

# VOLKSWAGEN

AKTIENGESELLSCHAFT



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SUSTAINABILITY REPORT

2019

“Focusing on consistent decarbonization can be a strong competitive edge. In any case, it offers the best way for setting a common course for a secure and economically successful future on a planet worth living on.”

Georg Kell  
Spokesman for Volkswagen's Sustainability Council

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A detailed description of the sustainability activities of our brands and regions and of the Volkswagen Group's CC projects is available at:

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Sustainability > Reporting

## NAVIGATION

-  > References to chapters in the Sustainability Report
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## FOREWORD

GRI 102-14, 102-15,  
102-16



Dr.-Ing. Herbert Diess  
Chairman of the Board of Management of Volkswagen AG and Chairman of the  
Brand Board of Management of Volkswagen Passenger Cars, Volume brand group, China

Ladies and gentlemen,

The automotive industry is in a state of deep upheaval. We are fueling the system change to e-mobility – not least in order to deliver new answers for environmental and climate protection.

The Volkswagen Group was the first automotive manufacturer globally to commit to the Paris Agreement. We are taking responsibility and making our contribution to keeping global warming below two degrees Celsius with a reference year of 2050. We have therefore launched our industry's largest decarbonization offensive.

The intention is for the entire Volkswagen Group to be carbon neutral by 2050. This includes our fleet and our entire Group. We are guided by binding intermediate goals along the way. In this way, we want to reduce our passenger car fleet's total life-cycle carbon footprint by 30% by 2025. Our target is to halve our plants' global CO<sub>2</sub> emissions.

This year, we have come a long way towards achieving our targets. Every vehicle is now manufactured in a 36% more environmentally friendly way than in 2010. We are also fully focusing our fleet on the electric vehicle. This is the best and most efficient option for less CO<sub>2</sub> in road traffic for the foreseeable future. Around 75 new e-models are planned to come onto the market in the next ten years.



Audi has already introduced the e-tron, and Porsche the Taycan. Mass production of the Volkswagen ID.3, the world's first electric vehicle with a carbon-neutral footprint, has started in Zwickau.

In addition, we invest in new business models in order to fuel the penetration of electric vehicles. "WeShare", our new carsharing service in Berlin and Hamburg, started this year. The fleet consists entirely of battery vehicles fueled by green power. The service will be expanded to numerous cities in Europe in 2020.

The Volkswagen Group is comprehensively driving the change. This is also underlined by our new rating system in procurement. It commits suppliers to clean production processes and to respecting human and codetermination rights. In addition, we have enshrined the topic of business and human rights in our compliance management system and set clear standards.

Moreover, our Group-wide Together4Integrity program and our Code of Conduct lay the foundation for conduct in the Volkswagen Group that is honest, ethically correct and has integrity.

We are making new alliances with industrial corporations, such as Ford, Microsoft, or Amazon. We also have new project partners, such as Permian Global, who support us in protecting and restoring tropical forests.

This diversity enriches our work. At the same time it challenges us. Mediating between the different demands, expectations and attitudes requires dialog. Our sustainability report makes an important contribution to this. It follows the guidelines of the Global Reporting Initiative, with reference to the Sustainable Development Goals of the United Nations. It also represents our Communication on Progress under the United Nations Global Compact and serves as our Nonfinancial Declaration under the German CSR Directive Implementation Act.

We look forward to receiving your suggestions and feedback!

Best regards,

Dr. Herbert Diess





# DECARBONIZATION

DECARBONIZATION



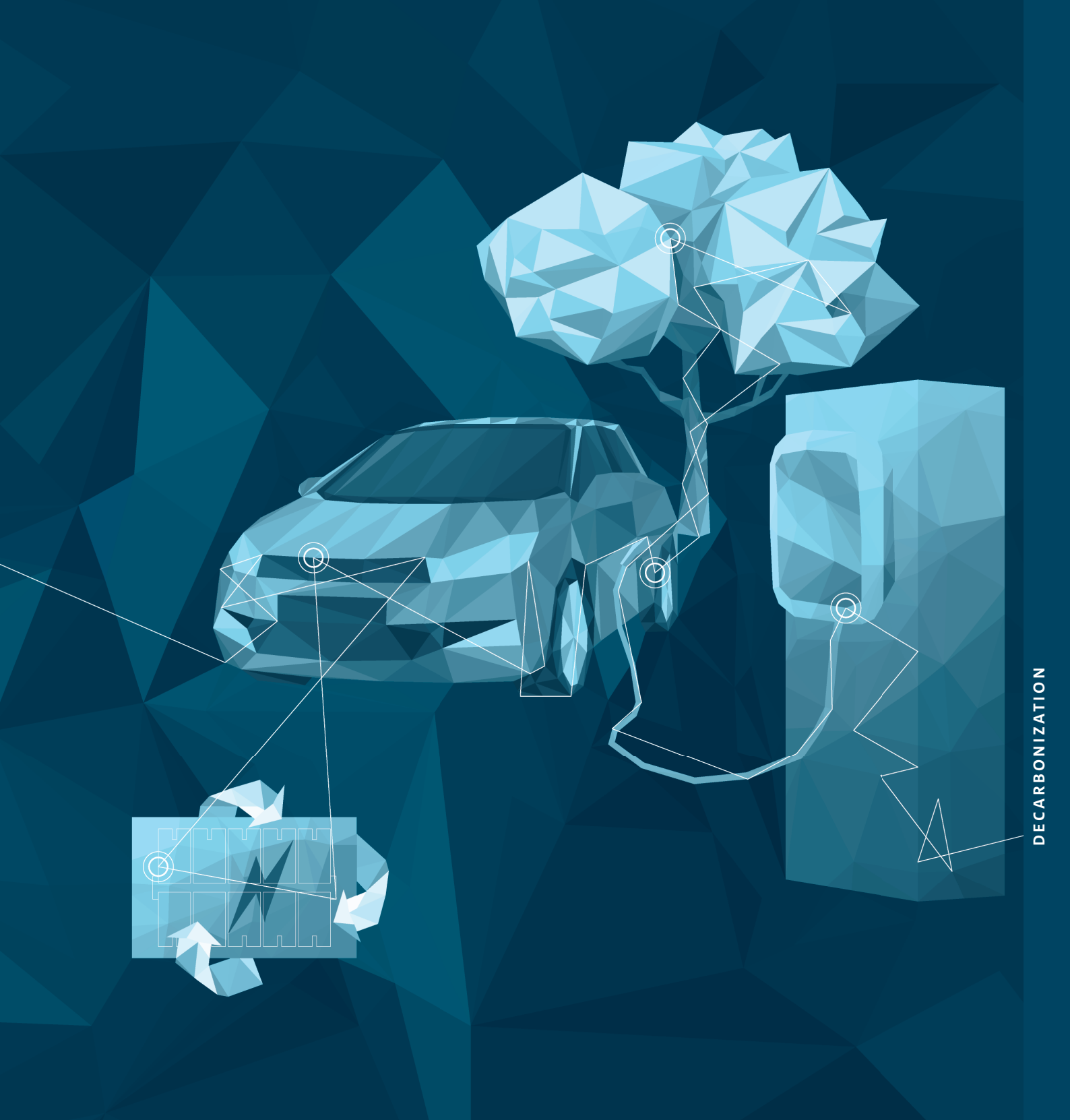
## DECARBONIZATION

GRI 102-15

### DECARBONIZATION – ON THE PATH TO BECOMING CARBON NEUTRAL

Climate change is one of humanity's key challenges. The speed of global warming has rapidly increased in the last three decades. Stopping it is an obligation for us all. Society accuses politicians and businesses, including the Volkswagen Group, of lacking willingness to act on climate protection issues. The global Fridays for Future movement constantly repeats this criticism – and emphatically so. The major public response shows that the attitude and demands of the movement are supported by large sections of the population.

According to the calculations of the Intergovernmental Panel on Climate Change (IPCC), the transport sector accounts for around 14% of global greenhouse gas emissions. In the EU, this is the only area in which greenhouse gas emissions have increased in recent years. We are aware of our responsibility as one of the world's largest automotive manufacturers and mobility providers. In concrete terms, over their entire life cycles, our products alone (passenger cars and light commercial vehicles) are responsible for about 1% of the total global CO<sub>2</sub> emissions produced.



## TAKING RESPONSIBILITY

We do not just take responsibility for this, we are also actively taking action because we want to go from part of the problem to part of the solution. That is why we have launched a comprehensive decarbonization program and want to use it to make our contribution to achieving the two-degree target in the Paris Agreement, or even to come in significantly below this target – if possible. The entire Volkswagen Group wants to be a carbon-neutral organization by 2050 at the latest. That extends from the fleet through production to administration. We want to improve our passenger cars' total life-cycle carbon footprint by 30% compared to 2015 by as early as 2025.

This means we are going far beyond legal and political requirements and are taking on a pioneering role in our industry. This is our new identity.

The key is the consistent electrification of our vehicle fleet, opening up the way to sustainable, emission-free mobility for our customers. We plan to invest around €33 billion in this Group-wide by 2024. However, electric mobility only makes a contribution to climate change when we optimize the carbon footprint over the entire life cycle. That is why we particularly have an eye on the supply chain, manufacture and supplying the vehicles with green electricity in our decarbonization program.

The decarbonization of the Group not only means we are living up to our responsibility as one of the world's leading mobility businesses, but also opens up new potential and competitive advantages for us. In this way, we meet the growing requirements of a wide variety of stakeholders and lay the foundation for products that inspire people all over the world. This ensures our future and success. Decarbonization thus strengthens the value of our Group and is an important instrument for providing for climate-related risks that could threaten our business model. Responsible handling of these risks has become a decisive factor for assessing companies, particularly from the perspective of investors and shareholders.

We consider it our responsibility to actively participate in shaping the framework for our economic activity – i.e. also the framework for the decarbonization of our business – in politics and civil society in dialog with our stakeholders. In the process, we ensure consistent communication of all brands and companies (“One Voice Policy”), including in associations.

We cannot achieve this system change alone – the interconnection of the sectors means that a successful transportation transformation only works with a successful energy transformation. Decarbonization in the energy and transportation sector is strongly dependent on the political environment. The greater common goal therefore needs cooperation and new alliances. The Group contributed its position on the political framework for carbon-neutral companies both nationally and internationally in a direct and indirect representation of interests in 2019: the key success factor for the Group's decarbonization strategy is the integration of renewable energy sources into all value creation stages. Cross-sector pricing of CO<sub>2</sub> would provide a suitable framework with which individual countries, coalitions of countries and the international community economically can optimize and safely achieve their climate targets overall. A more detailed description and positions on additional topics are also available online.

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Sustainability

## MAKING DECARBONIZATION MEASURABLE

We support our decarbonization program with concrete, verifiable targets and measures. It is based on three key principles, which at the same time represent a setting of priorities: the top priority are measures with which CO<sub>2</sub> emissions can be avoided or reduced. In second place come measures with which we can shift the energy supply in the entire value chain to less CO<sub>2</sub>-intensive energy and/or renewable energy. Finally, we offset unavoidable CO<sub>2</sub> emissions through climate protection projects that meet the highest international standards.

Our decarbonization index (DCI) is an informative measurement tool that makes our progress and intermediate results in this area public and verifiable. The DCI is calculated based on the CO<sub>2</sub> emissions of the major brands that manufacture passenger cars and of light commercial vehicles of the Europe (EU-28, Norway and Iceland), China and USA regions over the entire life cycle. By 2025, it should

fall by 30% compared to the baseline of 2015. The DCI value was 43.0 t CO<sub>2</sub>e/vehicle in the reporting year. In 2019, all production locations as well as the brands and regions created decarbonization roadmaps, which were incorporated into a Group decarbonization roadmap.

 > The Environment > Climate Protection

The degree of achievement of our targets is measured with a tracking system. If we temporarily miss the target, we will implement corrective measures. Our program's first measures were already being taken in 2019. These include the compulsory use of renewable energy sources in the manufacture of batteries by suppliers, converting power stations from coal to natural gas, customer offers for green electricity for e-vehicles, measures for battery recycling and the production of the new ID.3 electric car.

## REDUCING CO<sub>2</sub> EMISSIONS OVER THE ENTIRE LIFE CYCLE

One reason that achieving our CO<sub>2</sub> reduction target is ambitious is because we relate our reduction targets to the vehicle's entire life cycle and thus also to areas that we can only in part directly influence ourselves. Our potential for direct action for carbon-neutral mobility resides in emission-free production, including the upstream supply chain, and vehicles that do not create emissions in use. Indirectly, we can have an influence by creating offerings for the use of green electricity for battery charging and a green, efficient charging infrastructure. When implementing our decarbonization program, we crucially need the cooperation of our suppliers and of energy suppliers and also behavior changes from our customers.

## BATTERY MANUFACTURING CHALLENGE

We are tackling the challenge that higher CO<sub>2</sub> emissions initially arise in the supply chain during the transition to electric mobility. The CO<sub>2</sub> emissions in manufacturing an electric vehicle are – from raw material extraction to handover to the customer – roughly twice as high as with a vehicle with a combustion engine. This is because of the difficulty of raw material extraction and the energy-intensive processes in manufacturing batteries. In particular, drying the raw materials, which are applied to a carrier film in liquid form, causes energy consumption to rocket.

However, we are increasing efficiency in big steps here: the first ID. model will already emit around 50% less CO<sub>2</sub> per kilowatt hour (kWh) of battery capacity than the current e-Golf – as a result of improved battery technologies and the manufacture of the battery with green electricity. All battery suppliers are contractually obliged to use certified green electricity in their production. Suppliers must provide proof of this before the award of the contract. CO<sub>2</sub> emissions in battery manufacturing are thus falling significantly.

We founded a 50/50 joint venture with the Swedish company Northvolt AB in 2019 to set up a factory for the production of lithium-ion batteries. The plan is to build the plant in Salzgitter

from 2020. Production should start at around the end of 2023/beginning of 2024. The annual performance of the battery factory to begin with should be 16 gigawatt hours.

The use of new technologies in the context of the consistent expansion of our fleet with electric vehicles is leading, among other things, to a change in the composition of the vehicle and a greater need for raw materials such as cobalt and lithium, the extraction and processing of which may be associated with increased human rights challenges. In close collaboration with our battery cell suppliers, we are therefore pursuing the objective of creating complete supply chain transparency, from mining the raw materials to manufacturing the finished product. We are continuously increasing transparency in our supply chain through various collaborations, audits and the piloting of new technologies, such as blockchain. From our perspective, in particular a sustainable and responsibly organized supply chain is also a key success factor for the global acceptance of electric mobility.

 > Responsibility > Supply Chain

#### ENERGY-EFFICIENT AND LOW-EMISSION PRODUCTION

Part of our decarbonization program is to reduce the CO<sub>2</sub> emissions per vehicle of all plants by 50% by 2025 compared to 2010. We are also introducing absolute CO<sub>2</sub> targets at the same time: by 2030, the Group sites should emit 16% less CO<sub>2</sub> in absolute terms compared to the base year of 2018. The key to this is increasing energy efficiency and raising the proportion of renewable energies in our electricity supply. Globally, renewable energies account for 41% of electricity consumption in the Volkswagen Group. 100% of electricity is already obtained from renewable energy at 43 Group sites.

Audi's manufacturing in Brussels has already been made carbon neutral throughout. For the production of the ID.3, the Volkswagen plant in Zwickau is currently being converted into one of the first, largest, most efficient and most environmentally friendly e-plants in Europe. In particular, the focus is on the reduction of CO<sub>2</sub> emissions, for example through purchasing green energy. This by itself reduces CO<sub>2</sub> emissions by nearly 90,000 tonnes per year.

With our zero impact factory initiative, as part of our "goTOzero" environmental mission statement we will take decisive steps in the future towards automotive manufacturing with zero impact on the environment. As well as resource efficiency and a circular economy, in particular climate protection with a carbon-neutral energy supply is at the top of the agenda.

 > The Environment > Commitment to an Undamaged Environment

#### E-MOBILITY AS A KEY FACTOR

The Volkswagen Group is further advancing a radical system change in individual mobility and consistently focusing on electric powertrains. Compared to vehicles with an internal combustion engine, electric vehicles have less of an impact on the environment, as they produce no local emissions during use. Our calculations show that the carbon footprint of electric vehicles today is already better over the entire life cycle too. A current Volkswagen Golf with a gasoline engine driven in the European market emits 172 g CO<sub>2</sub>/km over its entire life cycle when it is driven 200,000 kilometers; the corresponding Golf TDI (diesel) on average emits 140 g CO<sub>2</sub>/km – and the e-Golf only emits 119 g CO<sub>2</sub>/km.

An electric vehicle's CO<sub>2</sub> advantage compared to an internal combustion engine is further increased by the decarbonization program's CO<sub>2</sub> reduction measures. These include measures to reduce CO<sub>2</sub> in the supply chain, especially in battery production, and the integration of renewable energy sources into the value chains.

The Volkswagen Group intends to launch almost 70 new electric models on the market in the next ten years – instead of 50 as previously planned. This means a rise in the number of electric vehicles projected for the next decade that are to be built on the Group's e-platforms from 15 million to 22 million. The proportion of the fleet that is electric should rise to at least 40% by 2030. As early as this year, the first new generation of electric cars will go into production.

In the future, the new electric cars will be made at eight locations in Europe, China and the USA – on the basis of the modular electric drive matrix. The associated economies of scale will allow the cost of e-mobility to be significantly reduced. This means individual mobility will be affordable and usable for many people in the future.

We are also systematically integrating electric mobility into forward-looking mobility concepts in urban areas that offer our customers connected and environmentally friendly services irrespective of whether they own their own vehicle. These include, for example, MOIA in the field of ride sharing or WeShare in the carsharing segment. The vehicle fleet will be fully electric in both cases.

#### CLIMATE-NEUTRAL VEHICLE USE

Electric mobility is only truly sustainable when the electric vehicle is used with CO<sub>2</sub>-free energy when driven. Through the subsidiary Elli (Electric Life), the Group offers 100% CO<sub>2</sub>-free Volkswagen Naturstrom electricity to private households and companies with or without electric vehicles in Germany. It is generated by wind, solar and hydroelectric power plants in Germany, Austria and Switzerland.



With the market launch of the ID.3, Elli is gradually establishing a portfolio of smart charging solutions by the start of 2020 that extends from hardware through billing and additional digital services to complete consulting packages. These include wall boxes, charging stations, IT-based energy management systems and customer cards for charging out and about.

This means Elli is tapping a completely new field of business for the Group, in which the energy and car focus areas grow closer together via electric mobility. Our aim is to make Elli the first provider on the market to offer drivers and fleet managers of electric vehicles a seamless and holistic charging and energy experience. In order to further strengthen electric mobility, Volkswagen and partners from industry will set up 400 fast-charging stations on major highways by 2020 with the IONITY project.

### SAVING CO<sub>2</sub> BY RECYCLING

Used batteries from electric vehicles should not be treated as hazardous waste, instead they can serve as a valuable source of raw materials and contribute to the reduction of emissions. Batteries that are fundamentally still intact, but no longer provide full power for use in electric cars can be used as energy storage units in charging stations. Completely dead batteries need to be recycled. To this end, Volkswagen Group Components in Salzgitter is setting up a pilot facility for battery recycling. From 2020 onward, up to 3,000 batteries per year can be recycled in it. For example, a new raw material (black powder) can be extracted for the cathodes of new batteries. This results in CO<sub>2</sub> saving potential of up to 25%. In the long term, we want to expand this and further improve recovery.

