizes its logistics to promote the recovery of cullet across the entire value chain where the Group is present and especially between glass processing sites (manufacturing windshields or windows, for example) and glass furnaces. 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 will therefore have a positive effect on emissions.*

Cap and trade	*Support with minor exceptions*	*We have been very active in the discussions on EU-ETS, in particular to the 2020 horizon, but also to prepare for the period between 2021 and 2030.* *Saint-Gobain has been engaged mostly through the sectoral associations representing its activities.*	*Through the national and European business associations, we have publicly expressed our position on the post 2020 reform of the EU-ETS Directive. The EU-ETS is a milestone of the EU Climate and Energy Policy and a necessary tool to reach -40% greenhouse gas emission reduction by 2030 (compared to 1990), while preserving the competitiveness of energy-intensive industries. Saint-Gobain supports: - The need for free and dynamic allocations and to address carbon leakage - The expansion of the Innovation Fund to support low carbon innovation in industrial sectors - The adaptation of the ETS Directive to changing economic conditions in order to provide the long-term visibility required to stimulate investment in low carbon technologies and processes.*

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

Question dependencies

This question only appears if you select “Trade associations” in response to C12.3.

Change from 2017

No change (2017 CC2.3b)

Response options

Select one of the following options:

Yes

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Question dependencies

This question only appears if you select “Yes” in response to C12.3b.

Change from 2017

No change (2017 CC2.3c)

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association’s position	How have you influenced, or are you attempting to influence the position?
Text field	Select from: ● Consistent ● Inconsistent ● Mixed ● Unknown	Text field	Text field
AFEP	*Consistent*	*Representing more than 110 of the largest private groups operating in France, the Afep - French Association of Private Enterprises - participates in the public debate with the aim of providing pragmatic responses to the development of a competitive French and European economy.*	*Saint-Gobain is a contributor to several work streams of AFEP, notably those related to climate and energy, energy efficiency and the circular economy.* *For example, Saint-Gobain has contributed actively to the debate on the circular economy in AFEP through its circular economy working group, and has repeated its support for a solid framework to drive circularity in the building sector. The Group has been heavily involved in an AFEP 2017 report on circular economy (“Trajectoires économie circulaire” – February 2017) .*
Green Building Councils	*Consistent*	*For many years, Saint-Gobain has been involved in local efforts to promote sustainable buildings by joining Green Building Councils (GBCs). These national associations of building market professionals and actors, present in over 100 countries, offer an effective dialogue platform to promote sustainable construction.*	*Saint-Gobain is proactively involved at 3 organizational levels of the World Green Building Council (WGBC) network: at international level, Saint-Gobain is one of the eleven members of the Corporate Advisory Board of the WGBC, at regional level, it is a partner of the European network of GBCs, and at country level, through its subsidiaries Saint-Gobain is member of 42 local GBCs.* *In total, over 50 employees are involved in*

			the GBCs network and represent Saint-Gobain in these 3 organizational levels. *We are a sponsor of WorldGBC's Better Places for People campaign. Saint-Gobain also provides active support for a number of WGBC campaigns, like Advancing Net Zero (ANZ) which aims to promote and support the acceleration of net zero carbon buildings to 100% by 2050, notably through certification.* *At European level, we are involved in the Energy Efficiency Mortgage Action Plan (EeMAP) initiative, as member of its Energy Efficiency Committee. The EeMAP Horizon 2020 projects explore the link between energy efficiency and borrower's reduced probability of default and the increase in value of energy efficient properties.* *We were also a member of the advisory board of the project Level(s), the new European framework for sustainable construction. Developed by the European Commission in close collaboration with key players such as Green Building Councils, Level(s) will contribute to the sustainable transformation of the construction sector.*
EpE	*Consistent*	*EpE (Enterprises for the Environment) is a coalition of around 40 French and international companies in the industrial and services sectors committed to work together to improve the inclusion of environmental challenges into their strategy and day-to-day management. EpE addresses medium and long term policy issues like climate change. EpE gives its members a forum for discussion, within the business world itself, but also with NGOs, ministers, politicians, scientists and academics. Shared experience and practices lead to the publication of guides, books, methodologies and proposals for action.*	*The Chairman and Chief Executive Officer of the Group, is Vice President of "Entreprises pour l'Environnement" the French non-profit organization partner of the WBCSD (World Business Council for Sustainable Development).We participate in working groups, studying climate change, the environmental economy, and the links between the environment, health and biodiversity. Saint-Gobain actively participate to the publication of several EpE booklets on various themes, notably "Companies and Climate Change Adaptation", "Companies strategies for climate: mobility" and "CO_2 avoided emissions". Saint-Gobain also attended the third Business and Climate Summit (BCS) in the end of August 2017, which was*

