SAAB - Climate Change 2019

C0. Introduction

C0.1

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

Saab serves the global market with world-leading products, services and solutions from military defence to civil security. With operations on every continent, Saab continuously develops, adapts and improves new technique to meet customer's changing needs. Saab is active in the defence market and in commercial aeronautics, infrastructure security and traffic management with solutions, services and products where Saab is either the main supplier of platforms and systems directly to the end-customer or is a subcontractor of subsystems and components. Saab also supplies consumables, spare parts and training. For the full-year 2018, 85 per cent of sales was from defence-related products and services, while the remaining 15 per cent related to commercial products and services. Saab's products are sold to over 100 countries and the company currently has operations in 35 countries. Research and development take place mainly in Sweden. Saab has employees mainly in Europe, South Africa, USA, Australia and Brazil.

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aab had around 17,000 employees at the end of 2018. Annual sales amount to around 33.2 MSEK. Total investments in self- and customer financed research and development corresponded to 23% of total sales in 2018.

In an increasingly complex market, a local presence and greater business orientation are critical to win strategically important deals, whether for military or civil security solutions. To adapt to the new conditions in the industry, Saab has divided operations into six business areas and five market areas, with a goal to create a more market-oriented company with even greater focus on customers' future needs and requirements. This means, among other things, that Saab will continue to grow in the global market and develop distinctive customer offering.

C0.2

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

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Row 1	January 1 2018	December 31 2018	Please select	<Not Applicable>

C0.3

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

Australia
Czechia
Denmark
Finland
Germany
Netherlands
Norway
South Africa
Sweden
Switzerland
United Kingdom of Great Britain and Northern Ireland
United States of America

C0.4

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

SEK

C0.5

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

Financial control

C-TO0.7/C-TS0.7

(C-TO0.7/C-TS0.7) For which transport modes will you be providing data?

Aviation

C1. Governance

C1.1

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

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Board Chair	The Chairman and the Board of Directors are responsible for leading the business and making sure it creates long-term profitability. Sustainability, including climate related objectives, is part of Saab's business strategy and a prerequisite for long-term success, it is therefore of high importance for the Board and the Chairman to monitor. The board is involved in strategic planning, and climate-related issues addressed throughout the year. Executive management provides updates to the Board on risks and the Board and Chairman is ultimately responsible for the result. The Chairman as the head of the Board is responsible for climate-related issues through the following mandates: - Approving and monitoring Saab's climate objectives as part of the overall strategy and business plan - Approving the climate objectives and activities in Saab's sustainability report - Reviewing and adopting Saab's Code of conduct, which includes a section about Environment, including climate-related issues

C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	Reviewing and guiding strategy 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	The Board of Directors is involved in guiding and reviewing the strategic planning throughout the year. The climate objectives are part of the business plan, which is prepared by the Chief Strategy Officer, and followed-up and reviewed at the Group management meetings. The CEO reports current issues including sustainability issues to the Board of directors, which meets once a month. The Audit Committee meets five times a year and follows up issues in all areas, including environmental- and climate related risks. The CEO reports the risks to the Board of Directors, at least once a year. The decision to adopt a new Environmental strategy 2018 was taken by the Executive Group Management and the Board of Directors during 2018. An annual summary of the climate objective, climate risks and opportunities and other focus issues is prepared for the Annual and sustainability report which is approved by the Executive Group Management and the Board of Directors. Climate-related risks have been taken into account in the process of acquisitions during 2018. The top risks and uncertainties, and how they are managed, are regularly reported to Group Management, the Audit Committee and the Board of Directors.

C1.2

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

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	Quarterly

C1.2a

(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 (do not include the names of individuals).

The CEO is the highest responsible for climate-related issues under the board of directors, since climate related issues are part of Saab's business strategy and are considered important for the company's long term success. The CEO is responsible for monitoring, assessing, and managing climate-related issues, including climate-related risks and opportunities. The CEO leads the Executive Group Management team and reports risks and strategic issues to the Board of Directors continuously as relevant issues arise.

The Chief Strategy Officer is responsible for working with strategies and scenario work in all areas, including the climate area. The Chief Strategy Officer reports to the CEO and leads the Strategy board. The Strategy Board is responsible for providing preparations for the Executive Group Management team on strategic issues, including climate related issues. Given that climate related issues, and managing these in an effective manner, is part of Saab's business strategy it is natural that the Chief Strategy Officer and the Strategy Board has the responsibility for briefing the Executive Group Management team on climate related issues of strategic importance.

The Head of Environmental Management reports to the Chief Strategy Officer and represents Saab in environmental issues both internally and externally. The main responsibility is to develop strategies for group-wide environmental issues including policies and objectives, secure execution and follow up the compliance of the environmental work within Saab. The Enterprise Risk Management function led by the Enterprise Risk Manager works actively with overarching risk management. The most pressing risks and uncertainties, and how they are managed, are regularly reported to Executive Group Management, the Audit Committee and the Board of directors. The Enterprise Risk Manager reports the risks to the Executive Group Management and the Audit Committee. The CEO, in turn, reports these risks to the Board of Directors at least once a year.

Each business area within Saab is responsible for identifying and managing risks, including climate related risks, in accordance with the Group's risk process and current policies, guidelines and instructions. At the business area level, each business area manager is ultimately responsible for reporting overarching risks to The Enterprise Risk Manager.

The Business Area Managers within Saab Group have full overview and responsibility for their separate business areas and are the most knowledgeable when it comes to risks affecting their specific business area. In order to get a full overview of risks on enterprise level, the Enterprise Risk Manager and the ERM function have the responsibility for analysing and reporting risks on to the Executive Group Management and the Audit Committee.

C1.3

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

Yes

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Who is entitled to benefit from these incentives?
Facilities manager

Types of incentives
Recognition (non-monetary)

Activity incentivized
Energy reduction target

Comment
We recognize the work done by our production sites and which have established successful management of identified issues (including climate change related issues). We recognize initiatives by publishing articles on our internal community as well as through our various networks and forums.

Who is entitled to benefit from these incentives?
Environment/Sustainability manager

Types of incentives
Recognition (non-monetary)

Activity incentivized
Emissions reduction project

Comment
We recognize the work done by our Environmental/sustainability manager which have established successful management of identified issues (including climate change related issues). We recognize initiatives by publishing articles on our internal community, on social media as well as through our various networks and forums.

Who is entitled to benefit from these incentives?
All employees

Types of incentives
Recognition (non-monetary)

Activity incentivized
Emissions reduction target

Comment
We recognize the work done by Combitech (Saab's wholly owned technical consulting company), which held a CO2 contest where the office with the lowest emissions was named the winner and presented at a corporate wide conference. We recognize the work by publishing articles on our internal community as well as on external media and through our various networks and forums.

C2. Risks and opportunities

C2.1

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

	From (years)	To (years)	Comment
Short-term	0	1	Saab's Environmental Strategy contains a group-wide objective to achieve a 33 % reduction of greenhouse gas emissions by 2030, from the base year 2017. We break down the long-term objective to annual targets and activities throughout our organisation so that Business Areas and Business Units in the organisation contribute to the group-wide objective. The emissions are measured and reported annually as one of Saab's overall Performance metrics.
Medium-term	1	5	Saab's Environmental Strategy and greenhouse gas objectives are incorporated in Saab's Business Plan, which has a 5-year focus and is revised each year.
Long-term	5	13	Saab's current Environmental Strategy contains environmental vision, policy, strategy and long-term objectives. One of the long-term Saab group-wide objectives are "Reduce greenhouse gas emissions with 33 % by 2030 in comparison with 2017".

C2.2

(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.

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

C2.2a

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

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	>6 years	On Group level, risks (including climate-related risks) are monitored continuously and more frequently than every sixth month. A full assessment, of all risks that have been identified during the year, is done on an annual basis. How often risks need to be followed up and reported is stated in a specific “Risk and opportunity management plan” for each risk assessment according to Saab's risk management process. The risks are managed through inclusion in Saab's Corporate Environmental Functions' operational plan that is reviewed several times a year. Based on risk analysis performed throughout the organization, the Enterprise Risk Manager compiles the key enterprise risks and report these to Group Management, Board of Directors and the Audit Committee. How far into the future risks are considered are dependent on different products' and businesses' life cycles.

C2.2b

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

Within Saab, each business area, market area and group function is responsible within its respective organisation for identifying and managing risks in accordance with the Group's risk process and current policies and guidelines. When combined with the Enterprise Risk Management (ERM), we get both a top-down and bottom-up approach to support our strategy and long-term goals. The purpose of ERM is to provide an overview of the risks and uncertainties Saab is exposed to and to support value creation, ensure risk awareness and balance risk versus return for the entire company.

The risks assessments done by the ERM, are measured based on the potential impact on Saab, the probability they will occur and how well they are managed. This gives Saab a tool to measure risk exposure and set priorities as needed. The sequence is to identify, analyse, evaluate, and manage both risk and opportunity. All the identified risks are analysed, and their potential impact are evaluated. After that, the risks that can have a major impact on the Group, either individually or in combination with other risks (climate related or not), are defined each year. The most pressing risks, and how they are managed, are regularly reported back to Group Management, the Audit Committee and the Board of Directors by the ERM manager.

Saab identifies and assesses asset-level climate related risks within the framework of our common process for risk management (HOW-0025) and the ERM. For example, this is done at acquisition of companies and execution of businesses and projects. The process starts with the definition of the focus areas and scope, organisational limitations, and product and/or geographical boundaries. The sequence is then to identify the sources, analyse areas of impact, evaluate potential consequences, and finally manage the risks within the defined scope. The frequency of monitoring relating to new acquisitions depend on when acquisitions occur. Monitoring during execution of projects and businesses is done continuously throughout the lifetime of the projects/business, and more frequently than every 6th month.

Physical risks at an asset level are identified and assessed through Saab Blue Risk Management Program. The program was developed in cooperation with Willis Towers Watson. The risk engineers from Willis Towers Watson perform inspections at Saab’s plants regularly - every year for the main sites down to every five years for smaller sites. Property Site Manager, managers from the operation and Loss Prevention Manager participate from Saab. The risk engineer assesses physical risks and rate them in four levels - blue, green, yellow and red. When a site does not reach the highest-level blue in a category, a recommendation is provided by the risk engineer. The site must reply to the recommendation within a defined time span. Actions are followed up during the next survey at the latest. The survey also results in a report to the insurance company.

The process for assessing the potential size and scope of identified risks, and to determine the relative significance of climate-related risks in relations to other risks, is done through rating identified risks impact on "Key strategies", "Occupational Health and Safety and Environment", "Performance" and "Sustainability" using a risk register template. The risks themselves are rated as very low, low, medium or high based on pre-defined criteria. The Likelihood of Occurrence, is determined to be very low, low, medium or high based on pre-defined criteria. The risk control effectiveness is qualitatively assessed in relation to the desired risk control level (both preventive and mitigating). The risk register template shows the risk level and priority for each risk based on impact/consequence, likelihood and current risk control. Climate-related risks are identified and assessed in the same way, together with other risks. In this way, the relative significance of climate-related risks in relation to other risks are visualised. Saab Group uses the ISO 31000:2009 Risk management - Principles and guidelines as our definition of risk terminologies.