### OFFSETTING UNAVOIDABLE CO<sub>2</sub> EMISSIONS

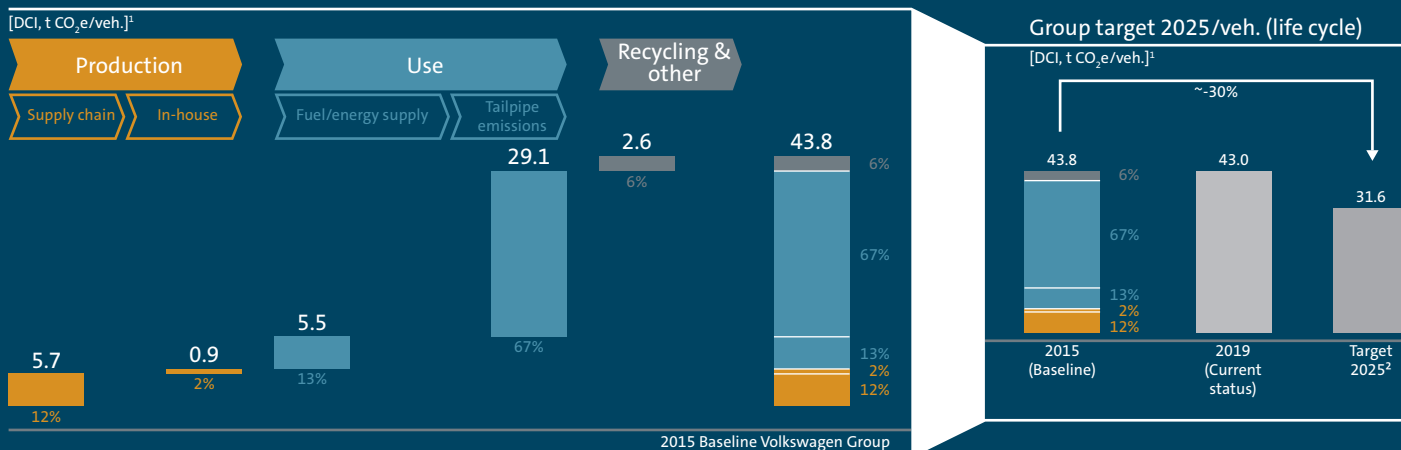
By reducing CO<sub>2</sub> emissions and offsetting unavoidable emissions, we want to ensure that the ID.3 has a carbon-neutral footprint when handed over to the customer. We offset unavoidable CO<sub>2</sub> emissions through climate protection projects with the highest certification standards, such as the Verified Carbon Standard (VCS), the Climate Community and Biodiversity Standards (CCB) or the Gold Standard. For the quality assurance of offsetting projects, we have developed a comprehensive scoring model and rate the projects with regard to compliance with standards, credibility, site selection, project size and the contribution to achieving the United Nations Sustainable Development Goals (SDGs).

We focus on three types of projects: forest protection and reforestation in tropical regions to support the maintenance and expansion of indispensable carbon sinks, and the establishment of renewable energy plants. First we support active forest protection and reforestation, particularly in the tropics. With the first project, the Katingan Mataya Forest Protection Project on the Indonesian island of Borneo, the Group offsets the currently still unavoidable CO<sub>2</sub> emissions from the supply chain, manufacturing and delivery of the new Volkswagen electric vehicle ID.3 and further emissions from other areas.

In 2019, we launched a comprehensive program for supporting climate protection projects and invested nearly half a million euros in offsetting unavoidable CO<sub>2</sub> emissions. For the next reporting year, we plan to massively expand our involvement in climate protection projects. The measures can be in all phases of the life cycle. One important criterion for this support: the CO<sub>2</sub> saving must be precisely quantified and provable. A committee of members of top management makes the decision on supporting the projects.

### PARIS CLIMATE TARGET REQUIRES A 30% REDUCTION OF LIFE-CYCLE CO<sub>2</sub>E/VEHICLE FOR THE GROUP<sup>3</sup>

Volkswagen Group Baseline 2015: Ø CO<sub>2</sub>e emissions/veh. (life cycle)



<sup>1</sup> Decarbonization index (DCI), up to and including 2020, European fleet legislation will be complied with on the basis of the New European Driving Cycle (NEDC). The DCI's European fleet emissions have therefore been calculated on the basis of the NEDC. From 2021, the NEDC target value will be changed into a WLTP target value through a process defined by lawmakers. When the target values change in 2021, the DCI's European fleet emissions will also be calculated in accordance with the WLTP, as a result of which fleet emissions in Europe are expected to rise by around 20%.

<sup>2</sup> Derived using science-based target methodology on the basis of the two degree target.

<sup>3</sup> Major passenger-car manufacturing brands and light commercial vehicles in the Europe (EU-28, Norway and Iceland), China and US regions.



Climate change is one of the current key global challenges. In light of this, the Task Force on Climate-related Financial Disclosures (TCFD) was set up by the G20's Financial Stability Board. Its recommendations create a coherent framework for voluntary and consistent reporting of an entity's climate-related financial risks

and opportunities. The current Volkswagen Group Sustainability Report for the first time includes a reference table here with the five topics recommended by the TCFD: governance, strategy, risk management, key indicators and targets.

## TCFD – RISKS AND OPPORTUNITIES DUE TO CLIMATE CHANGE

TCFD Recommendation	TCFD Disclosure	Source
<b>Governance</b>		
Disclosure of the Group's governance around climate-related risks and opportunities	a) Describe the board's oversight of climate-related risks and opportunities.	Sustainability Report 2019, "Responsibility" chapter and "The Environment" chapter CDP questionnaire (C1.1, C1.1a, C1.1b)
	b) Describe management's role in assessing and managing climate-related risks and opportunities.	Sustainability Report 2019, "Responsibility" chapter and "The Environment" chapter CDP questionnaire (C1.2, C1.2a, C2.2, C2.2a, C2.2b)
<b>Strategy</b>		
Disclosure of the actual and potential impacts of climate-related risks and opportunities on the Group's businesses, strategy and financial planning	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium and long term.	2019 Annual Report > "Report on Risks and Opportunities" chapter Sustainability Report 2019, "The Environment" chapter CDP questionnaire (C2.1, C2.2, C2.2c, C2.2d)
	b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy and financial planning.	CDP questionnaire (C2.3, C2.3a, C2.4, C2.4a, C2.5, C2.6, C3.1, C3.1a, C3.1c)
	c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2 °C or lower scenario.	Sustainability Report 2019, "Introduction" chapter and "The Environment" chapter CDP questionnaire (C3.1c, C3.1d)
<b>Risk Management</b>		
Disclosure of how the Group identifies, assesses and manages climate-related risks	a) Describe the organization's processes for identifying and assessing climate-related risks.	2019 Annual Report, "Report on Risks and Opportunities" chapter Sustainability Report 2019, "Introduction" chapter CDP questionnaire (C2.2a, C2.2b, C2.2c, C2.3, C2.4)
	b) Describe the organization's processes for managing climate-related risks.	Sustainability Report 2019, "Introduction" chapter CDP questionnaire (C2.2d, C2.3a)
	c) Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organization's overall risk management.	Sustainability Report 2019, "Introduction" chapter CDP questionnaire (C1.2a, C2.2, C2.2b, C2.3a)
<b>Metrics and Targets</b>		
Disclosure of the metrics and targets used to assess and manage climate-related risks and opportunities	a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	2019 Annual Report, "Sustainable Value Enhancement" chapter Sustainability Report 2019, "The Environment" chapter CDP questionnaire (C2.3a, C5.1, C5.2, C5.2a, C6.1, C6.3, C6.5, C9.1)
	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	Sustainability Report 2019, "The Environment" chapter CDP questionnaire (C5.1, C5.2, C6.1, C6.3, C6.5)
	c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	2019 Annual Report, "Sustainable Value Enhancement" chapter Sustainability Report 2019, "Introduction" chapter and "The Environment" chapter CDP questionnaire (C4.1, C4.1a, C4.1b, C4.2)

## OUTLINE OF THE LEGAL STRUCTURE OF THE GROUP

Volkswagen AG is the parent company of the Volkswagen Group. It develops vehicles and components for the Group's brands, but also produces and sells vehicles – in particular passenger cars and light commercial vehicles – under the Volkswagen Passenger Cars and Volkswagen Commercial Vehicles brands. In its capacity as parent company, Volkswagen AG holds direct or indirect interests in AUDI AG, SEAT S.A., ŠKODA AUTO a.s., Dr. Ing. h.c. F. Porsche AG, TRATON SE, Volkswagen Financial Services AG, Volkswagen Bank GmbH and a large number of other companies in Germany and abroad. More detailed disclosures are contained in the list of shareholdings in accordance with sections 285 and 313 of the Handelsgesetzbuch (HGB – German Commercial Code), which can be

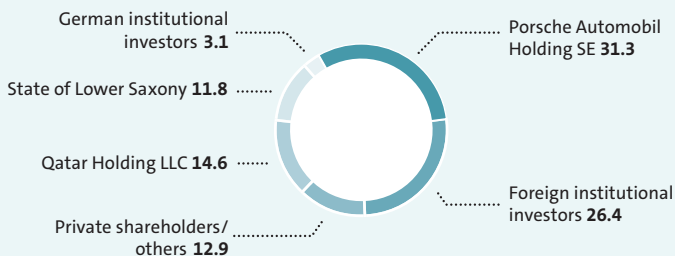
accessed at [www.volkswagenag.com/en/InvestorRelations.html](http://www.volkswagenag.com/en/InvestorRelations.html) and is part of the annual financial statements.

Volkswagen AG is a vertically integrated energy company within the meaning of section 3 para. 38 of the Energiewirtschaftsgesetz (EnWG – German Energy Industry Act) and is consequently subject to the provisions of the EnWG. In the electricity sector, Volkswagen AG generates, sells and distributes electricity together with Group subsidiaries.

The Volkswagen AG Board of Management has sole responsibility for managing the Company. The Supervisory Board appoints, monitors and advises the Board of Management; it is consulted directly on decisions that are of fundamental significance for the Company.

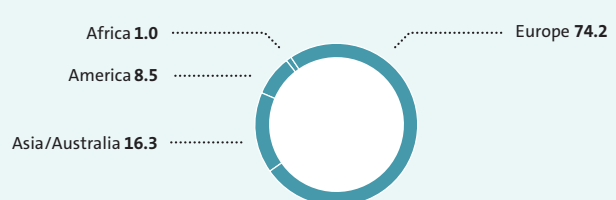
## VOLKSWAGEN AG SHAREHOLDER STRUCTURE

as of December 31, 2019, in % of voting capital



## EMPLOYEES BY CONTINENT

as of December 31, 2019, in %



## ORGANIZATIONAL STRUCTURE OF THE GROUP

The Volkswagen Group is one of the leading multibrand groups in the automotive industry. The Group's business activities comprise the Automotive and Financial Services divisions. All brands within the Automotive Division – with the exception of the Volkswagen Passenger Cars and Volkswagen Commercial Vehicles brands – are independent legal entities.

The Automotive Division comprises the Passenger Cars, Commercial Vehicles and Power Engineering business areas. The Passenger Cars Business Area essentially consolidates the Volkswagen Group's passenger car brands and the Volkswagen Commercial Vehicles brand. Activities focus on the development of vehicles and engines, the production and sale of passenger cars and light commercial vehicles, and the genuine parts business. The product portfolio extends from small cars through to luxury vehicles in the premium segment, and also includes motorcycles, and will gradually be supplemented by mobility services.

The Commercial Vehicles Business Area primarily comprises the development, production and sale of trucks and buses from the Scania and MAN brands, the corresponding genuine parts business and related services. The commercial vehicles portfolio ranges from light vans to heavy trucks and buses. The collaboration between the two commercial vehicle brands is coordinated in TRATON SE, which has been listed on the stock exchange since mid-2019.

The Power Engineering Business Area combines the large-bore diesel engines, turbomachinery, special gear units, propulsion components and testing systems businesses.

The activities of the Financial Services Division comprise dealer and customer financing, vehicle leasing, direct banking and insurance activities, as well as fleet management and mobility offerings.

With its brands, the Volkswagen Group is present in all relevant markets around the world. The key sales markets currently include Western Europe, China, the USA, Brazil, Russia, Mexico and Poland.

Volkswagen AG and the Volkswagen Group are managed by the Volkswagen AG Board of Management in accordance with the Volkswagen AG Articles of Association and the rules of procedure for Volkswagen AG's Board of Management issued by the Supervisory Board.

In addition to the Finance & IT, Human Resources and Integrity and Legal Affairs divisions, the Volkswagen Group collaborates across six operating units and the China region, these being the "Volume", "Premium", "Sport & Luxury", "Truck & Bus" brand groups, as well as the Components & Procurement and Financial Services operating units. The "Volume" brand group comprises the Volkswagen Passenger Cars, SEAT, ŠKODA and Volkswagen Commercial Vehicles brands. The Audi, Lamborghini and Ducati brands are brought together in the "Premium" brand group. "Sport & Luxury" is comprised of the Porsche, Bentley and Bugatti brands. The

“Truck & Bus” brand group is the umbrella for the Scania and MAN brands. Components & Procurement will function as one unit spanning all of the brands and supporting them. The Financial Services business has been combined into a single unit. We are convinced that this management model will allow better use of existing expertise and economies of scale, boost synergy effects more systematically and accelerate decision making. In addition, this prepares the Volkswagen Group for a management structure that is simpler, leaner and more effective, and strengthens the brands, giving them more autonomy. In line with the principle of subsidiarity, decisions will be taken at the lowest competent level, close to business operations.

At the same time, spreading the Group’s management duties more broadly means that responsibility is assigned more clearly and definitively. Every member of the Board of Management has assumed additional higher-level duties for the Group. At the same time, the members of the Board of Management of Volkswagen AG have responsibility for a brand group or operating unit, thus improving collaboration between the brands and the Group as a whole and ensuring that management of the Group is a shared undertaking.

Each brand within the Volkswagen Group is managed by a brand board of management, which ensures the brand’s independent and self-contained development and business operations. To the extent permitted by law, the board adheres to the Group targets and requirements laid down by the Board of Management of Volkswagen AG, as well as with the agreements in the brand groups. This allows Group-wide interests to be pursued, while at the same time safeguarding and reinforcing each brand’s specific characteristics. Matters that are of importance to the Group as a whole are submitted to the Group Board of Management to be agreed upon, to the extent permitted by law. The rights and obligations of the statutory bodies of the relevant brand company remain unaffected.

The Volkswagen Group companies are managed solely by their respective managements. The management of each individual company takes into account not only the interest of its own company but also the interests of the Group, the relevant brand group and the individual brands in accordance with the framework laid down by law.

At Group level, committees also address key strategic issues, for example relating to product planning, investments, risks management and management issues. Some of the committees were optimized in the reporting year in order to improve the efficiency of their decision making. This has reduced complexity and reinforced governance within the Group.

The Best Governance module of our future program TOGETHER 2025<sup>+</sup>, which was newly enhanced over the course of the fiscal year, is also fostering our Company’s transformation. One of its aims is to further improve manageability of the Group and to make even better use of synergy effects.

## PRODUCTION LOCATIONS

GRI 102-7

The Volkswagen Group’s production network is comprised of 124 locations in which passenger cars, commercial vehicles and motorcycles, as well as powertrains and components are manufactured.

With 72 locations, Europe remains our most important production region for vehicles and components. There are 28 sites in Germany alone. The Asia-Pacific region has 33 locations. We have six locations in North America and nine in South America. The Group operates four locations in Africa.

## THE VOLKSWAGEN VALUE CHAIN

### RESEARCH & DEVELOPMENT

Year for year, the Volkswagen Group invests more in research and development than any other automotive company in the world, laying the foundations for new models and innovative concepts with which to master the challenges of the future: digitalization, networking and electric mobility (e-mobility).



### PROCUREMENT

Every year, the Volkswagen Group purchases a wide range of raw materials, components and other goods. A sustainable supply chain and environmentally compatible transportation play key roles in our responsible and comprehensive championing of human rights, environmental protection and the battle against corruption.



### PRODUCTION

Every working day, the Volkswagen Group manufactures an average of 36,000 vehicles globally. Efficient production ranks alongside employee health and safety as one of our core goals.



### MARKETING & SALES

The Volkswagen Group markets its vehicles in 153 countries. Around the world, comfort and safety are considered the key customer requirements. Business relationships with fleet customers are often long-term and stable partnerships. The Volkswagen Group's share of commercial fleet customers is 44.1% in Germany and 25.6% in the rest of Europe.



### AFTER-SALES & FINANCIAL SERVICES

Our service provision includes supporting dealerships to ensure they can provide quality advice and maintenance, managing our original parts business, and providing innovative vehicle-related financial services.



### RECYCLING

Recycling makes a key contribution to reducing our products' impact on the environment and conserving resources. This is not just about recycling vehicles at the end of their useful life; recycling starts at the new-vehicle development stage, during which we pay close attention to the recyclability of the required materials, the use of high-quality recycled materials, and the avoidance of pollutants.

With the future-oriented program TOGETHER – Strategy 2025 announced in 2016, we are seeking to make the Volkswagen Group more focused, efficient, innovative, customer-oriented and sustainable, and systematically geared toward generating profitable growth.

We at the Volkswagen Group have set ourselves the goal of continuing to excite our customers in future and meeting their diverse needs with an appealing product portfolio of impressive vehicles and forward-looking, tailor-made mobility solutions. Every day, we actively assume and exercise responsibility in relation to the environment, safety and society, and we aim to be a role model in these areas. Integrity, reliability, quality and passion thus form the basis for our work. Using this approach, we aim for technological leadership in the industry and competitive profitability while also striving to be an excellent employer.

In summer 2019, we further enhanced our program for the future with TOGETHER 2025+. We are increasing the momentum for achieving our strategic targets and sharpening our focus. To this end, the strategic vision of the Volkswagen Group was also revised. With “Shaping mobility – for generations to come”, we aim to more actively shape the future of mobility while safeguarding it sustainably – for present and future generations.

With electric drives, digital connectivity and autonomous driving, we want to make the automobile cleaner, more quiet, more intelligent and safer. At the same time, our core product will become more emotive and offer a completely new driving experience. In this way, the car can continue to be a cornerstone of sustainable, individual and affordable mobility in the future. In addition, we are committed to the Paris Agreement on climate protection and are one of the first companies in our industry to commit ourselves to the zero-emissions target by 2050 at the latest.

The automotive industry is being shaped particularly by the transformation to e-mobility and digitalization. We have positioned ourselves to successfully tackle this radical change: the strategies of our brands and regions as well as those of our functional areas are consistently aligned with the TOGETHER 2025+ Group strategy.

Under the umbrella of the TOGETHER 2025+ Group strategy, we have defined five central modules that incorporate many of our existing Group initiatives. With this change, we are putting the focus on corporate governance, improved performance, increased brand values, software and excellence in employee management.

Our Code of Collaboration, along with our integrity and compliance program Together4Integrity (T4I), is a central pillar of the Group strategy. This Code describes how collaboration is to take place within the Group and between individuals in their day-to-day work. Its core values are encapsulated in the terms “genuine”, “straightforward”, “open-minded”, “as equals” and “united”. T4I brings together all activities relating to integrity, culture, compliance, risk management and human resources, creating a common path toward a new corporate culture.

### FIVE MODULES OF THE TOGETHER 2025+ STRATEGY

Our revised TOGETHER 2025+ Group strategy comprises consistent strategic decisions and specific modules aimed at safeguarding the long-term future of the Group and generating profitable growth.

