Sustainability Management and Governance

Volvo Cars' approach to sustainability management
Central to our business and key to our future success – sustainability – is as important to the company as safety. Volvo Cars is committed to protecting and improving the environment and wider society, as well as the lives of our customers and employees. Volvo Cars' sustainability strategy is fully integrated into the corporate strategy and provides guidance to strategic and operational decisions. Our sustainability strategy is also challenged frequently by regular analysis, that includes climate-related risks and opportunities.

International commitments
Volvo Cars is proud to be a founding member of the UN Global Compact in 2000. Since then, Volvo Cars has endeavoured to observe the Ten Principles of the Global Compact. This includes Principle 7, the adoption of a precautionary approach to environmental challenges. Furthermore, Volvo Cars is committed to supporting the United Nations Sustainable Development Goals (SDGs). The SDGs act as our guide, where we focus on and address 5 of the 17 goals through our sustainability strategy. The SDGs relevant to our business are:

In addition to the UN Global Compact, our own Code of Conduct (Our Code – How We Act) reflects the following international conventions and guidelines:

- The eight core conventions of the UN agency, the International Labour Organisation (ILO); Child Labour (138 and 182), Forced Labour and Compulsory Labour (29 and 105), Equal Remuneration and Discrimination (100 and 111), and Freedom of Association and Collective Bargaining (87 and 98)
- The 10 principles of the Global Compact
- The Universal Declaration of Human Rights
- UN Convention on the Rights of the Child
- OECD Guidelines for Multinational Companies
- UN Guiding Principles on Business and Human Rights

SUSTAINABILITY GOVERNANCE

As outlined in the chart on page 117, Volvo Cars has put in place a governance structure to monitor the progress of its sustainability strategy, ambitions and initiatives.

Board of Directors (BoD) – People and Sustainability Committee (PSC)
The BoD sets the strategic direction and approves our strategy, including sustainability. It follows up progress in the PSC. Our climate action plan with its risks and opportunities is discussed at least twice a year. PSC also brings a diverse and outside perspective to sustainability issues for the company.

Executive Management Team (EMT)
The EMT is responsible for the overall governance, execution and implementation of the sustainability strategy and regularly monitors progress through a number of KPIs. The climate action plan with risks and opportunities is reviewed quarterly.

Global Sustainability Committee (GSC)
The GSC is chaired by the Head of Global Sustainability and consists of members that are authorised line organisation representatives with the mandate to take decisions, provide guidance and support initiatives to drive the strategy and performance forward. The purpose is to improve cross-departmental collaboration and understanding as well as act on major sustainability issues and risks. The GSC regularly updates and reports to relevant EMT Boards for decision. Climate related risks and opportunities are discussed and fed into the Enterprise Risk Management process, where the Head of Global Sustainability is one of the Corporate Risk Managers, see page 52.

Functional Management Teams
Functional Management Teams are responsible for ensuring that sustainability becomes an integrated part of everyone's daily work. They are sounding boards for the GSC members and can be requested to secure resources and funding for sustainability initiatives.

Global Sustainability Team (GST)
The GST is centrally responsible for the day-to-day governance and coordination of sustainability. It develops and refines the sustainability strategy, leads and supports the strategic initiatives and follows up the progress of our KPIs. It also gathers business intelligence on sustainability matters.

Green Finance Committee (GFC)
The GFC reviews and validates the selection of the Eligible Green Projects (see Green Financing Report on page 148 for further information).

Sustainability reporting

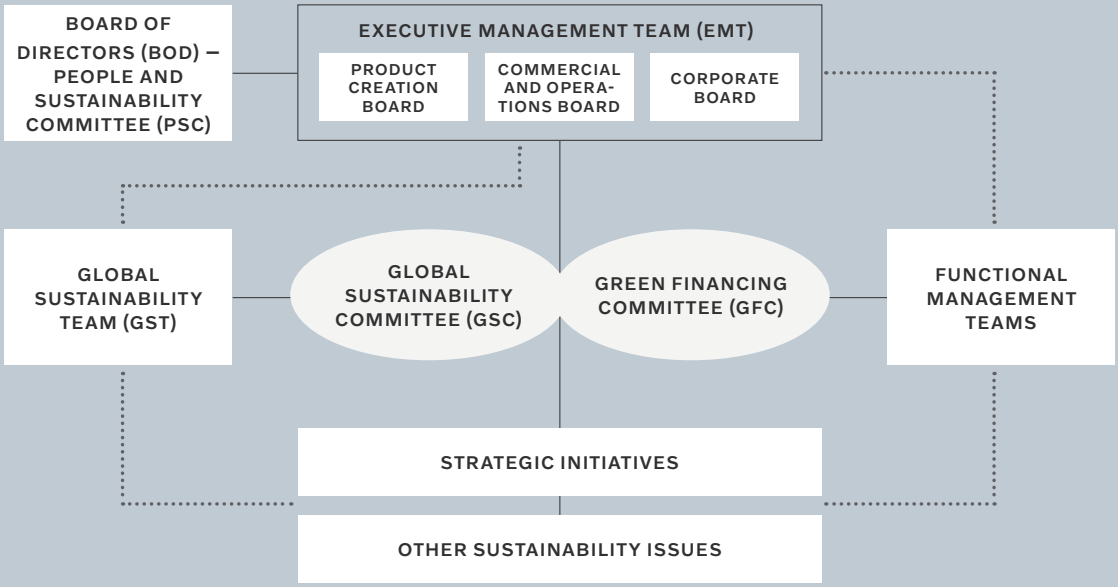
Volvo Cars published its first Environmental Report in 1992. It was expanded to a Sustainability Report in 2003 in line with the guideline of the Global Reporting Initiative (GRI). The 2020 report is prepared in accordance with GRI Standards, accordance level Core. Volvo Cars reports on an annual basis, and this report covers the period January 1st to December 31st, 2020 (except where otherwise stated). Volvo Cars' Sustainability Report has been prepared to meet the statutory requirements in accordance with the Swedish Annual Accounts Act 6 chapter 11§. The scope and content of the Sustainability Report is defined by the GRI Index presented on pages 144-145 in this report. Definitions regarding boundaries as well as measuring techniques and calculations for each performance indicator are given in respect to the disclosure concerned. No significant changes occurred during the reporting period or from previous reporting periods. Deloitte AB has performed a limited assurance of the Sustainability Report in line with ISAE 3000, see page 147. As a signatory to the UN Global Compact, the Sustainability Report is also our Communication on Progress.

Additionally, Volvo Cars continuously analyses, identifies and selects different initiatives and schemes which both support and externally validate our ambitions. Climate action is a focus area of the company, as is financial risk. Therefore, the Task Force on Climate-related Financial Disclosures (TCFD) is one such scheme whose eleven recommended disclosures have been incorporated in this year's Annual Report (see page 146 for further information).

Stakeholder engagement

Our stakeholder involvement provides guidance on how we should develop and communicate our sustainability work. We have an open dialogue with our major stakeholders not only through networks, conferences, our website or at citizen@volvocars.com, but also through deeper interviews, surveys and analysis. Throughout 2020, we continued to promote our sustainability credentials to our stakeholders through press releases, our website, social media, presentations at conferences and in individual meetings. We will carry on doing so in 2021.

SUSTAINABILITY AT VOLVO CARS IS CENTRALLY GOVERNED AND COORDINATED



Materiality analysis

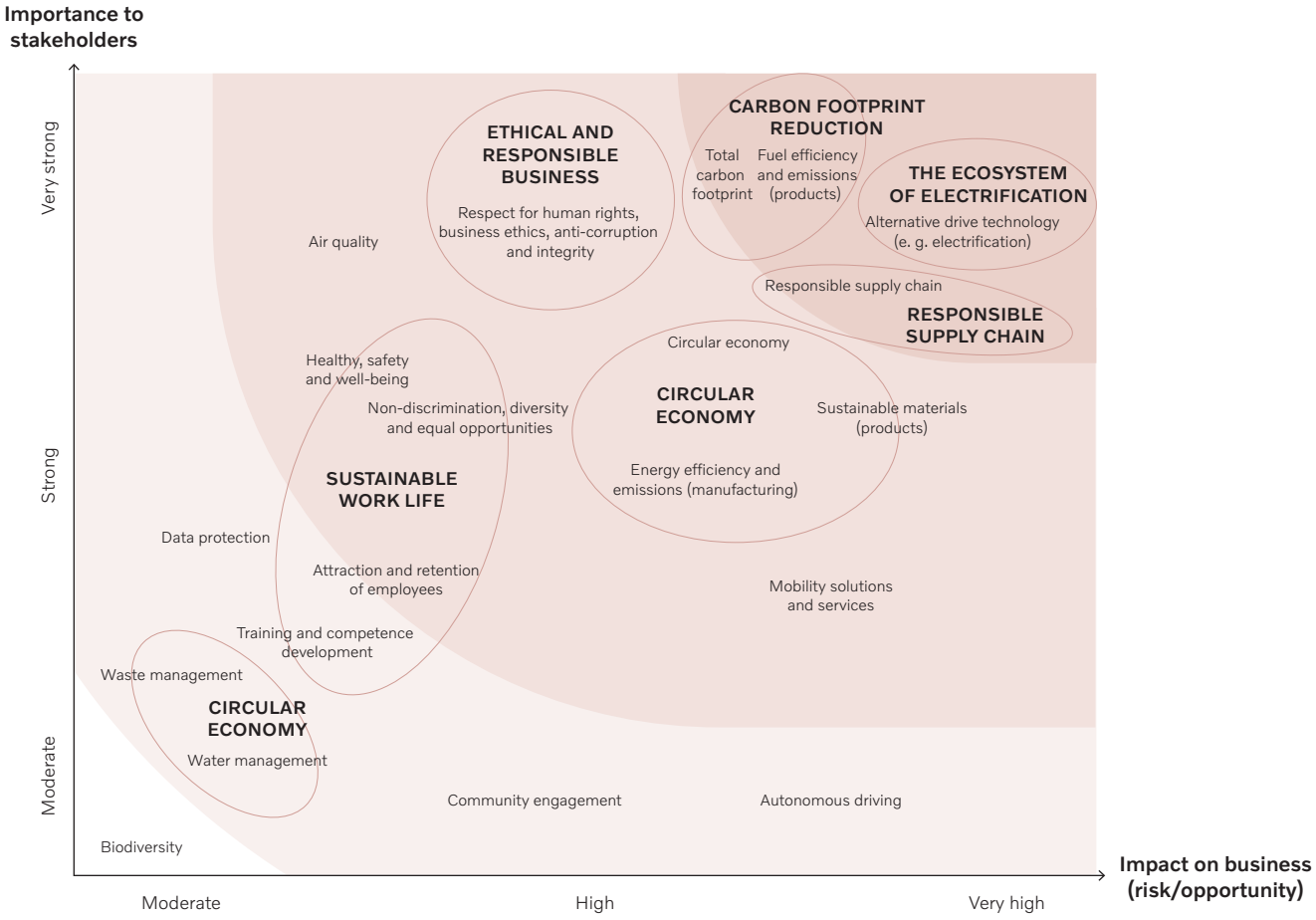
In 2019, we carried out an international survey where external and internal stakeholders were asked to indicate which sustainability areas they considered to be of greatest relevance to Volvo Cars. The stakeholders were selected based on relevance and previous contacts. Based on importance to stakeholders and impact on business (i.e. significance of economic, environmental and social impacts), the following are the most important sustainability topics for Volvo Cars to address (in order of priority):

1. Carbon footprint reduction
2. The ecosystem of electrification
3. Ethical and responsible business
4. Responsible supply chain
5. Circular economy
6. Sustainable work life

Climate-related risks and global warming Scenarios

From a world economic point of view, climate change is a top risk both in terms of impact and likelihood. It affects our company and our industry in many ways. Climate-related risks can be divided into two major categories:

1. Transitional Risks – related to the transition to a lower-carbon economy with extensive policy, legal, technology, and market changes to address mitigation and adaptation requirements related to climate change.