Definition of substantive financial or strategic impact: Saab uses ERM process to define impact. Medium impact, as defined by the ERM, is translated to substantive impact. For Saab Group’s Key Strategies, substantive strategic impact is defined as: *Strategy execution affected, or strategy achievement may be in danger.* For Saab Group’s Performance, substantive financial impact is defined as: *Moderate to persistent negative effect on sales and/or cash flow targets, EBIT loss or negative effect in project portfolio gross margin*. In risk assessments according to Saab´s internal process HOW-0025 the definitions are set in a risk management plan prior to the risk assessment. For risk assessment within Saab Corporate Environmental Management team, which covers several climate-related risks, medium or substantive impact is defined as 0,02 % of annual EBIT.

C2.2c

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Saab's corporate executive team and board of directors have decided on a generic checklist of relevant risk types which are considered at identification and assessment of all kinds of Enterprise risks, including climate related risks. Compliance risks related to current laws and regulations are included in that checklist. Saab's environmental management system, which is part of Saab's Global Management System, is certified to ISO 14001. Saab has registers of current legislation applicable to Saab's operations, facilities and products in accordance with ISO 14001. The registers are updated several times a year as changes occur. Saab has implemented processes and instructions in Saabs Global Management System to ensure compliance to all applicable legislation. Evaluations of conformance are performed regularly, and the result is reported at Management Reviews. Processes and instructions to enable compliance as well as evaluations of compliance are checked at internal and external audits. If Non-conformities are identified at evaluations, of compliance or audits root cause analysis is performed and corrective and preventive actions are identified and carried out. This needs to be done within a specific timeframe. As an example, Saab's legal registers includes energy regulations. One example of this is the Swedish national law and regulation on Energy mapping which concerns sites within Saab in Sweden.
Emerging regulation	Relevant, always included	Saab's corporate executive team and board of directors have decided on a generic checklist of relevant risk types which are considered at identification and assessment of all kinds of Enterprise risks, including climate related risks. Compliance risks related to emerging laws and regulations are included in that checklist as operational and compliance risks. Saab's Corporate Environment function and appointed stakeholder representatives for specific areas of regulations continually monitors emerging regulations. If regulations are considered to have a major impact to Saab's business these are included in the Enterprise Risk Management Process through the Corporate Environmental function. Example of a specific identified risk of this type: if Saab doesn't participate in external networks and industry associations and doesn't monitor emerging regulations through regulations monitoring software we may not prepared for emerging climate-related regulation. On such regulation is the EU:s regulation on fluorinated gases which affects all of our production sites in Europe. An example in the regulation is that refrigerants with a Global Warming Potential of more than 2500 is not allowed for refilling large systems from year 2020.
Technology	Relevant, always included	Saab's corporate executive team and board of directors have decided on a generic checklist of relevant risk types which are considered in identification and assessment of all kinds of Enterprise risks, including climate related risks. Technology risks such as development of new systems and products are included in that checklist as strategic risks. Saab's success is dependent on its ability to develop and manufacture innovative products and launch them on the market at the right time and at competitive prices. Due to long development cycles, market changes can mean that demand has changed when the products are ready to be brought to market. One example is possible future restrictions on use of fossil fuel or limited access to fossil fuel. As an example, Saab's Gripen Figthers have therefore been developed with new technology which make it possible to fly on 100% biofuel. This is done in order to ensure that Saab remain one of the leading companies on technical development and can continue to provide products that are in the forefront of technical advancement.
Legal	Relevant, always included	Saab's corporate executive team and board of directors have decided on a generic checklist of relevant risk types which are considered at identification and assessment of all kinds of Enterprise risks, including climate related risks. The risk of litigation claims is included in that checklist as a measure to reduce our exposure to litigation claims. During the last assessment performed by the ERM group, potential climate related litigations were analysed, however, no material risks were identified. One potential such risk, that may increase as a consequence of climate change, is litigation claims related to energy shortages in areas of the world where Saab has operation. As per today, no such risks have yet been identified.
Market	Relevant, always included	Saab's corporate executive team and board of directors have decided on a generic checklist of relevant risk types which are considered at identification and assessment of all kinds of Enterprise risks, including climate related risks. Market risks are included in that checklist as strategic risks. Saab's success is dependent on its ability to develop and manufacture innovative products and launch them on the market at the right time and at competitive prices. Due to long development cycles of Saab's type of products, market changes can mean that demand has changed when products are ready to be brought to market. The risk is that the products do not generate the previously expected return. Example of changes may be increased customer demand for more energy efficient or low carbon products. This is a risk that has been identified since many years which is why we have invested and participated in for example, Clean Sky since 2008. Clean Sky is the largest European research programme developing innovative, cutting-edge technology aimed at reducing CO2, gas emissions and noise levels produced by aircraft.
Reputation	Relevant, always included	Saab's corporate executive team and board of directors have decided on a generic checklist of relevant risk types which are considered at identification and assessment of all kinds of Enterprise risks, including climate related risks. Reputational risks are included in that checklist as strategic risks. One example of a specific identified risk of this type is if external communication around our climate actions and initiatives are insufficient, conception amongst external stakeholder may be negatively affected, this could in turn affect investors trust in that the company is well prepared for managing the effects of climate change. Saab has an Environmental Communications plan to provide relevant information.
Acute physical	Relevant, always included	Saab's corporate executive team and board of directors have decided on a generic checklist of relevant risk types which are considered at identification and assessment of all kinds of Enterprise risks, including climate related risks. Acute physical risks are included in that checklist as part of Business Contingency Management. In addition, Saab has in cooperation with Willis Towers Watson developed the so-called Blue Risk Management Program. As part of the program a risk engineer performs "blue surveys", which are inspections of a Saab plants where a number of physical risks are investigated and rated. An example of risk included is risk of flooding. The blue surveys are conducted every year for the main sites down to every five years for small sites. The risk engineer assesses physical risks and rate them in four levels - blue, green, yellow and red. When a site does not reach the highest-level blue in any category an appropriate recommendation will be made by the risk engineer. The site must reply to the recommendations within a defined time span. Actions due to the recommendations are followed up at the next survey at the latest. The survey also results in a report to the insurance company. The insurance company also makes a thorough assessment of physical risks prior to development of new sites, acquisitions and expansions on Saab's behalf. New sites within Saab are not established in areas with high risks of severe extreme weather for instance.

	Relevance & inclusion	Please explain
Chronic physical	Relevant, always included	Saab's corporate executive team and board of directors have decided on a generic checklist of relevant risk types which are considered at dentification and assessment of all kinds of Enterprise risks, including climate-related Enterprise risks. Chronic physical risks are included in that checklist as part of Business Contingency Management. In addition, Saab has in cooperation with Willis Towers Watson developed the so-called Blue Risk Management Program. As part of the program a risk engineer performs "blue surveys", which are inspections of a Saab plants where a number of physical risks are investigated and rated. An example of a risk included is risk of fire that may be caused by chronic heat waves. The blue surveys are conducted every year for the main sites down to every five years for small sites. The risk engineer assesses physical risks and rate them in four levels - blue, green, yellow and red. When a site does not reach the highest-level blue in any category an appropriate recommendation will be made by the risk engineer. The site must reply to the recommendations within a defined time span. Actions due to the recommendations are followed up at the next survey at the latest. The survey also results in a report to the insurance company. The insurance company also makes a thorough assessment of physical risks prior to development of new sites, acquisitions and expansions on Saab's behalf. For instance, new sites within Saab are not established in areas with high risks of sea level rise.
Upstream	Relevant, always included	Saab's corporate executive team and board of directors have decided on a generic checklist of relevant risk types which are considered at identification and assessment of all kinds of Enterprise risks, including climate related. Upstream risks are included in that checklist as part of Supply chain operational risks. An example of a specific identified risk is that if adequate requirements are not set at procurement, environmental performance, such as carbon emission at use of product or service, may suffer. Since 2017, Saab has included a requirement in all agreements with providers of company cars and pool cars that emission higher than 140 g/km are not accepted, and for rental cars and taxis the limit is 135 g/km. If this had not been clearly stated and made a prerequisite for Saab signing contracts with such suppliers, we might not meet our targets of reducing emissions in general and reducing emissions from business travel in particular. Saab has implemented a supplier Code of Conduct and measure systematically to ensure that the suppliers' take ethical, social and environmental responsibility.
Downstream	Relevant, always included	Saab's corporate executive team and board of directors have decided on a generic checklist of relevant risk types which are considered at identification and assessment of all kinds of Enterprise risks, including climate related risks. Downstream risks are included in that checklist as operational risks part of Development of New Systems and Products. Due to long development cycles of Saab's type of products, customer demand may have changed when products are ready to be brought to market. An example of risk is that customer demand for more energy efficient or low carbon products are increasing. This is a risk that has been identified since many years which is why we have invested and participated in eg Clean Sky since 2008. Clean Sky is the largest European research programme developing innovative, cutting-edge technology aimed at reducing CO2, gas emissions and noise levels produced by aircraft. In addition, energy and fuel efficiency in the use phase is considered at an early stage in Saab's development and design of new products and systems. Another example is possible future restrictions on use of fossil fuel or limited access to fossil fuel. Saab's Gripen Figthers have therefore been developed with new technology which make it possible to fly on 100 % biofuel. This is done in order to ensure that Saab remain one of the leading companies on technical development and can provide products that are in the forefront of technical advancement.

C2.2d

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

Identified risks are weighed against Saab's risk tolerance and decisions are made on the appropriate measures to avoid, reduce, spread or accept the risks. The result that comes out of this will then be managed by the responsible director, and the priority of these risks will be determined by responsible director or president. Actions to be taken into decision is if to eliminate risk, reduce/minimize risk, transfer risk (in time, space, or ownership) or accept risk, maintaining existing controls. The basic method to treat a risk is to eliminate or reduce (mitigate) the likelihood and consequences of the risk. The level of the opportunity (gain and likelihood) are compared with the opportunity priority matrix stated in the Risk and Opportunity Management Plan. Then a decision is made if the opportunity shall be exploited. The management progress is monitored in risk and opportunity register. During the whole process, risks and opportunities are regularly monitored and reviewed by the Risk and Opportunity Coordinator, who also supports to the Managers and Risk owners in their work. The frequency of monitoring relating to new acquisitions depend on when acquisitions occur. Monitoring during execution of projects and businesses is done continuously throughout the lifetime of the projects/business, and more frequently than every 6th month.

The most pressing risks and uncertainties and how they are managed are regularly reported to Group Management, the Audit Committee and the Board of Directors by the ERM group and ERM manager.

Risks are also managed through the Saab Group’s global insurance programme, which contains all the usual business insurance, including product liability and injury prevention policies. The main purpose of which is to prevent property damage and business disruptions. Insurance is procured in the Swedish and international markets. In addition, Saab’s internal audit unit is responsible for independently reviewing the effectiveness of a sample of internal control processes each year.

Example of how the process has been applied to one transition risk:

A risk that has been identified is that if the climate strategy is not implemented internally then the needed actions will not be executed and there will be a poor low carbon transition. One action to reduce/minimize this risk has been to implement the environmental strategy through awareness campaigns within the organisation. Another action has been to create an internal Climate Fund. This fund will support the development of small-scale innovations aimed at reducing CO2 emissions, that might otherwise not be invented and/or implemented. This will be financed by an internal add-on fee on all flights booked through Saab Group’s Swedish booking system. 82% of our employees are based in Sweden, the number of people using this booking system is therefore a clear majority of our total number of employees. Booking business travel through this system is mandatory since it is a requirement of our insurance policy.