These modules include Best Governance, Best Performance, Best Brand Equity, Software-enabled Car Company and Excellent Leadership. We continuously review the status and progress of these initiatives in order to analyze the target achievement, importance and suitability of the measures defined. This enables us to tailor these modules to the transformation underway within our company. In the Best Governance module, we are working to create a focused, streamlined corporate structure to manage the brands, continually leverage synergies and accelerate decision-making processes. We want the Group to be perceived as efficiently managed, trustworthy, sustainable and transparent. To this end, we are intensifying the dialog with our key stakeholders and systematically reviewing whether we are still the best owner for our various brands and companies. In addition, we want to make our CO<sub>2</sub> targets measurable and make our progress towards becoming carbon neutral in 2050 transparent.

The aim of the Best Performance module is to achieve a sustainable increase in our enterprise value by increasing efficiency, productivity and profitability. As a global company, our size enables us to make even more efficient use of economies of scale. We remain firmly committed to our ambitious targets, work consistently on achieving them and strive to exceed them. This will lay the foundations for extensive investment in our Company, in our employees and in mobility for present and future generations.

In the Best Brand Equity module, the focus is on realigning and further refining the brand portfolio, making a significant increase in the value of our Group brands possible by 2025. The profile and mission of each brand are being optimized and overlaps in market positioning reduced. Based on these optimizations, we will decide on the future design, product portfolio and services of each Group brand – using the needs of our customers as a starting point.

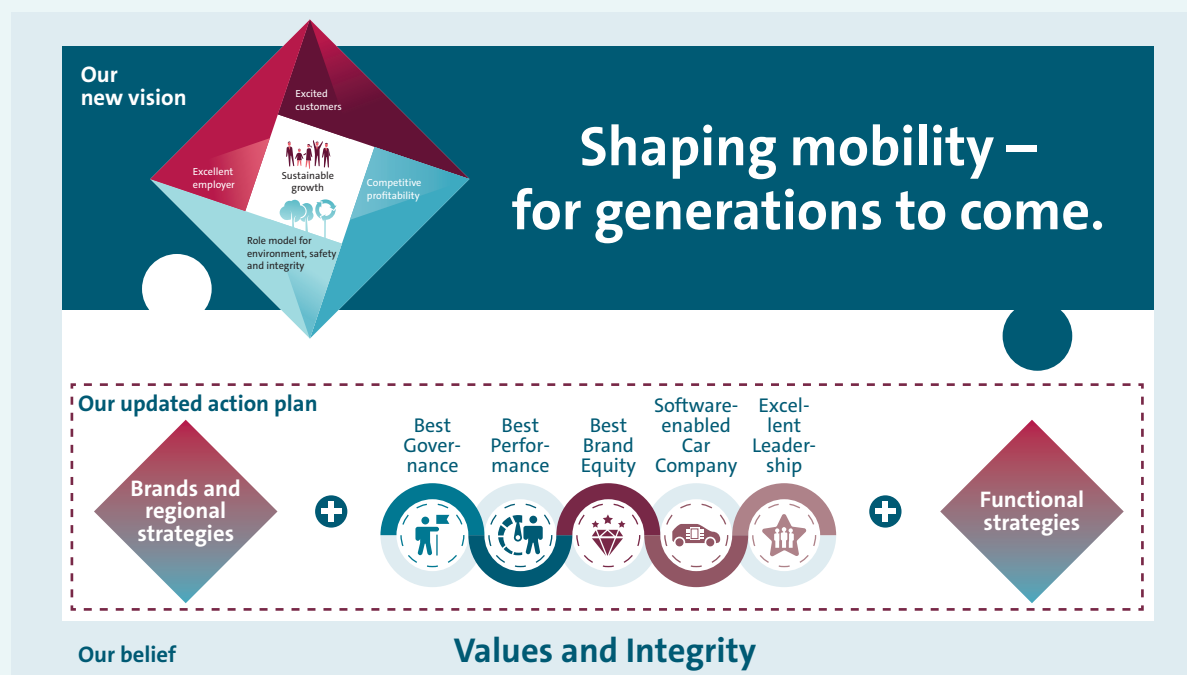
In the Software-enabled Car Company module, we are working to make software development one of the Volkswagen Group's core competencies. To achieve this, we are pooling existing expertise, substantially strengthening our resources and establishing a dedicated organizational unit. By 2025, all new vehicle models across the Group will be based on our own cross-brand software platform. This approach will enable us to leverage synergies between the individual brands and vehicle projects. The aim is that the Volkswagen Group and its brands will stand not only for the best vehicles but in equal measure for exciting digital products and services.

The Excellent Leadership module will accelerate the transformation to open, partnership-based, value-based leadership. Management development and training will be radically reorganized and succession planning will be even more systematically pursued so

that the right talents always have the right positions in the Group at the right time. We are also defining clear expectations for the Group's managers. These involve greater customer focus, more corporate responsibility, greater effectiveness and focus on results as well as a culture of constructive dissent and a positive approach in dealing with mistakes. Volkswagen also wants to increase diversity at all levels of the company and is pursuing clear, measurable targets for raising the proportion of female and international managers.

## GROUP STRATEGY GOALS AND KEY PERFORMANCE INDICATORS

The five strategic modules describe how we want to achieve our vision of sustainable mobility for present and future generations. We are managing our project using four target dimensions, which are also reflected in the Volkswagen strategy rhombus. The four target dimensions are excited customers; excellent employer; role model for the environment, safety and integrity; and competitive profitability. We want to grow sustainably by consistently pursuing these objectives.



The target dimensions apply throughout the whole Group. The strategic KPIs that we use to measure how well we have implemented our Group strategy are dependent on the respective business model. After all, the business model for our passenger car-producing brands is different from the business model for trucks and buses and also differs from the business model for our Power Engineering Business Area and our services business.

The strategic KPIs of the competitive profitability target dimension have been defined and standardized. As the Group strategy is currently being revised and specified in detail, the content of some strategic KPIs in the other target dimensions is still being determined. The relevance of the KPIs is reviewed at Group level and their focus is continuously monitored and adjusted as necessary. We report on the defined nonfinancial strategic KPIs in the "Corporate Governance Report" and "Sustainable Value Enhancement" sections of the Annual Report.

## TARGET DIMENSION: EXCITED CUSTOMERS

This target dimension focuses on the diverse needs of our customers and on tailor-made mobility solutions. We aspire to exceed our customers' expectations, thus generating maximum customer benefit. This requires not only the best products, the most efficient solutions and the best service, but also flawless quality and an outstanding image. We want to inspire enthusiasm in our existing customers, win over new ones and retain their loyalty in the long term – because only loyal and faithful customers will recommend us to others.


The strategic KPIs consist of the conquest rate and KPIs pertaining to loyalty, customer satisfaction and quality.

## TARGET DIMENSION: EXCELLENT EMPLOYER

To achieve sustainable success, we need skilled and dedicated employees. We aim to increase their satisfaction and motivation by means of equal opportunities, an attractive and modern working

environment, and a forward-looking organization of work. An exemplary management and corporate culture forms the basis for this, allowing us to retain our core workforce and attract new talent.

The strategic KPIs of this target dimension cover internal employer attractiveness determined by means of the opinion survey, external employer attractiveness, an external employer ranking as well as the diversity index.


 > People > Employer Attractiveness

#### TARGET DIMENSION: ROLE MODEL FOR ENVIRONMENT, SAFETY AND INTEGRITY

Every day, we at the Volkswagen Group assume and exercise responsibility in issues relating to the environment, safety and society. This is reflected both in our thoughts and actions and in all our decisions. We pay particular attention to the use of resources and the emissions of our product portfolio as well as those of our sites and plants. Our goal is to continuously reduce our carbon footprint and lower our pollutant emissions. Through innovations and outstanding quality, we aim for maximum product safety.

Our primary objectives in this process include complying with laws and regulations, establishing secure processes and dealing openly with mistakes so that they can be avoided or rectified in the future. In terms of integrity, Volkswagen aims to become a role model for a modern, transparent and successful enterprise.

The strategic KPIs for this target dimension include the decarbonization index, CO<sub>2</sub> fleet emissions as well as compliance, integrity and a culture of dealing openly with mistakes.

 > The Environment > Commitment to an Undamaged Environment

#### TARGET DIMENSION: COMPETITIVE PROFITABILITY

Investors judge us by whether we are able to meet our obligations as regards interest payments and debt repayments. As equity holders, they expect appropriate dividends and a long-term increase in the value of their shares.

We make investments with a view to achieving profitable growth and strengthening our competitiveness, thus keeping the Volkswagen Group on a firm footing in the future and ensuring it remains an attractive investment option.

The goals we have set ourselves are operational excellence in all business processes and becoming the benchmark for the entire industry.

The strategic KPIs are operationalized for internal management purposes: target and actual data are derived from Volkswagen Group figures.

#### STRATEGIC KPIs: COMPETITIVE PROFITABILITY

	2015	2025
Operating return on sales <sup>1</sup>	6%	7 to 8%
Research and development ratio (R&D ratio) in the Automotive Division	7.4%	~ 6%
Ratio of capex in the Automotive Division	6.9%	~ 6%
Net cash flow in the Automotive Division	€8,887 million	> €10 billion
Payout ratio	negative	≥ 30%
Net liquidity in the Automotive Division	€24,522 million, 11.5%	~ 10% of Group sales revenue
Return on investment (ROI) in the Automotive Division	-0.2%	> 14% <sup>2</sup>

<sup>1</sup> 2015 before special items.

<sup>2</sup> Taking into account the new IFRS 16.



## RISK MANAGEMENT AS AN EARLY WARNING SYSTEM

Promptly identifying the risks and opportunities associated with our business activities and taking a forward-thinking approach to managing them is crucial to our Group's long-term success. A foresighted risk management process and effective internal control systems are therefore vitally important to us. Not only do we set high internal standards, we also insist that all our suppliers along our entire value chain comply with these standards.

## RISK MANAGEMENT SYSTEM AND INTERNAL CONTROL SYSTEM

A comprehensive risk management and internal control system (RMS/ICS) helps us to handle risks responsibly. It defines the primary principles and elements of our Group, forming the basis for the appropriate and effective management and control of material risks. This applies to risks with consequences for the Volkswagen Group and to risks for the environment and society.

The organizational design of the Volkswagen Group's RMS/ICS is based on the internationally recognized COSO Enterprise Risk Management framework (COSO = Committee of Sponsoring Organizations of the Treadway Commission). Through a Group risk management policy, all business divisions and units are obliged to implement an RMS/ICS. The Group Risk Management function supports the divisions by providing necessary training and participating in conceptual development. The Board of Management receives ad-hoc, quarterly and annual risk reports.

The focus of our RMS/ICS is the three lines of defense model – a basic element required, among others, by the European Confederation of Institutes of Internal Auditing (ECIIA). In line with this model, our RMS/ICS has three lines of defense that are designed to protect us from the occurrence of material risks.


- The first line of defense comprises the risk management and internal control systems at the individual Group companies and divisions. The RMS/ICS is an integral part of our Group's organizational structures and processes.
- The second line of defense is the Group Risk Management function, which sets standards for the RMS/ICS and coordinates the quarterly risk survey and annual governance, risk and compliance (GRC) control process. It reports to the Group Board of Management on any material risks, which are defined in terms of quantitative and qualitative assessment criteria and given probability ratings.
- The third line of defense is Group Internal Audit, which carries out regular checks on the structure and implementation of the RMS as part of its independent audit activities.

## INTEGRITY AND COMPLIANCE RISKS

The Volkswagen Group continuously develops its risk management in order to take account of increased internal and external requirements in the field of corporate responsibility. This particularly applies to the instrument of the list of risk focus areas used by the Group, which is divided into 18 different modules. In 2019, it was checked whether the list of risk focus areas was up-to-date as necessary and individual focus areas were moderately adjusted. In this way, in particular the assessment of compliance risks, environmental risks from operating processes and product characteristics as well as risks of noncompliance with human and employee rights has been further intensified.

The list of risk focus areas is to be used by all entities affected. The Group Risk Management function and the brand risk management units can declare selected areas of focus – including from the sustainability, environment and compliance areas of focus – “mandatory” for the relevant units.

Risks that could impact on our bottom line also include general environmental risks and climate-change risks. These include risks that could result from differing CO<sub>2</sub> and emissions regulations, but also extreme weather, storms or floods with effects on production, infrastructure and supply chains. More detailed information is provided in the TCFD section.

 > Introduction > Decarbonization

## NONFINANCIAL RISKS

The Group risk management processes also take account of the risks for nonfinancial aspects in accordance with the CSR-Richtlinie-Umsetzungsgesetz (CSR-RUG – German CSR Directive Implementation Act). Here, we have assigned concrete risks from the list of focus areas to the individual matters as a priority.

- Environmental matters
  - Environmentally relevant risks from consequences of operating processes or product characteristics
  - Environmentally relevant risks from the use of materials and substances for production purposes or other operating purposes
- Employee matters
  - Personnel risks with regard to occupational safety and health
  - Risks from the use of employees from outside companies within the framework of contracts for work and service contracts
- Social matters
  - Risks of noncompliance with social responsibility
  - Risks of violation of health and safety-related regulations



- Customer matters
  - Risks of violation of product-related regulations
  - Risks from product responsibility
- Respect for human rights
  - Risks of noncompliance with human rights
- Combating corruption and bribery
  - Risks of active corruption
  - Risks of passive corruption
  - Misappropriation and embezzlement risks

Relevant risks in the eyes of the Volkswagen Group including the risks relating to the six nonfinancial aspects that must be reported on are presented in the report on risks and opportunities in the management report. In fiscal year 2019, risks were identified with regard to CO<sub>2</sub> compliance in individual brands and markets that very probably have or will have serious negative effects on the non-financial aspect of environmental matters. A more detailed description is available in the Annual Report's report on risks and opportunities under the heading "Environmental Protection Regulations".



> 2019 Annual Report > Report on Risks and Opportunities



# RESPONSIBILITY

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and KPIs

In the TOGETHER 2025+ Group strategy, we have set a major objective: to act as a model of integrity. Through the implementation of the Together4Integrity (T4I) program, we want to consistently achieve this goal throughout the Group across all brands and companies and to strengthen corporate governance on integrity and compliance. We have set ourselves the objective of the key performance indicators of integrity and compliance having the same strategic and operational priority as, for example, sales revenue, profit, product quality or employer attractiveness. T4I is thus one of the most extensive change programs in the history of the Group. The Integrity and Legal Affairs function of the Board of Management, under the leadership of Hiltrud D. Werner, is responsible for designing and implementing the program.

#### T4I WITH FOCUS ON GOVERNANCE AND CULTURE CHANGE

The program serves to provide the regulatory framework for acting with integrity and in compliance with the rules – that is T4I's governance dimension. In addition, T4I also has the dimension of culture change: to reach people and strengthen their own drive to act with integrity. For our employees, there is thus a stable framework in which they can act responsibly, purposefully and entrepreneurially and contribute to Volkswagen having integrity through and through and being a respectable company in the best sense of the word.

The seven Group Essentials are the foundation of the culture change. These essentials define how we at Volkswagen want to work together and they supplement the Code of Conduct, which lays down the general rules of conduct, particularly with respect to compliance with the law and with internal guidelines.

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Group > The Volkswagen Group Essentials

T4I's methodological design follows the five fundamental and widely acknowledged principles of the international Ethics & Compliance Initiative (ECI). The principles relate to strategy, risk management, acting with integrity, a culture of open discussion and taking on responsibility, including in the case of misconduct. T4I specifically will put integrity and compliance in concrete terms for all five principles, with the intention of sustainably anchoring them in corporate practice. As a consistent umbrella program T4I combines the content of all the Group's initiatives and its departments with respect to integrity and compliance.

An important factor for the success of T4I is a strong tone from the top, with which members of the Board of Management and top managers provide direction, reveal objectives and explain the reasons for and advantages of the program. The protagonists here are both the members of the Group Board of Management and the members of the boards of management or managing directors of the individual companies who put the individual initiatives in the local frame of reference and authentically champion T4I as a project of their company's own. Further support is provided by numerous dialog-oriented communication measures and

event formats, for example, perception workshops, which actively involve employees across hierarchies and which employees can help shape.

However, T4I not only has an impact internally, but also beyond the Group: through the revision of the Code of Conduct for Business Partners, through which we also commit our suppliers and sales partners to the principles of integrity and compliance. Furthermore, the increasing focus on integrity and compliance, particularly in the Code of Conduct, also determines every employee's interaction with customers, representatives of civil society, government bodies, authorities and other stakeholders.

#### IMPLEMENTING T4I THROUGHOUT THE GROUP

The program is to be rolled out to the roughly 700 operating business units (legal entities) in which our more than 670,000 employees work by 2025. From the start in spring 2018 to the end of the 2019 reporting period, the program has initially been rolled out to more than 200 business units, prioritized by size and risk profile, in order to achieve a far-reaching impact as quickly as possible. With around 491,000 employees, these business units represent more than two thirds of all the Volkswagen Group's employees.

The core content of T4I is more than 100 packages of measures that must be independently implemented by every business unit. This is intended to create consistently robust systems and processes for avoiding compliance and integrity risks in all areas of activity – and should thus also eliminate the causes that fostered serious misconduct in the past. The packages of measures are grouped by topic into 11 key initiatives, for example on product compliance, on HR compliance and processes, on the whistleblower system or on Business Partner Due Diligence. One key initiative – the integrity program – is particularly focused on the topic of integrity. Regular reporting on how implementation of the particular key initiative is progressing ensures transparency about the progress made in implementation in the individual companies and thus creates the basis for quality assurance. The focus in the reporting year was on reaching people, raising their awareness and motivating them. To this end, we held T4I launch events and subsequently held T4I perception workshops. Both events are held in every business unit at the start of the implementation of T4I and involve both employees and managers across hierarchies as players in the change process. The joint design and implementation of these events increases awareness of each individual's valuable contribution to the success of the change among participants. In addition, they offer the opportunity to ask openly critical questions and name problems.

The perception workshops are primarily about the actual practice of integrity and compliance – measured by the perception of employees. Here, representatively selected employees and managers give their assessment and discuss opportunities for improvement. In the reporting year, it became apparent that employees predominantly speak positively about the practice of integrity and compliance at each site: on average, more than 80% of survey

respondents know the corporate values, for example. They know where they can report wrongdoing and agree with the statement that how managers behave is important to the Group. The workshops are repeated after around one year, partly in order to measure progress and identify any existing need for action.

At the end of the 2019 reporting year, 69 launch events with more than 8,000 participants had been held in 34 countries since the start of the program. In the same period, we have held 89 perception workshops with a total of more than 7,700 participants in 36 countries.

#### T4I AS A COMPASS FOR DOING THE RIGHT THING

The “integrity program” key initiative has the goal of increasing understanding of integrity and its importance as a basis of doing business among all the Volkswagen Group’s employees and managers and of creating a culture in which acting with integrity is not only consistently possible, but also seen as a matter of course. It is associated with encouraging the constructive handling of mistakes, increasing the transparency of reasons for decisions and strengthening willingness to also address aberrations and risks with managers. Integrity is a core element of professional conduct for us and this is the only thing we aim for: to do the right thing in a given situation.

As the basis for running our business, integrity must impact all levels. This means integrity is an obligatory criterion for all the Board of Management’s decisions: every submission to the Board of Management must include an opinion by the responsible department on the way in which the intended decision and its consequences are in line with the Group’s integrity and compliance or whether/what integrity or compliance risks are associated with it and how they can be lessened. In the same way, integrity is also laid down as a criterion for decisions by the boards of management of the individual Group brands and companies.