2. Physical Risks – related to the physical impacts of climate change and can be event driven (such as hurricanes and flooding) or longer-term shifts in climate patterns (such as sea level rise).

In 2020, we started analysing different global warming scenarios in accordance with TCFD recommendations to verify the resilience of our strategy. We used IEA's Stated Policies Scenario (4DS) and Sustainability Development Scenario (<2DS) for analysing Transitional Risks and IPCC's 8.5 Scenario for analysing Physical Risks. By analysing impact and likelihood in these different scenarios, we not only identified risks that affect our company, but also opportunities.

Initial scenario analysis of Transitional Risks shows differences in estimated costs in reaching our long-term ambition of becoming climate neutral. For example, potential offsetting costs that could be relevant for any remaining carbon emissions in 2040 are three times higher in a 2DS scenario than a 4DS scenario. This is a further incentive to increase the prioritisation of carbon emission reduction actions. Another example is a possible shift in consumer preferences and behaviours that may happen faster than predicted (see Electrification as well as Climate Change and Sustainability in Enterprise Risk Management on page 52 for further information). It could result in a higher demand for pure electrified cars, less demand for larger vehicles like SUVs, a higher demand of other mobility services or less car ownership demand. However, in total, our current sustainability strategy shows resilience towards the different scenarios since it addresses all the three critical parts of CO_2 reductions; tailpipe, supply chain and operations. Our ambitions are in line with a well below 2-degree scenario (as verified by the Science-Based Targets initiative (SBTi)), and our product and mobility services offers are designed to mitigate potential transitional risks, for instance with an aggressive transition into electric vehicles well ahead of communicated or potential regulatory bans on combustion engines. The biggest remaining challenge is to deliver on our high ambitions.

Our physical assets will be affected by climate change in different ways and severity and have been assessed for Property and Machinery, Logistics and Raw Material Supply and Tools. We see that both our own sites and those within our supply chain have risks of, for example, earthquakes, lightning, flooding, storm surges, windstorms, as well as a longer-term sea-level rise. In a high climate change scenario, we see an impact on our properties with more frequent and longer plant closures and subsequently higher costs for repairs and interruptions. This, in turn, causes higher insurance costs. In the longer term, high risk areas may not be insurable at all. This is also valid for our supply chain, which could increase the cost of parts and services. Our industrial and supply chain setup is dimensioned for the current natural disaster impact and frequency. However, further analysis is needed due to uncertainties on the impact of material supply.

Volvo Cars' sustainability strategy

The materiality analysis and input from our stakeholders have been aligned with our internal strategies, scenario and gap analyses, risk assessments, benchmarking, forecasts and consumer perception data in order to define what we consider to be our most relevant material topics. We then developed the structure of our sustainability strategy with clear focus areas, ambitions and strategic initiatives.

We commit to the highest standard of sustainability in mobility. We believe that by working towards climate neutrality, embracing the circular economy and conducting business responsibly, we will help the planet, contribute to a fairer and more equal society, as well as support our profitable growth. In partnership with our stakeholders, we can increase the impact of our efforts to make a global difference and promote sustainable development.

STRATEGIC FOCUS AREAS	STRATEGIC INITIATIVES
CLIMATE ACTION	1. Reduce CO_2 across the value chain 2. Develop the electrification ecosystem 3. Improve real-world energy efficiency of our cars
CIRCULAR ECONOMY	4. Make materials circular and eliminate waste 5. Retain component value over time 6. Capture business benefits of circularity
ETHICAL AND RESPONSIBLE BUSINESS	7. Take lead in setting a new global people standard for the industry 8. Put sustainability on a par with quality and cost in procurement 9. Engage in sustainable financing 10. Tackle corruption and unethical business practices

VOLVO CARS' MATERIAL TOPICS	VOLVO CARS' SUSTAINABILITY STRATEGY – FOCUS AREAS
EMISSIONS Aspect boundary: Volvo Cars' products (the environmental performance of our cars), supply chain, energy consumption within operations	**CLIMATE ACTION** **Be a climate-neutral company by 2040** Short term action (2018–2025) is aiming at reducing GHG emissions by 40 per cent per car, including reductions of: • Tailpipe emissions by 50 per cent • Supply chain emissions by 25 per cent • Operational emissions (including transport) by 25 per cent
ENERGY Aspect boundary: energy consumption within and outside the organisation	**CIRCULAR ECONOMY** **Be a circular business by 2040** Our ambition is to increase revenue and profit, and to create cost savings, while reducing CO_2 emissions substantially by: • Using larger share of recycled and bio-based materials • Increasing resource utilisation and minimising waste • Efficient component value retention • Developing new business opportunities
MATERIALS Aspect boundary: recycled input materials	
WASTE Aspect boundary: waste by type and disposal method (reuse, recover, recycle)	
DIVERSITY AND EQUAL OPPORTUNITIES Aspect boundary: own operations (Volvo Cars' employees)	**ETHICAL AND RESPONSIBLE BUSINESS** **Be a recognised leader in ethical and responsible business** We intend to achieve this by: • Being an Employer of Choice • Further strengthening the ethical dimension of our culture and corporate governance • Developing partnerships that potentially enable a positive impact on our brand • Strengthening our supply chain by ensuring that sustainability performance has equal weight as cost and quality in the sourcing process
OCCUPATIONAL HEALTH AND SAFETY Aspect boundary: own operations (Volvo Cars' employees)	
ANTI-CORRUPTION Aspect boundary: own operations and partners	
RESPONSIBLE SOURCING Aspect boundary: own operations (procurement) and supply chain	

Performance 2020

Climate Action – Be a climate-neutral company by 2040

Action to reduce our carbon emissions has the highest priority in our sustainability strategy. We are a contributor to climate change. We are part of the problem, but we are also part of the solution. Therefore, we are taking actions across our whole value chain. We have the ambition to be a climate neutral company by 2040, in line with the 2015 Paris Agreement which seeks to limit global warming to 1.5°C above pre-industrial levels, and supporting SDG 13. Through the implementation of our electrification strategy, we are also supporting SDG 11 by increasing access to sustainable transportation and improved air quality.

However, we must act now. So, we are aiming to reduce our lifecycle carbon footprint per car by 40 per cent between 2018 and 2025. We plan to achieve this through the following carbon reductions (per car) across our value chain:

- 50 per cent reduction in tailpipe emissions
- 25 per cent reduction in supply chain emissions
- 25 per cent reduction in operational emissions (including from logistics and manufacturing)

In 2020, our total CO_2 emissions amounted to 34.3 million tonnes, or 52.1 tonnes/car, which is a 6.2 per cent per car reduction between 2018 and 2020. This reduction is mainly due to increased sales of electrified vehicles, but also due to decreased emissions from downstream transportation and distribution, as well as business travel and commuting. See Sustainability Scorecard page 139 for more details.

Volvo Cars has submitted carbon reduction targets to the Science-Based Targets Initiative (SBTi). These have been approved as in line with the reductions necessary to meet the goals of the Paris Agreement to limit global warming to well below 2°C above pre-industrial levels. We have also shared our full carbon emissions data with CDP, the world's foremost environmental disclosure organisation, and received a C score.

The lifecycle performance of our products

We have a long history of carrying out environmental assessments with a holistic perspective. We carry out simplified Life Cycle Assessments (LCAs) on all our models and we continuously develop and improve our methods. This work has intensified in recent years and we feel that we should be open about the full carbon impact of our electric vehicles. So, we have produced a comprehensive LCA of the carbon footprint of our first BEV, the XC40 Recharge, and compared it to an XC40 ICE. We will produce similar LCAs for all future fully electric Volvo cars. You can find further details and the full report on https://group.volvocars.com/news.

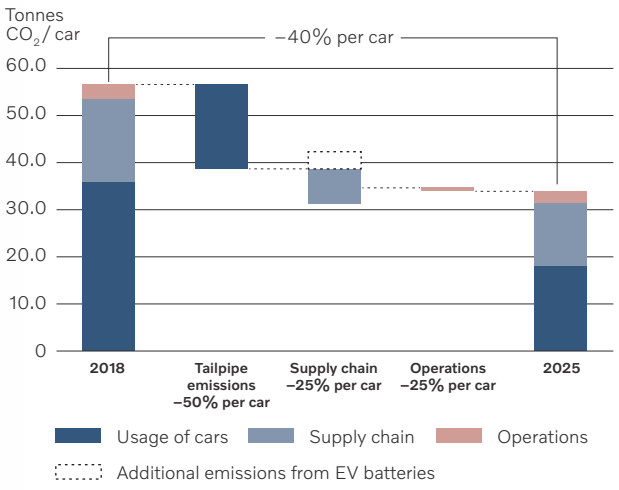
Producing fully electric vehicles (such as the XC40 Recharge) alone will not address the car industry's impact on the climate. Electric vehicle production is currently more carbon intensive than producing an ICE-engine vehicle. And the distance they need to be driven to have a lower carbon impact than an ICE vehicle is dependent on how the electricity is generated to power them. However, over their lifetime the carbon footprint of a fully electric vehicle is less than an ICE, irrespective of the electricity source.

LCAs also enable us to work within our own operations and supply chain to target carbon intensive materials and processes.

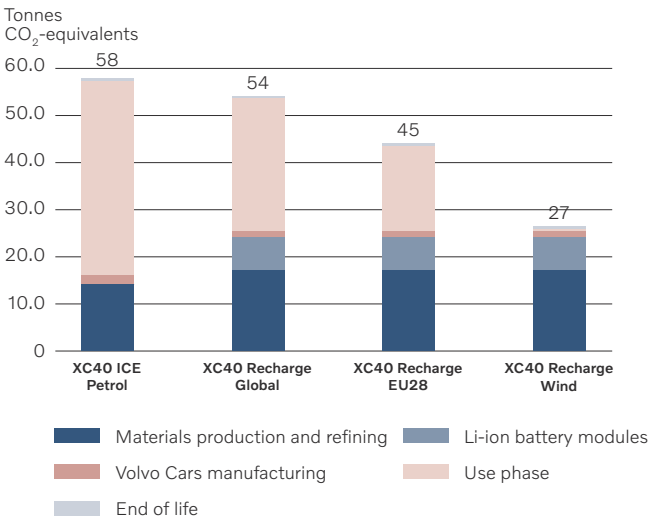
Tailpipe emissions

Tailpipe emissions will be reduced through our electrification strategy. Volvo Cars was the first conventional carmaker to commit to all-out electrification and phasing out cars powered

CO_2 EMISSION AMBITIONS PER CAR 2018–2025



LCA EMISSIONS



Carbon footprint for XC40 ICE and XC40 Recharge, with different electricity-mixes in the use phase for the XC40 Recharge. Results are shown in tonnes CO_2-equivalents per functional unit (200,000 km lifetime range).

only by an internal combustion engine. We are aiming for 50 per cent of our sales to come from fully electric vehicles by 2025, with the rest being hybrids. We already have plug-in variants for all of our car models and our first fully electric car, the XC40 Recharge, was successfully rolled out this autumn.