Example of how the process has been applied to one physical risk: Saab performs a thorough identification and assessment of risks in cooperation with its insurance company prior to establishment of a new site. If the physical risks due to extreme weather are found to be too high when we weigh it against our risk tolerance, potential impact, and likelihood, another location is chosen instead. Lower, acceptable risks are covered by insurance. One identified physical risk is the risk for flooding due to an extreme rainfall once every hundred years. Through the risk assessment, a decision was made to eliminate that particular risk by planning to locate the new building above the predicted estimate water lever rise during such a rainfall. The Site Property Manager is responsible for managing this risk and the decision on appropriate management method was taken by the Head of Property at Saab.

C2.3

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

Yes

C2.3a

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

business.

Identifier
Risk 1

Where in the value chain does the risk driver occur?
Direct operations

Risk type
Physical risk

Primary climate-related risk driver
Acute: Increased severity of extreme weather events such as cyclones and floods

Type of financial impact
Reduced revenue and higher costs from negative impacts on workforce (e.g., health, safety, absenteeism)

Company- specific description
Saab's third largest plant is located in Järfälla, Sweden. A small river is located nearby the plant. Research shows that Sweden will have more precipitation and more heavy rain in the future. The municipality of Järfälla has conducted flooding scenarios and calculations based on an extreme rainfall (once every hundred years with a climate factor of 1,25). The scenario shows that an extreme rainfall may result in water rise up to 11,7 metres above sea level. One of Saab's four office and production buildings at the plant is located at 10.8 metres above sea level and another building is at 12 metres above sea level. The buildings will in worst case be flooded, which means that it will not be possible to reach workplaces. Saab's operations will thereby be interrupted.

Time horizon
Medium-term

Likelihood
About as likely as not

Magnitude of impact
Medium-low

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
0

Potential financial impact figure – maximum (currency)
16000000

Explanation of financial impact figure
If the water reaches the office and production buildings that are located at 10.8 metres above sea and prevent normal production for 1 week, the Business Interruption cost would be approximately 16 MSEK. This is calculated using an estimate of Saab's cost for salaries at the Järfälla site for one week. The facilities, as well as the potential production loss, are covered by insurance. This means that the potential financial cost will not significantly impact Saab. If Saab had not chosen to manage the risk by insurance the potential financial impact would be significantly higher.

Management method
Saab has in cooperation with Willis Towers Watson developed the Blue Risk Management Program to manage Saab's Loss Prevention Standard. External risk engineers perform "blue surveys" / on-site inspections for Saab's plants regularly - every year for the main sites down to every five years for small sites. The risk engineer assesses physical risks and rates them in four levels - blue, green, yellow and red. When a site does not reach the highest-level blue in any category an appropriate recommendation will be made by the risk engineer. Actions due to the recommendations are followed up at the next inspection at the latest. The survey also results in a report to the insurance company. Within Saab's Global Management System there is a process for Business Continuity Management. Activities are performed in order to quickly return the business to a normal state within a reasonable time after a major incident or accident. Major objective for the process: • Identify the processes and resources that are critical for the business and operations • Identify risks that can affect the critical resources and mitigate the identified risks • Create business continuity plans, procedures and a crisis management command structure • Continuously follow up on the plans and procedures Saab will move to another building above the potential flooding level. Until then the risk is covered by insurance. The annual cost of insurance for the site is approximately 8 MSEK.

Cost of management
8000000

Comment

Identifier
Risk 2

Where in the value chain does the risk driver occur?
Direct operations

Risk type
Transition risk

Primary climate-related risk driver
Market: Other

Type of financial impact
<Not Applicable>

Company- specific description
Higher cost for energy in Saab's operations due to higher energy prices and taxes in the future. The total cost of energy has increased due to costs for expansion and rebuilding of the existing electricity grid within Sweden. The electricity grid needs to be rebuilt due to new low-carbon installations such as solar and wind. In future EU harmonization, prices for energy in Sweden may also increase due to the fact that energy will then be sold to countries in Europe at a higher price than present in Sweden. Saab Group has 82% of our employees in Sweden, therefore access to sufficient amounts of energy in Sweden is of high importance to the whole Group. Every second year the Swedish Energy Agency make a long-term prognosis of future energy prices and energy consumption within different sectors (Ref. report: Scenarier över Sveriges energisystem 2018). The prognosis is based on six different scenarios where aspects such as economic growth, fuel prices, degree of electrification etc. are considered. Within all six scenarios the electricity prices are expected to rise between approximately 15% to 50% to year 2025. As electricity is the main energy carrier within Saabs operations and other energy carriers, such as district heating and cooling, as historically showed same long-term prices development as electricity Saab has estimated that energy prices in total will rise between 15% to 50% to 2025.

Time horizon
Long-term

Likelihood
More likely than not

Magnitude of impact
Low

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
156000000

Potential financial impact figure – maximum (currency)
204000000

Explanation of financial impact figure
Future electricity prices are expected to rise due to expansion and rebuilding of the existing electricity grid within Sweden and expanding new fossil-free electricity production. In addition, due to future EU harmonization, prices for electricity in Sweden may increase because energy will be sold to countries in Europe at a higher price than present in Sweden. There is also an ongoing electrification process within both transport and industrial sector, increasing the demand for electricity. All in all, with proposals to close two nuclear power plants in Sweden, this results in an estimated increase of at least 15% up to 50% to year 2025. The average price for electricity in Sweden in 2018 was 0,90 SEK per kWh according to Eurostat, including taxes and levies. Based on Saab’s current energy consumption in Sweden, a price increase of 15% could result in a total cost for energy of around 156 MSEK and a 50% increase could result in a total cost of energy of around 204 MSEK.

Management method
Saab has implemented energy savings programmes and continuously replace energy from fossil sources to renewable energy sources. For instance, Saab have installed additional solar panels at our site in Gothenburg and we have changes to LED lights in a number of different sites throughout Sweden. Saab hedges the energy cost three years ahead which reduces the risk of unexpectedly rapid price increases. Within the scope of the energy savings programme Saab has the recent three years (2016-2018) on average invested approximately 1 030 kSEK/year in energy saving measures. The costs for running the programme is estimated to approximately 1 400 kSEK/year.

Cost of management
2430000

Comment

Identifier
Risk 3

Where in the value chain does the risk driver occur?
Direct operations

Risk type
Physical risk

Primary climate-related risk driver
Acute: Other

Type of financial impact
Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions)

Company- specific description
The majority of Saab's operations are located in Sweden, that is where the Head Quarters is located as well as some of the larger production sites (Linköping, Göteborg, Karlskoga, Arboga, Malmö, Karlskrona and Huskvarna). Research shows that Sweden's climate is getting warmer. The temperature rise will be larger during the winter months but may also result in heat waves during the summer. The summer of 2014 and 2018 were warm and dry which resulted in a number of wildfires. Saab has not been affected by any of the wildfires, but in 2014 the fire was in the same region of Sweden as one of Saab's production sites in Arboga. If a wildfire fire would reach one of Saab's facilities or prevent employees from reaching the office for a period of time, it would result in business interruption and could also result in significant property damage.

Time horizon
Short-term

Likelihood
About as likely as not

Magnitude of impact
Low

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
0

Potential financial impact figure – maximum (currency)
12000000

Explanation of financial impact figure
If a fire would prevent employees to reach the Arboga site for safety reasons and operations would be down for two weeks, the business interruption cost can be estimated to 12 MSEK, defining business interruption as Saab's cost of salaries for staff being unable to work for two weeks. Since wildfires are more common in July and August when production is lower due to summer vacations the actual cost would probably be somewhat lower. The facilities, as well as the potential production loss, are covered by insurance. This means that the potential financial cost will not significantly impact Saab. If Saab had not chosen to manage the risk by insurance the potential financial impact would be significantly higher.

Management method
Saab has in cooperation with Willis Towers Watson developed the Blue Risk Management Program to manage Saab's Loss Prevention Standard. External risk engineers perform "blue surveys" / on-site inspections for Saab's plants regularly - every year for the main sites down to every five years for small sites. The risk engineer assesses physical risks and rates them in four levels - blue, green, yellow and red. When a site does not reach the highest-level blue in any category an appropriate recommendation will be made by the risk engineer. Actions due to the recommendations are followed up at the next inspection at the latest. The survey also results in a report to the insurance company. Within Saab's Global Management System there is a process for Business Continuity Management. Activities are performed in order to quickly return the business to a normal state within a reasonable time after a forest fire. Major objectives for the process: • Identify the processes and resources that are critical for the business and operations • Identify risks that can affect the critical resources and mitigate the identified risks • Create awareness and knowledge

within the organisation • Create business continuity plans, procedures and a crisis management command structure This risk of fire is covered by insurance. The annual cost of insurance for the site is approximately 6,6 MSEK.

Cost of management
6600000

Comment

C2.4

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

C2.4a

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

Identifier
Opp1

Where in the value chain does the opportunity occur?
Customer

Opportunity type
Products and services

Primary climate-related opportunity driver
Development and/or expansion of low emission goods and services

Type of financial impact
Increased revenue through demand for lower emissions products and services

Company-specific description
To meet demands for lower emission products Saab has, as part of our R&D, looked into alternate fuel sources for some of our products. Saab's military jetfighter Gripen has successfully undergone a series of test flights with 100% biofuel in 2017. These demonstrated that the aircraft can be flown with an alternative fuel and gives valuable knowledge for future possible use of alternative fuel. This was the first time that a single engine jetfighter flew with 100% biofuel. The flights went entirely as planned. Saab has also employed two master students from the University of Linköping who, during the first half of 2019, produced a report called "What the future hold for electric aviation", as their Master thesis. They performed a scenario analysis using the PESTLE method, on the future for electric aviation. Determining what the key drivers and obstacles are. This report is interesting for Saab Group and, together with other analysis, provides a road map for future aviation technologies.

Time horizon
Long-term

Likelihood
Likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
No, we do not have this figure

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Strategy to realize opportunity
Now as the test project is finalised and proven successful, Saab will promote these solutions through different channels and in different groups. The strategy to realise these opportunities include participation in investigations, workshops and Gripen-campaigns to communicate acquired knowledge and to develop and coordinate new initiatives in the field of developing Swedish biofuels. Saab's investments in the field of alternative fuels in the aviation sector are included in Saab´s total budget of 1300 MSEK for R&D (self-financed).

Cost to realize opportunity
1300000000

Comment

Identifier
Opp2

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Resource efficiency

Primary climate-related opportunity driver
Move to more efficient buildings

Type of financial impact
Reduced operating costs (e.g., through efficiency gains and cost reductions)

Company-specific description
Energy efficiency is always considered at development of new buildings at Saab's sites. One example is in Järfälla where Saab's properties will be subject to development. We can improve our resource efficiency and lower our energy use by moving to newer, more resource efficient, buildings. Saab has therefore made the decision to move offices and production facilities to a new building. An opportunity identified is to make the building very energy efficient. The aim is to be fully self-sufficient on heating with no purchasing needs and even to sell excess heat. 7470 MWh district heating was used for the site in 2018 and could be saved in the future.