Whether it is possible for each individual to act with integrity is an explicit question in the Opinion Survey, the annual survey of all the Group’s employees. The question is: “In our organizational unit, is it possible for everyone to act with integrity”. If employees think this possibility is in doubt in a particular organizational unit, the relevant manager must identify and clear the possible obstacles together with the team. The question was asked in the Opinion Survey for the first time in 2017 and since then, including in the reporting year, has been one of the three questions with the highest level of agreement.

The conduct anchors were developed in order to breathe life into the concept of integrity and make clear to employees what acting with integrity in their day-to-day work means. They serve as practical guidelines for action and at the same time set a normative expectation regarding what is considered “correct conduct” in the Volkswagen Group. These defined “conduct anchors” will also form the frame of reference when integrity becomes an obligatory topic in employee appraisals from 2020.

#### INTEGRITY AS A MANAGEMENT TASK

As role models, managers are among the greatest factors influencing employee conduct. In order to further strengthen this function as a role model and further develop their skills, the Role Model Program 2.0 was introduced in 2019 to encourage dialog-oriented and distance-reducing collaboration. The managers are to be equipped to ensure a culture of open discussion in their own team, where risks or conflicting objectives can be discussed without fear of sanctions and employees are encouraged to contribute their questions and ideas. Beyond their own conduct, however, managers also have the task of purposefully encouraging and demanding the right conduct among their employees. One of the ways in which support is given to them is through formats that are provided via the Opinion Survey method toolbox.

#### EMPLOYEES’ ACTIVE ROLE

Motivating our employees and spurring them to action is also critically important. The integrity program therefore ensures permanent visibility of the topic through continuous communication both in employee media and in personal discussions. For example, information about the integrity program is regularly provided at works meetings, in individual departments, in the integrity workshops, in front of shop stewards or also vocational trainees. The T4I perception workshops are also used as platforms for discussing integrity and compliance. In addition, as the Director of Integrity and Legal Affairs, Hiltrud D. Werner regularly meets with employees from various departments on the dialog bus tour for direct discussion about integrity-related challenges in day-to-day work.

However, the people who promote the topic of integrity of their own accord, who embed it within the structures of the Group and keep the topic alive – the integrity ambassadors – are also of key importance. It was possible to expand the network of them again in 2019. The number of these voluntary disseminators at Volkswagen AG rose from 200 to more than 400. Worldwide there are already more than 700. This suggests an improved understanding and higher acceptance of the topic of integrity as well as greater willingness by employees to openly address problematic aspects where necessary.

In selected departments, the integrity program also creates centers of excellence, which are used for in-depth, department-specific analysis of the topic of integrity. The change measures developed by employees are later reviewed to see if they can be transferred to other departments and, if suitable, are recommended Group-wide as best practices. In 2019, there were centers of excellence in Germany, Italy, Spain, the USA and South Africa. The number of them has risen to a total of 26 since 2018.



## ANCHORING INTEGRITY IN PERSONNEL MANAGEMENT

Another focus of activities is the integration of integrity in as many HR processes as possible. For example, integrity has been a criterion in the recruitment process and in staff development of managers since 2019. Integrity was also taken into account as a required component of performance-related remuneration from the Board of Management to management level. Training and presentation documents aimed at specific target groups are used to provide information for new and existing employees and ensure that they have the competence they need.

## MEASURING PROGRESS WITH THE INTEGRITY INDEX

In addition to the Opinion Survey, we also use the integrity index in order to measure our progress in integrity and compliance. The index was developed in cooperation with the holder of the Peter Löscher Chair of Business Ethics at the Technical University of Munich (TUM) and comprehensively represents the integrity of an organization. We also use it as a key performance indicator in the Group initiatives on the “Excellent Leadership” module of the TOGETHER 2025+ strategy.

The index is cross-sectoral and global and of high scientific validity. It includes established frameworks such as the ECI and the Global Reporting Initiative (GRI). The index covers weaknesses in integrity and compliance matters and makes changes in the thinking and conduct of managers and employees visible.

We started the integrity index in 2019 as a pilot project for Volkswagen Passenger Cars Germany and AUDI AG (German sites). More than 100 measuring points in the compliance/infrastructure, working atmosphere/integrity culture, product/customers, society and partner/markets categories were collected and evaluated by Business Ethics experts. The analysis is based both on internal sources, such as employee surveys, guidelines and management interviews, and on external data, such as international databases and interviews with experts.

Both the companies examined – Volkswagen Passenger Cars and AUDI AG – exhibit a good integrity level overall. However, the detailed results signal a need for action in various places. Following a decision by the Board of Management, the findings will now be used in a structured follow-up process in order to derive and implement improvement measures together with the departments. The aim is to raise the integrity level at the two pilot companies to the next level. This improvement is to be confirmed with the planned follow-up integrity index survey at Volkswagen Passenger Cars and AUDI AG in the first quarter of 2021.

## COMPLIANCE

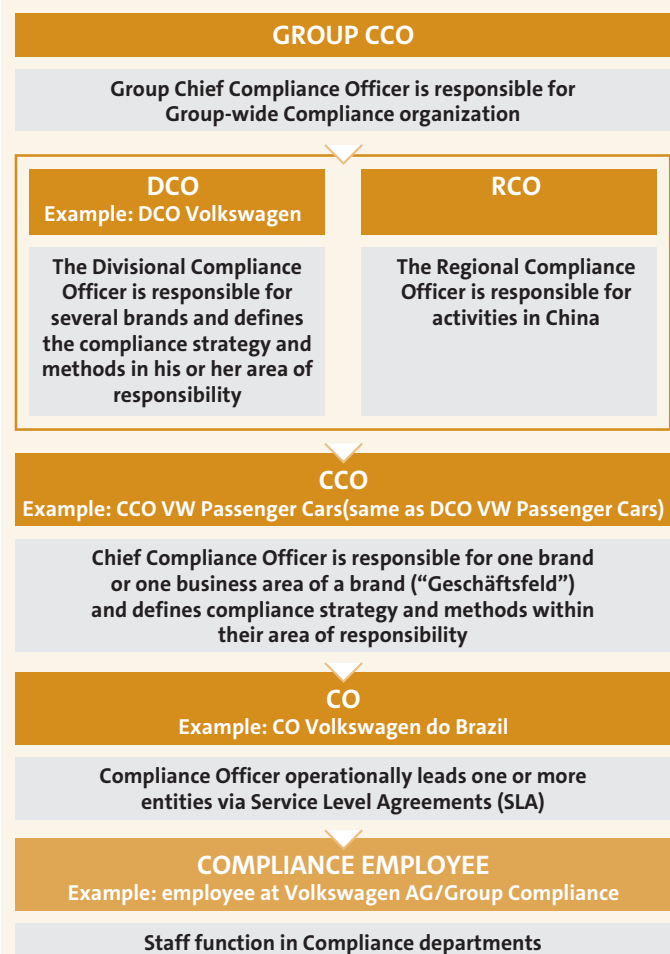
GRI 102-11, 102-17, 205-1, 205-2

### COMPLIANCE ENSURES ADHERENCE TO RULES


Compliance with national and international laws and regulations, internal rules and voluntary commitments is among our Company's guiding principles as well as ensuring compliant behavior in a lasting manner. We are striving to strengthen the trust of our

customers, our business partners and stakeholders in our Group through fair treatment. Compliant behavior is the basis for this and must be a matter of course for all Group employees. One of our Group's main tasks at present is to further enhance awareness of this.


## COMPLIANCE STRUCTURE IN THE GROUP



Our Group's compliance organization supports and advises the Group and brand companies, helping them to conduct their business activities in accordance with the rules and to consistently adhere to relevant laws and internal regulations. The focus of our compliance organization is on anti-corruption, breaches of trust and the prevention of money laundering. Furthermore, we have carried out an analysis on fraud prevention across all relevant second lines of defense in the reporting year.

 > 2019 Annual Report > Report on Risks and Opportunities

One of the results of this analysis is that the topic of human rights will in the future also fall under the responsibility of our compliance organization. At the moment, content-related, procedural and organizational preparations are being made in order to be able to successfully conclude the integration of the topic of business and human rights into the Volkswagen Group's compliance management system.

 > Responsibility > Human Rights

Our global compliance organization is headed by the Group Chief Compliance Officer, who reports directly to the Director of Integrity and Legal Affairs and the Audit Committee of the Volkswagen AG Supervisory Board. Furthermore, the compliance organization


is organized by division in the Group, which ensures communication and harmonized implementation of processes across all relevant Group companies.

The divisional compliance officers are generally responsible for several brands (brand company group) and implement compliance measures in their area of responsibility. Porsche AG is an exception: the divisional compliance officers there are only responsible for their own brand. The Regional Compliance Officer is responsible for activities in China. The chief compliance officers are responsible for a brand and report to their competent senior management on disciplinary matters and to the divisional compliance officers on functional matters. The compliance officers report to the senior management responsible for them and manage one or more organizational units operationally. They support management in the different companies to identify, assess, manage and monitor compliance risks and to take suitable action to counter these.

The Group Compliance Committee – a committee on a top management level chaired by the Director of Integrity and Legal Affairs – ensures that compliance and integrity standards are developed, applied and communicated in a standardized manner across divisions and brands. Communication between the Group and brand compliance managers and networking take place through regular meetings and conferences. Our compliance management system is aligned with national and international laws and standards.

## CLEAR RULES THROUGH THE CODE OF CONDUCT AND GROUP POLICIES

The Volkswagen Group's Code of Conduct is the key instrument for strengthening employees' awareness of correct behavior, giving employees support and guidance, and finding the right contact persons in cases of doubt. The framework is available to all employees on the intranet and to external third parties on the Internet. Employees can still contact Compliance – for example the Compliance information point at Volkswagen AG.

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Group > Compliance & Risk Management > Compliance

Reference to the Code of Conduct and the obligation to comply with it are integral parts of the employment contracts. The Code of Conduct remained part of our employee appraisals in the reporting year and was thus taken into account when calculating their variable, performance-related remuneration. Members of the higher levels of management have been certified on the Code of Conduct since 2019 and will be certified on it annually in the future.

In Group Compliance, numerous Group policies were transposed into the corresponding regulations at the brands and companies in the reporting year: dealing with gifts and the avoidance of conflicts of interest and corruption were regulated uniformly across the Group. In addition, the Volkswagen whistleblower system was strengthened as a central point of contact for serious breaches of rules. Group policies on the prevention of money laundering and

on mergers and acquisitions were also implemented. A new policy on governance and integrity, risk management, compliance and legal (GRC+L) describes the organization, structure and functions for compliance, integrity, risk and legal.

#### IDENTIFYING AND REDUCING COMPLIANCE RISKS

We conducted a Group-wide compliance risk analysis (ICRA) in the reporting year. As part of the analysis, the Group companies were classified into different risk categories on the basis of a comprehensive questionnaire. To reduce the potential risks, we have rolled out standardized compliance measures across the Group, the scale of which varies depending on the risk situation of the Group companies. This risk analysis will be repeated regularly.

#### MEASURING COMPLIANCE

To measure developments in compliance, we defined the “compliance, culture of error management and behaving with integrity” strategic indicator for the major brands that manufacture passenger cars. This is based on an evaluation of the answers to three questions in the opinion survey relating to compliance with regulations and processes, dealing with risks and errors, and behaving with integrity. In the case of negative deviations, the affected departments develop and implement measures. In the reporting year, the key performance indicator further improved on the previous good figure.

#### HIGH COMPLIANCE REQUIREMENTS FOR OUR BUSINESS PARTNERS

We also want to ensure that our business partners apply the same standard of integrity in business practices that applies to the Volkswagen Group. We therefore carried out integrity checks for business partners: so-called Business Partner Due Diligence (BP-DD). This check is made as part of a risk-based, transparent and proper documentation process. The Group's BPDD tool is an application it uses to check on the basis of risk whether existing and potential new direct business partners act with integrity and comply with all relevant laws, rules and regulations in their business. In the reporting year, we implemented our new standardized IT-based process worldwide. If a business partner does not meet our compliance requirements, risk-reducing measures are taken.

In addition, we have revised the Code of Conduct for Business Partners, in which the Compliance, Procurement and Sales divisions together draw up fundamental expectations of the business conduct and ethical behavior of their business partners for the first time, e.g. on the topics of human rights or the prevention of corruption.

#### WHISTLEBLOWER SYSTEM SHOWS BREACHES

The Volkswagen whistleblower system is the central point of contact for reporting serious breaches of rules in the Volkswagen Group. The focus is on investigating such breaches of rules that could seriously damage the Group's reputation or financial interests or that have significantly violated the Volkswagen Group's ethical core values. Examples of these include economic crimes, corruption offenses, tax offenses, environmental crimes, violations of human rights, breaches of antitrust and competition laws, money laundering and the financing of terrorism, breaches of production-safety and licensing requirements and significant breaches of data protection regulations.

The aim of the whistleblower system is to protect Volkswagen and the workforce from harm using binding principles and a clearly governed process. Experience with reported breaches of rules helps to enhance compliance management and prevent similar incidents in future. The whistleblower system guarantees the highest possible protection of whistleblowers and those affected. An investigation is only initiated after very careful review of the information and where there are concrete indications of a breach of the rules. The persons implicated are presumed innocent for as long proof of any violation of the rules has not been established. They are treated fairly, their response is heard as soon as possible and their names are cleared if they have been wrongly accused. The entire investigation process is subject to strict confidentiality and secrecy. Whistleblowers are also protected and their statements are treated confidentially. Their identity is not published if so desired and legally possible. Proven misconduct is sanctioned appropriately.

Information on misconduct by employees of the Volkswagen Group can be reported via a large number of reporting channels and the report can be made anonymously if desired. The whistleblower system is coordinated through the Central Investigation Office in Wolfsburg, which is also responsible for handling information from whistleblowers concerning Volkswagen AG and its subsidiaries. AUDI AG, Dr. Ing. h.c. F. Porsche AG and TRATON SE each have separate investigation offices for themselves and their subsidiaries.

The options for making an anonymous report also include a specially protected online reporting channel, which can be used to communicate using aliases, and an international 24-hour telephone hotline that takes calls in a total of 17 languages. In addition, two external attorneys (ombudsmen) have been appointed to take information from whistleblowers.

In 2019, 3,174 pieces of whistleblower information were registered across the Group (excluding China) at the four investigation offices (2018: 1,560). This shows that employees feel at home with the whistleblower system and the underlying procedure. Moreover, this is proof that employees are motivated to make an active contribution to preventing misconduct – there is a speak-up culture.

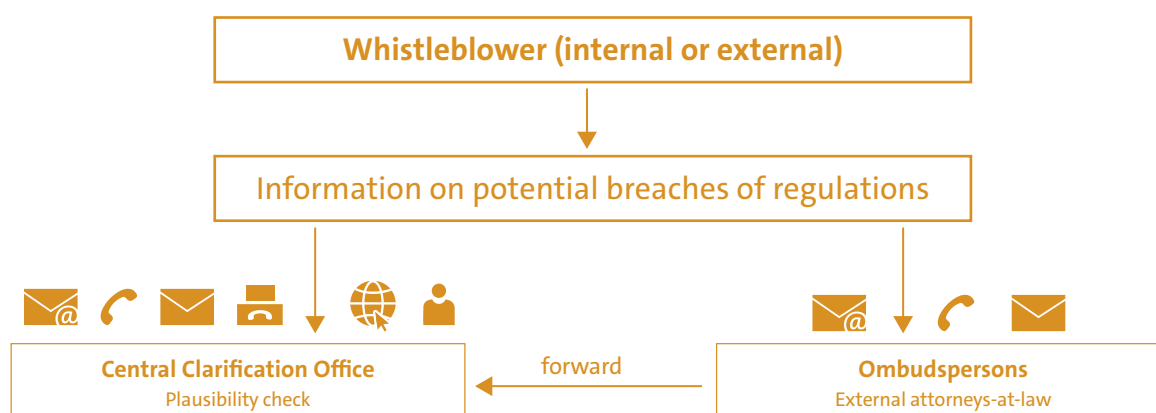


## TRAINING AND COMMUNICATION FORMATS

The training and communication activities on the topic of compliance were further expanded in the reporting year. The basis for understanding compliance in the Group is the training on the Code of Conduct, which is obligatory for all employee groups. Both face-to-face and online training is provided. The training is regularly repeated with new and expanded content and is documented in employees' training histories. In the reporting year, the Group also introduced mandatory anti-corruption training, which is also being rolled out across the Group. For the first time, raising awareness and training on this topic is aimed not only at internal target groups, but also implemented for business partners from sales and procurement on the basis of risk.

In line with the risk-based approach, compliance training sessions for specific target groups will also continue to be carried out – in some cases compulsorily – including on the prevention of money laundering. Moreover, compliance content is communicated in various dialog formats or in talks and events as part of the staff development programs. Various communication activities, campaigns and dialog formats, e.g. on the topic of anti-corruption or the whistleblower system, also extensively informed our employees and raised their awareness on compliance topics in 2019. Group Compliance is increasingly focusing on target-group-specific communication measures together with the departments.

## REPORTING CHANNELS OF THE WHISTLEBLOWER SYSTEM



## MONITORSHIP IN THE TESTING PERIOD

In October 2019, the US Department of Justice and the Independent Compliance Monitor Larry D. Thompson approved a request from Volkswagen to extend the testing period in the Monitorship. This means we have an additional 90 days to prove that we have met our commitments under the terms of Volkswagen's 2017 settlement with the US government. This time is being used to fully test and, where necessary, remediate the measures that the Group and its brands have put in place, including recommendations from the Monitor, in order for Thompson to certify the Group's ethics and compliance programs. Mr. Thompson's report will be submitted to the US Department of Justice in July 2020. His Monitorship, which was set at three years on his appointment in June 2017, will continue until September 2020.

As Volkswagen undertakes the biggest transformation in our history, we are working hard to embed a culture of integrity in everything we do and are making good progress. We intend to make sure that this change is lasting and continues long after the Monitorship ends. In a global company as large and complex as Volkswagen, we need to have enough time to be careful and rigorous in our upcoming testing.

As Independent Compliance Monitor, Thompson is tasked with ensuring that Volkswagen's compliance and ethics programs are appropriately designed and implemented to prevent and detect violations of US law of the kind that gave rise to the diesel crisis. He also oversees Volkswagen's obligations under the terms of its 2017 settlement of civil claims by the US federal government and the state of California as the Independent Compliance Auditor.

For our Group, sustainability means simultaneously striving for economic, social and environmental goals in a way that gives them equal priority. As one of the world's largest industrial corporations, we want to use our creative power in line with our sustainability model for the benefit of people and the environment – in the full knowledge that conflicting objectives exist in practice, which means this is not always easy. We have therefore developed a sustainable style of company management and put in place the necessary management structures.

Our TOGETHER 2025+ Group strategy enshrines the objective of shaping mobility to be sustainable for us and for generations to come. At the same time, we want to be an excellent employer and a role model for the environment, safety and integrity. We thus put sustainability at the center of running our business and in so doing are sending a signal that we are using the diesel crisis as an opportunity to make a new start.

A particular challenge when implementing our strategic goals on all levels of the value chain is the complexity of our Company, with its 12 brands, more than 670,000 employees and 124 production sites. We are taking our Group through the greatest transformation process in its history. This is particularly shaped by the transition to electric mobility, digitalization and new mobility services, which has affected our entire industry. We want to survive these challenges and become the leading company for individual mobility in the electrical and connected age. Furthermore, we are anchoring digitalization in all the divisions.