			supported by EpE and the WBCSD.
EuroACE	*Consistent*	*EuroACE, the European Alliance of Companies for Energy Efficiency in Buildings, is an association of industrials that provide materials and solutions for energy efficiency in buildings. Created in 1998, EuroACE works at European level, together with the European institutions and a broad range of stakeholders, to develop a consistent European framework enabling more energy efficiency in new and existing buildings. EuroACE also supports targeted actions at national level.*	*Saint-Gobain is an active member and supporter of the work of EuroACE, notably through its role as a Board member and its chairmanship of the Energy Efficiency Policy workgroup of the Alliance. Our input builds on our knowledge of energy efficiency policies in the various European countries and our holistic vision of buildings.* *In 2016-2017 we supported EuroACE in developing a strong vision for the revision of the Energy Performance of Buildings Directive (EPBD) and the Energy Efficiency Directive (EED).* *Saint-Gobain holds the Presidency of the Alliance in 2017-2018.*
EU-ASE	*Consistent*	*EU-ASE is a multi-sectoral business organisation launched in 2010, whose members have operations across the 28 Member States of the European Union. EU-ASE represents all industrial sectors engaged in energy efficiency, giving visibility and enhancing technological and market solutions for energy efficiency whose potential is today not fully exploited. EU-ASE works to promote a forward looking political agenda where energy efficiency will facilitate further decarbonisation efforts and the integration of renewable energy sources, in line with the Paris agreement.*	*Saint-Gobain joined the EU-ASE in February 2017.We have been involved in the work of EU-ASE on the EU Clean Energy Package, notably in order to strengthen the revisions of the Energy Performance of Buildings Directive (EPBD), the Energy Efficiency Directive (EED), and the overall climate and energy Governance.*
EURIMA	*Consistent*	*Eurima, the European Insulation Manufacturers Association, represents the interests of all major mineral wool producers throughout Europe. Eurima is a leading voice making the case for a European energy policy that places a more meaningful emphasis on energy efficiency and savings by promoting the common interests of our industry and working for positive regulations and standards to reduce energy use across Europe. Eurima*	*Saint-Gobain Isover is actively involved in the work of Eurima and provides regular input to all of its work streams.* *Isover holds the Chairmanship of Eurima as well as Convenorship of the Technical Committee and Vice-Convenorship of the Energy Efficiency Committee. As President of Eurima, the Director of Public Affairs, Marketing and Communications of our Insulation Division promotes the common interests of our industry and works for*

		also takes the lead on promoting sustainability in the construction sector.	*positive regulations and standards in Energy efficiency.*
ETC	*Consistent*	*Energy Transition Commission is a diverse group of leaders from public, private and social sectors. They are energy users and suppliers, researchers and advisers, with experience in various geographies aiming to help identify pathways for change in their energy systems to ensure both better growth and a better climate.*	*The Chairman and Chief Executive Officer of the Group, is one of the commissioners. We participated in the elaboration of several reports like the ETC "Better Energy, Greater Prosperity" report published in May 2017 to limit global warming at levels well below 2 °C.* *In 2017, a dedicated work stream on the decarbonization of hard-to-abate sectors was launched.*
Global Alliance for Building and Construction (GABC)	*Consistent*	*This alliance, launched by France and the United Nations Environment Program (UNEP) during the COP21, aims to bring states, local authorities, construction businesses and relevant associations together by means of a roadmap to smooth the transition to energy efficient buildings with low greenhouse gas emissions, in accordance with the goals set under the Paris Agreement.*	*Saint-Gobain is committed to creating a low-carbon trajectory for the global construction industry. For this reason, the Group is actively involved in the work of the GABC, as a founding member of the GABC and as a member of its steering committee. Through its involvement in the GABC, Saint-Gobain seeks to demonstrate to all countries that the technical solutions exist, particularly for improving energy efficiency, regardless of geography – hot countries, cold countries, dry or tropical climates – and that these solutions are affordable.*
Glass for Europe	*Consistent*	*Glass for Europe is the trade association for Europe's manufacturers of building, automotive, and transport glass, all derived from the base material known as flat glass. Glass for Europe's position is to call for a binding energy efficiency target that will support economic growth, sustain the competitiveness of Europe's industries and facilitate the transition towards a low-carbon economy across all sectors of the economy.*	*As a member of Glass for Europe, Saint-Gobain is acting in favor of energy efficiency in light of glass contribution to energy savings at building level, and to lighter solutions on the automotive industry.*
EUROGYPSUM	*Consistent*	*Eurogypsum is an European federation of national associations of gypsum products manufacturers. Eurogypsum's position consists in promoting a sustainable built environment for Europe thanks to the environmental, social and economic credentials of gypsum products and*	*Saint-Gobain has been a member of Eurogypsum for several years. As a leader on the gypsum products market, Saint-Gobain already advocates for a better recycling of gypsum products.* *Saint-Gobain participates in all work streams of Eurogypsum, and is particularly*