However, an attractive electric carline alone will not make the electrification strategy a success. It equally needs support from an ecosystem of new services and capabilities to make the electric drive as convenient as possible and to support our customers in their transition into electrification. We need to understand what services and offerings the customers need and expect. The following four focus areas are of biggest interest for our customers:

1. Market and Retailer Readiness – training and preparing retailers and workshops
2. Charging – ease and convenience with a consistent user experience
3. Battery strategy – securing an environmental, ethical and safe process from mining to recycling
4. Financial impact – educating customers on the total cost of ownership and residual value

We keep ahead of current and future emission standards in all our markets by developing efficient technological solutions and a thorough follow-up of legal compliance twice a year. Our EU fleet average CO_2 emissions (based on NEDC correlated figures from WLTP tests) decreased from 132 g/km in 2019 to 111 g/km in 2020. This was due to increased sales of our electrified vehicles. With our electrification strategy, we fulfil the EU's 2020 emissions target and we also expect to fulfil the Volvo Cars 2021 EU targets. Volvo Cars has officially entered a CO_2 pooling agreement with Ford for 2020 which will create an income that can be invested in the further development of green technology.

Worldwide Harmonised Light Vehicles Test Procedure (WLTP) has replaced the former NEDC in Europe. All our European carlines are homologated according to the new procedure. NEDC and WLTP figures can be presented to consumers and dealers already during configuration by showing the CO_2 impact in every configuration step. The WLTP fleet average figure for Europe in 2020 was 130 g CO_2/ km. See Sustainability Scorecard page 139 for more details.

Supplier emissions

As we reduce our tailpipe emissions, our supply chain will become an even greater source of our overall emissions. So, we are working closely with our suppliers to reduce their emissions, including using renewable energy, more recycled and bio-based material, and limiting wastage. We aim to reduce supply chain emissions by 25 per cent per car 2018–2025, including an ambition to achieve 100 per cent renewable energy at our tier 1 suppliers by 2025. To become a climate neutral company, the importance of collaborating with our business partners and drive impact across the value chain is more important than ever before.

First, we must require suppliers to disclose data on emissions and use of energy specific to each manufacturing site and location. For this reason, Volvo Cars is now a member of CDP Supply Chain and this year we introduced data collection via the CDP climate questionnaire for our top 95 strategic suppliers based on emission intense product categories as well as spend. The results of the initial input shows that these suppliers, in total, used 6.0 per cent renewable energy in 2020 for their global operations (including business units that do not deliver to Volvo Cars). We will continue to collect relevant supplier data and focus on improvements where it could impact the most e.g. increased share of renewable energy and CO_2 emission reduction targets. It also helps to standardise sustainability measurements in the industry and increase the level of transparency.

Climate data disclosure is required ahead of a sourcing decision in order to enable us to select business partners that share our strategic ambitions and can deliver on our targets. Our roadmap towards 100 per cent renewable energy among tier 1 suppliers by 2025 has been broken down into yearly targets and adapted to the availability of renewable energy in different regions.

Building on the achievement of securing 100 per cent renewable electricity for our Chengdu plant, we launched a corresponding target for suppliers in Chengdu. During the annual Volvo Car Asia Pacific Supplier Convention held in Chengdu in November 2020, representatives of 25 direct procurement suppliers located in Chengdu joined us on stage to demonstrate their commitment to securing 100 cent renewable electricity by 2021. In July 2020, we also hosted a Sustainability Tech Show in Shanghai with representatives from 85 key suppliers displaying more than 100 sustainable product solutions. The collaboration with business partners to inspire development is important both to drive performance and promote change in our industry.

Operational emissions
We will also continue to address our total operational emissions. We are making good progress towards our ambition of having climate neutral manufacturing operations. However, emissions from manufacturing represents a small part of our operational emissions. Hence, we also work to reduce emissions from our offices and business travel, as well as from our logistical operations (which currently represents the largest part of our operational emissions).

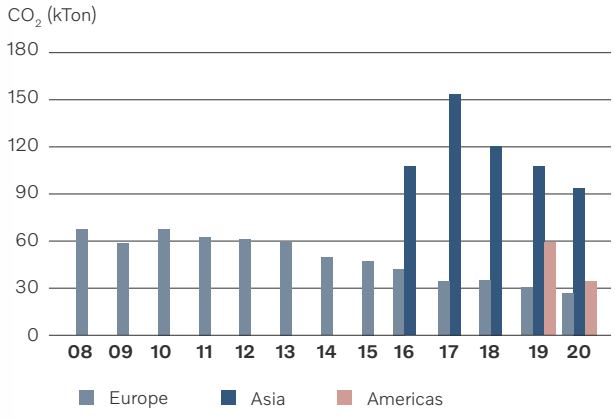
Logistical Operations (Transport)
Between 2018 and 2019, Volvo Cars succeeded in reducing CO_2 emissions from transports by 8.0 per cent per car. During 2020, the journey continued to further cap the CO_2 emissions. However, due to re-balancing of the industrial structure, the CO_2 emissions per produced car increased by 4.0 per cent in 2020 compared to 2019. An important tool to mitigate the increased carbon footprint has been to increase the filling degree of transported goods. In 2020, we achieved a global average of approximately 77 per cent. Also, we continued to actively change transport mode to the most efficient possible, such as rail and sea freight. In the beginning of 2020, a major change in our European transport network was implemented. This change from a point-to-point road network to a truly intermodal concept using rail, sea transports and road transports with trucks running on renewable fuels, has proven its capability of being flexible and stable, even under challenging pandemic conditions. Each week, 5 trains leave the Czech Republic for the Port of Rostock where the trailers are shipped on sea vessels to the Port of Trelleborg. From there, trucks running on sustainable renewable HVO diesel transport the trailers to the plant in Torslanda. The set-up is calculated to cut the CO_2 emissions in half compared to the previous set-up and remove about 3,400 trucks from the roads in central Europe every year. Since the opening in March 2020, our new intermodal V6 has transmitted over 46,000 cars by rail, of which 30,000 intercontinentally. In addition to the environmental benefits of distributing more of the cars by train, this also means they reach their final destination faster. Using various transport modes can reduce the time from factory to final destination by up to 30 per cent. Furthermore, production materials are transported by rail between Ghent and Sweden on a daily basis.

Towards climate neutral manufacturing operations
In our quest to having climate neutral manufacturing operations by 2025, our global plants are, to date, run on 56.0 per cent climate neutral energy (including 84.0 per cent climate neutral electricity). The total CO_2 emissions of Volvo Cars' production sites amounted to 156,700 tonnes in 2020.

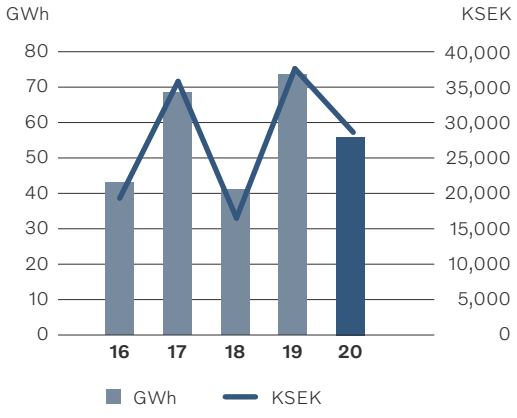
Our climate neutral ambition includes emissions derived from electricity and heating (natural gas, LPG, fuel oil and district heating). Our approach is based on three general activities:
1. Reduce energy usage through efficiency improvements and energy recovery
2. Implement on-site generation/extraction of renewable energy
3. Buy climate neutral energy from energy/utility suppliers

Reduce energy usage through efficiency improvements and energy recovery
Energy efficiency actions in our production plants during 2020 resulted in a yearly energy use reduction of 56 GWh. Volvo Cars has worked systematically with energy saving projects since 2010. During 2020, this has resulted in direct and indirect savings of nearly MSEK 29. Some examples of the most significant energy conservation measures completed in 2020 are shutting down certain sealer ovens and air handling units, as well as optimising hot water circuits, air temperatures and air flows.

NET CO_2 EMISSIONS FROM ENERGY – MANUFACTURING OPERATIONS –



ENERGY EFFICIENCY SAVINGS



Implement on-site generation/extraction of renewable energy
To date, we have installed 15,000 solar panels and three wind turbines at our Ghent plant, which together cover about 13–14 per cent of the plant's electricity demand. Also, the installation of a solar power system at our Charleston plant was completed in 2020. The solar panels generate approximately 12,000 MWh annually, or nearly 20 per cent of the Charleston plant's electricity usage. We continue to actively investigate additional opportunities for on-site generation.

Buy climate neutral energy from energy/utility suppliers
In Europe, we have successfully reduced our CO_2 emissions over the years and have stabilised at a low level. In Asia, we took a big step forward by securing 100 per cent renewable electricity for our Chengdu plant, resulting in approximately a 40 per cent reduction of CO_2 emissions. We continuously engage with the market to find climate neutral energy opportunities.

Sustainability in the retailer network
During 2020 we have developed our guidance when it comes to how we design and build our retailers. We focus on using sustainable materials, using solar panels, heat and cooling recovery when it comes to the ventilation and how we take care of rainwater, we offer solutions to either reuse it or to allow the water to infiltrate locally. Retailers need to be evaluated individually since conditions vary depending on location. We also recommend all our retail partners to change to recyclable energy where possible. This initiative will be continuously supported and developed during 2021.

For EMEA, we aim for 25 per cent CO_2 reduction from 2020 to 2025. The plan is to roll it out globally.

Circular Economy – Be a circular business by 2040

We recognise the benefits of the circular economy in keeping our products and components in use for longer; minimising the need to extract finite resources, efficiently use resources, eliminating wastage and helping reduce our overall carbon emissions. We also acknowledge that the circular economy can help generate substantial savings, as well as create new revenue streams, including through greater material efficiency and component value retention.

We are moving away from the linear economic model and applying circular economic principles in order to meet our climate ambitions, secure future availability of materials, as well as ensure efficient raw material usage and waste management practices. This means that we are transforming the way our products are designed, produced and used, and that we support SDG 12 and SDG 13.

Volvo Cars has the ambition to be a Circular Business by 2040. From 2025, our aim is that our adoption of the circular economy generates annual cost savings of MSEK 1,000 and carbon emission reductions of 2.5 million tonnes (2018 baseline). This will be done by:

- Using 25 per cent recycled and bio-based materials in our cars by 2025, and by using the most sustainable options when selecting materials such as wool and wood
- Increasing resource utilisation and minimising waste, including through reducing production related waste by 20 per cent per produced unit between 2018 and 2025
- Retaining component value, including through reusing, refurbishing and remanufacturing parts
- Developing new business opportunities which optimise the efficient lifecycle of our products and components

Volvo Cars recently became a Member of the Ellen MacArthur Foundation (EMF), the world's leading organisation driving the transition to a circular economy. This will help both drive our internal adoption of the circular economy, as well as promote wider adoption within industry.

Closed loops with suppliers

In 2019, a closed loop system with one of our aluminium suppliers was initiated. The scrap created in the production process at our Olofström plant in Sweden, is returned to the supplier that in turn reuses the material in their production of new aluminium sheets for Volvo Cars. Currently, over 75 per cent of our aluminium sheet metal scrap is returned to the producer. This represents around 10 kg of aluminium weight per car (based on an average of 300 kg of aluminium per car).