Time horizon
Medium-term

Likelihood
Virtually certain

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
5400000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
The cost for heating is today in the Järfälla example is approximately 5 400 000 SEK annually, this means that 5 400 000 SEK can be saved annually. In addition, smart electricity solutions will further reduce costs for energy.

Strategy to realize opportunity
Saab’s strategy is to catch the opportunity to make the new building very energy efficient by placing requirements on the landlord and the developer and to have a dialogue with the energy and heat suppliers. This will be done as part of the planned sale of Saab’s current property and construction of a new building for Saab. If additional cost occurs this will be well covered by revenue from the property sales. Therefore, there is no additional cost to realizing this opportunity.

Cost to realize opportunity
0

Comment

Identifier
Opp3

Where in the value chain does the opportunity occur?
Customer

Opportunity type
Products and services

Primary climate-related opportunity driver
Development of new products or services through R&D and innovation

Type of financial impact
Better competitive position to reflect shifting consumer preferences, resulting in increased revenues

Company-specific description
Fuel is one of the largest operational costs in shipping and owners and operators need to minimize fuel consumption in order to save cost, reduce emissions and stay competitive. Saab has developed a ROV (Remotely Operated underwater Vehicle) which is used by the Danish company C-Leanship (which Saab owns 70 % of) for hull cleaning. Hull cleaning services that can allow for frequent cleanings with minimum operational interruption create large customer values. C-Leanship offers the market safe, fast and gentle cleaning services by providing hull cleanings in port terminals during cargo operation and bunkering. This leads to substantial reductions of costs while at the same time it reduces emissions for the shipping industry. C-Leanship's technology is gentle and does not damage the anti-fouling paint, allowing for shipping lines to clean more frequently and thereby reducing fuel consumption. The result is a typical fuel savings of 3-5 %. By performing frequent yearly hull cleanings, customers can typically achieve annual CO2 emission savings of some 3000 tonnes and fuel cost savings of around 500 TUSD for a mid-size vessel (3 % saving is equal to 900 tonne of heavy fuel oil (per year) for a mid-size container vessel consuming 100 tonne fuel out per day and trading 300 days per year).

Time horizon
Medium-term

Likelihood
Very likely

Magnitude of impact
Low

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
500000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
By performing frequent yearly hull cleanings, customers can typically achieve annual fuel cost savings of around 500 TUSD for a mid-size vessel. The financial impact is based on establishing a solid business by 2026 generating 2500 cleanings annually which accounts for approximately 15 % of the accessible market, generating a possible divestment value in excess of 500 MSEK.

Strategy to realize opportunity
The market for cleaning services is expected to grow continuously, driven by increasing fuel prices and stricter environmental regulations. C-leanship aims to expand its business through the establishment of cleaning centers in major strategic ports along the major trading routes. Services are delivered in Singapore now, and the target is to expand the business to new ports. The cost to realize opportunity can be estimated to 300 MSEK of which Saab's share of the cost is approximately 50%, making it a total of 150 MSEK.

Cost to realize opportunity
150000000

Comment

C2.5

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

	Impact	Description
Products and services	Impacted for some suppliers, facilities, or product lines	The products and services part of our operations have been impacted through our identification of opportunities to offer sustainable products with minimized environmental and climate impact. This is now part of Saab's Strategic Business Plan. As customers are becoming more and more concerned about their emissions the demand for solutions that reduces emission increases. One example of how this has affected products and service is Saab's decision to develop the C-Leanship, which is own to 70 % by Saab. C-Leanship offers the market safe, fast and gentle cleaning services by providing hull cleanings in port terminals during cargo operation and bunkering thereby facilitating substantial cost savings and reduction of emissions for the shipping industry. By performing frequent yearly hull cleanings, customers can typically achieve annual CO2 emission reduction of some 3000 tonnes and fuel cost savings of around 500 TUSD for a mid-size vessel. Another example is Saab's Aerobahn systems which is offered to airports. It reduces fuel costs and cuts carbon emission by more efficient traffic flow of aircrafts. The magnitude of impact for these types of products and services is still low on Saab's total business since 85 % of sales was from defense-related products and services in 2018.
Supply chain and/or value chain	Impacted for some suppliers, facilities, or product lines	There are both risks related to use of energy and opportunities in generating our own. Every second year, the Swedish Energy Agency makes a long-term prognosis of future energy prices and energy consumption. They predict that electricity prices are expected to rise between approximately 15% to 50% to year 2025. The increase in price from our electricity suppliers will affect our cost of energy. An even larger problem is if in the future, we may not be able to purchase all the energy that we need or our operations, this could have a negative impact on our productivity. This is one of the reasons that we are working together with external energy experts, both in Sweden and abroad. We have prioritized our largest sites where we have implemented energy efficiency programs to reduce our use of energy and find alternative sources for energy. This has been identified as an opportunity in our site in Järfälla. We see that we could be self-sufficient on heat, and even deliver excess heat externally from the planned new building, making us less dependent on the electricity suppliers at that site. As part of the development project, Saab engages with energy suppliers to develop a suitable solution. Magnitude if impact: The potential is to save approximately 7470 MWh of heat, and for Saab at least an annual savings of 5,4 MSEK. This means that the magnitude of impact is low on Saab's total business.
Adaptation and mitigation activities	Impacted for some suppliers, facilities, or product lines	Flooding of a nearby small river may reach office and production buildings at one of our sites in Järfälla at a heavy rainfall (one in a hundred years with a climate change factor included). Saab has identified this as a risk while our strategy for managing this particular risk has become an opportunity. The property in that site is in the process of a new exploitation plan for about 2000 apartments, a school, a pre-school, hotel and other services. Saab will still have office and operations in a new building at a corner of the area. To manage the risk, Saab has adapted the exploitation planning to prevent damage from possible future flooding from the nearby river. This means that no buildings will be located below the predicted highest possible water level. Until the new development is finalised, the risk is mitigated through insurance. The magnitude of impact is relatively low, since this is part of a development which will bring revenue which well covers the costs of the adaption activity.
Investment in R&D	Impacted	Climate-related issues have been identified as an opportunity for Saab to develop more low-emissions products and services. This have impacted our investment in R&D within the area and investments have been made in a number of research projects and pilots that are related to products and services that can contribute to lower CO2 emissions. As examples, Saab actively participates in Clean Sky, which is the largest European research programme developing innovative, cutting-edge technology aimed at reducing CO2, gas emissions and noise levels produced by aircraft. We also contribute to research and studies regarding electric airplanes and have performed test-flights using 100% biofuel. We have invested in in efficient hull cleaning, which saves fuel for the shipping industry, invested in more efficient air traffic management and we have invested in the development of AVAS, which enables landing in severe visibility conditions. This opens up for direct flights between airports without Instrumental Landing Systems, which makes the larger airports less jammed and makes air travel more efficient The magnitude of impact is medium. Saab's total Research and Development expenditures amounted to 7562 MSEK 2018 of which climate-related investment is a part. For the hull cleaning opportunity C-Leanship described in section 2.4 the investment will be 300 MSEK of which Saab's share of the cost is approximately 50%.
Operations	Impacted	The risk of increasing energy prices affects our operations, especially in Sweden where a significant part of our operations take place. This has led Saab to implement a range of energy savings activities for facilities and operations. The work to implement these is ongoing in line with Saab's Strategic Business Plan where it says that Saab will increase efficiency and minimize environmental and climate impact. Magnitude of impact: As an example, energy savings activities for heating at Saab's largest site implemented within the last three years or under implementation are estimated to save 13,4 MSEK annually and 19800 MWh annually. The magnitude of impact on Saab's total business is low.
Other, please specify	Please select	

C2.6

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

	Relevance	Description
Revenues	Impacted for some suppliers, facilities, or product lines	Climate-related opportunities have led to increased revenues for Saab. One example is the C-Leanship solution. The target until 2026 is to establish a business for C-Leanship that generates an operating income of 200 MSEK, which has been factored into our financial planning process. This is currently considered a relatively low impact on Saab. C-Leanship offers the market safe, fast and gentle cleaning services by providing hull cleanings in port terminals during cargo operation and bunkering thereby facilitating substantial cost savings and reduction of emissions for the shipping industry. C-Leanship's technology is gentle and does not damage the anti-fouling paint allowing shipping lines to clean more frequently and hence reducing fuel consumption. The result is a typical fuel savings of 3-5 %. By performing frequent yearly hull cleanings, customers can typically achieve annual CO2 emission reduction of some 3000 tonnes and fuel cost savings of around 500 TUSD for a mid-size vessel. Another example is the air traffic control system that Saab has developed which improves performance, reduces fuel costs and cuts carbon emission by more efficient traffic flow of aircrafts. It enables aircrafts to wait on their turn at the gate with engines off and thereby reduces fuel consumption fo taxiing. The revenue from the system Aerobahn DMAN and host platform averages to about 110 MSEK per year so far. There is a large potential for huge emission reductions as the system is deployed to an increasing number of airports around the world. The system is included in US FAA's Terminal Flight Data Manager (TFDM) program and is scheduled for deployment at more than 20 U.S. airports over the next 10 years.
Operating costs	Impacted	Increased operating cost for electricity has been identified as a risk. To mitigate such risks energy savings activities are continuously implemented. Proposals for energy savings activities are evaluated based on kWh-savings and cost savings. Activities are chosen based on largest energy savings effect and payback times. These activities will decrease the operating costs. Magnitude of impact: As an example, energy savings activities for heating at Saab's largest site implemented within the last three years or under implementation are estimated to save 13,4 MSEK annually and 19800 MWh annually. The magnitude of impact on Saab's total business is thereby low and has not considerably impacted our financial planning process.
Capital expenditures / capital allocation	Not impacted	An external risk engineer performs on Saab's behalf and in cooperation with the insurance company a thorough assessment of physical risks prior to development of new sites, acquisitions and expansions. Saab does not establish new sites in areas with unacceptably high risks of severe extreme weather or sea level rise, for instance. If instead the worst-case scenario for a specific location is considered acceptable, this will be covered by insurance. In 2018 Saab's capital expenditures in tangible fixed assets amounted to 1481 MSEK, but it has not been significantly impacted by the risks identified in C2.3a, such as the risk of flooding and increasing energy prices. Capital expenditures are driven by the need for new technology to improve production and development processes, investment in properties and initiation of major projects or operations. The magnitude of impact on Saab's total business is low and has not considerably impacted our financial planning process.
Acquisitions and divestments	Impacted for some suppliers, facilities, or product lines	An external risk engineer performs, on Saab's behalf, and in cooperation with the insurance company a thorough assessment of physical risks prior to acquisitions and expansions. Saab does not acquire new sites in areas with unacceptably high risks of severe extreme weather or sea level rise for instance. If instead the worst-case scenario for a specific location is considered acceptable, this will be covered by insurance. The magnitude of impact consists of cost for the risk assessments and is thereby low.
Access to capital	Not impacted	The identified risks in C2.3a such as flooding and increasing energy prices and the identified opportunities in C2.4a, the development of C-Leanship or technical developments of Gripen Jet fighters, do not have a potential to impact Saab's access to capital. Saab is prepared for future changes in customer demand and requirements related to climate change. It is vital and prioritised for Saab to clearly explain to our investors and customers how we conduct our business operations and that we comply with ethical, social and environmental requirements and expectations, this is considered to be the most important thing related to our access to capital.
Assets	Not yet impacted	Saab has not yet seen any impact on assets due to climate change. Most of our sites are located in Sweden where extreme weather is rare. Prior to establishment of a new site an external risk engineer performs on Saab's behalf and in cooperation with the insurance company a thorough assessment of physical risks prior to development of new sites, acquisitions and expansions. Saab does not establish new sites in areas with unacceptably high risks of severe extreme weather for instance. If instead the worst-case scenario for a specific location is considered acceptable, this will be covered by insurance. The magnitude of impact on Saab's total business is low and has not considerably impacted our financial planning process.
Liabilities	Not impacted	External risk engineers perform on Saab's behalf and in cooperation with the insurance company a thorough assessment of physical risks prior to development of new sites and at determined periods for existing sites. Natural hazards such as flooding, storms, wildfires, rain etc are included in the assessments. The result is presented to the insurance supplier which means that the insurance suppliers are aware of our physical risks related to climate change. Thereby we do not expect climate-related risks and opportunities to impact Saab's insurance liabilities.
Other	Please select	

C3. Business Strategy

C3.1

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

Yes

C3.1a

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

No, but we anticipate doing so in the next two years

C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b

(C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b) Indicate whether your organization has developed a low-carbon transition plan to support the long-term business strategy.