Climate protection is currently the greatest global challenge. We want to give our response to this and have decided on an ambitious decarbonization program, which aims to make us a carbon-neutral company in 2050. This commitment to the Paris Agreement means we are taking on a pioneering role. We are also guided by the requirements of the Task Force on Climate-Related Financial Disclosures (TCFD) and are providing concrete information about how we handle risks and opportunities that arise from the consequences of climate change for our Group.

With digitalization too, we want to become a business that shapes the change and are working at full speed to advance its development: not just in our vehicles and mobility services, but also in manufacturing and in management. This requires more of us than just developing new technologies and making them usable. The digital transformation must be supported by a forward-looking HR strategy that involves our employees, trains them and gives them job security.


## ESSENTIALS AND GUIDING PRINCIPLES

Our actions are determined by the Volkswagen Group Essentials, which set out the values and foundations for our shared corporate culture. The Volkswagen Group's Code of Conduct helps managers and employees deal with legal and ethical challenges in their day-to-day work. We also gear our activities toward many internal guidelines on sustainability. They include the Social Charter, the

Charter on Labor Relations, the Charter on Vocational Education as well as the Charter on Temporary Work.

Our objective with these fundamental principles is to achieve that the Volkswagen Group acts in compliance with international agreements and frameworks, such as the UN Sustainable Development Goals, the declarations of the International Labour Organization (ILO), the guidelines and agreements of the Organization for Economic Cooperation and Development (OECD), and the agreements of the United Nations on fundamental rights and freedoms.

In 2019, we developed "goTOzero", the new Group environmental mission statement, which enshrines our goal of conducting business in as environmentally friendly a manner as possible and to become carbon-neutral by 2050. The four areas of activity – climate change, resources, air quality and environmental compliance – are part of the mission statement. As a global company, we are aware that the importance of some of the action areas identified as material may differ significantly depending on the region.

 > The Environment > Climate Protection

## STRUCTURE AND TASKS OF THE SUSTAINABILITY ORGANIZATION

The organizational structures and organization as part of Group-wide sustainability management were defined in more precise detail in the reporting year. The resultant stipulations, structures and processes will subsequently be codified in a separate Group policy. The core elements of realignment include the establishment of the Chairman of the Group Board of Management's cross-functional overall responsibility for sustainability, the responsibility of the members of the Board of Management responsible for different areas for specific management systems related to sustainability and the development of the Group Steering Committee for Sustainability into a top committee of the Group. The members of this steering committee include executives from central Board of Management business areas and representatives of the brands and the Group Works Council. The Group Steering Committee for Sustainability defines concrete strategic targets and programs, sets out measures for uniform cross-business-area, cross-brand and cross-regional development of sustainability management and makes decisions on sustainability-related basic issues and positions in the Volkswagen Group. It also handles the further development of Group-wide sustainability management.

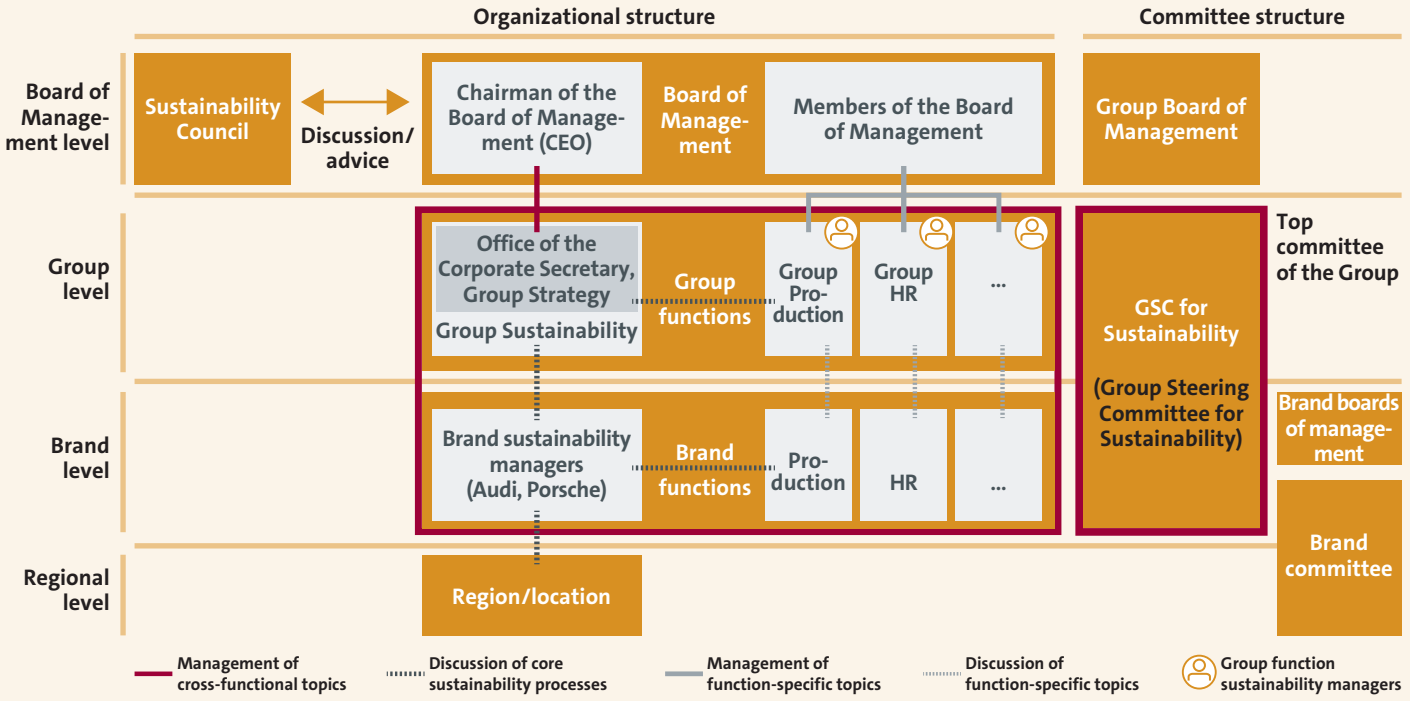
The Group Steering Committee's office is located in the Group's sustainability function (Group Sustainability). Group Sustainability has been restructured in the past months and integrated in the Office of the Corporate Secretary and Group Strategy. One particular objective of this reorganization is to ensure a close link between sustainability, the strategic company goals and the core business.

Group Sustainability coordinates all sustainability-related activities within the Group. Working together with Board of Management business areas, brands and regions, it defines and is responsible for so-called core processes of sustainability and sustainability

programs (e.g. the decarbonization program). The core processes of sustainability encompass the sustainability strategy, the materiality analysis, stakeholder management, ratings and rankings, sustainability policies and sustainability reporting (including the non-financial report).

In addition to the Group Steering Committee for Sustainability, regular discussions within the Group-wide sustainability network take place through various formats, such as the annual Group Sustainability Summit. We have institutionalized our stakeholder management work through external committees. At the Group level, these are the Sustainability Council and the Stakeholder Panel.

### SUSTAINABILITY EMBEDDED IN THE VOLKSWAGEN GROUP



### REVISING THE MATERIALITY ANALYSIS

GRI 102-46, 102-49

We use the framework of the Global Reporting Initiative (GRI) standards for our sustainability reporting. Since the 2017 reporting year, we have also used this framework with regard to the requirements of the CSR-RUG (German CSR Directive Implementation Act) regarding the disclosure of nonfinancial information in accordance with HGB sections 315c in conjunction with sections 289c to 289e.

The new TOGETHER 2025+ corporate strategy with its four target dimensions and its vision of “shaping mobility – for generations to come”, for shaping mobility to be sustainable for current and future generations, stand for a detailed analysis of which topics are material for the Volkswagen Group in 2019. We obtain material information for understanding the Volkswagen Group’s impact on society and the environment via our stakeholder management.

☰ > Introduction > Group Profile

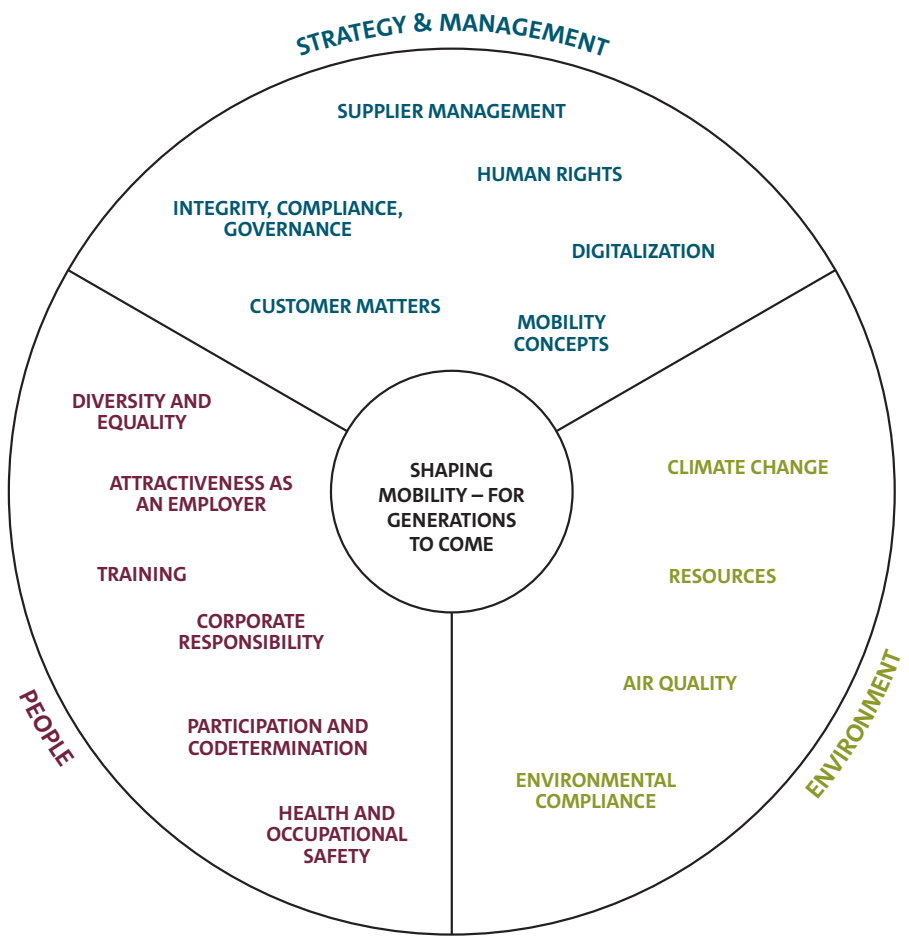
As the starting point for our materiality analysis, we are guided by the Sustainable Development Goals (SDGs) formulated by the United Nations, which describe the social challenges facing companies. Based on the results, we defined 16 key action areas pursuant to HGB section 315c in conjunction with sections 289c to 289e, which are explained in detail in this report. In order to identify key topics, we took into account external studies, sector and media analyses, ratings, stakeholder surveys, internal and external guidelines and codes, the TOGETHER 2025+ strategy, benchmarks and the individual departmental strategies.

These Volkswagen Group action areas were assessed as regards their importance for the strategy and their stakeholder relevance. We analyzed stakeholders’ demands, expectations and attitudes in relation to the action areas as part of a reputation survey in which more than 600 national and international individuals from numerous stakeholder groups participated. This procedure complements the activity of the established Stakeholder Panel and the Group companies’ stakeholder surveys. During this process, Volkswagen identified a total of 16 key topics.

When further developing our materiality analysis in the 2019 reporting year, we focused on updating and strengthening the environmental action areas and, in line with the “goTOzero” Group mission statement, defined the four action areas climate change, resources, air quality and environmental compliance. Digitalization and

mobility concepts (previously product and road safety) are new key topics. Based on our organizational structure, integrity, compliance and governance have been combined into a single action area. We see risk management as a cross-divisional early warning system and it is therefore no longer reported as a separate action area.

**THE VOLKSWAGEN GROUP’S KEY ACTION AREAS IN ACCORDANCE WITH HGB SECTIONS 289C (3) AND 315C (2) AND GRI STANDARDS**  
 GRI 102-47



In the overall view of all 16 action areas, we take all economic, environmental and social aspects of our corporate responsibility equally seriously. As a global company, we are aware that the importance of some of the action areas identified as material may differ significantly depending on the region. We do not currently prioritize between the action areas, but in the future we will define clear focuses via our sustainability program. We have already set an initial focus with the Group decarbonization program.

As the details of the new Group strategy have not yet been finalized, we are still in the process of specifying the content of the key action areas and defining corresponding values, targets and indicators. In 2020, we plan to continue the revision of our materiality analysis started in 2019, to implement the materiality analysis even more deeply within the company and to expand it to include an extensive IT-based data analysis.

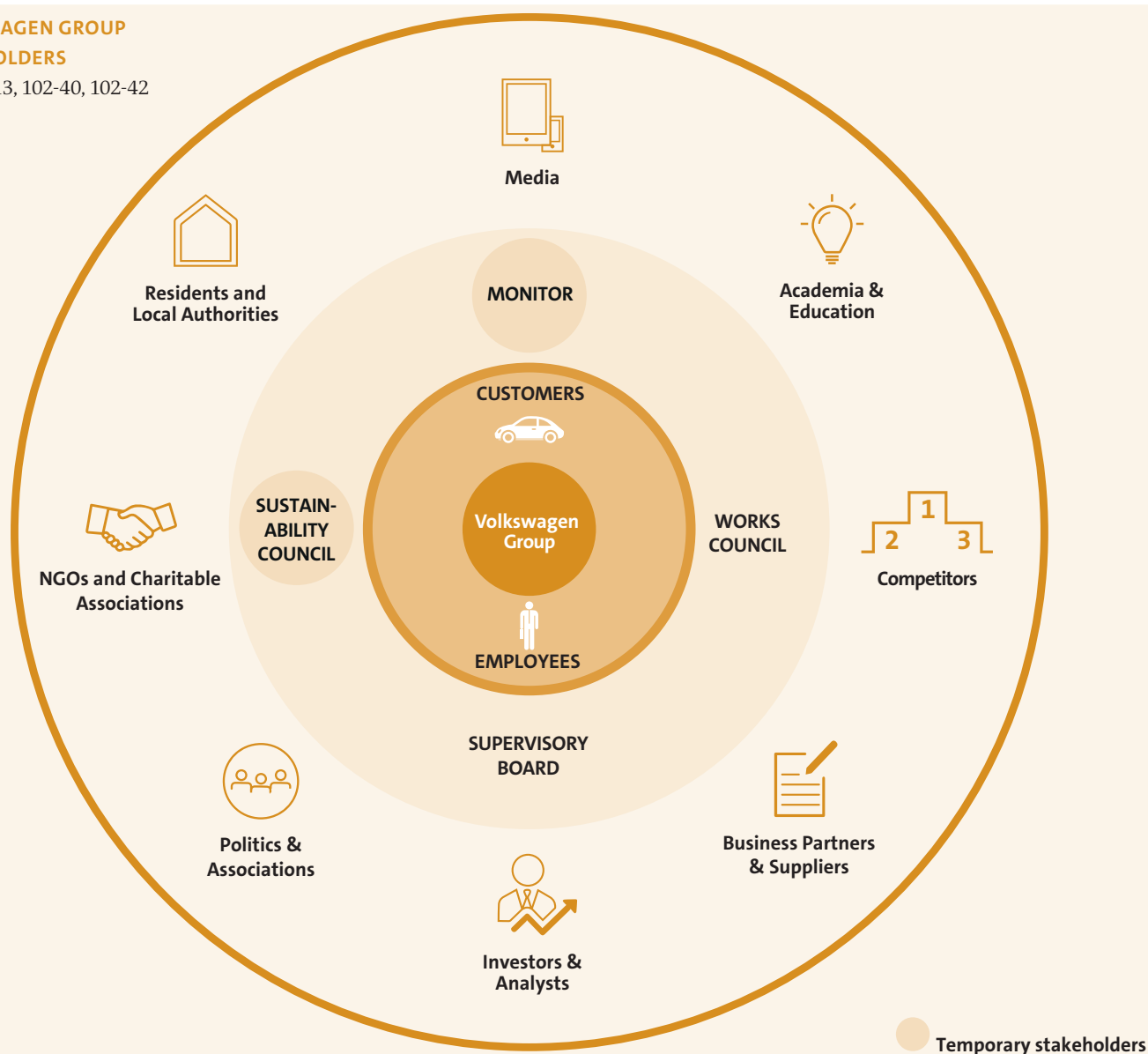
**STRATEGIC STAKEHOLDER MANAGEMENT**  
 GRI 102-42

Our stakeholders are individuals, groups, or organizations who have a material influence on or are materially influenced by the way in which the Group reaches its corporate decisions and the implications of those decisions. We have identified ten stakeholder groups of equal value in our environment. Our customers and our employees represent the innermost ring of the external stakeholder network. Around this core, we have identified eight further groups. The Group’s supervisory and advisory bodies, such as the Supervisory Board or Works Council, the Sustainability Council and the monitor appointed by the US Department of Justice act as a particular interface between internal and external stakeholders.

For us, stakeholder management means interacting with key stakeholder groups systematically, continuously and in line with our

## VOLKSWAGEN GROUP STAKEHOLDERS

GRI 102-13, 102-40, 102-42



TOGETHER 2025\* Group strategy. Stakeholder management aims to systematically record expectations and use feedback from our stakeholders to critically reflect on strategic planning processes. From now on, it will be an integral component of the new Group policies on environmental and sustainability management.

The reputation KPI, as a nonfinancial performance indicator of the Group, also makes a decisive contribution to anchoring stakeholder management in the strategy. The strategic KPI is part of the "Best Governance" module of the TOGETHER 2025\* Group strategy and checks the extent to which our stakeholders see Volkswagen as a trustworthy group of companies. The indicator is based on the responses by external stakeholders to the question in the annual Group reputation survey about the degree to which they trust the Volkswagen Group. The survey data is based on personal telephone interviews that are conducted annually in the summer period with selected representatives from the fields of politics and associations, scientific bodies, NGOs, investors, analysts and business partners

in the three key markets (Germany, the USA, China). The indicator shows the proportion of survey participants, as a figure of between 0% and 100%, who state that they trust the Volkswagen Group. In 2019, the Group achieved a figure of 34% of stakeholders compared to 26% in 2018. In the USA, the proportion was 55% (2018: 54%) and in China 93% (2018: 84%). Once a year, we produce a summary of our stakeholder feedback and the reaction of the Group in this regard as part of our nonfinancial reporting. In the 2019 reporting year, our stakeholders submitted recommendations to the Group across all committees and formats. These suggestions and expectations provide important stimuli for further developing the Group strategy and sustainability management. A summary is available on the Group's corporate website.