We are also investigating a similar set-up for other materials such as steel. Additionally, requirements on recycled materials have been added in the sourcing process for both product related parts as well as packaging.

Recyclability at end-of-life

We design our cars to fulfil the EU End-of-Life Vehicle Directive so that about 95 per cent of the materials can be recovered, either reused or recycled.

Recycled plastics

In 2018, we announced our Recycled Plastics Vision that by 2025, at least 25 per cent of the plastics used in every newly launched Volvo car will be made from recycled material. We work closely with suppliers and the recycling industry, as well as take part in research projects in order to achieve this target and to push for a greater supply of recycled plastics within the automotive industry. We are currently working on an efficient way to measure and follow-up on our progress. To demonstrate the viability of the vision, we revealed a demo car with more than 170 parts made from recycled material. Our vision was commended by UN Environment as an example for other companies to follow. Several components identified in the demo car have been launched in our products in 2020.

Sustainable steel and aluminium

Steel and aluminium represent a significant carbon footprint of the materials in our vehicles. Therefore, we have intensified our work to minimise their negative impacts. Our work includes both increasing the recycled content and decreasing the footprint of the production processes. For aluminium, the use of renewable energy in the aluminium smelting plays a very large role in reducing the carbon footprint. For steel there are more options available to reduce the footprint, like hydrogen gas reduction, carbon capture or using an electric arc furnace with renewable energy. We have an ongoing dialogue with suppliers to understand their roadmaps to reach carbon-neutral metal production.

Post-first life of electric vehicle batteries

Volvo Cars has a three-step strategy (reuse, remanufacture, recycle) for handling electric vehicle batteries after their original use in the cars, i.e. post- first life. The purpose of the strategy is to maximise battery utilisation, minimise environmental impact by enabling circular material flow, and decrease cost. As of today, we have collected around 1,250 batteries that will be used as core material for our remanufacturing and reuse process.

Remanufacturing

Volvo Cars' remanufacturing programme restores replaced parts to their original specifications to realise both environmental and financial savings. A remanufactured part requires up to 85 per cent less raw materials and 80 per cent less energy compared to a new part. In 2020, the programme saved approximately 271 tonnes of steel and 126 tonnes of aluminium. The energy saved corresponds to a carbon dioxide emission reduction of 4,116 tonnes per year, see Sustainability Scorecard page 139 for more details.

Water management

Since 2019, we have increased the scope for water savings to include all manufacturing sites. Our target is to reduce consumption per car by at least 15 per cent between 2018 and 2025. By the end of 2020, we reduced water consumption to 2.7 m^3/car, reaching a 7.0 per cent reduction since 2018. This is due to an increased focus on water consumption, but also due to plant shutdown during the pandemic.

Waste management

We work on reducing waste in all our operations. Our largest waste stream is metal from car production, which amounted to 209,700 tonnes in 2020 and is entirely recycled. Nevertheless, initiatives were launched to reduce the amount of waste by increasing the utilisation degree of metals within the body components plants.

Volvo Cars aims to increase the recycling rate of waste at our production sites and to decrease the amount of waste that is landfilled or incinerated. In 2020, we revised and updated our target to reducing production related waste by 20 per cent per produced car between 2018 and 2025. At the end of 2020, we have achieved a 9.0 per cent reduction since 2018. The reductions are mainly due to increased reuse of sheet metal and packaging material.

Our waste management aims to have new solutions for waste streams with the philosophy 'every single step counts'. In 2020, we achieved a material recycling rate of 94.5 (94.0) per cent and the amount of landfilled waste was 0.7 (1.0) per cent.

Car sharing for a circular economy

Our mobility solution, M, is a testament of how new business models can contribute to our circular economy strategy. As more progressive cities push to reduce emissions, car sharing will be critical in reducing the number of cars in the city. Each shared car can replace up to 8 privately owned cars which helps to free up space as well as achieve substantial resource and emission avoidances.

Ethical and Responsible Business – Be a recognised leader in ethical and responsible business

We aim to be a recognised leader in Ethical and Responsible Business. By acting ethically and responsibly, on both a corporate and individual level, we believe that this will not only enhance our brand appeal, attract investment and the best talent, and avoid reputational damage, but, importantly, help address global environmental and social challenges, including within our industry. Volvo Cars recognises that acting as a responsible company makes business sense and supports our profitability. We will work in partnership with others and aim to be an industry change-maker.

A strong corporate culture that focuses on ethics and leadership, as well as equal opportunities (SDG 5) and decent work for all (SDG 8), is critical towards achieving this, which we intend to do by:

- Setting a new global people standard for our industry
- Putting sustainability on a par with cost and quality in our sourcing decisions
- Engaging in sustainable financing
- Tackling corruption and unethical business practices

Setting a new global people standard for our industry

Our global and diverse workforce is central to our success and our strong culture. Our people are our competitive edge and the focus on being an Employer of Choice continues in order to attract and retain the right people.

A responsible business

Our People Policy ensures that we secure health and safety, that diversity and inclusion are at the top of our agenda, that labour rights are embraced and adhered to, and that we are embodying compliance and ethics.

Our culture creates an environment of constant improvement; we share knowledge with each other, we give and ask for feedback, and we encourage our people to take a personal responsibility for continuous learning and development. With feedback and engagement, we can grow and innovate as a company. Our employees rewarded us with a 75 per cent engagement score, which is above global benchmark.

Our approach to wellbeing and safety

All our operations, employees and contractors are governed by our global standards for health, safety and wellbeing. In 2020, our focus has been on the global pandemic, and we have been determined to have as safe a workplace as possible. We have taken a lot of actions, created guidelines and communicated continuously about the situation.

Despite the ongoing pandemic our work with wellbeing and safety does not stop, and we have continued with risk observations as well as safe behavior. With the Contractor Safety and Safety Training Center we are making big progress to eliminate accidents, with all-time low results. The number of injuries with sick leave, which is measured as Lost Time Case Rate (LTCR), decreased by 23.0 per cent to 0.10 for employees and 0.20 for supervised contractors, see Sustainability Scorecard page 139 for more details.

In 2020, we have focused on workplace experience and wellbeing by optimising space and adapting to new ways of working and new demands. For example, in the production plants, we have rolled out interior guideline pilots by using daylight and environmental improvements. Also, we have addressed food waste and removal of palm oil from all restaurants in Sweden, as well as improved wellness through healthier options, increased vegetarian options and variety of choice.

Diversity and inclusion

We have an open culture and strive to be a truly global and diverse company by promoting inclusiveness and leading by example. We want everyone at Volvo Cars to feel that they can be their authentic self at work. We encourage and welcome different perspectives in order to make room for creativity, innovation and better decision making.

Volvo Cars People Policy outlines the values and expectations that we have for diversity and equal opportunities. Our Global Diversity and Inclusion Catalyst Team with representatives from each function and region, serve as the governing body to ensure continuous improvement.

During the year, our focus has been on preparing the roll-out of our Global Parental Friendly Employer initiative as well as on our 50/50 Gender Neutral Leadership Commitment. The Global Parental Friendly Employer is an initiative where we support all our employees – no matter hourly or monthly, father, mother or same sex parent or adoption with the possibility to spend time with their children. The initiative has been rolled out in Europe and will launch globally during the first quarter of 2021. To deliver on our 50/50 Gender Neutral Leadership Commitment in recruitment and promotion to leadership positions, we have focused our efforts on digital events, such as International Women's Day, our Global Inclusion Month in June and a Women Leader platform for sharing experiences.

As women remain underrepresented in the fields of STEM (Science, Technology, Engineering and Maths), we are committed to taking a proactive approach by engaging in activities and external partnerships to increase interest among youth. When the pandemic hit, we managed to focus our efforts in reaching out to women in STEM by introducing digital events.

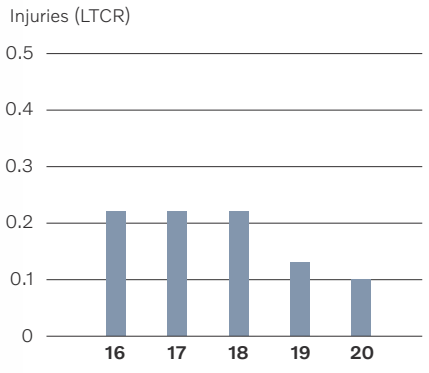
We are dedicated to creating a diverse and multi-cultural Top Management Team that brings international experience and global perspective with varied competencies, backgrounds and cultures, and that is valued in industry-leading, innovative and consumer-focused organisations. By the end of 2020, about 34 per cent of our top 475 managers were non-Swedish and females in leading positions remained stable at 28.3 per cent, see Sustainability Scorecard page 139 for more details.

Labour rights

Volvo Cars People Policy clearly states that all employees have the right to form or join labour organisations of their choice and to bargain collectively. Volvo Cars encourages dialogue with its employees, whether that is through cooperation with the unions, other employee representatives or employees directly. Approximately 79 per cent of our global workforce is covered by collective labour agreements. The social dialogue between Volvo Cars and the unions, where applicable, regarding information and consultation, creates value and contributes to the development of the company. Members of the unions are represented at every board meeting through their elected representatives.

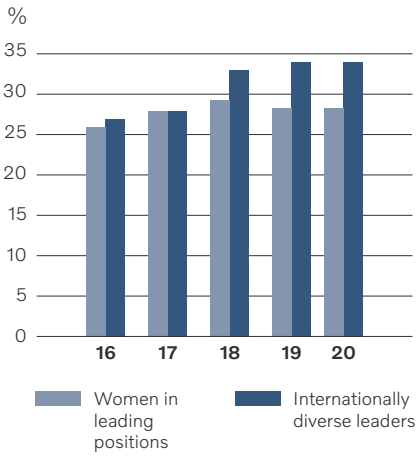
Also, we have zero tolerance towards harassment and discrimination as defined in the Volvo Cars People Policy. Training on Discrimination, Harassment and Bullying takes place throughout the organisation continuously. In 2020, 50 cases of discrimination and harassment were reported globally. All cases were investigated, and corrective and supportive actions were taken in all instances.

INJURIES (LOST TIME CASE RATE)

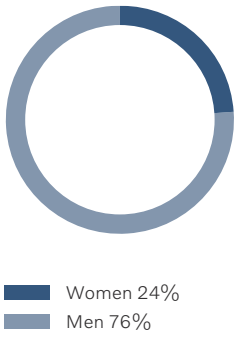


Injuries (LTCR) – Volvo Cars employees

DIVERSITY IN LEADERSHIP POSITIONS



GENDER DISTRIBUTION – ALL EMPLOYEES –



People Policy Assessment
We believe that the wellbeing of people is fundamental in all aspects of life and therefore we commit to providing a sustainable working environment to all employees through our People Policy. The People Policy Assessment project started in 2017 and is in line with the United Nations Guiding Principles on Business and Human Rights. It assesses both potential and actual human rights impact through desktop assessments, interviews conducted with key external and internal stakeholders, on-site verification and assessment of risks, analysis of impacts and creation of action plans. The initial scope of the project covering all our plants has been completed and improvement opportunities and the actions are closely monitored and followed up. Also, the project now focuses on raising awareness and building competence among leaders in the broader APAC region, e.g. through workshops with key internal stakeholders, based on lessons learned through previous assessments.

We are also working to secure that all our employees are compensated fairly using acknowledged principles for living wage which has been incorporated into our Policy.