No, we do not have a low-carbon transition plan

C3.1c

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

i) Saab's Strategy function collects and processes information in many areas, including climate-related areas, as a basis for our business strategy and objectives. Sustainability, including climate related issues, is the core in Saab's business strategy and a prerequisite for our long-term success. Climate related issues have a direct impact on the way we will be able to run our business in the future, with limited energy resources and climate change threats. Climate change is also a business opportunity for Saab. Saab's strategy therefore includes objectives to reduce the GHG emissions from our own operations as well as an aim to develop environmentally sustainable innovations and solutions. Saab's use of electricity worldwide and the potential to reduce emissions through both energy efficiency activities and changes to more fossil-free sources is an example of a climate related issue that has affected our strategy.

Stakeholders' expectations, together with Saab's own strategic assessment, serve as the basis for selecting priority issues for Saab's sustainability work. Saab receives input from stakeholders continuously through a number of channels. In addition to regular contact with stakeholders, Saab sent out brief surveys on the company's sustainability work in 2014 and 2015 to a number of stakeholders, including employees, students, investors and customers in order to get their input on what they see as important when it comes to sustainability issues. Saab also monitors trends in sustainability and participate in a number of collaborations and organisations that provide valuable contributions to the work. Many stakeholders have an expectation that Saab uses its technology and innovation capacity to develop environmentally sustainable innovations.

ii)Saab's business strategy includes a section about performance and working more efficiently. The climate objective to reduce Saab's GHG emissions by 33% by 2030 (related to 2017) is part of this section in the business strategy. The strategy also includes energy reduction targets to support the overarching climate objective.

iii)The most substantial business decision made during 2018 that was influenced by the integration of climate related issues into our Business Strategy was the decision to continue investments in the C-Lean Ship. This is a unique method for hull cleaning in seaport terminals for the shipping industry. The C-Lean Ship offer customers fuel savings of 3-5%, which is an estimate reduction of 3 tonnes of CO2 daily per ship. During 2018, this service has contributed to an approximate 165 000 tonnes reduction of CO2 emissions. Another substantial business decision made during the reporting year, that was influenced by the climate change aspect of our business strategy, was the continued investment in on-site solar plants at our site in South Africa. This has had a significant positive impact on the energy efficiency with an estimate reduction in energy consumption by 20 % at the facility. During 2018, this led to an estimate annual CO2 savings of 1000 tonnes.

iv) One aspect of climate change that have influenced our business strategy is the opportunity that providing products and service that can help contribute to lower emissions present. We now have a broad product portfolio containing a large number of such products

and services. One example of this is the investment in next-generation vessel traffic management with dynamic route planning that optimizes the ships' routes for the lowest possible environmental impact.

v) A short-term strategy that have been influenced by climate change is our work within both innovations like the EU's Clean Sky 2 Programme, which managed by Clean Sky Joint undertaking until 2023. Saab participates in the development of new advanced wings called Blade with the aim to reduce weight, drag and emissions. We have also set new targets on resource efficiency, including energy use and GHG emissions. On energy efficiency, we aim to reduce our GHG emissions from heat, cooling and electricity with 50% by 2025 in comparison to 2016. This will be done by optimising the use of energy, heat and cooling and a transfer to non-fossil fuels for heating and operation of facilities. To reach our target of a 33 % reduction in GHG emissions by 2030, we also strive to minimise the use of fossil fuels in business travel and goods transportation. We also facilitate online meeting in order to reduce our annual business travels.

vi) We have a long-term strategy that is based on the key areas in our Environmental Strategy. In relation to climate change, the focus is on sustainable product innovations, i.e. material efficiency, re-usability, use-phase emissions, and energy consumption through product design, development and maintenance. In this strategy we emphasize material selection and design. In combination with a potential future increase in prices on fossil fuels we see the growing demand of sustainable solutions as a growing market which we aim to be part of. Saab Group’s system solutions can connect various sectors of the society and create a platform for efficient decision-making, citizen dialogue and improved resource utilisation.

vii) Both our short-term and long term-strategy gives us a strategic advantage over competitors that have been less prone to translate products and services within military and defence systems to new markets and applications - within civil security in general and environmental solutions in particular. With our strategy, we can tap into this growing market.

viii) Saab Group’s new environmental strategy sets, among other things, a target to reduce GHG emissions. By 2030 Saab has the ambition to reduce its emissions by at least 33 % compared to 2017. The target is consistent with the Paris Agreement, scenario pathway RCP 2.6, and the goal to limit global warming to less than 2 degrees Celsius.

C3.1g

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

Saab has set a new climate-related target in line with the 2 degree Celsius scenario and are using the RCP 2.6 climate-related scenario for this, but has not yet committed to the SBT initiative. Structured climate-related scenario analysis are expected to be an input to the business strategy 2020.

Saab’s target of reducing our CO2 emissions with 33% by 2030 is related to the science-based target that we have set using the RCP 2.6 climate-related scenario. We have not yet committed to the SBT Initiative since the target that we have does not yet include all relevant categories in Scope 3. We have targets related to Scope 3 on Business Travel and are working actively with our suppliers and with behavioural change within the company to reduce emission from Business travel.

We have not until now seen absolute need for a structured scenario analysis. It has not been a main priority area until now within the defence and security area of business.

However, the next step is now to investigate how to further use climate-related scenario analysis in our business strategy. As one step towards that, Saab will be having a TCFD workshop to further develop our integration of climate-related scenario analysis into our business strategy during the fall of 2019.

C4. Targets and performance

C4.1

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

Absolute target

C4.1a

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

Target reference number

Abs 1

Scope

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

% emissions in Scope

100

Targeted % reduction from base year

33

Base year

2017

Start year

2017

Base year emissions covered by target (metric tons CO2e)

68272.6

Target year

2030

Is this a science-based target?

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science-Based Targets initiative

% of target achieved

6.17

Target status

Underway

Please explain

The target covers 100 % of emission in scope 1 and 2 and 100 % emission in scope 3 within the categories Transportation and Distribution, Business Travel and Leased Assets. The target is aligned with the Paris Agreement's goal to limit the increase in global average temperature to below 2 degree Celsius above pre-industrial levels. Saab's target is based on IPCC scenario RCP 2.6. The emissions data used for the calculation of our target have been updated since the publication of our annual- and sustainability report. The emission reduction reported in our annual- and sustainability report do therefore not correspond completely with the numbers in our CDP reporting.

C4.2

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

C4.3

(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.

Yes

C4.3a

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

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	1	0
To be implemented*	1	277
Implementation commenced*	3	680
Implemented*	9	4372.65
Not to be implemented	1	0

C4.3b

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

Initiative type
Low-carbon energy installation

Description of initiative
Solar PV

Estimated annual CO2e savings (metric tonnes CO2e)
753

Scope
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
416000

Investment required (unit currency – as specified in C0.4)
384000

Payback period
4 - 10 years

Estimated lifetime of the initiative
>30 years

Comment
Solar PV are installed at Saab's site in South Africa.

Initiative type
Energy efficiency: Building services

Description of initiative
HVAC

Estimated annual CO2e savings (metric tonnes CO2e)
31

Scope
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
24300

Investment required (unit currency – as specified in C0.4)
90200

Payback period
4 - 10 years

Estimated lifetime of the initiative
6-10 years

Comment
The activity is chiller set-point adjustment and optimisation at Saab's site in South Africa.

Initiative type
Energy efficiency: Processes

Description of initiative
Heat recovery

Estimated annual CO2e savings (metric tonnes CO2e)
102

Scope
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
82600

Investment required (unit currency – as specified in C0.4)
578600

Payback period
4 - 10 years

Estimated lifetime of the initiative
11-15 years

Comment
Saab replaces hot water electric geysers with heat pumps at Saab's site in South Africa

---

Initiative type
Energy efficiency: Building services

Description of initiative
Lighting

Estimated annual CO2e savings (metric tonnes CO2e)
449

Scope
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
524800

Investment required (unit currency – as specified in C0.4)

2752000

Payback period
4 - 10 years

Estimated lifetime of the initiative
16-20 years

Comment
Saab replaces and retrofits lights with energy efficient lamps at Saab's site in South Africa.

Initiative type
Energy efficiency: Processes

Description of initiative
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
200

Scope
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
256000

Investment required (unit currency – as specified in C0.4)
256000

Payback period
<1 year

Estimated lifetime of the initiative
11-15 years

Comment
Saab installs timer switches to control equipment at Saab's site in South Africa

---

Initiative type
Energy efficiency: Building services

Description of initiative
HVAC

Estimated annual CO2e savings (metric tonnes CO2e)
253

Scope
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
2020000

Investment required (unit currency – as specified in C0.4)
935000

Payback period
<1 year

Estimated lifetime of the initiative
>30 years

Comment
A number of heating savings activities was implemented and under implementation during 2018 at Saab's largest site in Sweden.

This was part of Saab's Property functions ongoing energy savings programme. The activities included e.g. optimization of flow of ventilation, heat recovery, optimization of operating hours of HVAC systems etc.

Initiative type
Energy efficiency: Processes

Description of initiative
Fuel switch

Estimated annual CO2e savings (metric tonnes CO2e)
44

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
0

Investment required (unit currency – as specified in C0.4)
0

Payback period
No payback

Estimated lifetime of the initiative
11-15 years

Comment
Saab has continued to replace regular diesel with HVO diesel for ground vehicles at our site and airport in Linköping, Sweden during the year. The initiative did not require any investment and do not result in any cost savings or cost increase.

Initiative type
Low-carbon energy purchase

Description of initiative
Other, please specify (Green Electricity)

Estimated annual CO2e savings (metric tonnes CO2e)
2452

Scope
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
0

Investment required (unit currency – as specified in C0.4)
104000

Payback period
No payback

Estimated lifetime of the initiative
Ongoing

Comment
Saab has changed electricity contract for one of the sites in Karlskoga, Sweden to electricity from 100 % renewable sources. The new contract does not require an investment but an annual cost increase. The 104 kSek in the Investment Required box above is the annual cost increase.