		solutions. Eurogypsum advocates for a European policy on gypsum products recycling that is not a single operator responsibility, but a collaboration between different operators throughout the value chain and pushes for a circular economy model of the gypsum products in the construction market.	*involved in its committees on climate and emissions, and sustainability.*
LEVEL(S)	*Consistent*	*To improve sustainability and drive market demand for better buildings, a new, open source assessment framework, Level(s) has been developed by the European Commission in close collaboration with stakeholders including Skanska, Saint-Gobain, Sustainable Building Alliance and Green Building Councils.*	*At European level, Saint-Gobain has been a member of the LEVEL(S) steering committee for 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 out this new tool on some of its projects in 2018.*
World Business Council for Sustainable Development (WBCSD)	*Consistent*	*WBCSD is a worldwide organization of 200 companies that deliberate on and develop solutions for a more sustainable world. A core component of WBCSD's Climate Policy activities is to foster strong policy signals and economic incentives promoting a race to the top where sustainable solutions can succeed. They actively call for policies that are consistent with ambitious action on climate and enable business-led solutions to scale up and speed up the implementation of the Paris Agreement.*	*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".* *Saint-Gobain attended the third Business and Climate Summit (BCS) in June 2017, which was supported by EpE and the WBCSD.* *We also joined the World Factor 10 program at the end of 2017 Business Council for Sustainable Development on the circular economy program, aiming to bring circularity into heart of business leadership and practice. The goal is to build a critical mass of engagement within and across business to move the Circular Economy to deliver and scale solutions needed to build a sustainable world.*
CPLC	*Consistent*	*The Carbon Pricing Leadership Coalition (CPLC) was officially launched on November 30, 2015, the opening day of the United Nations Framework Convention*	*We are part of the Carbon Pricing Leadership Coalition Founding Partners and take part to working groups such as the one related to carbon pricing of the*

		on Climate Change 21st Conference of Parties (COP21) meeting in Paris, France. The World Bank Group, business groups, and investors have called on governments and corporations around the world to support carbon pricing to bring down emissions and drive cleaner investments in cleaner technologies.	*construction sector.*
Globe EU & Bee Group	*Consistent*	*The GLOBE EU Bee Group is a forum for MEPs on one hand and progressive business partners on the other. The Bee Group's purpose is to propose alternatives inspired by innovation and a long-term vision on issues related to sustainable development and circular economy. In other words, the Bee Group invites decision-makers to think about the future, building upon the common understanding that positive legislation is needed to manage the transition towards a more sustainable model.* *Within the European Parliament, GLOBE EU serves as a platform for discussing European policy proposals and for coordinating political action among Members of the European Parliament (MEPs) and at member state level.*	*In 2017 the GLOBE EU events organized with the Bee Group addressed issues such as Green Public Procurement, Innovation, Indoor Environmental Quality, Sustainable Mobility, Waste Flows in a Circular Economy. GLOBE EU also organized the Earth Overshoot Day in the European Parliament.* *Through its activities (workshops, round tables, conferences and other structured discussions) the Bee Group helps sharing the vision of forward-looking corporations; debates how legislation and incentives can help innovate towards resource-efficiency, and how best practices can be upscaled.*

(C12.3d) Do you publicly disclose a list of all research organizations that you fund?

Question dependencies

This question only appears if you select "Funding research organizations" in response to C12.3.

Change from 2017

No change (2017 CC2.3d)

Response options

Select one of the following options:

(C12.3e) Provide details of the other engagement activities that you undertake.

Question dependencies

This question only appears if you select “Other” in response to C12.3.

Change from 2017

No change (2017 CC2.3e)

Response options

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

Question dependencies

This question only appears if you select “Direct engagement with policy makers”, “Trade associations”, “Funding research organizations” and/or “Other” in response to C12.3.

Change from 2017

No change (2017 CC2.3f)

Response options

The Group’s Sustainable Development Vice-President leads and coordinates the actions across the Group in this domain. Are part of his team the sustainable Habitat team (including the European Public Affairs team), as well as the EHS department managing the Group environmental targets including CO_2. This organization ensures that all actions and projects are in line with the group’s overall climate commitments.