Making a wider difference
We are working to ensure that our company and our employees contribute to creating a better and more prosperous society, as well as protecting people and our planet. We do this in several ways, including through creating strong partnerships with international, national and local organisations. Many of our people also work to improve the quality of life in the communities in which we operate in order to enhance social mobility and promote diversity. In 2020, Volvo Cars continued its projects aiming at reducing social segregation in its hometown regions and broadening the future talent base for recruitment. The objective is to increase interest among youth and young adults to work in the automotive industry, motivate young people to enter higher education, as well as increase diversity and inclusion within local society. Some examples of activities are:

- Volvo Experience Programme Digitalisation (VEP Digi) – a six-month work experience internship programme open to long-term unemployed people in Sweden
- Mentor programmes (Mitt Liv and Öppet Hus) – social enterprises that support recent immigrants to Sweden by helping them integrate into the local job market
- Cooperation with targeted secondary schools – Volvo Cars' employee role models have inspired and motivated students through school visits
- Activities increasing the interest among youth for the STEM area (Science, Technology, Engineering and Maths) – examples include Introduce a Girl to Engineering Day, Internships, summer jobs and summer jobs for persons with function variations

Putting sustainability on a par with cost and quality in our sourcing decisions
As a premium global mobility provider, we have an opportunity to have a substantial positive impact on the planet in how we select, collaborate with, and steer our supply chain towards our sustainability strategy.

Sustainability requirements for suppliers
Sustainability requirements are an integrated part of our contractual agreements with suppliers. The Volvo Cars Code of Conduct for Business Partners states our basic expectations on their sustainability performance, such as legal compliance, human rights, working conditions, caring for the environment and business integrity. Additionally, all suppliers are screened in a Compliance Due Diligence prior to entering into a contractual arrangement and on a continuous basis. This is to identify and mitigate legal risks in the fields of Corruption and Trade Sanctions, Money Laundering and Violations of Human Rights. Suppliers must meet the requirements and implement systematic management of all areas, including ensuring that employees and sub-suppliers respect the principles. Our contractual agreements also include numerous other sustainability requirements, such as having a certified management system for quality and environment (ISO9001, IATF16949 and ISO14001), meeting recycled content targets, reporting material content to the automotive International Material Data System (IMDS) and to be proactive in addressing issues and driving improvements.

Supply chain sustainability risk awareness
To ensure awareness of potential risks and prioritise suppliers based on sustainability assessments, we analyse them according to the Risk Assessment Tool developed by the Responsible Business Alliance – an industry coalition dedicated to corporate social responsibility in global supply chains.

In 2020, 4,599 supplier sites were included in the risk scoring which corresponds to 100 per cent of active tier 1 supplier and directed sub-tier supplier sites that deliver parts, components and services to us.

Supplier sustainability assessments
We are committed to ensuring that the people who make our products and components, or provide services, are treated with dignity and respect. Our alignment with suppliers on these principles is essential. Volvo Cars applies sustainability assessments to verify compliance with requirements, but also to identify improvement areas which could lead to increased sustainable business practices throughout the supply chain.

Sustainability Self-Assessment Questionnaire
The Self-Assessment Questionnaire (SAQ) on CSR/Sustainability has been developed in conjunction with the automotive industry as part of a collaborative initiative called Drive Sustainability. The questionnaire covers sustainability areas such as business ethics, human rights, environmental management and responsible sourcing. All answers are validated by an external assessor and the supplier can be provided with recommendations on how to improve. We require all direct material suppliers to complete the SAQ and it is a mandatory element in the sourcing process of all suppliers providing production material since 2019. At the end of 2020, 663 supplier sites (89.0 per cent) had submitted a completed SAQ.

Supplier sustainability audits

The purpose of Volvo Cars Sustainability Audit Program is to make comprehensive on-site evaluations of suppliers' sustainability performance that is based on the Code of Conduct for Business Partners. Most audits are conducted by an accredited third-party auditor, but we also have qualified in-house capacity to perform supplier audits. During 2020, we conducted 25 supplier audits prioritised from a list of suppliers receiving a high-risk score or for other commercial reasons. Since 2015, we have performed 153 sustainability audits amongst our tier 1 and directed sub-tier suppliers. As of 2020, we have addressed approximately 83 per cent of the improvement findings identified in our audit program. For the remaining findings, we continue to work for improvements in close collaboration with our suppliers.

Supply of minerals and metals

Volvo Cars is committed to ensure that we only use metals and minerals whose extraction, processing, trade and transportation have not directly or indirectly resulted in human rights abuses, unethical business conduct, severe environmental harm or provided funding to conflicts. As part of this commitment, we fully support the OECD Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas and strive to continuously improve our responsible sourcing practices. Our Procurement Position on Metal and Mineral Sourcing and Code of Conduct for Business Partners are examples of key policy documents expressing Volvo Cars' expectations and requirements towards suppliers.

To secure full transparency and traceability of 3TG materials (Tin, Tantalum, Tungsten and Gold), we conduct annual conflict mineral supply chain investigations. The data collected in this process is used to identify, assess and mitigate risks which in turn improves supply chain performance from a responsible sourcing perspective. We request 3TG suppliers to declare their due diligence measures and disclose the smelters used in their supply chain in a company level Conflict Minerals Reporting Template (CMRT) provided by the Responsible Minerals Initiative (RMI). As a member of the RMI, we also gain access to additional data on upstream actors' supply chain responsibility as well as tools to execute sourcing decisions that improve regulatory compliance and support responsible sourcing from conflict-affected and high-risk areas. By tracing the minerals in our supply chain and only buying material from smelters and refiners validated to be conformant with the Responsible Minerals Assurance Process (RMAP) – RMI's third-party verification of smelter and refiner management systems and sourcing practices – we can secure responsible sourcing in line with global standards. The aggregated information creates the foundation of our due diligence process for conflict minerals where we identify potential discrepancies, select suppliers for independent OECD-aligned audits and follow-up on risk mitigation action plans to address adverse impacts.

Volvo Cars' target is to have 100 per cent RMI approved 3TG smelters by the end of 2020. In 2017, we aligned with our suppliers and started to investigate smelter's conformance level with RMI requirements. 133 suppliers participated in this year's conflict mineral supply chain investigation. After evaluating the reported data, we conclude that the current level of conformant smelters in the supply chain is 71.0 per cent. Volvo Cars may not have achieved the ambition to become 'conflict free' yet, but we are strengthened in our conviction that we must continue to work closely together with suppliers and sub-suppliers to prevent human rights abuses and improve lifes upstream in the value chain. We recognise that due diligence is an ongoing, proactive and reactive process. Information, due diligence practices and risk monitoring systems will progressively be enhanced over time as a result of constructive engagement with suppliers and other stakeholders.

Volvo Cars has signed long-term agreements with leading battery makers CATL and LG Chem to ensure the global supply of lithium-ion batteries. Moreover, Volvo Cars is the first carmaker to implement global traceability of cobalt used in our batteries by applying blockchain technology. Technology firms Circulor and Oracle operate the blockchain technology across CATL's and LG Chem's supply chain. Circulor's blockchain technology is today used to achieve 100 per cent traceability of cobalt used in the XC40 Recharge. In 2020, Volvo Cars invested in Circulor through the Volvo Cars Tech Fund. The investment will allow both companies to expand their focus beyond cobalt, for example by looking at increasing traceability of other critical raw materials in batteries.

During the year, blockchain traceability has been expanded to include mica insulation sheets and we have decided to increase the traceability of all critical raw materials in batteries, as well as include CO_2 consumption for the battery production.

To support the continuous improvement of working conditions on artisanal and small-scale mining (ASM) sites, Volvo Cars collaborates with Better Mining. This ASM assurance and impact programme, led by RCS Global, translates digital sustainability and due diligence data into direct improvements on and around the sites. Trained monitoring agents are permanently deployed to mining sites, where they record information on risks and incidents. The information collected is verified by a team of experts who ensure completeness and follow up with agents on any red flags or data anomalies. Monthly corrective action plans (CAP) are issued through workshops with local stakeholders and implementation is overseen by the agents. Volvo Cars receives communication on CAP implementation progress every quarter. The monitoring programme, which at its peak this year included 16 sites, has so far been focused on Cobalt, Tin, Tantalum and Tungsten in the Democratic Republic of the Congo (DRC) and Rwanda. Volvo Cars engagement in Better Mining allows for upstream risk mitigation, greater market access for responsibly ASM-produced minerals as well as a tangible contribution to positive and quantifiable socio-economic impacts in mining communities.

Additionally, in 2020 Volvo Cars initiated work to identify raw materials that are not only of pivotal importance from a production perspective but are also associated with negative environmental, social and governance (ESG) impacts. These high-risk materials require enhanced due diligence and increased supply chain transparency and traceability. We have

also started to review some of our responsible sourcing strategies, processes and management systems. Together with the ongoing work to define which raw materials are critical to Volvo Cars, this will ensure that we make the right prioritisations and use available resources in the best way possible.

Sustainability in VQE
Since 2012, Volvo Cars has used the Volvo Cars Quality Excellence process (VQE) to monitor suppliers' performance in relation to our requirements and expectations, such as delivery performance and quality. An award is given to acknowledge suppliers that are successful in all evaluated sets of quality, manufacturing and delivery performance disciplines. Since 2018, sustainability is a new separate element in the VQE evaluation, showing that high sustainability performance is an absolute criteria to become an awarded supplier. The VQE sustainability element is based on the SAQ, with a Volvo Cars unique rating.

Engaging in sustainable financing
In 2020, we successfully issued our first Green Bond of MEUR 500. The bond attracted considerable investor interest. It established us as a serious player on the rapidly growing green bond market. See the Green Financing Report on page 148 for more information.

Tackling corruption and unethical business practices
Our Code – How We Act is our code of conduct and is the starting point for how Volvo Cars operates and expresses its strong commitment to responsible and ethical business. To support Our Code and to address the risks of corruption and unethical business practices, Volvo Cars has established a Compliance and Ethics Programme. Responsible and ethical business is obviously broader than our commitment to tackling anti-corruption. Therefore the Compliance and Ethics Programme, which is managed by the Compliance and Ethics Office, focuses not only on anti-corruption but also on the implementation of initiatives and controls that aim to prevent, detect and mitigate legal and ethical risks in the areas of anti-trust, data protection and trade sanctions and export control as further outlined in the Corporate Governance Report (see page 55). Another important part of our programme is the Code of Conduct for Business Partners. These two documents set out the principles which employees and business partners are expected to abide to when working at, or doing business with, Volvo Cars. Both are based on international conventions and standards.

To create awareness and ensure that Volvo Cars, as an organisation, does what it is committed to, it continuously provide a broad range of training on ethical business practices for all employees, as well as specific training for managers focusing on behavior and role modelling. In 2020, the planned training initiatives were partly hampered by the Covid-19 pandemic, but Volvo Cars' zero tolerance against corruption and its firm commitment to conduct business in a responsible manner remain as strong as ever. Despite the pandemic:

- The focus on our Responsible Business Discussions and Ethical Training for Leaders continued in 2020, and will increase even further in 2021.
- The training on Our code – How We Act for production employees was completed at our Charleston plant, but had to be postponed in Ghent, China and Malaysia. All production employees in Sweden received this training in 2019.
- The yearly mandatory e-learning launched at the end of 2020 focused on the main principles that apply when handling data as Data Protection is another important part of our Compliance and Ethics Programme.
- Leaders are trained, via the leadership programmes, to develop their ethical behaviours and culture of ethics. More than 1,600 leaders have been trained since the launch of the leadership programmes and we will continue to focus on these trainings in 2021.