Initiative type
Process emissions reductions

Description of initiative
Behavioral change

Estimated annual CO2e savings (metric tonnes CO2e)
88.65

Scope
Scope 3

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
0

Investment required (unit currency – as specified in C0.4)
1100000

Payback period
No payback

Estimated lifetime of the initiative
Ongoing

Comment
Saab Group's wholly owned consulting company Combitech, has developed a Travel Carbon Tool (TCT) that monitors the emissions from business travel on a monthly basis. In combination with the launch of the tool in 2017, a campaign was run together with one of the largest suppliers of train travel in the Nordic region, encouraging employees to travel more by train instead of by car and airplane. Since there has been a shift in traveling, from air travel and car to train, the annual monetary savings are estimated to be insignificant.

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	In order to comply with the Swedish legislation on Energy mapping and efficiency Saab's sites undergo energy assessments. The assessments identify the largest energy consuming parts of the operations and facilities and recommend actions to reduce energy consumption. These recommended actions are considered when Saab's Property function evaluates possible energy reducing actions overall as a basis for investment decisions.
Dedicated budget for energy efficiency	Saab's property function has a dedicated budget for facility related energy efficiency activities. For each activity investment cost, pay-back time, energy savings and emission saving are defined as basis for decisions on which energy efficiency actions to take. Saab's environmental function has a budget for operational energy efficiency actions.
Dedicated budget for low-carbon product R&D	Saab has a dedicated budget for R&D within Clean Sky which is the largest European research programme developing innovative, cutting-edge technology aimed at reducing CO2, gas emissions and noise levels from aircrafts.
Employee engagement	Saab has recently released a new environmental and climate related web training for all employees to create awareness and engagement within the area. The awareness may contribute to investments in emissions reductions activities.
Internal incentives/recognition programs	Saab recognizes implementation of emissions reductions activities by publishing articles on our internal community as well as through our various networks and forums.
Partnering with governments on technology development	Saab participates in Clean Sky, which is the largest European research programme developing innovative, cutting-edge technology aimed at reducing CO2, gas emissions and noise levels from aircrafts. Clean Sky is partly funded by the European Union. Saab also participates in a programme for development of electric airplanes which is funded by Vinnova, Sweden's Innovation Agency.

C4.5

(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?
Yes

C4.5a

(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.

Level of aggregation
Product

Description of product/Group of products
Saab's product Aerobahn Departure Manager (DMAN) is a traffic flow management tool used by airport operators, air navigation service providers, and airlines in order to reduce departure taxi times and maximize runway throughput. The taxi time reductions enabled by the Aerobahn DMAN directly correlate with a reduction in fuel burn and thereby carbon emissions. The first deployment of the Aerobahn DMAN was at John F. Kennedy International Airport in New York in 2012 as part of the JFK Ground Management Program. Following the 2012 deployment, analysts from Massachusetts Institute of Technology and Saab Sensis conducted a collaborative study to assess the impact that departure management had at JFK. The study showed that when comparing taxi times from prior to the deployment of the Aerobahn DMAN in 2009 with those after the deployment in 2012, annual taxi times were reduced by 2,800 hours. This results in an approximate annual reduction of 13 million kg of fuel burn and 43,000 metric tons of CO2 emissions.

Are these low-carbon product(s) or do they enable avoided emissions?
Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions
Other, please specify (Study in collaboration with Massachusetts Institute of Technology)

% revenue from low carbon product(s) in the reporting year
0.4

Comment
Based on already existing contracts for deployment of the product on airports, the product is estimated to save 274,000 tonnes annually in five years and 376,000 tonne CO2 annually in 10 years from now.

Level of aggregation
Group of products

Description of product/Group of products
Saab provides simulators for the Gripen aircrafts. The simulators replaces many of the real training flights and thereby avoids carbon emission.

Are these low-carbon product(s) or do they enable avoided emissions?
Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions
Other, please specify (Own estimations)

% revenue from low carbon product(s) in the reporting year
0

Comment
It has not been possible to single out the revenue from the simulators.

Level of aggregation
Product

Description of product/Group of products
Saab's product Remotely Operated underwater Vehicle (ROV) is used for hull washing of large vessels. This reduces the environmental footprint of ships by dramatically reducing fuel consumption and thereby carbon emission, but also by cutting down on spread of microorganisms between different marine environments. In addition it reduces the need to bring vessels in to dry docks in order to repaint them, which also reduces the cost of the shipping companies.

Are these low-carbon product(s) or do they enable avoided emissions?
Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions
Other, please specify (Own estimations)

% revenue from low carbon product(s) in the reporting year
0

Comment
The revenue from this product is confidential information. ROV used for hull washing in the concept of C-Leanship can result in a 5 % reduction in the fuel consumption of a vessel, depending on its size.

C5. Emissions methodology

C5.1

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

Scope 1

Base year start
January 1 2017

Base year end
December 31 2017

Base year emissions (metric tons CO2e)
12569.6

Comment

Scope 2 (location-based)

Base year start
January 1 2017

Base year end
December 31 2017

Base year emissions (metric tons CO2e)
34956.9

Comment

Scope 2 (market-based)

Base year start
January 1 2017

Base year end
December 31 2017

Base year emissions (metric tons CO2e)
34317.9

Comment

C5.2

(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.
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

C6. Emissions data

C6.1

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

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)
13407.5

Start date
January 1 2018

End date
December 31 2018

Comment

C6.2

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

Row 1

Scope 2, location-based
We are reporting a Scope 2, location-based figure

Scope 2, market-based
We are reporting a Scope 2, market-based figure

Comment

C6.3

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

Reporting year

Scope 2, location-based
20671.1

Scope 2, market-based (if applicable)
20252.8

Start date
January 1 2018

End date
December 31 2018

Comment

C6.4

(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?
No

C6.5

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

Purchased goods and services

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
We do not regard this scope 3 category to be of particular relevance because of our limited influence on the suppliers. Saab communicates environmental requirements at procurement and we do not believe that further measures would result in significant emissions reduction. Purchased business travel services is included in Business travel below.

Capital goods

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
For Saab this Scope 3 category is not regarded to be of particular relevance because emissions from this category are relatively small, therefore we choose to focus our resources on categories with greater potential impact.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
This category is deemed by IAEG and not relevant to most aerospace companies. The emissions from this category are not significant for Saab´s business.

Upstream transportation and distribution

Evaluation status
Relevant, calculated

Metric tonnes CO2e
4354.6

Emissions calculation methodology
These are registered emissions from upstream transportation and distribution by road, sea and air as a part of the upstream operations. The emission factors are: Diesel 2.53934 kgCO2e/liter, Truck 17t+ 0.17927 kgCO2e/tkm, Truck 7,5-17t 0.3581 kgCO2e/tkm. Sea Cargo Avg. load 0.01323 kgCO2e/tkm. Continental freight flights 1.02929 kgCO2e/tkm. Intercontinental freight flights 0.65135 kgCO2e/tkm. Sources: DEFRA 2018.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

Explanation

Waste generated in operations

Evaluation status
Relevant, calculated

Metric tonnes CO2e
1545.7

Emissions calculation methodology
In order to reflect the new LCA standard (EN15804) the emission factors show the total climate impact of waste treatment without including avoided emissions in other systems (next cycle). This means that the energy recovery from the incineration of waste for the production of district heating is not deducted from the emission factor of waste for incineration in the Nordic countries. Recycled waste fractions include only a small transport component (collection of waste) while the material recycling and replacement of virgin materials takes place outside the system (by the actor who buy the recycled material). The emission factor based on EcoInvent is 0.502 kg CO2 per kg incinerated waste and 0.0213 for recycled mix waste from DEFRA 2018

Percentage of emissions calculated using data obtained from suppliers or value chain partners

Explanation

Business travel

Evaluation status
Relevant, calculated

Metric tonnes CO2e
28478.6

Emissions calculation methodology
25 025,8 tCO2e of total business travel emissions is tracked from Air travel. Emission factors provided by DEFRA 2018 (without RFI and uplift factor); Continental 0.08584 kg CO2/pkm, Domestic 0.15777 kg CO2/pkm, Intercontinental 0.11237 kg CO2/pkm. 3 452,8 tCO2e of total business travel emissions is from company,- and leased cars as the majority category within this segment while including data from taxi, train and mileage allowance. Diesel car avg: 0.17753 kg CO2/km, and Petrol car avg: 0.18368 kg CO2/km. Factor emission sources provided by DEFRA 2018.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

Explanation

Employee commuting

Evaluation status
Relevant, calculated

Metric tonnes CO2e
14676

Emissions calculation methodology
Total emissions of employee commuting is internally calculated for all of our employees globally based on an employee survey conducted at different installations. Employees in Sweden accounts for 11 427 tCO2e of total employee commuting emissions. The majority of the installations have used different methods of data collection. Most have stated their use of transportation and the number of kilometres. Therefore, percentages have been allocated to the respondents in the survey, then calculated the total emission of the plant based on transportation types that includes petrol,- diesel,- hybrid cars, bus, train, bicycle, walking and/or electric equipment.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

Explanation

Upstream leased assets

Evaluation status
Relevant, calculated

Metric tonnes CO2e
388.7

Emissions calculation methodology
Registered emissions of upstream leased assets is based on the electricity and district heating usage on our domestic and international sites. Location and country specific factors have been used. For example, district heating in Malmo is accounted for 106,9 tCO2e from the total of leased assets. Emission factor provided by the source of Eon.se; 0.0903 kg CO2/kwh.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

Explanation

Downstream transportation and distribution

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
Downstream transportation and distribution is not applicable for our business model.

Processing of sold products

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
Saab’s core business, products and services are goods that, when sold, are not further processed. It’s either an end product or, even if part of another end product it’s not further processed. This means that Saab’s emission in this category is very low.

Use of sold products

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
The total range of Saab's different products and services is so extensive that any attempt to calculate environmental impacts in total is considered impracticable. At design Saab works hard to minimize fuel consumption and thereby emission from the product that we sell that are most relevant in this category - the Gripen fighter. But since delivery of fighter aircrafts are very limited and uneven from year to year and the time between developments of new generations of fighter aircrafts is many many years, it would not be relevant to compare emission in this category from year to year.

End of life treatment of sold products

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
The majority of Saab's products are long life products and will, at end of life, be dismantled and recycled with minimized environmental impacts.

Downstream leased assets

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
Saab only lease office and production space to others in buildings where Saab has own operation. This means that we include emissions from downstream leased assets (office and production space) in the report of our scope 1 and 2 emissions, i.e Saab's emission in this category is 0.

Franchises

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
Not applicable for our business model as we do not have any franchises. Saab's emission in this category is 0.

Investments

Evaluation status
Not evaluated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
This has not yet been evaluated.

Other (upstream)

Evaluation status
Not evaluated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation

Other (downstream)

Evaluation status
Not evaluated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation

C6.7

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

C6.7a

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

Row 1

Emissions from biologically sequestered carbon (metric tons CO2)
331

Comment

C6.10

(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.