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Sustainability > Reporting

Given the size and complexity of the Group, we follow a multi-level approach. Our brands and regions have their own stakeholder

activities. The Group's task is to bring together all of these activities in an integrated stakeholder activity framework. This includes:

- Stakeholder activities on a Group level with specific committees, special formats and a focus on stakeholders relevant across the Group
- Advising and coordinating the brands and regions and their activities through Group sustainability management.
- Harmonizing activities, e.g. with the help of our sustainability model, stakeholder guidelines and regular internal meetings to share best practices
- Documenting activities, e.g. with the help of the sustainability report and the "Shift" magazine, our Group website, press releases, newsletters and social media
- Carrying out regular stakeholder analyses and stakeholder surveys

### SUSTAINABILITY COUNCIL AS AN INDEPENDENT BODY

To support its strategic sustainability issues, the Volkswagen Group appointed a Sustainability Council in September 2016. This is made up of internationally renowned experts from the academic world, politics and society. The Council establishes its own working methods and areas of focus independently, has extensive rights for the purposes of exchanging information, consultation and initiating action, and consults regularly with the Board of Management, top management and the employee representatives. The project, which began in 2018, achieved its first results in 2019: the Open Source Lab on Sustainable Mobility, for example, organized dialog events about using open data in mobility and prepared handouts, the international program for financing forecast-based civil protection has implemented initial mechanisms, the research project on transport policy instruments for achieving international climate targets has published initial short studies, the visiting professors at Open Labs have begun their work and the project for the strategic focus of sustainability at Volkswagen has reached its first milestones. In addition, the Council decided on three new initiatives: a research project on distribution effects and the acceptance of climate-friendly fiscal policies, a survey on the effects of digitalization and e-mobility on employment and a commitment to a sustainable cobalt supply chain. Furthermore, the Sustainability Council formulated further recommendations for how technological, political and cultural change should be organized to win back trust and lay the foundations for future success.

### OPEN DISCUSSIONS IN THE STAKEHOLDER PANEL

The Volkswagen Group has established a Stakeholder Panel, which has overseen the Group sustainability activities for over 20 years. The aim is to critically question and continuously improve sustainability management, Group initiatives and reporting processes. The members of the panel receive invitations to dialog events and surveys at regular intervals and are our reference points in stakeholder analyses. In the 2019 reporting year, we increased the size of the panel in German-speaking countries (Germany, Austria and Switzerland) from 150 to more than 300 participants. For 2020,

we plan to establish an international panel of a comparable size as the basis for international stakeholder dialog activities.

### DIALOG AND INTERACTION OPPORTUNITIES

GRI 102-43

In June 2019, we launched the Volkswagen Group Stakeholder Dialog Series in Wolfsburg as a Group-wide dialog series in the conference format. The aims were the open-ended recording of stakeholder ideas and the transparent provision of information on current sustainability topics, such as electrification, decarbonization, cultural change and sustainable supply chains. By cooperating with initiatives, we continuously expand our collaboration with external partners. For example, the Volkswagen Group became the first automotive manufacturer to be an official member of the Global Business Initiative on Human Rights (GBI) in September 2019. This highlights our commitment to protecting human rights at all levels of the value chain.

A detailed overview of our activity formats can be found on our website:



> [www.volkswagenag.com](https://www.volkswagenag.com) > Sustainability > Reporting

### REPRESENTATION OF INTERESTS TOWARDS POLITICS AND SOCIETY

GRI 415-1

The Volkswagen Group and its brands work in a complex and highly regulated environment. When making business decisions, numerous conditions must therefore be taken into account and the consequences of these decisions for our stakeholders must be assessed and factored in. We consider it our responsibility to actively participate in shaping the framework for our economic activity in dialog with these groups.

On a Group level, the representation of the Group's political interests towards governments, parliaments, authorities, associations, institutions and society is coordinated worldwide and a coordinated approach and action and consistent communication of the brands and companies is ensured. To this end, in the 2019 reporting year, the structures were refined by a Group-wide policy and additionally a "Public Affairs" steering committee was set up. The committee regularly reports to the Group Board of Management.

Principles such as integrity, openness and verifiability and guidelines for contact with politicians as well as rules for transparency are set out in the Group-wide policy. For instance, Volkswagen AG's entry in the European Union's transparency register and the disclosure of our positions represented to politicians in the reporting year are based on these principles. For example, we advocate a sustainable and politically united Europe that is based on strong EU institutions and on the principles of the internal market and freedom of movement for workers. We support free and fair international trade relations on the basis of global agreements that protect human rights and promote prosperity, employment and growth. In some cases, we have attracted public criticism in individual countries due to our



business activities. More generally, these debates are also about the question of whether and how international corporations can be active in political systems whose values are not lived by the Group and do not correspond to represented values. We believe politicians – not companies – set the framework for corporate action. Fundamentally, we orient our business decisions on local laws within the framework of international requirements, such as the UN Norms on Corporate Human Rights Responsibilities, and on our own ethical standards. Wherever we operate, we live and represent our values. We derive the commitment to oppose any strengthening of extremism in politics and society from our historical responsibility.

Rules for the representation of the Group's political interests in associations have also been developed as part of the Group-wide policy. Firstly, all areas in the Group that carry out the tasks of representing political interests inform the Public Affairs Division of their activities. Secondly, policymakers within the associations are committed to the same principles and guidelines. They undertake to contribute the Group's positions for dialog with politicians to the discussions within these organizations within the framework of what is permitted under competition and antitrust law without change. Where the positions for dialog with politicians that are decided in the group of members differ substantially from the contributed positions of the Group, this is recorded as dissent.

The Group does not make political donations as a matter of principle. Where other forms of financial support are permitted and desirable, we set rules for granting and disclosing this support, for example for parties in the democratic spectrum in Germany in the context of sponsoring. Figures for the support of party events and for the advertising budget for party-affiliated publications are disclosed annually.

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Sustainability > Policy

### STRENGTHENING OF INTEGRITY AND COMPLIANCE

We have learned from the errors of the past, particularly from those of the diesel crisis. We continue to strengthen integrity and compliance in the Volkswagen Group, because our goal is to be a role model in this area. This is not just shown by the development of the integrity index and our commitment to the implementation of our Group-wide Together4Integrity (T4I) program. We have also created new and extended Group policies in the areas of the prevention of corruption, the whistleblower system, money laundering and business partner due diligence. Furthermore, we have established a compliance management system for human rights, thus creating the conditions for completely integrating the business and human rights focus area into the Volkswagen Group's compliance management system. We have also underlined the significance of this action area with the Board of Management's appointment of a coordinator for the topic of human rights in 2019. In the field of environmental management, we have put compliance on a new footing, thus reflecting our knowledge that serious breaches of rules are also associated with significant damage for

our Group and society in this area. We will tackle corresponding risks at an early stage.

We are consistently extending this principle of comprehensive risk prevention to all issues of corporate responsibility and have specifically further developed the Volkswagen Group's risk management system to this end. Along with risks that arise for the Group as a result of changed, external general conditions, we also take account of the impact on and associated risk for people, the environment and society that may originate from the Group.

### MEASURABILITY OF OUR SUSTAINABILITY PERFORMANCE

We will make our sustainability performance even easier to measure in the future and have developed new strategic figures and extended existing indicators for this. There are various key performance indicators for sustainability:

- The decarbonization index measures the Group-wide reduction of CO<sub>2</sub> emissions per vehicle over the entire life cycle of the product portfolio of major brands that manufacture passenger cars and of light commercial vehicles in the Europe (EU-28, Norway and Iceland), China<sup>1</sup> and US regions.
- The Opinion Survey provides information on employee satisfaction and the internal assessment of employer attractiveness.
- The diversity index assesses achievement of the target of increasing the proportion of women and the level of internationalization in management.
- The integrity index shows the progress in achieving targets in the field of integrity and compliance and the corresponding need for action. In addition, it makes changes in managers' attitudes and actions visible to employees. We started the integrity index in 2019 as a pilot project for Volkswagen Passenger Cars Germany and the German sites of AUDI AG.
- The reputation KPI is calculated using international surveys on stakeholders' trust in the Volkswagen Group.

These and other strategic KPIs are linked with concrete programs and roadmaps in our action areas that are being gradually rolled out in all brands and companies. Further details can be found in the relevant chapters of this report.

We are also increasing measurability in the sustainable organization of our supply chain. As of this year, we evaluate our suppliers' sustainability performance in the fields of ecology, society, integrity and human rights with a new sustainability rating and show them opportunities for improvement. We are now also making the measurement a decisive criteria for awarding contracts and for maintaining business relations. This is particularly a response to the challenge that the transition to electric mobility means resource consumption and greenhouse gas emissions in the extraction of raw materials and production may rise, but human rights risks may also increase in value creation, e.g. in the field of conflict minerals.

<sup>1</sup> Fleet emissions have been calculated on the basis of the rules applicable in China, including taking credits for BEVs and PHEVs into account.

## TRANSPARENCY THROUGH IMPACT ANALYSES

In the interests of our ability to manage the Group, we want to take decisions on complex issues on a broader knowledge basis and with the aid of outstanding analysis ability. This also strengthens the Group's reputation, the legitimacy of the business model and the dialog with our stakeholders, to whom we want to communicate our approach transparently and verifiably.

For example, the Volkswagen Group has set itself the objective of measuring the impact of its actions more quantitatively in the future and, if possible and reasonable, to monetize this. It is about positive and negative impacts that the Group has in all sustainability dimensions with its business, supply chains and products and services. To this end, we conducted a pilot project at the Kassel site in 2019. We chose the site in view of the plant's transformation in the direction of e-mobility, its ability to innovate and its role as a large employer anchored in the region.

We want to not just expand this process as a management approach and as an analysis and reporting tool, but particularly to evaluate our contribution to meeting the United Nations' 17 Sustainable Development Goals with it.

With this approach, the Volkswagen Group and Porsche are supporting the tasks of the value balancing alliance initiative, which campaigns for standardization of impact assessment.

We also strive to be able to understand the impact of new mobility concepts and vehicle technologies even better and assess these reliably. We are thus carrying out impact assessments based on real data, models and simulations in many areas. These include, for example, concepts of shared mobility, congestion avoidance at traffic lights or the improvement of air quality in urban areas.

In any event, our sustainability strategy focuses on improvements of the traffic situation in urban areas and global cities. This is where we believe the future of mobility will be decided. The majority of the world's population already lives in cities where traffic problems with congestion, accidents and poor air quality demand concrete solutions. We therefore aim for a close partnership with cities across the world and want to shape urban mobility to be sustainable together with them.

## SUSTAINABILITY RATINGS


Analysts and investors are referring increasingly to company sustainability profiles when making their recommendations and decisions. They draw primarily on sustainability ratings to evaluate a company's environmental, social and governance performance. At the same time, sustainability ratings are instrumental in determining whether we are meeting our goal of being one of the world's leading providers of sustainable mobility. Furthermore, they provide the basis for implementing internal measures.

After the diesel issue became public knowledge, the Volkswagen Group was downgraded significantly in the MSCI, RobecoSAM, Sustainalytics, oekomISS, Vigeo Eiris, EcoVadis and RepRisk sustainability indices and consequently removed from sustainability indices such as the Dow Jones Sustainability Index and the FTSE4Good Index. In fiscal year 2019, Volkswagen continued to have a score of A- in the CDP and had an A rating in the Water Disclosure Project (WDP).

## SOCIAL RESPONSIBILITY

GRI 102-12

As a good corporate citizen, we would like to be a constant economic driver, contributing to local structural development and equal opportunities. We have always believed in the importance of recognizing our social responsibilities towards our stakeholders. The main focus of our corporate social engagement activities is on supporting local development, educational and community projects at many of our sites around the world. In 2019, the brands and companies supported more than 520 projects and initiatives on a global scale – information on the individual topics and projects can be found on our website:

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Sustainability > Reporting > CC-Projects Worldwide

We select specific projects and develop them on our own or in partnership with local partner organizations and NGOs. We choose and carry out projects in accordance with our Group-wide guidelines:

- The projects are in accordance with the Group Essentials and address a specific issue of local relevance or a global challenge.
- They are an expression of diversity within the Group and the social environment in which the projects are carried out.
- They are the result of close stakeholder dialog with the local players involved in implementation.
- Project management is the responsibility of the local units working on the project.



During the reporting year, we were involved in numerous projects to sustainably improve social structures. We give donations in cash and in kind to support activities and projects primarily devoted to education, culture, sports and social causes. Donations may only be given to recognized nonprofit organizations or ones specifically endorsed to receive donations. In the reporting period, Volkswagen AG made donations amounting to €33.6 million.

In the long-term cooperation between the Volkswagen AG and the German Red Cross, the focus in the reporting period was on the Forecast-Based Financing program. The subject of the program is the provision of financial resources for humanitarian aid on the basis of detailed forecasts and risk analyses. The aim is to predict disasters, to minimize their effects as far as possible and thus prevent human suffering. Another part of the partnership is the "Future of public health protection and the emergency services in Germany".

The topic of corporate volunteering is particularly important to us in the context of employees' broad involvement in running the business. An important component of volunteering in Volkswagen AG is the Volkswagen pro Ehrenamt program. The aim is to raise more awareness of voluntary activities and to support and encourage them. This is why Volkswagen sees Pro Ehrenamt as a hub between people who want to get involved and those who have voluntary work to offer. The program is aimed at all Volkswagen employees and their partners at our sites and at former employees in early retirement or retirement.

The Volkswagen workforce has taken on social responsibility for people in need for decades: Volkswagen AG's employees donated more than €760,000 in 2019. Employees and the Group support disadvantaged people at the Volkswagen AG locations through these workforce donations. Support is given to specific projects, which, for example, improve the situation of people whose quality of life has been affected by illness, disability, or other circumstances. Likewise, the Group's employees, led by the Group Works Council, have supported the international children's relief organization terre des hommes for 20 years. In 2019, the amount donated was more than €1.2 million. At the Volkswagen Group's production locations in Argentina, Brazil, India, Mexico, South Africa, Thailand and Germany, a wide variety of projects for disadvantaged boys and girls are funded from the donations. They are given protection, support, the opportunity for education and career prospects. Employees do not just get involved as part of special campaigns, such as the Audi workforce fundraising for earthquake victims in Mexico. For years, many employees have also been donating the cents shown after the decimal point in their pay slips.

#### INTEGRATION SUPPORT FOR REFUGEES

The Volkswagen Group's refugee aid program also created a large number of site-specific options for refugees in cooperation with the people responsible for sustainability of the Group brands in 2019.

There were three areas of focus here: meeting, education and professional integration.

Regular opportunities to meet other people, such as "Kitchen Stories" or "Kicking About and Cooking" have encouraged communication between our employees and refugees and dismantled reservations. In the field of education, our focus was on acquiring language skills, developing expertise and obtaining primary qualifications, because these skills form the basis for career prospects for refugees in Germany. We offered language courses lasting a number of months, supported integration and employability courses and, together with our cooperation partner for student support, Kiron, brought together refugee students and Volkswagen employees in intercultural workshops.

We have implemented career guidance and skills assessment measures at various Group sites. Our entry-level vocational qualification options, which combine theoretical and practical preparation for a career and an intensive language course and thus prepare refugees for an apprenticeship in Germany, were just as successful. Apprenticeship options for refugees rounded off the offering.

In addition to the Group-wide involvement of the Audi, Porsche, MAN, Volkswagen Financial Services, Volkswagen Commercial Vehicles and Volkswagen Passenger Cars brands, many employees of the Volkswagen Group do voluntary work for refugees. Supporting them in this is also the Volkswagen Group's refugee aid program's task. From 2015 until the end of 2019, we reached more than 5,000 refugees through our projects.

#### SUPPORTING SOCIAL BUSINESS

The Volkswagen Group supported the Global Social Business Summit again in November 2019. In Berlin, 550 representatives from business, the academic world, politics and society discussed business models that pursue social and environmental objectives and are at the same time economic. The participants came from 54 countries.

The Volkswagen Group supported the annual conference with Nobel Peace Prize winner Prof. Muhammad Yunus for the fourth time. At the event, international social business players presented their ideas for a more sustainable and more social world in various workshops and worked on their own possible social business projects with the Volkswagen Group.

#### CONNECTING DIGITALIZATION AND SOCIAL ENGAGEMENT

The Volkswagen Group also increasingly uses the potential of digitalization in its social engagement. One example is the xStarters program, which focuses on the digital education of young people. In creative workshops with design thinking elements, young people between the ages of 14 and 19 learn digital and non-digital skills for the future around finding ideas, prototyping or robotics in and outside of schools. Slightly more than 100 workshops have been held since 2018 and approximately 2,400 school students have

been reached. Volkswagen Group employees are also involved in the xStarters program, working as volunteers to contribute their knowhow and support the young people.

The connection of sustainability and digitalization can also be found in procurement in the Volkswagen Group. Transparency in the supply chain is a cross-sectoral hot topic that particularly affects the automotive industry. For example, the conversion to e-mobility poses a challenge for the Volkswagen Group both in terms of the technology and infrastructure: in order to be able to ensure sustainable mobility, responsible procurement of raw materials has the highest priority, particularly in the case of cobalt, lithium, nickel, lead and rare earths.

That is why the Volkswagen Group, Adidas, Zalando and Deutsche Bahn work together in a collective impact initiative and have together put on the Supply Chain Transparency Hackathon Series since 2018. The aim of this format from the corporate citizenship business area is to make expert knowledge from the companies involved available to start-ups via corporate volunteering. The participants from various disciplines each work together with the start-ups in cross-company teams for one day in order to develop innovative, digital solutions for practical applications. In this way, for example, it should be possible to track respect for human rights and compliance with environmental standards along multi-tiered supply chains more easily. The hackathon series was continued in 2019 with three events and 300 participants.

## SUPPLY CHAIN

GRI 409-1, 412-1, 412-2, 414-1, 414-2

### GLOBAL RESPONSIBILITY IN THE SUPPLY CHAIN

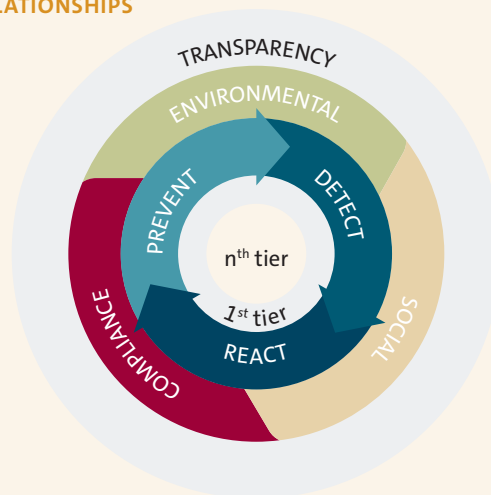
We purchase products and services around the world to manufacture our products. At 40 locations in 24 countries, our procurement network ensures that our production facilities are supplied with materials of the requisite quality, in the required quantities, at competitive prices. Due to the complexity of its products, the Volkswagen Group's supply chain is highly complex, globally distributed and subject to constant change. In a business with international production facilities and sales activities in more than 150 countries, compliance with due diligence obligations is an enormous challenge and a great responsibility.

The greater penetration of e-mobility in our fleet also means that emissions will shift from the usage phase to the supply chain in the future. If nothing else, the high demand for energy for the production of components for electric mobility plays an important role here. This is why the reduction of CO<sub>2</sub> emissions in the supply chain represents a strategic topic of focus for us. At the same time, e-mobility means an increase in the consumption of difficult-to-obtain raw materials and minerals. The Volkswagen Group and its suppliers are confronted with increasing expectations and regulatory requirements resulting, for example, from the National Action Plans to implement the UN Guiding Principles on Business and Human Rights.

### MANAGEMENT APPROACH WITH THREE DIMENSIONS OF ACTION<sup>1</sup>

We want to live up to our responsibility in our business relationships on a global level and act proactively beyond fulfilling legal requirements. In procurement, we follow a three-pronged approach to establishing sustainable supply chains with the focuses of decarbonization, human rights, responsible procurement of raw materials and combating corruption. This step requires transparency about the supply relationships that go beyond the first tier (tier 1).

### SUSTAINABILITY MANAGEMENT SYSTEM IN SUPPLIER RELATIONSHIPS



<sup>1</sup> This management approach excludes the joint ventures in China.