In 2020, 126 suspected violations of Our Code and our policies were reported to the Compliance and Ethics Office. Following investigation, 25 of these reports were substantiated, and disciplinary actions were taken in 22 cases, including employee dismissals and termination of supplier contracts. Regular compliance risk assessments allow us to identify and understand the main risk fields to which we are exposed and the high-risk areas. These assessments also serve as the basis for identifying the appropriate improvement and mitigation measures and to ensure that our Programme is customised to address the areas where our main risks are to be found. From a continuous improvement point of view, our main focus in 2020 was our Data Protection compliance efforts.

Sustainability ratings
Volvo Cars acknowledges that external third-party validation of our sustainability performance is essential to gaining credibility and gives both internal and external stakeholders reassurance that our sustainability strategy and our ambitions support global goals, such as the UN SDGs and the Paris Agreement.

We actively engage with S&P Global SAM's Corporate Sustainability Assessment (CSA) and achieved a score of 71 in this year's assessment, giving us a percentile ranking of 87.

Also, we report to EcoVadis where we received a Platinum rating for 2020. This puts us in the top 1 percent in our industry.

Sustainability Scorecard

ECONOMIC DIMENSION

	2020	2019	2018	2017	2016
Retail sales (vehicles)	661,713	705,452	642,253	571,577	534,332
Manufactured vehicles[1]	658,525	705,036	667,754	602,164	533,039
Revenue (MSEK)	262,833	274,117	252,653	208,646	180,902

1) Factory completed vehicles.

ENVIRONMENTAL DIMENSION

Carbon Footprint[1] (t CO_2e)		**2020**	2019	2018
Total emissions		34,282,000	38,656,000	37,055,000
Total emissions per vehicle[2]		52.1 (–6.2%)[3]	54.8 (–1.2%)[3]	55.5
Scope 1 (Direct GHG emissions)	Company facilities	75,000	85,000	81,000
	Company vehicles	9,000	12,000	12,000
	Total	**84,000**	**97,000**	**93,000**
Scope 2 (Indirect GHG emissions)	Purchased electricity, steam, heating and cooling for own use	101,000	132,000	96,000
	Total	**101,000**	**132,000**	**96,000**
Scope 3 (Upstream indirect GHG emissions)	Purchased goods and services	11,370,000	11,640,000	10,722,000
	Transportation and distribution	639,000	680,000	596,000
	Waste generated in operations	7,000	7,000	7,000
	Business travel	15,000	75,000	100,000
	Employee commuting	40,000	70,000	70,000
	Leased assets upstream	19,000	14,000	0
	Total	**12,090,000**	**12,486,000**	**11,495,000**
Scope 3 (Downstream indirect GHG emissions)	Transportation and distribution	291,000	282,000	346,000
	Use of sold products	20,477,000	24,339,000	23,787,000
	Leased assets downstream	4,000	4,000	4,000
	End of life treatment of sold products	397,000	418,000	384,000
	Retailers	838,000	898,000	850,000
	Total	**22,007,000**	**25,876,000**	**25,317,000**
Tailpipe emissions per car[2]		31.1 (–12.7%)[3]	34.5 (–3.1%)[3]	35.6
Supply chain emissions per car[2]		17.3 (7.5%)[3]	16.5 (2.8%)[3]	16.1
Operations emissions per car[2]		3.7 (–3.0%)[3]	3.8 (–0.4%)[3]	3.8

1) Emissions are calculated based on the guidance of the Green House Gas protocol including emissions within our financial control. The following categories have been excluded; capital goods, Fuel and energy related activities, Processing of sold products and investments. Due to an updated methodology as well as new input data from an external service provider, the figures for 2018 and 2019 are adjusted compared to prior communication to ensure accuracy, completeness and comparability.
Company facilities: GHG emissions from our global manufacturing plants include the energy used, multiplied with an emission factor for each different energy type. GHG emissions from our global offices are reported based on purchased energy and generic emission factors. Where emissions in offices are missing, accessible data is extrapolated to represent global emissions. Emissions are calculated using a market-based methodology.
Company vehicles: GHG emissions from company vehicles are related to the fuel consumed by our test cars, estimated using external emission factors from DEFRA and global procured volume of fuels for test cars. Emissions related to the production and end of life treatment of test cars are reported in Scope 3.
Purchased electricity, steam, heating and cooling for own use: Indirect GHG emissions for manufacturing facilities are calculated based on purchased energy and supplier specific emission factors, where such are available. Emissions from global offices as well as Volvo Cars owned warehouses are reported based on purchased energy and generic emission factors. In cases where a location-based approach is taken, the energy mix per location is used. Where emissions from energy in offices is missing, accessible data is extrapolated to represent global emissions. Emissions are calculated using a market-based methodology. If calculated using a location-based methodology, total emissions for purchased electricity, steam, heating and cooling for own use would be 228,000 tons CO_2.
Purchased goods and services: Emissions from purchased materials are derived from material compositions of representative vehicles and CO_2e emission factors from Sphera's LCA modelling software Gabi (including the greenhouse gases CO_2, CH4, N20, HFC, PFC and SF6, among others), multiplied with the global manufactured volume. GHG emissions caused by materials and services not directly relating to the car are calculated on a spend-based approach using an extended environmental input-output life cycle assessment model developed by CIRAIG, deemed to have enough accuracy for selected emissions. Emissions from parts packaging for spare parts not captured in the spend-based model is calculated based on kg materials and relevant emissions factors.
Transportation and distribution: GHG emissions from logistics is calculated by including inbound, outbound and parts supply logistics transports managed and paid for by Volvo Cars, as well as emission factors derived from NTM. Radiative forcing is added for air freight.
Waste generated in operations: GHG emissions from waste generated in our operations are calculated by categorizing waste volumes into types and treatment methods, as well as using external generic emissions factors from DEFRA.

Business travel: GHG emissions from air travel are calculated by using the flight distance reported by our travel agency, as well as emissions factors from NTM. Radiative forcing factor for domestic flights of 1.0; for both continental and intercontinental flights, radiative forcing factor of 2.0 is used. Emissions caused by other modes of business travel are calculated on a spend-based approach, using relevant emissions factors from public sources.
Employee commuting: GHG emissions from employee commuting are based on global commuting distances and patterns for the reported years, based on a simulation conducted with 31,000 employees with travel choice taken into account for the different regions.
Leased assets upstream: Emissions from leased assets upstream includes emissions from the manufacturing plant in Luqiao, China, owned by Geely. Energy used is multiplied with an emission factor per energy type. Volvo Cars' share of Luqiao emissions is calculated based on the total number of produced Volvo cars in Luqiao compared to the total number of cars produced in Luqiao. Emissions from waste generated by the production of Volvo cars is added by categorizing waste volumes into types and treatment methods, as well as using external generic emissions factors from DEFRA.
Use of sold products: Average GHG emissions from use of sold products are based on official data Worldwide Harmonized Light Vehicle Test Procedure (WLTP) of Volvo sold cars in Europe (EU28), applied on car types and the global number of manufactured cars. Volvo Cars product offer is global and EU data is a fair estimate of similar products worldwide. Total GHG emissions from use of produced products are then calculated by applying the CO_2e emissions per km, mentioned above, on our global manufactured volume and an average mileage of 200,000 km per car. The accuracy of the calculation method can be influenced by real world factors not covered by the official data such as driving behavior and different usage of auxiliary loads. Volvo Cars ambition is to increase knowledge and accuracy over time and to be as transparent as possible regarding our GHG emissions from the use of our products. Many markets have car variants that are not tested on WLTP. These variants have previous years been assigned a fuel consumption based on a manually selected similar WLTP tested variant. From this year this process have instead been rule-based, automated and applied on all years in this report to ensure consistency.
End of life treatment of sold products: GHG emissions caused by the end of life treatment of sold products are estimated based on emission factors from the Battery electric XC40 Recharge carbon footprint study and our global manufactured volume.
Leased assets downstream: Emissions from leased assets downstream is calculated by summarizing the Volvo Cars share of emissions reported by leased spare parts warehouses.
Retailers: GHG emissions caused by retailers are based on financial data of EMEA Volvo Cars retailers and a detailed analysis of seven selected retail sites and their CO_2 per sold car. This is multiplied with total number of sold cars globally.

2) Based on manufactured vehicles.
3) Percentage change versus 2018 baseline year. Note that figures may differ due to rounding.

Manufacturing Operations[1)2)]

Energy use (MWh)		**2020**	2019	2018	2017	2016
Total energy use (direct and indirect)[3)]	Europe	647,000	726,500	778,000	770,000	766,000
	Asia	332,000	358,000	400,000	422,000	317,000
	Americas	92,000	131,800	—	—	—
	Total	**1,071,000**	**1,216,300**	**1,178,000**	**1,192,000**	**1,083,000**
Energy use per manufactured vehicle (MWh/vehicle)	Europe	1.5	1.5	1.6	1.6	1.7
	Asia	2.0	2.2	2.3	3.2	4.1
	Americas	4.1	3.8	—	—	—
	Total	**1.7**	**1.8**	**1.8**	**2.0**	**2.0**

Water use, Operations (m^3)[4)]		**2020**	2019	2018	2017	2016
Total water use	Europe	655,000	705,000	751,000	756,000	748,000
	Asia	851,000	1,047,000	1,190,000	1,133,000	789,000
	Americas	175,000	312,000	—	—	—
	Total	**1,691,000**	**2,064,000**	**1,941,000**	**1,889,000**	**1,537,000**
Total water use per manufactured vehicle (m^3/vehicle)	Europe	1.5	1.5	1.5	1.6	1.6
	Asia	5.0	6.3	6.9	8.7	10.2
	Americas	7.9	9.0	—	—	—
	Total	**2.7**	**3.0**	**2.9**	**3.1**	**2.9**

Waste, Operations (tonnes)		**2020**	2019	2018	2017	2016
Hazardous waste	Europe	13,800	17,500	17,900	13,300	10,500
	Asia	1,600	2,100	2,700	2,300	1,500
	Americas	15	20	—	—	—
	Total	**15,415**	**19,620**	**20,600**	**15,600**	**12,000**
Metal[5)]	Europe	135,000	153,100	166,000	163,000	165,000
	Asia	68,000	67,400	72,000	58,000	37,000
	Americas	6,700	11,400	—	—	—
	Total	**209,700**	**231,900**	**238,000**	**221,000**	**202,000**

Non-hazardous waste (including metal)	Europe	220,300	232,000	235,000	228,000	212,000
	Asia	54,600	61,500	68,500	52,500	27,700
	Americas	5,500	9,300	—	—	—
	Total	**280,400**	**302,800**	**303,500**	**280,500**	**239,700**
Total waste	Europe	234,100	249,500	252,900	241,300	222,500
	Asia	56,200	63,600	71,200	54,800	29,200
	Americas	5,515	9,320	—	—	—
	Total	**295,815**	**322,420**	**324,100**	**296,100**	**251,700**
Total waste per manufactured vehicle (kg/vehicle)	Europe	531	514	515	511	489
	Asia	332	386	412	421	376
	Americas	250	264	—	—	—
	Total	**468**	**471**	**488**	**492**	**472**

1) Data for the year 2019 is based on 1 dec 2018 to 30 Nov 2019, except the data for Americas that is based on calender year 2019.
2) The Volvo Cars facilities included in the data for Europe are Volvo Cars Torslanda Plant (Gothenburg, Sweden), Volvo Cars Ghent Plant (Ghent, Belgium), Volvo Cars Skövde – Engines (Skövde, Sweden), and Volvo Cars Olofström – Body Components (Olofström, Sweden). The Volvo Cars facilities included in the data for US is Volvo Cars Charleston Plant (Charleston, South Carolina, USA), first reporting year 2019. Data for Volvo Cars Floby (Floby, Sweden) is included up to 2015. The Volvo Cars facilities included in APAC are Volvo Cars Malaysia - CKD (Kuala Lumpur, Malaysia), Volvo Cars Chengdu Plant (Chengdu, China), Volvo Cars Daqing Plant (Daqing, China), and Volvo Cars Zhangjiakou - Engines (Zhangjiakou, China).
3) Direct = energy produced on site for own consumption. Indirect = purchased electricity and heating.
4) 2019 was the first year Volvo Cars started reporting figures for Americas. The figures exclude water used for cooling.
5) Metal scrap from Volvo Cars Skövde – Engines (Skövde, Sweden), and Volvo Cars Olofström – Body Components (Olofström, Sweden) and Volvo Cars Zhangjiakou - Engines (Zhangjiakou, China) is allocated on the car factories in Europe, APAC resp. US according to production since they deliver to all car plants. The facilities Volvo Cars Chengdu Plant (Chengdu, China) and Volvo Cars Daqing Plant (Daqing, China) have stamping operation which means that they get more metal scrap than an ordinary car factory.