Intensity figure
0.0000010152

Metric numerator (Gross global combined Scope 1 and 2 emissions)
33660.3

Metric denominator
Other, please specify (Sales)

Metric denominator: Unit total
33156000000

Scope 2 figure used
Market-based

% change from previous year
6.32

Direction of change
Decreased

Reason for change
A decrease in Scope 1 and Scope 2 emissions due to emission reduction activities and change of electricity purchase contracts in correlation with an increase in sales. One of the emission reduction activities that we have done in the reporting year is install solar panels at Saab's site in South Africa. Another initiative was to continue replacing regular diesel with HVO diesel for ground vehicles at our site and airport in Linköping, Sweden during 2018. Calculations of intensity figure in 2017 was based on unit total revenue as the metric denominator. In 2018, we want to base our calculations on sales as the metric denominator. We have therefore re-calculated the intensity figure from last year based on our sales for 2017, resulting in an intensity figure for 2017 of 0.0000010837. Change from previous year have been calculated based on this intensity figure.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?
Yes

C7.1a

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

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	13325.89	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	26.41	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	55.2	IPCC Fifth Assessment Report (AR5 – 100 year)

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
Australia	151.2
Czechia	125.8
Denmark	0
Finland	0
Germany	37.4
Netherlands	0
Norway	0
Sweden	12197.8
Switzerland	326.4
United Kingdom of Great Britain and Northern Ireland	31.2
United States of America	461.2
South Africa	76.5
India	0

C7.3

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

By business division

C7.3a

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

Business division	Scope 1 emissions (metric ton CO2e)
Kockums	165.6
Dynamics	1065.6
Support and Services	7657.2
Aeronautics	3746.3
Surveillance	538.9
Industrial Products and Services	226.3
Group wide	7.6

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility generation activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	13407.5	<Not Applicable>	Saab cannot separate the emissions from production of jetfighters from the production of other types of products and systems (OEM activities). In Saab's product portfolio there are several hundred products. The flight system that they produce is part of an number of different Business Areas. The figure entered in "Gross Scope 1 emissions, metric tons CO2e" is our total gross Scope 1 emissions.
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.5

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

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)
Australia	1410.8	1410.8	1881	0
Czechia	109	128.7	209.6	0
Denmark	63.3	184	389.4	79.3
Finland	0	0	0	0
Germany	217.5	348.4	475.9	0
Netherlands	153.5	171.6	323.2	0
Norway	4.8	0	535.8	535.8
Sweden	9816.4	8595.7	278089.7	261304.2
Switzerland	14	111.7	558.4	0
United Kingdom of Great Britain and Northern Ireland	133.2	172.8	470.7	0
United States of America	2994.1	3377.6	6499.2	0
South Africa	5728.3	5728.3	5973.2	0
India	26.2	23.3	757.5	0

C7.6

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

By business division

C7.6a

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

Business division	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Kockums	254	116.2
Dynamics	3785.6	4248.4
Support and Service	1038.3	979.5
Aeronautics	5701.4	4914.8
Surveillance	8335.5	8274.6
Industrial Products and Services	1529	1695.9
Group wide	27.4	23.3

C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7

(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO2e.

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	20671.1	20252.8	Saab cannot separate the emissions from production of jetfighters from the production of other types of products and systems (OEM activities). In Saab's product portfolio there are several hundred products. The flight system that they produce is part of an number of different Business Areas. The figure entered in "Scope 2, location-based, metric tons CO2e" and "Scope 2, market-based" is our total Scope 2 emissions.
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C-TO7.8

(C-TO7.8) Provide primary intensity metrics that are appropriate to your indirect emissions in Scope 3 Category 11: Use of sold products from transport.

Activity
Aviation

Emissions intensity figure
0

Metric numerator (Scope 3 emissions: use of sold products) in Metric tons CO2e
0

Metric denominator
<Not Applicable>

Metric denominator: Unit total
0

% change from previous year
0

Vehicle unit sales in reporting year
0

Vehicle lifetime in years
0

Annual distance in km or miles (unit specified by column 4)
0

Load factor
Saab Group cannot disclose on the load factor for our jet fighters since many of our customers are defense administrations of different kinds. Detailed information about the extent of our products usage is classified and cannot be provided to us or anybody else (with reference to national security).

Please explain the changes, and relevant standards/methodologies used
Saab Group is not able to disclose this information. These metrics are not relevant to our organisation as we are producing products for the military and such information are defence secrets. However, are reporting the fuel that we consume in our own operations for test flights as part of our Scope 1 emissions.

C7.9

(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?
Decreased

C7.9a

(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.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	0	No change	0	
Other emissions reduction activities	4284	Decreased	12.48	Emissions reduction activities have reduced emissions with 4284 tonn CO2e from 2017 to 2018, where 2017 total emissions in S1 and S2 were 34317.9 tCO2e. (-4284/34317.9) * 100 = -12.48 %).
Divestment	0	No change	0	
Acquisitions	0	No change	0	
Mergers	0	No change	0	
Change in output	0	No change	0	
Change in methodology	7.3	Decreased	0.02	These are the emissions factor changes from 2017 to 2018 within scope 1. Aviation gasoline, diesel, petrol, burning oil and natural gas blends are used in the calculation, resulting in a total of 7,3 tCO2e reduction or -0,021 % from emissions factor change from 2017 to 2018, where 2017 total emissions in S1 and S2 were 34317.9 tCO2e. (-7.3/34317.9) * 100 = -0.021 %).
Change in boundary	0	No change	0	
Change in physical operating conditions	0	No change	0	
Unidentified	3634	Increased	10.6	The emissions for Scope 1 and Scope 2 in 2017 were 34 317.9 t CO2e and in 2018 the corresponding number was 33 660.3 tCO2e. Identified changes were a reduction due to emission reduction activities and change in methodology accounting for a total reduction of 4291.3 tCO2e. Unidentified change= 33 660.3-(34 317.9 -4284-7.3) = 3633.7 tCO2e (3633.7/34317.9)*100 = 10.6%
Other	0	No change	0	

C7.9b

(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?

Market-based

C8. Energy

C8.1

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

More than 0% but less than or equal to 5%

C8.2

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

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

C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	1021.1	51961.2	52982.3
Consumption of purchased or acquired electricity	<Not Applicable>	134994.9	33748.8	168743.7
Consumption of purchased or acquired heat	<Not Applicable>	108754.8	0	108754.8
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	18656.5	0	18656.5
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	8.7	<Not Applicable>	8.7
Total energy consumption	<Not Applicable>	263436	85710	349146

C8.2b

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

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

C8.2c

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

Fuels (excluding feedstocks)
Diesel

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
1968.4

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Comment

Fuels (excluding feedstocks)
Aviation Gasoline

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
9.3

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Comment

Fuels (excluding feedstocks)
Petrol

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
178.3

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Comment

Fuels (excluding feedstocks)
Jet Kerosene

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization
41373.9

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Comment

Fuels (excluding feedstocks)
Biodiesel

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
1138.3

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Comment

Fuels (excluding feedstocks)
Fuel Oil Number 1

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
2935

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Comment

Fuels (excluding feedstocks)
Natural Gas

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
3669.9

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Comment

Fuels (excluding feedstocks)
Liquefied Petroleum Gas (LPG)

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
688.1

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Comment

Fuels (excluding feedstocks)
Wood Pellets

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
1021.1

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Comment

C8.2d

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

Aviation Gasoline

Emission factor
2.5388

Unit
kg CO2e per liter

Emission factor source
DEFRA 2018

Comment

Biodiesel

Emission factor
0.0346

Unit
kg CO2e per liter

Emission factor source
DEFRA 2018

Comment

Diesel

Emission factor
2.68779

Unit
kg CO2e per liter

Emission factor source
DEFRA 2018

Comment

Fuel Oil Number 1

Emission factor
2.53627

Unit
kg CO2e per liter

Emission factor source
DEFRA 2018

Comment

Jet Kerosene

Emission factor
2.55

Unit
kg CO2e per liter

Emission factor source
Avinor 2018

Comment
12.25 KWh/kg x 0,8 (densitet) og 3,1 kg CO2 per kg fuel x 0,8 densitet (standard EU best)

Liquefied Petroleum Gas (LPG)

Emission factor
1.51906

Unit
kg CO2 per liter

Emission factor source
DEFRA 2018

Comment

Natural Gas

Emission factor
2.04652

Unit
kg CO2e per m3

Emission factor source
DEFRA 2018

Comment

Petrol

Emission factor
2.30531

Unit
kg CO2e per liter

Emission factor source
DEFRA 2018

Comment

Wood Pellets

Emission factor
0.01506

Unit
kg CO2e per kWh

Emission factor source
DEFRA 2018

Comment

C8.2e

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

	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)
Electricity	8.7	8.7	8.7	8.7
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

C8.2f

(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.

Basis for applying a low-carbon emission factor
Energy attribute certificates, Guarantees of Origin

Low-carbon technology type
Wind
Hydropower
Nuclear
Biomass (including biogas)

Region of consumption of low-carbon electricity, heat, steam or cooling
Europe

MWh consumed associated with low-carbon electricity, heat, steam or cooling
134994.9

Emission factor (in units of metric tons CO2e per MWh)
0

Comment

Basis for applying 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

Low-carbon technology type
Biomass (including biogas)
Other low-carbon technology, please specify (Waste incineration)

Region of consumption of low-carbon electricity, heat, steam or cooling
Europe

MWh consumed associated with low-carbon electricity, heat, steam or cooling
125353.7

Emission factor (in units of metric tons CO2e per MWh)
0.064

Comment
This is the consumption of district local heating and cooling given for each location. An average emissions factors from the local heating and cooling energy company is reported here.

C-TO8.4

(C-TO8.4) Provide any efficiency metrics that are appropriate for your organization's transport products and/or services.

Activity
Aviation

Metric figure
0

Metric numerator
tCO2e

Metric denominator
<Not Applicable>

Metric numerator: Unit total
0

Metric denominator: Unit total
0

% change from previous year
0

Please explain
This information is Confidential and cannot be provided.

C9. Additional metrics

C9.1

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

Description
Waste

Metric value
7129

Metric numerator
ton

Metric denominator (intensity metric only)

% change from previous year
5

Direction of change
Increased

Please explain
The figure in cell "Metric Value" represents the total waste generated from Saab's sites with more than 70 employees, contaminated soil excluded. One of Saab's overall environmental objectives is to reduce waste to landfill with 10 % by 2025, contaminated soil excluded. We measure waste amounts for all treatment methods. Contaminated soil is excluded since it is dependent on ongoing remediation projects which varies from year to year and have a large effect on the total waste amounts.

C-TO9.3/C-TS9.3

(C-TO9.3/C-TS9.3) Provide tracking metrics for the implementation of low-carbon transport technology over the reporting year.

Activity
Aviation

Metric
Other, please specify (Maximum Take Off Weight)

Technology
<Not Applicable>

Metric figure
16500

Metric unit
<Not Applicable>

Explanation
Fuel efficiency is very important and considered throughout the design phase of our military aircraft e.g by continuously working to reduce weight. The Maximum Take Off Weight for Saab's new military aircraft Gripen E is 16500 kilogram.

C-TO9.6/C-TS9.6

(C-TO9.6/C-TS9.6) What is your investment in research and development (R&D), equipment, products and services and which part of it would you consider a direct investment in the low-carbon transition?