- **Prevent:** Sustainability requirements are enshrined in contracts and specifications, particularly the Code of Conduct for Business Partners. Suppliers are trained and their awareness is raised.
- **Detect:** The sustainability risks in the supply chain are systematically detected and prioritized. Sustainability is anchored in the material contract award decisions across the Group and a rating of potential suppliers' sustainability performance ("S rating") is used. The basis for this is self-assessment and risk-based on-site audits.
- **React:** Various measures are available to react to the risks and impacts identified. These include a standardized ad-hoc process to review breaches by individual suppliers and action plans from audits. The key objective is to rectify and prevent breaches and to actively and effectively improve suppliers' sustainability performance.

In order to identify current developments and long-term challenges in the individual countries, we encourage dialog between our brands and regions through the Sustainability Procurement Network, in which more than 50 experts from five continents work together.

#### CLEAR REQUIREMENTS FOR SUPPLIERS (PREVENT)

The core element of our supplier management is the "Volkswagen requirements for sustainability in relations with business partners" – the Code of Conduct for Business Partners. This was thoroughly updated in 2019. It embeds our expectations of our business partners' conduct with respect to key environmental, social and compliance standards in our contractual agreements. The requirements are based, among other things, on the OECD Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights and the relevant International Labour Organization (ILO) conventions. The Code of Conduct is, however, not just based on international standards, but also objectives, rules and policies of the Volkswagen Group.

In the area of the environment, for example, there is a requirement that business partners with production facilities where more than 100 employees work must have a certified environmental management system in accordance with ISO 14001 or EMAS. Suppliers must share information about total energy consumption and CO<sub>2</sub> emissions with the Volkswagen Group on request. In addition, we recommend that our suppliers put in place a certified occupational health and safety management system that complies with OHSAS 18001, SA8000 and/or AA1000.

Before submitting a quotation, our suppliers must confirm that they acknowledge our sustainability requirements; this explicit acknowledgment must be repeated after 12 months have elapsed if they wish to submit new quotations. We also call on our tier 1 suppliers to pass our requirements set out in the Code of Conduct down along the supply chain.

#### SYSTEMATIC DETECTION OF SUSTAINABILITY RISKS (DETECT)

Our aim is to know and effectively address the material sustainability risks in our supply chain at all times. A sustainability rating (S rating) was introduced as a key measure in mid-2019 and has since been implemented across the Group. It is used to audit the sustainability performance of suppliers and show opportunities for continuous improvement. It assesses the environmental performance of suppliers and their social sustainability and integrity.

The S rating is directly relevant to awarding contracts: if a supplier does not meet our requirements for compliance with sustainability standards, it is fundamentally not eligible for the award of contracts. There is thus a direct incentive for suppliers to improve their sustainability performance.

The check for the S rating takes place via a multistage process. In an initial step, the risk exposure is identified based on a combination of country risk and the supplier's corporate processes and policies. A specialist service provider is used for the identification of the country risk. The Group's sustainability performance is analyzed by means of a standardized questionnaire for self-assessment. We developed the "SAQ" questionnaire in a joint project with other automotive corporations involved in the DRIVE Sustainability Working Group organized by CSR Europe. The information and documents in the SAQ are rechecked and validated by a service provider: if a supplier states that it has appropriate processes and policies, it must prove this with documents.

A total of 12,646 suppliers submitted a questionnaire in 2019. In the reporting year, over 5,915 suppliers improved their sustainability performance through taking appropriate steps. 65% of our 2,000 highest-revenue suppliers documented that they have a certified environmental management system in accordance with ISO 14001 and/or EMAS.

Following an initial analysis of the supplier data, in-depth audits are carried out on site, based on risk. If the results of the audit reveal serious shortcomings in the implementation of our sustainability requirements, the supplier in question is generally given a negative rating. This means that the award of a contract is generally not possible. 1,331 on-site audits were carried out worldwide in 2019. On average, three breaches of our sustainability requirements were identified. Clear differences can be seen depending on the region.

#### AD-HOC CASES IN 2019


Geographic region	Average breaches per region
Africa	3.7
Asia*	4.7
Europe	1.9
Latin America	2.2
North America	5.2

\* In terms of geographical distribution, Russia and Turkey are allocated to Asia.

In order to avoid duplication and for broader coverage of the supply chain, we are currently working together with OEMs and suppliers in a working group of the German Association of the Automotive Industry (VDA) on a joint standard for on-site audits. The plan is that suppliers will only have to have themselves audited once from 2020 onward. The results can then be shared with all the business partners involved via a central platform.

The Volkswagen Group has been preparing its business partners for the S rating with information and in events and workshops for almost a year. By directly connecting the sustainability performance to eligibility for the award of contracts, the Volkswagen Group is sending a clear signal to its suppliers to work towards sustainable penetration of the supply chain together with the Volkswagen Group – because the primary aim is not to exclude suppliers from the supply chain through the S rating, but rather to equip those who cannot yet produce a satisfactory performance to do so. This is the only way in which positive impacts on people and the environment can be achieved. With this in mind, every supplier has the option of undergoing a reassessment after taking improvement measures.

Business partners who we have identified as having an increased corruption risk due to their business and region are also subjected to an in-depth audit. All relevant business partners will then be continuously checked for any change in general conditions through a risk and news screening. So far, our database contains 416 Business Partner Due Diligence audits.


> Responsibility > Compliance

### MAKE IMPROVEMENTS ON SITE (REACT)

A series of measures are available to react to risks identified in the supply chain and concrete breaches by suppliers, and thus to actively bring about improvements.

What we refer to as “ad-hoc cases”, i.e. suspected breaches of the sustainability requirements that occur suddenly, represent a significant component of sustainable supply chain management. The process of ad-hoc case management was revised and systematized in 2019.

The breaches that lead to opening an ad-hoc case can, for example, be uncovered through information from third parties or employees in the supplier businesses. In such a case, the relevant ad-hoc expert team of the relevant brand or region coordinates a catalog of measures and is supported by the Group ad-hoc expert team.

If we determine that suppliers or sub-suppliers are failing to meet our sustainability requirements in such a case, we ask them to provide a written statement based on a standardized report (6D Report). Based on six points, our business partners can describe the situation and any remedial measures. Repeated on-site checks carried out by external service providers can help to determine whether the measures were carried out in a satisfactory manner.

### DEALING WITH AD-HOC CASES

During the reporting period, Group Internal Audit agreed measures with suppliers in addition to 27 ad-hoc cases that were processed by Procurement. This concerned suppliers where behavior contravening the rules or contracts was identified as a result of information provided or audits carried out. The collaboration was ended or suppliers were blocked for new awards of contracts in the case of a total of 17 suppliers due to the activities of Procurement and Internal Audit.

Geographical distribution	Context		Type of supplier		
Europe	20	Social	18	Direct supplier	18
Asia*	6	Compliance	8	Subcontractor	9
Africa	1	The Environment	1		
North America	0				
Latin America	0				

\* In terms of geographical distribution, Russia and Turkey are allocated to Asia.

Employees and external parties can also report potential breaches of rules on the part of our suppliers to the Volkswagen Group's employee representatives or the trade union associations and use the Volkswagen Group's whistleblower system. Potential breaches of rules can also be reported to [sustainability@vwgroupsupply.com](mailto:sustainability@vwgroupsupply.com). This applies to possible breaches on the part of our tier 1 suppliers as well as sub-suppliers in the supply chain. External ombudsmen are available as a further point of contact.

### PARTICULAR DUTY OF DUE DILIGENCE FOR HUMAN RIGHTS

As part of our sustainable supplier management measures, we pay particular attention to protecting those groups of people who, along our supply chain, are at particularly high risk of human rights abuses. In this context, we are guided by the implementation of processes of due diligence with regard to human rights, as required in the UN Guiding Principles on Business and Human Rights and the OECD Guidelines for Multinational Enterprises. In line with the requirements of a risk-based approach, we concentrate our measures on the supply chains that are associated with particularly high risks for negative impacts according to our analyses.

These particularly include our raw materials supply chains. The way we organize the responsible sourcing of raw materials is driven by the requirements of the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. This contains guidelines for management approaches, for risk identification and prevention, for checking smelters and for communication and reporting instruments.

With regard to the conflict minerals tin, tantalum, tungsten and gold, for example, we require our suppliers' management systems to exclude the use of minerals from smelters not certified in accordance with international standards. We check these by obtaining

reports about all smelters in our upstream supply chain through the Responsible Minerals Initiative's internationally recognized Complex Mineral Reporting Template and evaluating the results. In the reporting year, 473 groups of companies supplied components that also contained tin, tantalum, tungsten or gold. We have clearly identified 327 smelters of tin, tantalum, tungsten and gold in their supply chains. If we identify noncertified smelters in our supply chain, we take steps to certify these smelters.

However, within the framework of our human rights due diligence obligations we also work in other raw material supply chains. To this end, we closely cooperate with our direct suppliers and in suspected cases of noncompliance require our suppliers to disclose the sources of materials that may have some connection with human rights violations, such as child, forced or compulsory labor as well as any other forms of modern slavery or human trafficking. This also applies to labor conditions in the extraction of raw materials such as cobalt, mica, or natural rubber. Because these processes are very time consuming as a result of the complexity of supply chains with up to eight tiers, we proceed on the basis of risk. In order to work systematically and in line with the OECD Due Diligence Guidance for this, we are currently developing an enterprise risk management system for the issue of raw materials.

Our current focus of action is battery materials, particularly cobalt. In close collaboration with our battery cell suppliers, we are pursuing the objective of creating complete supply chain transparency from mining the raw materials to manufacturing the finished product. This is the only way in which we can effectively prevent negative impacts. One component of our strategy in this context is also working directly with the mine operators, because the risk of violations, particularly of human rights, is highest at the start of the supply chain and this can consequently be countered the most effectively.

#### **BLOCKCHAIN FOR MORE TRANSPARENCY AND SECURITY IN THE SUPPLY CHAIN**

In order to increase transparency in the supply chain and to avoid risk in the procurement of raw materials, the Volkswagen Group is currently piloting the use of blockchain technology in global and complex supply chains.

For example, in 2019 the Volkswagen Group joined the Responsible Sourcing Blockchain Network (RSBN) for the responsible sourcing of strategic minerals using blockchain technology. The collaboration will enable us to gain greater insight into the provenance of cobalt used in lithium-ion batteries for electric vehicles. Other minerals used in vehicle production can also be tracked in this way.

In April 2019, the Volkswagen Group also launched a pilot project for the global lead supply chain and closely cooperates with the tech company Minespider here. The project will involve suppliers and sub-suppliers that deliver more than two thirds of the Group's total lead starter battery requirements. The collaboration is the

outcome of a "Hackathon for Supply Chain Transparency" held in 2018, in which Minespider came first.

In order to exclude human rights violations in our own supply chain, we also plan to audit the sustainability performance of the mines in our supply chain in the medium term. No standard is currently available. At the start 2019, Volkswagen therefore joined the CERA (Certification of Raw Materials) project, which has committed itself to developing such a standard and will test this on selected raw materials.

#### **INVOLVEMENT IN INTERNATIONAL INITIATIVES**

The work in the deeper tiers of the supply chain and beyond contractual relations requires more far-reaching efforts from us. We will only achieve this through joint, industry-wide initiatives and partnership-based collaboration with suppliers. Therefore, our goal must be to work together with them on improving their sustainability performance.

In our work, we seek close cooperation with international organizations. As part of our supplier management, we use the Risk Readiness Assessment (RRA) and standardized reporting templates of the Responsible Minerals Initiative. As a member of the World Economic Forum's Global Battery Alliance, we want to catalyze measures towards a socially responsible, environmentally sustainable and innovative battery value chain.

In order to ensure transparency of cash flows and to support the combating of corruption in extractive countries, we are involved in the Extractive Industries Transparency Initiative (EITI), which is supported by governments, NGOs, investors and renowned companies.

Our involvement in the industry-led initiative DRIVE Sustainability under the umbrella of CSR Europe is also key for our activities. The development of the common questionnaire standard for auditing sustainability aspects of suppliers was a milestone in this respect, as was the training approach for suppliers pursued jointly with other OEMs via training events in selected countries.

#### **DECARBONIZATION OF THE SUPPLY CHAIN**

The Volkswagen Group pursues the objective of continuously avoiding or reducing greenhouse gas emissions over the entire life cycle of a vehicle. Greater importance is increasingly attached to the supply chain here, because the switch to electric mobility shifts emissions away from the usage phase towards production and the supply chain.


In order to encourage measures for reducing greenhouse gas among suppliers, we identify the greatest sources of emissions along the supply chain on the basis of our vehicles' life cycle assessment data. Building on a hotspot analysis, joint roadmaps were developed in numerous workshops with suppliers from relevant industries in the reporting year in order to coordinate and pursue



objectives and measures for CO<sub>2</sub> reduction. The biggest driver of emissions in the supply chain for electric mobility is the HV battery cell. We have therefore consistently made the use of renewable energies for the production of our HV battery cells a contractual requirement.

We extend the responsibility for environmental effects of our vehicles to our suppliers throughout the value chain. We have been actively involved in the CDP Supply Chain Program (SCP) since 2015 and also received a score of A– again for the reporting year there. This corresponds to leadership status. In 2019, we significantly expanded the number of suppliers who we survey as part of the SCP regarding responsibility for our climate and water to more than 280 suppliers. That is equivalent to more than 79% of our production-related procurement spending (excluding services, Volkswagen Brazil, Scania and our joint ventures in China). According to our suppliers' self-assessments, they reduced their overall emissions by a total of 8.05 million t of CO<sub>2</sub>e compared to the previous year. The suppliers put the proportion of renewable electrical energy at 23%. Since 2016, the CDP has included science-based targets (SBTs) in the questionnaire: 34% of our answering suppliers have already set SBTs or have undertaken to set such targets.

Of course, a supply chain free from greenhouse gas emissions is currently still a vision. It was therefore decided that all greenhouse gas emissions arising in the supply chain for the ID.3 will be offset through global climate protection projects in the future.

 > Introduction > Decarbonization

## SUSTAINABILITY TRAINING FOR EMPLOYEES AND PARTNERS

Systematic training of our employees and suppliers is a central component of our strategy and essential for the improvement of sustainability in the supply chain. For all Procurement employees, this issue is an established part of the skills profile. In 2019, more than 3,300 procurement staff worldwide were given training in this area. Our training measures are also geared to specific target groups. For example, buyers of components associated with higher sustainability risks were given an intensive training program in a separate format. Since 2017, we have trained our procurement employees to deal with the special challenges found in battery supply chains.

To facilitate ongoing supplier development, we make an e-learning module on sustainability available to all current suppliers, as well as to Volkswagen Group procurement staff, in the nine languages of the countries which have been defined as compliance risks. By the end of the reporting year, more than 33,000 suppliers – representing 64% of the sales revenue of suppliers of our procurement volume – had completed the e-learning module. The content of the e-learning module was revised in 2019. We are planning to make a newly developed learning program available for 2020.

Alongside the e-learning format, we also conduct issue-specific sustainability training courses and workshops with our suppliers at selected locations. During the reporting period, events were held in countries including Argentina, Brazil, Germany, Mexico, Poland, Sweden and South Africa. In total, the awareness of around 1,500 personnel employed by some 1,100 of our suppliers was raised on sustainability issues at these events. In addition, we also work with industry initiatives and in cooperation with other companies on equipping our suppliers to better manage sustainability.

## HUMAN RIGHTS

### TAKING ACCOUNT OF HUMAN RIGHTS WHEN DOING BUSINESS

It is particularly important for the Volkswagen Group to identify which risks for human rights violations may result from its activities as early as possible. We want to respect human rights and live up to our corporate responsibility in our business activities. We are fundamentally guided by international requirements and standards, to which we are committed. This applies both to processes within our Group and to collaboration with our business partners

and suppliers – i.e. at all levels of the value chain and the supply chain. We are currently implementing this concept in the Group. We implement our management approach throughout the Group: controlled companies are included, for example within standardized risk management processes. In the case of noncontrolled companies, an individual analysis is carried out within the risk management approach. Here we rely on collaboration with our corporate partners.

The basis for cooperative work relations characterized by social harmony includes the Volkswagen Group's agreements which were made with the Group European Works Council and Global Group Works Council. They offer our employees certainty as regards their employee and human rights. In essence, this includes their right to freedom of association, their right to collective negotiations and equal pay, and the banning of discrimination at work.

Relevant international standards for the business and human rights focus area by which we orient ourselves include in particular:

- The United Nations' Universal Declaration of Human Rights, which is codified in the International Covenant on Civil and Political Rights and in the International Covenant on Economic, Social and Cultural Rights
- The Core Labor Standards of the International Labour Organization (ILO)
- The UN Guiding Principles on Business and Human Rights
- The OECD Guidelines for Multinational Enterprises

In the last few years, a trend of also regulating the issue of business and human rights in national laws has been emerging in leading economic powers. Volkswagen, as a global business, also observes such national requirements that put international standards in concrete form. One example of this is the UK Modern Slavery Act 2015: we publish a corresponding Group statement on this on our website annually. In Germany, we support the German federal government's National Action Plan (NAP) for Business and Human Rights.

In 2019, the Volkswagen Group laid down the respective key focal points, the so-called "Salient Business & Human Rights Issues" in the business and human rights focus area in the three categories of labor, tolerance and security in the sense of the UN Guiding Principles:

- Freedom of association and the right to collective bargaining
- No forced labor
- No child labor
- Good working conditions
- No involvement in any unlawful activities
- Guarantee of the security of people
- Tolerance towards different – ideological and religious – opinions and respectful expression of them
- No discrimination
- Diversity, protection of disadvantaged, particularly indigenous groups

#### CLEAR REQUIREMENTS IN THE CODE OF CONDUCT

Our expectations of our employees and our Group-wide understanding of the observance of universal human rights are also set out in our Code of Conduct. The issue of human rights is covered in the chapter on "Our responsibilities as a member of society".

Our Code of Conduct and additional topic-related Group policies apply to the employees of all brands, companies and hierarchy levels around the world.

Our employees are trained for this. We use real-life examples to illustrate the individual issues and help employees put the Code of Conduct's rules into practice. Over and above the Code of Conduct, our human rights responsibility does not end at the factory gate: we also pay attention to the influence our business activities have on our neighborhood, local communities and society. We enter into dialogs with our stakeholders whenever possible and where necessary take measures to live up to our corporate responsibility for human rights and effectively protect these.

#### INTEGRATION OF HUMAN RIGHTS INTO COMPLIANCE

The Volkswagen Group Board of Management has decided to meet its responsibility regarding human rights by integrating the business and human rights focus area into its compliance management system. This integration strengthens the significance of the topic and establishes clear standards. We want to understand human rights risks and thus make human rights violations within and outside the Group transparent, avoid them as preventively as possible and in the case of an occurrence, discover them and respond appropriately.

The Volkswagen compliance management system for human rights is based on seven elements:

- Culture and values, e.g. through the integration of the topic into strategic documents and Group policies
- Objectives, e.g. the already announced focuses of work in the business and human rights focus area
- Risk-based approach in the context of systematic analysis and uniform Group-wide measures
- Efficient programs and processes in the business and human rights focus area, e.g. the sustainability rating ("S rating"), with which we audit our suppliers' sustainability performance and show opportunities for continuous improvement




> Responsibility > Supply Chain

- Group-wide compliance through a global organization structure and the establishment of a business and human rights center of competence
- Communication and trainings, particularly, for example, for raising awareness among employees and management and our business partners
- Monitoring and continuous improvement, e.g. through reporting and organizational feedback as part of rankings

At the moment, content-related, procedural and organizational preparations are being made in order to be able to successfully conclude the integration of the topic of business and human rights into the Volkswagen Group's compliance management system.