Emissions, Other		**2020**	2019	2018	2017	2016
CO_2 emissions of products – EU fleet average (CO_2 g/km)	NEDC	111	132	133	125	121
	WLTP	130	157	—	—	—
Electrified vehicles sold[1] – accumulated figures		265,091	149,655	103,722	68,936	46,129
Electrified vehicles sold[1] – percentage of sales		17%	7%	6%	4%	4%
Fully electric vehicles (BEVs) sold – percentage of sales		0.7%	—	—	—	—
SBTi target[2] follow-up – Scope 1 and 2 (vs 2019 baseline)		–19.2%	Baseline	—	—	—
SBTi target[3] follow-up – Scope 3 Use of sold products (vs 2019 baseline)		–5.2%	Baseline	—	—	—

1) Electrified vehicles is defined as plug-in hybrids and fully electric vehicles.
2) Volvo Car Group commits to reduce absolute scope 1 and 2 GHG emissions 60% by 2030 from a 2019 base year.
3) Volvo Car Group commits to reduce scope 3 GHG emissions from use of sold products 52% per vehicle kilometer by 2030 from a 2019 base year (this includes Well-to-Tank emissions).

						T8 Twin Engine		BEV
Materials		V60	XC60	XC90	V90	S60	S90L	XC40
Materials breakdown by car model (kg)	Steel and iron	878	905	1,090	875	1,087	1,136	934
	Aluminium	236	266	304	255	295	323	404
	Copper	29	30	34	32	51	59	71
	Magnesium	8	11	10	7	7	10	4
	Other metals	29	28	30	30	26	34	28
	Thermoplastics	232	240	279	239	229	271	246
	Elastomers	59	91	98	75	74	84	73
	Other polymers	64	75	81	89	96	116	90
	Glass and ceramics	55	56	53	59	53	55	49
	Fluids	70	66	89	76	81	82	26
	Others	22	13	16	28	49	53	247
	Grand Total	**1,682**	**1,781**	**2,083**	**1,766**	**2,047**	**2,226**	**2,172**

Remanufacturing	2020	2019	2018	2017	2016
Aluminium saved due to remanufacturing (kg)	126,181	143,798	216,472	264,507	292,569
Steel saved due to remanufacturing (kg)	270,606	340,748	424,498	541,548	602,174
CO_2 saved from reuse of aluminium and steel (kg)[1]	4,116,399	3,321,439	4,761,228	5,879,451	6,505,476
Number of remanufactured parts	39,828	49,408	67,276	88,590	90,828

1) The main reason for the increased CO_2 savings is due to changes in the CO_2e emission factors from Sphera's LCA modelling software Gabi.

PEOPLE DIMENSION

Total workforce by employees and supervised workers as per December 31, 2020	Employees	Supervised workers (consultants)	Total
Global Total (FTE)	40,131	3,332	43,463

Total number of employees by employment contract and gender as per December 31, 2020[1]

	Women	Men
Permanent contract	24%	76%
Temporary contract	37%	63%
Total	**24%**	**76%**

1) The main employment form within Volvo Cars is permanent employment, but depending on the need and duration of assignment temporary solutions will be used such as consultants, agency and temporary employment contracts. Key positions should always be employed on a permanent basis. Depending on national labour regulations and market situation the approach may vary in Volvo Cars' different locations.

Breakdown of permanent contract employees by gender and age group as per December 31, 2020

	Board Members[1]		Executive Management Team		All other permanent contract employees[2]	
	Women	Men	Women	Men	Women	Men
<25	—	—	—	—	23%	77%
25–29	—	—	—	—	25%	75%
30–34	—	—	—	—	25%	75%
35–39	—	—	—	—	25%	75%
40–44	—	—	—	—	28%	72%
45–49	—	—	10%	20%	23%	77%
50–54	—	20%	10%	20%	23%	77%
55–59	—	20%	10%	10%	20%	80%
60–65	20%	30%	—	10%	16%	84%
>65	10%	—	—	10%	11%	89%
Total	**30%**	**70%**	**30%**	**70%**	**24%**	**76%**

1) Only appointed Board Members are included in these figures. In addition to these, there are 3 representatives from the unions on the Board of Directors. However, Volvo Cars does not have any influence of their appointment.
2) Breakdown by gender for the category "All other permanent contract employees" is reported within each age group and as a total for all age groups.

Diversity Indicators	2020	2019	2018	2017	2016
Women in leading positions[1]	28.3%[2]	28.3%[2] (29.1%)	29.3%	28.0%	26.2%
Internationally diverse leaders	34.0%	34.0%	33.0%	28.0%	27.0%
50/50 in external recruitment and internal promotion	29.4%	—	—	—	—

1) The figures cover Sweden, Belgium and China.
2) This figure covers a broadened scope to now also include the USA and EMEA.

Accidents and sick leave	2020	2019	2018	2017	2016
Injury rate (LTCR)[1] – employees	0.10	0.13	0.24	0.19	0.22
Injury rate (LTCR)[1] – supervised contractors	0.20	0.11	0.47	—	—
Fatalities[2]	0	1	0	0	0
Sick leave – employees[3]	4.3%	4.2%	4.3%	4.5%	4.8%

1) LTCR is defined as the number of work and occupational accidents reported with at least one day sick leave, divided by hours worked and multiplied by 200,000. Follow-up of LTCR for supervised contractors was initiated in 2018. Supervised contractors include consultants and agencies working under our supervision.
2) Includes all employees, supervised contractors and independent contractors at our sites. independent contractors are defined as contractors involved in the construction/reconstruction of Volvo cars' factories. injuries and fatalities among contractors are only reported for projects in which Volvo cars is the developer. 1 non-employee fatality occurred in 2019.
3) Figures for employees in Sweden only.

GRI Index

This report has been prepared in accordance with the GRI Standards: core option. In addition, Volvo Cars' sustainability risks are described in the Management Report under Enterprise Risk Management pages 52–54, as well as in the The World Around Us and Our Strategic Framework chapters pages 14–25. The publication year of all GRI standards used for this report is 2016, unless otherwise stated.

GRI 101: Foundation 2016 (does not include disclosures)
GRI 102: General Disclosures 2016 (core)

Number of disclosure	Disclosure	Comments/Omissions	Page number(s)
Organisational profile			
102-1	Name of the organisation		Front page, all pages
102-2	Activities, brands, products and services		2–3, 10–13, 47–51
102-3	Location of headquarters		39
102-4	Location of operations		39
102-5	Ownership and legal form		47
102-6	Markets served		39
102-7	Scale of the organisation		5, 39, 48, 51, 61–66, 73
102-8	Information on employees and other workers	Information regarding employment type (full-time, part-time) is not disclosed as data is not available on a global basis.	73, 142
102-9	Supply chain		136–138
102-10	Significant changes to the organisation and its supply chain		58
102-11	Precautionary principle or approach		124
102-12	External initiatives		124, 136
102-13	Membership of associations		124, 130, 133, 137
Strategy			
102-14	Statement from senior decision maker		6-7
Ethics and integrity			
102-16	Values, principles, standards and norms of behaviour		23–25, 30-31, 57, 134–136
Governance			
102-18	Governance structure		55-59, 124–125
Stakeholder engagement			
102-40	List of stakeholder groups	Active stakeholder engagement is a vital part of Volvo Cars' daily operations and sustainability management. The prioritised stakeholders in relation to specific strategic focus areas and processes, as well as the outputs of our engagement with these stakeholders, are described throughout the report.	28–29, 126
102-41	Collective bargaining agreements		135
102-42	Identifying and selecting stakeholders		125–126
102-43	Approach to stakeholder engagement		28–29, 125
102-44	Key topics and concerns raised		28–29, 126–128
Reporting practice			
102-45	Entities included in the consolidated financial statements		67, 114–115
102-46	Defining report content and topic boundaries		125–127
102-47	List of material topics	Also see list of material topics in GRI Index.	126–128
102-48	Restatements of information	Any restatements of information have been included in the footnotes of the Sustainability Scorecard.	139–143
102-49	Changes in reporting	GRI 305-7 Nitrogen Oxides (NOx), Sulphur Oxides (SOx) and other significant air emissions has been removed from the sustainability part as the VOC emissions have been reduced to a level that is not significant and therefore no longer material.	125
102-50	Reporting period		125
102-51	Date of most recent report		125
102-52	Reporting cycle		125
102-53	Contact point for questions regarding the report		151
102-54	Claims of reporting in accordance with the GRI Standards		58
102-56	External assurance		147

MATERIAL TOPICS

Number of disclosure	Disclosure	Comments/Omissions	Page number(s)
Anti-corruption			
103-1 – 103-3	Management approach		57, 138
205-3	Confirmed incidents of corruption and actions taken	Possible corruption incidents are included in the reported Code of Conduct violations.	138
Materials			
103-1 – 103-3	Management approach		133
301-2	Recycled input materials used	We only report on remanufacturing as other data is currently not available.	141–142
Energy			
103-1 – 103-3	Management approach		129–132
302-1	Energy consumption within the organisation		140
302-3	Energy intensity		140
Emissions			
103-1 – 103-3	Management approach		129–132
305-1	Direct (Scope 1) GHG emissions		139
305-2	Energy indirect (Scope 2) GHG emissions		139
305-3	Other indirect (Scope 3) GHG emissions		139–140
305-4	GHG emissions intensity		139–140
Own disclosure/KPI	Electrified vehicle sales		141
Own disclosure/KPI	EU fleet average		141
Waste (2020)			
103-1 – 103-3	Management approach		133–134
306-1 – 306-2	Management approach (topic specific)		133–134
306-3	Waste generated		140–141
Occupational health and safety (2018)			
103-1 – 103-3	Management approach		134–137
403-1 – 403-7	Management approach (topic specific)		134–137
403-9	Work-related injuries	[1] Figures are presented on an aggregated level for all work-related injuries. Data not available for high-consequence work-related injuries. [2] Data not available for main type of injuries.	134–137, 143
Diversity and equal opportunity			
103-1 – 103-3	Management approach		134–135
405-1	Diversity of governance bodies and employees		142
Supplier social assessment and supplier environmental assessment (Responsible Sourcing)			
103-1 – 103-3	Management approach		136–138
308-1	New suppliers that were screened using environmental criteria		136–137
414-1	New suppliers that were screened using social criteria		136–137

TCFD Index

For 2020, we have integrated the recommendations from the Task force on Climate-related Financial Disclosures (TCFD) into the annual report. The table below includes the TCFD recommendations and references to where to find the information in this report.