Activity
Aviation

Investment start date
January 1 2008

Investment end date
December 31 2023

Investment area
R&D

Technology area
Aerodynamics

Investment maturity
Applied research and development

Investment figure
3800000000

Low-carbon investment percentage
81-100%

Please explain
Saab is one of the main suppliers to Clean Sky, Europe’s largest research programme dedicated to reducing aircraft emissions. Clean Sky started in 2008, with a total turnover of 17 billion SEK, split equal by the industry and the EU commission. The industry’s part is covered by 50 per cent by Integrated Technology Demonstrators (represented by 12 companies including Saab). Of this funding, 24 per cent, or 3.8 billion, is distributed to the Smart Fixed Wing Aircraft project. Assuming this amount is evenly split over the ten years that this project will run, it will end up at 380 million SEK in one year. Saab is one of twelve companies involved. As figures or financial implications on company level is confidential, this is how detailed we can present this estimated financial implications. Clean Sky 2 started 2014 and will end 2023. The total investment in the programme is 38 billion SEK equally split between the industry and the European Commission. Saab is taking part in 3 out of 6 major demonstrator programs in Clean Sky 2. Saab also invest in many other Research and Development sustainability projects. Saab's total investment in Research and Development 2018 was 7625 MSEK.

C10. Verification

C10.1

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

	Verification/assurance status
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	Third-party verification or assurance process in place

C10.1a

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

Scope
Scope 1

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
Saab_CDP assurance statement 2019.pdf

Page/ section reference
Page 1 of the "Independent limited assurance report on parts of Saab AB's CDP Climate Change 2019 Questionnaire".

Relevant standard
ISAE 3410

Proportion of reported emissions verified (%)
100

Scope
Scope 2 location-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
Saab_CDP assurance statement 2019.pdf

Page/ section reference
Page 1 of the "Independent limited assurance report on parts of Saab AB's CDP Climate Change 2019 Questionnaire".

Relevant standard
ISAE 3410

Proportion of reported emissions verified (%)

100

Scope
Scope 2 market-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
Saab_CDP assurance statement 2019.pdf

Page/ section reference
Page 1 of the "Independent limited assurance report on parts of Saab AB's CDP Climate Change 2019 Questionnaire".

Relevant standard
ISAE 3410

Proportion of reported emissions verified (%)
100

C10.1b

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

Scope
Scope 3- at least one applicable category

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Attach the statement
Saab_CDP assurance statement 2019.pdf

Page/section reference
Page 1 of the "Independent limited assurance report on parts of Saab AB's CDP Climate Change 2019 Questionnaire".

Relevant standard
ISAE 3410

C10.2

(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?
Yes

C10.2a

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

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C4. Targets and performance	Progress against emissions reduction target	ISAE 3410	Saab Group have verified our target as reported in question 4.1a. Saab_CDP assurance statement 2019.pdf

C11. Carbon pricing

C11.1

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

Yes

C11.1a

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

Sweden carbon tax

C11.1c

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

Sweden carbon tax

Period start date

January 1 2018

Period end date

December 31 2018

% of emissions covered by tax

1

Total cost of tax paid

12521036

Comment

The cost of tax paid represents the tax Saab payed for electricity in Sweden 2018. The figure in "% of emissions covered by tax" represents the share of emission from Saab's electricity use in Sweden.

C11.1d

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

To pay the regulated tax.

C11.2

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

C11.2a

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

Credit origination or credit purchase
Credit purchase

Project type
Forests

Project identification
Saab has purchased offsets through the Qantas Future Planet Programt to compensate for emission from air travel. According to Qantas 100 % of these offstes go to verified carbon offset projects that meet the Verified Carbon Standard an the Gold Standard. The projects the offsets contribute to are: Carbon Neutral Kangaroo Island, Reinvigorating Indigenous Traditions, Empowering Rainforest Communities, Conserving Tasmania's Wilderness

Verified to which standard
Gold Standard

Number of credits (metric tonnes CO2e)
901

Number of credits (metric tonnes CO2e): Risk adjusted volume
901

Credits cancelled
Yes

Purpose, e.g. compliance
Voluntary Offsetting

C11.3

(C11.3) Does your organization use an internal price on carbon?
No, but we anticipate doing so in the next two years

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?
Yes, our suppliers
Yes, our customers

C12.1a

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

Type of engagement
Information collection (understanding supplier behavior)

Details of engagement
Collect climate change and carbon information at least annually from suppliers

% of suppliers by number
100

% total procurement spend (direct and indirect)
1

% Scope 3 emissions as reported in C6.5
60

Rationale for the coverage of your engagement
60% of Saab Groups's Scope 3 emissions reported in C6.5 are related to business travel . Saab Group has set a climate objective to reduce greenhouse gas emissions with 33% by 2030. However, Saab is continuously working to reduce our emissions related to Scope 3 as well and see our suppliers of business travel as a key element in achieving that.

Impact of engagement, including measures of success
Saab's is in continuous dialogue with our main suppliers of business travel and receive reports on related emissions on a regular basis. In 2017, we engaged with our largest suppliers of rental cars and agreed on new requirements stating that the emissions from the cars cannot exceed 135 g CO2/km. In 2018, the average emission per km was 126 g CO2. Together with one of the largest suppliers of train travel in the Nordic countries, Statens Järnvägar (SJ), Saab had an internal campaign during 2018 aimed at increasing the share of train travel compared to business travel by car and airplane. Traveling with trains within the Saab Group in Sweden has increase with 10 % during 2018 compared to 2017. Saab Group's wholly owned consulting company Combitech, developed a tool during 2017 and 2018, called Travel Carbon Tool (TCT). Through the use of the TCT, departments within Combitech received monthly updates on their business travel related emissions and progress towards Combitech's overall emission reduction target. Being able to follow the development in CO2 emissions monthly, instead of receiving an annual total at the end of the reporting year, has contributed to a shift in the modes of travel in favour of traveling by train. Another reason for the reduction was that Combitech had a CO2 competition between offices in 2018 where the offices competed for who had the least emissions during the year. This competition combined with monthly information on travel contributed to the increase in train travel within Combitech by 50% on certain routes. This resulted in a decrease in the CO2 emission, within Combitech, from car travel with 3,732 tCO2 from 2017 to 2018. For air travel the corresponding number was a reduction of 84,920 tCO2. During the same time-period train travel have increased significantly. Combitech also received public recognition from SJ for the success. During the fourth quarter of 2018 Saab and Combitech commenced the implementation of TCT on a corporate level within Saab Group (expected release 2019Q2).

Comment
99% of emissions from scope 3 category Business Travel is covered.

C12.1b

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

Type of engagement
Education/information sharing

Details of engagement
Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services

% of customers by number
100

% Scope 3 emissions as reported in C6.5
0

Please explain the rationale for selecting this group of customers and scope of engagement
Customers' use of our jetfighters has an impact on the environment in the form of CO2 emissions. Recognising this, Saab has worked to develop a new generation of the Gripen combat aircraft system over a time period of several years. The new Gripen is equipped with advanced resource efficiency technologies. It is a small aircraft, in size and weight, with one engine. This means that the total consumption of raw materials and fuel is minimized. This reduces the impact on the environment. Therefore, it is very important for Saab to engage with our customers and provide them with information on how to use these new technologies in an optimised way.

Impact of engagement, including measures of success
The development of a fighter aircraft takes an estimated 10-20 years to develop. Resource efficiency through new methods and materials is an important factor in the daily work. This includes reducing the weight of the plane, which also contributes to reducing emissions. Previously, only customers who were asking for informed on emissions got the information. Nowadays all new customers can receive information on how to reduce their emissions with focus on the use-phase and the possibility to increase the use of Jet biofuel. The new generation of the Gripen combat aircraft system has until now been sold to the Swedish Air Force and to the Brazilian Air Force.

C12.3

(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?
Direct engagement with policy makers
Trade associations
Funding research organizations

C12.3a

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

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Other, please specify (Public procurement etc.)	Support	Saab takes part, through its subsidiary Combitech, in a Swedish co-operation project within the IT industries, and is also part of the steering group. The project works for a fossil-free Sweden 2045 through digital sustainability. We are taking part in the project to influence the government on setting new standards and regulations eg. Public procurement.	The aim is to influencing digital sustainability requirements in public procurement and developing regulation letters to state authorities for digital procurement.

C12.3b

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

C12.3c

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

Trade association
The Aerospace and Defence Industries Association of Europe (ASD).

Is your position on climate change consistent with theirs?
Consistent

Please explain the trade association's position
ASD helps to address major societal challenges facing Europe such as climate change and demographical changes, and food and water, by addressing the gap between market and research.

How have you influenced, or are you attempting to influence their position?
Among others, Saab has representatives in the Board and in the Environmental Commission of the organization. Therefore, Saab is active in the organization's work with climate issue, e.g. in the board and also in the Environmental Commission with issues like energy efficiency, biofuels, circular flow and trading systems e.g. CORSIA. Our involvement is appr. 70 per cent monitoring and appr. 30 per cent lobbying.

Trade association
The Association of Swedish Engineering Industries (Teknikföretagen).

Is your position on climate change consistent with theirs?
Consistent

Please explain the trade association's position
Teknikföretagen (the Association of Swedish Engineering Industries) works for a sustainable and climate neutral society. They have a responsibility in working for development and distribution of new technique needed for reaching the Climate Goal 2045 (set by the Swedish government). To achieve this goal, they have carried out a study focusing on electric use, distribution and production, and its way to a climate neutral society. They have identified a few key areas that need to be developed in order to reach the climate neutral society: smart grid, increased production of low carbon electricity, new and a reinvesting grid, and more effective production and end-use.

How have you influenced, or are you attempting to influence their position?
Among others, Saab has representatives in the Environmental Committees of the organization. Therefore, Saab is active in the organizations work with climate issues, e.g. participating in committees, energy efficiency and product-related issues. Our involvement is appr. 80 per cent monitoring and appr. 20 per cent lobbying.

C12.3d

(C12.3d) Do you publicly disclose a list of all research organizations that you fund?
No

C12.3f

(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?

Saab Group has a mandatory web-based course that we have a goal of all our employees to take. The course was developed in the end of 2018. It provides knowledge and understanding of our environmental- and sustainability policies. During the training course employees are given the opportunity to learn more about Saab's environmental work and what they as an employee can do for Saab's shared environment. There are many drivers for working actively to reduce our own impact on the environment from legislation to business opportunities. Saab's environmental strategy and objectives are in focus and examples on the impact we have in our everyday life and how simple choices can make a big difference. This course will ensure that our employees are familiar with our overall climate strategy and can incorporate that in their daliy work.

C12.4

(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).

Publication
In mainstream reports

Status
Complete

Attach the document
saab_annual_report_2018 Copy.pdf

Page/Section reference
Saab's Annual and Sustainability Report 2018. Pages 9-10, 12-13, 15, 30, 32, 33, 53-55, 58-59, 63, 66 and 129

Content elements
Governance
Strategy
Emissions figures
Emission targets
Other metrics

Comment

Publication
In voluntary communications

Status
Complete

Attach the document
Web pages saabgroup.pdf

Page/Section reference
Extract from Saab's Website, www.saabgroup.com. See pages 1-11 in attached document.

Content elements
Strategy
Risks & opportunities
Other, please specify (Code of Conduct for suppliers)

Comment

C14. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C14.1

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

	Job title	Corresponding job category
Row 1	Group Environmental Director and Head of Environment	Environment/Sustainability manager

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	Public or Non-Public Submission	I am submitting to
I am submitting my response	Public	Investors

Please state the main reason why you are declining to respond to your Customers

Prefer to work directly with customer, not through a third party

Please confirm below

I have read and accept the applicable Terms