At Group level, the Sustainable Habitat team defines and coordinates the Group’s strategy for influencing sustainable construction markets, including issues relevant to climate change such as embodied carbon and energy efficiency, notably within the framework of discussions with stakeholders. Through our public advocacy activities, we ensure a regular monitoring of policy and regulatory developments, and provide timely input to support future policy developments.

The EHS policy guides the Group's approach towards the maximal reduction of its environmental impacts, and states mid-term targets for emissions reduction and energy consumption. It is communicated to all employees through guidance documents, to ensure a consistent approach for all Activities and countries in which we operate.
Furthermore, the Corporate Marketing Department has defined "Public Advocacy and Standards" as one of the marketing pillars of the Group, dedicated to the enhancement of the monitoring of new regulations in force in the business and aligned with the vision of the Sustainable Habitat Strategy.
The public advocacy actions led by Saint-Gobain are fully transparent and publicly disclosed in the Transparency Register in Brussels. This register provides citizens with a direct and single access to information about who is engaged in activities aiming at influencing the EU decision-making process, which interests are being pursued and what level of resources are invested in these activities.
At country level, our public advocacy committees, composed of internal experts, promote pro-active positions to mitigate consequences of climate change and enable adaptation in the building sector. 38 cross-business Habitat Committees are in place around the world to identify opportunities and define methods to manage them. They also exchange information on local policy trend, led by each Activity in each country, to ensure alignment.
Our objectives of decreasing our carbon footprint for scope 1 and 2 by 2025, together with the avoided emissions thanks to the use of our improved insulations solutions are fully in line with worldwide public policies (building energy efficiency, cap and trade and carbon taxes schemes).

(C12.3g) Why do you not engage with policy makers on climate-related issues?

Question dependencies

This question only appears if you select "No" in response to C12.3.

Change from 2017

No change (2017 CC2.3g)

Response options

This is an open text question.

Please note that when copying from another document into the disclosure, formatting is not retained.

Communications

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Change from 2017

Modified question (2017 CC4.1)

Response options

Please complete the following table. You are able to add rows by using the “Add Row” button at the bottom of the table.

Publication	Status	Attach the document	Content elements
Select from: ● In mainstream reports ● In mainstream reports in accordance with TCFD recommendations ● In mainstream reports, in line with CDSB framework ● In mainstream reports, in accordance with TCFD recommendation AND in line with CDSB framework ● In other regulatory filings ● In voluntary communications ● In voluntary sustainability report ● No publications with information about our response to climate-related issues and GHG emissions performance ● Other, please specify	Select from: ● Complete ● Underway – previous year attached ● Underway – this is our first year	Attach your document here.	Select all that apply: ● Governance ● Strategy ● Risks & Opportunities ● Emissions figures ● Emission targets ● Other metrics ● Other, please specify
In mainstream reports	*Complete*	*2017 registration document*	*Governance* *Strategy* *Risks & Opportunities* *Emissions figures* *Emission targets* *Other metrics*
In voluntary communications	*Complete*	*EpE: “Avoided emissions* *Companies assess their climate solutions”*	*Other, avoided emissions*
In voluntary communications	*Complete*	*Linkedin post of our CEO on climate change:* *https://www.linkedin.com/pulse/climate-change-sustainable-development-eu-has-take-de-chalendar/?lipi=urn%3Ali%3Apage%3Ad_flagship3_profile_view_base_post_details%3BXoybU%2FgVSoS6PipVnpRqtA%3D%3D*	*Governance* *Strategy* *Risks & Opportunities*

Connection to other frameworks

TCFD

C12.4 does not align with a specific area, or recommended disclosure provided by the TCFD. However, it does align with the TCFD’s primary aim to have climate-related information disclosed in financial filings.

C13 Other land management impacts

Module C13 only applies to organizations with activities in the following sectors:

- Agricultural commodities
- Food, beverage & tobacco
- Paper & forestry

C14 Signoff

Signoff

(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.

Change from 2017

Minor change (2017 CC15.1)

Response options

Please complete the following table:

Job title	Corresponding job category
The Senior Vice President in charge of Human Resources and Member of the Executive Board , having the overall responsibility of the Sustainable Development department	Select from: ● Board chairman ● *Board/Executive board* ● Director on board ● Chief Executive Officer (CEO) ● Chief Financial Officer (CFO) ● Chief Operating Officer (COO) ● Chief Procurement Officer (CPO) ● Chief Risk Officer (CRO) ● Chief Sustainability Officer (CSO) ● Other C-Suite Officer ● President ● Business unit manager ● Energy manager ● Environmental, health and safety manager

	• Environment/Sustainability manager • Facilities manager • Process operation manager • Procurement manager • Public affairs manager • Risk manager • Other, please specify