Key elements of TCFD	TCFD disclosure	Page number(s)
Governance		
Disclose the organisation's governance around climate-related risks and opportunities.	a) Describe the Board's oversight of climate-related risks and opportunities.	52-54 124-128
	b) Describe the Management's role in assessing and managing climate-related risks and opportunities.	52-54 124-128
Strategy		
Disclosure of actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning where such information is material.	a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium and long-term.	52-54 124-128
	b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning.	24 52-54 124-128
	c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	124-128
Risk management system		
Disclose how the organisation identifies, assesses and manages climate-related risks.	a) Describe the organisation's processes for identifying and assessing climate-related risks.	52-54
	b) Describe the organisation's processes for managing climate-related risks.	52-54
	c) Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organisation's overall risk management.	52-54
Metrics and targets		
Disclose the metrics and targets used to assess and manage climate-related risks and opportunities in line with its strategy where such information is material.	a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.	124-128
	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	139-140
	c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.	124-128

Auditor's Limited Assurance Report on Volvo Cars' Sustainability Report and statement regarding the Statutory Sustainability Report

To Volvo Car AB (publ.),
corporate identity number 556810–8988

Introduction
We have been engaged by the Board of Directors of of Volvo Car AB (publ.) ("Volvo Cars") to undertake a limited assurance engagement of the Volvo Cars Sustainability Report for the year 2020. The Company has defined the scope of the Sustainability Report and the Statutory Sustainability Report on page 125.

Responsibilities of the Board of Directors and the Executive Management
The Board of Directors and the Executive Management are responsible for the preparation of the Sustainability Report including the Statutory Sustainability Report in accordance with the applicable criteria and the Annual Accounts Act respectively. The criteria are defined on page 125 in the Sustainability Report, and are part of the Sustainability Reporting Guidelines published by GRI (Global Reporting Initiative), which are applicable to the Sustainability Report, as well as the accounting and calculation principles that the Company has developed. This responsibility also includes the internal control relevant to the preparation of a Sustainability Report that is free from material misstatements, whether due to fraud or error.

Responsibilities of the auditor
Our responsibility is to express a conclusion on the Sustainability Report based on the limited assurance procedures we have performed and to express an opinion regarding the Statutory Sustainability Report. Our engagement is limited to historical information presented and does therefore not cover future-oriented information.

We conducted our limited assurance engagement in accordance with ISAE 3000 Assurance Engagements Other than Audits or Reviews of Historical Financial Information. A limited assurance engagement consists of making inquiries, primarily of persons responsible for the preparation of the Sustainability Report, and applying analytical and other limited assurance procedures. Our examination regarding the Statutory Sustainability Report has been conducted in accordance with FAR's accounting standard RevR 12 The auditor's opinion regarding the Statutory Sustainability Report.

A limited assurance engagement and an examination according to RevR 12 is different and substantially less in scope than an audit conducted in accordance with International Standards on Auditing and generally accepted auditing standards in Sweden.

The firm applies ISQC 1 (International Standard on Quality Control) and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. We are independent of Volvo Cars in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements.

The limited assurance procedures performed and the examination according to RevR 12 do not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. The conclusion based on a limited assurance engagement and an examination according to RevR 12 does not provide the same level of assurance as a conclusion based on an audit.

Our procedures are based on the criteria defined by the Board of Directors and the Executive Management as described above. We consider these criteria suitable for the preparation of the Sustainability Report.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion below.

Conclusion
Based on the limited assurance procedures we have performed, nothing has come to our attention that causes us to believe that the Sustainability Report, is not prepared, in all material respects, in accordance with the criteria defined by the Board of Directors and Executive Management.

A Statutory Sustainability Report has been prepared.

Göteborg 18 March 2021

Deloitte AB

Jan Nilsson
Authorized Public Accountant

Lennart Nordqvist
Expert Member of FAR

Green Financing Report

Introduction

On October 7th, 2020, Volvo Car AB (publ.) ("Volvo Cars") issued its first green bond to finance the design, development and manufacturing of Zero Emission Vehicles, that is Battery Electric Vehicles (BEVs). The transaction is supporting Volvo Cars' sustainability strategy and longer ambition to be a climate neutral company by 2040. Several actions will be taken to reach that ambition: reducing the lifecycle carbon footprint per car by 40 per cent between 2018 and 2025 is one of them. Reducing tailpipe emissions by 50 per cent will be a large part of the delivery and to achieve this, Volvo Cars is aiming for 50 per cent of its sales to come from BEVs by 2025.

We have the ambition to be a climate neutral company by 2040, in line with the 2015 Paris Agreement which seeks to limit global warming to 1.5°C above pre-industrial levels and supporting SDG 13. Through the implementation of our electrification strategy, we are also supporting SDG 11 by increasing access to sustainable transportation and improved air quality.

The Green Financing Framework

The issuance of the Green Financing Framework is part of Volvo Cars' sustainability strategy. Its deliverables strengthens the company's focus on contributing to positive environmental impacts and more specifically on clean transportation, Zero Emission Vehicles. Volvo Cars' belief is that the transition to BEVs is part of the solution towards a sustainable society, which is also one of the cornerstones in the company's overall purpose: providing Freedom to move in a personal, sustainable and safe way. The Green Financing Framework is aligned with both the ICMA Green Bond Principles (GBP) and the LMA Green Loan Principles (GLP).

Cicero have provided a Second Party Opinion with a Dark Green shading of Volvo Cars' Green Financing Framework. Included in the overall shading is an assessment of the governance structure which is rated excellent. Deloitte has performed a limited assurance of the Green Financing Report, including the allocation and impact reporting, in line with ISAE 3000, see page 149 for the Limited Assurance Report.

For more information about the Green Financing Framework and Cicero's statement, please see https://investors.volvocars.com/en/debt-information/green-financing.

Terms and conditions of the bond

The bond of MEUR 500 has a tenor of seven years and a fixed coupon rate of 2.50 per cent. The bond is listed on the Luxemburg Stock Exchange.

Allocation Report

The total amount of net proceeds from the issuance of the Green Financing Instrument, was used to finance and refinance, in whole or in part, new or existing projects, assets and activities such as; new electric powertrain and platform technology for Zero Emission Vehicles, increased BEV production capacity and battery assembly, and investment into Polestar, all according to the Eligibility Criteria ("Eligible Green Projects") outlined in the Green Financing Framework.

Use of proceeds

December 31, 2020	MEUR
Total amount of green bond issued	500
Total amount used [1]	500
Net proceeds used for refinancing [1]	95.6%
Net proceeds used for financing	4.4%
Total amount of unallocated proceeds invested in cash and/or cash equivalents	0

1) 31.2 per cent was invested in Polestar. Volvo Cars owns 50 per cent in Polestar.

Impact Report

The environmental impacts and benefits of the Eligible Category Clean Transportation are evaluated with regards to the following impact indicators:

Indicator	Performance
Number of BEVs sold	4,659
Percentage of BEV cars sold in the overall fleet mix	0.7%
Absolute CO_2 tailpipe emissions avoided [1]	0.15 million tonnes
Percentage reduction in CO_2 tailpipe emissions per vehicle [2]	12.7%

1) Absolute CO_2 tailpipe emissions avoided is calculated by multiplying number of sold BEVs with the global average CO_2 emissions (WLTP) for all cars sold in 2020 excluding BEVs. For calculation purposes an assumed average mileage of 200,000 km per car has been applied.
2) Percentage reduction in CO_2 tailpipe emissions per vehicle is based on the average tailpipe emissions for all cars sold in 2020 compared to the baseline year 2018. For further calculation methodology applied, see page 139-140 regarding use of sold products.

2020 was the year that the XC40 recharge, Volvo Cars' first fully electric car, was available to our customers. The percentage of BEV cars sold in the overall fleet mix is in line with expectations for 2020. However, our ambition is that 50 per cent of Volvo Cars' sales should come from BEVs by 2025.

ESG aspects

Volvo Cars' ambition is to enable consumers to move and travel in a sustainable way, and we are aware that electric vehicles have environmental and social impact. An ESG assessment of potential controversies was performed regarding our transformation towards electrification. The battery production is a focus area of ours. For more detail see Sustainability Information, Performance 2020 (page 129 and onwards) and more specifically the Lifecycle Performance of Our Products (page 129) and Supply of Minerals and Metals (page 137).

Measure methodology

Average GHG emissions from use of sold products are based on official data (WLTP) of Volvo Cars manufactured cars in Europe (EU28) applied on car types and the global number of manufactured cars. For more information on the reporting methodology and the assumptions applied, see page 140.

Auditor's Limited Assurance Report on Volvo Cars' Green Financing Report

To Volvo Car AB (publ.),
corporate identity number 556810–8988

Introduction
We have been engaged by Volvo Car AB (publ.) ("Volvo Cars") to undertake a limited assurance engagement of the Green Financing Report ("Reporting") for the year 2020 set out on page 148.

Responsibilities of Management
Volvo Cars Management is responsible for the preparation of the Reporting in accordance with the applicable criteria, as explained in the Volvo Cars Green Financing Framework (available at https://investors.volvocars.com/en/debt-information/green-financing) as well as the accounting and calculation principles that the Company has developed. This responsibility also includes the internal control relevant to the preparation of the Reporting that is free from material misstatements, whether due to fraud or error.

Responsibilities of the auditor
Our responsibility is to express a conclusion on the Reporting based on the limited assurance procedures we have performed. Our engagement is limited to historical information presented and does therefore not cover future-oriented information.

We conducted our limited assurance engagement in accordance with ISAE 3000 Assurance Engagements Other than Audits or Reviews of Historical Financial Information. A limited assurance engagement consists of making inquiries, primarily of persons responsible for the preparation of the Reporting, and applying analytical and other limited assurance procedures. The procedures performed in a limited assurance engagement vary in nature from, and are less in extent than for, a reasonable assurance engagement conducted in accordance with International Standards on Auditing and other generally accepted auditing standards in Sweden.

The firm applies ISQC 1 (International Standard on Quality Control) and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. We are independent of Volvo Cars in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements.

The procedures performed consequently do not enable us to obtain assurance that we would become aware of all significant matters that might be identified in a reasonable assurance engagement.

Accordingly, the conclusion of the procedures performed do not express a reasonable assurance conclusion.

Our procedures are based on the criteria defined by Volvo Cars Management as described above. We consider these criteria suitable for the preparation of the Reporting.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion below.

Conclusion
Based on the limited assurance procedures we have performed, nothing has come to our attention that causes us to believe that the Reporting for the year 2020, is not prepared, in all material respects, in accordance with the applicable criteria, as explained in the Volvo Cars Green Financing Framework.

Göteborg 18 March 2021

Deloitte AB

Jan Nilsson
Authorized Public Accountant

Lennart Nordqvist
Expert Member of FAR