The appointment of a coordinator for the topic by the Group Board of Management in January 2019 also highlights the relevance of the business and human rights focus area. She also coordinates the collaboration with the brands and regions.

 > Responsibility > Compliance

## ADDITIONAL TABLES AND KPIS

GRI 102-11, 102-16

The following tables provide an overview of the objectives for the focal topic of responsibility, stakeholder management and the steering of supplier management. For the latter, selected indicators

are presented in either a cumulative manner or year-on-year comparison.

### RESPONSIBILITY TARGET PROGRAM

Action Areas	Goals and Actions	Deadline	Status
Sustainable Management	Implementation of Group-wide sustainability governance, ensuring a control model	2021	Start 2019
	Joint project of the Sustainability Council and Volkswagen AG with the Fraunhofer IAO on the effects of digitalization and e-mobility on employment	2019	
	Use of the Council's ideas, intensification of the interaction between Council and Group	Ongoing	
	Improvement of reputation KPI from 2018 (26%) to 2019 (34%) in Germany; "Volkswagen Group Stakeholder Dialog Series" as a Group-wide dialog series	2019	Start in 2019
Compliance	Further deepen awareness and culture of compliance	Ongoing	Target-group-specific information is provided and awareness raised via different media in the various brands and companies
	Continuous optimization of compliance management system (CMS)	Ongoing	Further development of CMS taking account of international legislation and internal Group benchmarks
	Continue to develop and conduct Group-wide compliance training courses	Ongoing	Risk-based approach geared to specific target groups for classroom and online training courses
	Continuous further development of the Group-wide whistleblower system	Ongoing	Define Group-wide minimum standards, external Internet presence, further rollout in brands and companies
Human Rights	Central coordination of the topic of business and human rights in the Volkswagen Group	Ongoing	Appointment of a coordinator for business and human rights by the Group's Board of Management in January 2019; she also coordinates the collaboration with the brands and regions.
	Preparation for the incorporation of the topic of business and human rights in the compliance management system	2019–2020	At the moment, content-related, procedural and organizational preparations are being made in order to be able to successfully conclude the integration of the topic of business and human rights into the Volkswagen Group's compliance management system.

Action Areas	Goals and Actions	Deadline	Status
Integrity	Bundle all the activities for integrity, culture, compliance, risk management and human resources in a common program	Ongoing	Bringing together of action areas, processes and measures in the "T4I toolbox" and Group-wide rollout of T4I
	Establish processes and reach people in order to anchor integrity and compliance sustainably in the business organization and the daily actions of each individual and to measure the progress	Ongoing	2019: 209 Group companies (around 430,000 employees) have started the Together4Integrity program – by 2025 it should be around 700 (491,000 employees)
	Spurring managers and employees to action with regard to the implementation of behaving with integrity in day-to-day work	Ongoing	Continuous communication, dialog formats
	Further development of Group-wide integrity standards and guidelines	Ongoing	Integrity is a criterion when recruiting, through qualification for promotion to bonus payment; Group policy for the function of integrity management
	Global rollout of the integrity program	Ongoing	Commitment of the brand board of management and Group Board of Management to integrity maxims, integrity as a decision-making criterion in submissions to the Board of Management, integrity training compulsory for all employees, expansion of the ambassador program
	Continuous measurement of progress	Ongoing	First integrity index survey for the Volkswagen Passenger Cars brand and AUDI AG (German sites), use of the results for a structured follow-up process
Supplier Management	Extend e-learning tool and sustainability questionnaire	Ongoing	In terms of procurement spending, 64% coverage for e-learning; a total of 12,646 completed questionnaires
	On-site sustainability audits	Ongoing	1,331 on-site sustainability audits completed in the reporting period
	Provide supplier training in sustainability	Ongoing	More than 1,500 suppliers trained on the subject of sustainability
	Implementation of OECD Due Diligence Guidance	Ongoing	Identification of 473 groups of companies that supplied us with components that also contained tin, tantalum, tungsten or gold. We have clearly identified 328 smelters of tin, tantalum, tungsten and gold in their supply chains. If we identify noncertified smelters in our supply chain, we take steps to certify these smelters.
Risk Management	Operation and further development of risk management and internal control systems (RMS/ICS) in operating business units	Ongoing	Support for operating business units to further develop RMS/ICS (e.g. through Group-wide rollout of new Risk Radar IT system for the management of acute risks)
	Standardize and further develop risk management methods and risk management and internal control processes to safeguard the future viability of the Volkswagen Group	Ongoing	Strengthening of quarterly risk reporting process across all Volkswagen AG executive functions and all brands by further enhancing risk management relevance
	Strengthen networking of risk management organization and activities between brands	Ongoing	All Group brands now involved in regular sharing of experience on risk management, network meetings; risk management wiki as information and idea-sharing platform for risk management organization

#### SALES-REVENUE-BASED PROPORTIONS OF ENVIRONMENTAL AND SOCIAL CERTIFICATIONS HELD BY MAIN SUPPLIERS

	2019	2018	2017
<b>Environmental certification (EMAS, ISO 14001)</b>			
Verified	65%	76%	61%



The background is a dark gray, low-poly geometric pattern. Overlaid on this is a white network diagram consisting of numerous small circles (nodes) connected by thin white lines. Some nodes are highlighted with concentric circles. The word "DIGITAL" is centered in a large, bold, white sans-serif font.

# DIGITAL

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Our global society today in particular faces the major challenge of finding the right balance when shaping mobility. At the moment, the spectrum simultaneously ranges from massive overloading on the one hand to glaring deficits on the other. The limits for greenhouse gas emissions, noise, traffic jams, accidents or poor air quality have been reached or exceeded in many major cities. At the same time, there is too little mobility for many people, limiting their access to and participation in society. This affects people who cannot pay for transport options or have no access to means of transport due to visual impairments, restricted movement or age. This is not only the case in the less developed countries around the world, but also in rural areas of industrialized countries and in suburbs.

Against this background, new concepts are needed that replace the existing options when it comes to acceptance and performance and achieve significant environmental and transport improvements. Problem-solving approaches such as carsharing only become genuine alternatives for users of existing options and part of day-to-day mobility if there are individual advantages in journey time, convenience, safety, or costs. Undesirable side effects must also be factored in if new concepts create additional traffic or replace nonmotorized transport.

New solutions therefore need to be measured by a large number of relevant social objectives, e.g. the United Nations' Sustainable Development Goals. However, there are hardly any universal solutions that are environmentally advantageous, economically favorable and socially acceptable in equal measure. It is important for companies to aim for transparency with regard to the impact of their mobility offerings and also to evaluate possible side effects at an early stage. Conflicting objectives must be detected and addressed. Weighting the objectives, by contrast, is a task that a company cannot determine for itself alone, but only in dialog with society and politicians.

As an automotive manufacturer, we traditionally rely on infrastructure such as roads, gas stations, or parking spaces and on their respective providers. On our path to becoming a mobility provider with new solutions, the need for connection with other players and for cooperation continues to increase. Traffic-efficient driving, for example, only works through the coordinated interaction between vehicle and traffic lights or roadworks. Mobility services need "stops" in order to let passengers into and out of the vehicle and carsharing services need reliable parking places. Integration into the structure of public transport services must also be taken into account here. The scope for action for mobility solutions is embedded in structural developments. Changes in residential, road and rail infrastructure or also new digital technologies in mobile communications are frequently time-consuming and costly. This means dependence on external conditions and decision-makers increases, but various opportunities and approaches to cooperation also present themselves on the road towards new mobility concepts.

Digitalization is the engine for opening up important future potential in mobility – and this does not just apply to the product level and the implementation of innovative mobility concepts. Manufacturing companies themselves can also generate considerable efficiency gains with digitally connected processes at all value chain stages under the guiding principle of Industry 4.0. The digitalization of products and manufacturing in turn relies on the exchange of large quantities of data. This requires efficient infrastructure and compliance with strict regulations that guarantee a high level of IT security and the protection of data from customers, partners and employees.



> [www.volkswagenag.com](http://www.volkswagenag.com) > Sustainability > Environment > New Mobility Concepts

## STRATEGY FOR SUSTAINABLE AND DIGITALLY MANAGED MOBILITY

The Volkswagen Group is actively evolving from an automotive manufacturer to a provider of sustainable mobility. We are bridging the gap between innovative vehicle technologies and futuristic service concepts which are geared to customers' requirements but can also help to solve environmental and traffic problems in urban and rural areas around the globe.

We are guided here by the "Shaping mobility – for generations to come" vision underlying our TOGETHER 2025+ Group strategy. Our goal: to shape mobility to be sustainable for us and for generations to come. With electric drives, digital connectivity and autonomous driving, we want to make the automobile cleaner, more quiet, more intelligent and safer. In climate protection too, it is becoming part of the solution. This means the car can remain a cornerstone of contemporary, individual and affordable mobility in the future.

Digitalization is fundamentally changing the car and increasingly turning it into a software product. It will become even more a part of our customers' digital world in the future. Requirements for the digital performance of cars will continue to increase. In addition, the cross-linking of electrics and electronics is extremely complex and costly. We therefore need to better manage the complexity and become even more efficient. We are not yet one of the big players in software. That is why we are working on developing software competence into a core competence of the Volkswagen Group. To this end, we are pooling our existing strengths and enormously strengthening our workforce. We are the first automotive manufacturer to have separated hardware and software development organizationally. We are developing a cross-brand software platform for vehicles and also the Volkswagen Automotive Cloud. The plan is that all new vehicle models across the Group will be built on an in-house software platform by 2025. It has the potential to set standards in the industry. Furthermore, we will additionally invest €4 billion in developing our IT by 2023. We are thus on the way to becoming a tech company and are going to establish ourselves as a software-enabled car company.

Digitalization is also connected with a number of challenges in the area of human resources for the Volkswagen Group. For example, jobs previously involving manual work will disappear as a result of greater penetration of IT in manufacturing. On the other hand, we will need numerous new employees with digital skills, whose recruitment is made harder due to a significant IT skills shortage in the labor market. In our human resources policy, we have set an important course that meets changed requirements through the pooling of our digital expertise at the Volkswagen Group's "We Campus" in Berlin, modern recruitment processes and the Digital Transformation Roadmap launched in 2019.

## > People > Training

The trust of our customers is particularly important for a successful transformation to a provider of sustainable mobility. The motto of our sales strategy is "Customer Delight". This means achieving the highest level of customer satisfaction possible. In order to be able to measure and manage this, we collect data on two strategic indicators for the major passenger car-producing brands: loyalty rate and conquest rate. In the case of our financial services, we also measure customer satisfaction.

## > 2019 Annual Report > Customer Satisfaction and Customer Loyalty

### IMPACT ASSESSMENT OF MOBILITY SOLUTIONS

The complexity of the mobility system means it is not easy to predict whether new concepts will make a contribution to achieving sustainability goals and what underlying conditions need to exist for this. Unlike, for example, when developing new vehicles, it is not possible simply to build and test prototypes. Instead, interactions with the mobility system in a relatively large area must be taken into account. Volkswagen addresses this challenge with an impact assessment. Mobility is digitally replicated on the basis of real data. Models are developed and simulations run in order to be able to evaluate the effects of solutions as early as possible. Various key figures that are not only scientifically acknowledged but also reflect the requirements of various players are used in the evaluation. For example, short journey times are important for customers, the reduction of CO<sub>2</sub> emissions and improving air quality are important for society and good utilization of its offering is important for the operator.

The simulations are conducted at different levels in line with the issue under consideration. At the highest level, the mobility requirements of a whole city with its surrounding areas are reproduced. This issue is then modeled for a realistic base case with current modes of transport, e.g. car, bicycle, walking, bus and train. Local improvements, e.g. to intersections, can be viewed at a more microscopic level. As a result of the simulation, possible improvements – or also undesirable side effects – can be made visible.

Measures for increasing efficiency in road traffic are important steps on the path to sustainable mobility for Volkswagen. The impact assessment in the reporting year therefore focused on topics including ride pooling and traffic light assistance systems. Studies show that new mobility solutions move between traffic efficiency and journey time attractiveness in a complex field of tension. Mobility options offering journey times similar to the car only have a limited time to pick up further passengers. Furthermore, it was also shown that ride hailing services can reduce traffic from people looking for parking spaces, but overall do not lead to a substantial reduction in driving. Only by sharing journeys, e.g. in MOIA's ride-pooling service, can driving be reduced and therefore also traffic congestion. A reliable service with high service quality that also reaches customers over a wide area requires proactive, strategic positioning of the fleet. As a result, it is possible, for example, to reach commuters at the periphery of towns and cities who have previously had to rely on a car due to insufficient public transport services. Intelligent filling of gaps in public transport services thus creates a key prerequisite for efficient and sustainable road transport in the future.

We have carried out another impact assessment related to intersections with traffic lights. These have a decisive impact on traffic quality in cities, e.g. in the form of lost time and emissions as a result of traffic jams. Traffic efficiency can only be increased here through information being shared between infrastructure and vehicles. Information obtained in the vehicle through a forecast of the traffic light phases is decisive for this. The forecast can be provided by the digitalized infrastructure through wireless communication. The vehicle driving up to the intersection with traffic lights can thus make an optimal adaptation to the signal change. This avoids the time and energy-inefficient maneuvers of braking and starting vehicles, thus reducing fuel/energy consumption and improving traffic flow.

### WORLDWIDE CITY PARTNERSHIPS

Shaping urban mobility plays a key role for the Volkswagen Group because many mobility options are primarily available in cities. According to the UN's estimates, almost 70% of the global population will live in cities by 2050. The problems are the most urgent and at the same time the potential for change is the greatest here. As a member of the World Business Council for Sustainable Development for many years, we seek a dialog with other transformative companies and other stakeholders in order to identify our own scope for action. The Volkswagen Group is currently collaborating on the "Transforming Urban Mobility" (TUM) project. At the same time, we use stakeholder dialog events at a Group level, for instance the event that took place in Wolfsburg in June 2019. Topics such as the future of mobility in cities were high on the agenda there.



The Volkswagen Group sees itself as a close and reliable partner to cities. A wide variety of projects is already being developed, tested and implemented in numerous collaborations around the world. Our Group has now initiated 12 city partnerships. These include Hamburg, Hanover, Dresden and Wolfsburg in Germany and cities such as Prague and Barcelona internationally.

Together with the city of Hanover, Volkswagen Commercial Vehicles manages the urban logistics initiative and avoids any gap at the end of the line. The goal is to realize clean, quiet, effective and thus future-proof logistics concepts for cities. An analysis of urban commercial transport is currently being conducted in order to identify optimization potential and to assess the effect of new concepts in advance. Together with industrial and academic partners, practical research findings on innovative solutions in cities are being developed in the national funded projects USEFUL (German Federal Ministry of Education and Research) and ZUKUNFT.DE (German Federal Ministry of Transport and Digital Infrastructure). Moreover, emission-free package delivery is being tested with parcel delivery providers using e-Crafters and Cargo e-bikes in a pilot project in the Linden Nord district of Hanover.

Particularly intense cooperation connects the Volkswagen Group to the Hanseatic City of Hamburg and to Dresden, the capital city of the German state of Saxony, which are both being developed as model cities for sustainable and integrated urban mobility. Promoting electric mobility, innovative mobility services, the intelligent connection of transport and the use of self-driving vehicles are at the heart of the partnership with Hamburg. In April 2019, the ride-sharing service MOIA was launched in all-electric operating mode in Hamburg. From spring 2020 onward, Volkswagen will also launch its all-electric carsharing service WeShare in the city. The Intelligent Transport Systems (ITS) World Congress, which Hamburg is organizing in 2021, will be another milestone of the collaboration between Hamburg and the Volkswagen Group. Germany had successfully applied to organize the congress with Hamburg, with the support of the Volkswagen Group as one of its main partners.

Under the “mobility of the future” mission statement, we advanced the collaboration with Dresden, the capital city of Saxony, in the areas of electric mobility, connected driving and the development of software for innovative mobility solutions. With the functional testing station, Volkswagen has brought a new research and development entity to Dresden, which focuses on testing driver assistance systems. Furthermore, innovative projects in the field of mobility are advanced in the startup incubator.

The city government is also gradually stocking its fleet with electric vehicles. There has been an official mobility point of the city at the Gläserne Manufaktur since April 2019. By 2022, more than 70 such mobility points, which will combine tram and bus stops, bikes for rent, carsharing and charging stations for electric cars and e-bikes, are to be created. The project partners are targeting an expansion of the charging infrastructure to up to 400 charging points by 2022. In addition, Volkswagen has opened the Future Mobility Campus, the first school laboratory for electric mobility in Dresden.

In addition to the valuable collaboration in the partnerships, the Volkswagen Group already offers cities a large number of solutions especially for the urban area – for example e-micromobility vehicles both for transporting people and for transporting goods (the eXS KickScooter from SEAT and the Cargo e-bike from Volkswagen Commercial Vehicles). A wide variety of mobility-on-demand solutions, such as MOIA (e-ride sharing), WeShare from Volkswagen (e-carsharing) and BeRider from ŠKODA (e-scooter sharing) additionally mean less congestion and more room in cities. In order to supplement the portfolio in the area of electric vehicles and services, the Group also offers energy and charging solutions with Elli. With its product and service portfolio, the Group aims to help cities shape sustainable urban mobility.

#### **MOIA: SHARED USE OF TRANSPORT SERVICES**

Shared journeys ease the burden on traffic and the environment in urban areas. With MOIA, we offer shared on-demand mobility services (ride sharing) in Germany. Instead of using their own cars, people travel to their destination with other passengers all traveling in the same direction. With its ride-sharing service, MOIA complements existing public rail and bus routes in a practical, inexpensive manner and offers an attractive alternative to private cars.

MOIA launched regular operations throughout Hanover in February 2019 and in Hamburg in April 2019. Within 12 months, MOIA shall be expanded in Hamburg to become one of the largest fully electric ride-sharing services in Europe. Hamburg is a global flagship project for MOIA. It is the first city with a population of more than a million where we have put our offering for innovative, shared mobility on the road. MOIA sees itself as part of the inner-city mobility offering and as a meaningful addition to local public transport. The Group is cooperating with Hamburg and the public transport operator Hamburger Hochbahn.

More than 900 drivers have been hired and specially trained at MOIA in Hamburg so far. As of the end of 2019, 1,200 people were employed there, including not just driving and operating staff, but more than 150 people in the field of IT development. A fleet of 100 fully electric MOIA vehicles were deployed with the launch. These cover a 200 km<sup>2</sup> operating area including Hamburg Airport. During 2020, the operating area should gradually increase to 300 km<sup>2</sup> and the fleet to 500 vehicles.

## AUTONOMOUS DRIVING IS BECOMING REALITY

Autonomous driving is a key issue in our transformation from an automotive manufacturer to a provider of sustainable mobility. A concept based on heavily used autonomous vehicles will not only require less space and energy – it will also be much safer. We would like to make automated driving accessible to everyone, everywhere.

We are already starting series production of partly automated driver assistance systems. Innovative parking features make day-to-day urban life easier, safety features save human lives in critical situations. One example of this is Emergency Assist, which starts a safety program as a rescue assistant in the case of medical emergencies when driver inactivity is detected. In addition, there is Adaptive Cruise Control to enable comfortable and safe driving in traffic jams.

In 2019 Volkswagen Autonomy (VWAT GmbH) was founded as a center of competence for autonomous driving based in Munich and Wolfsburg, in order to develop the technology to market readiness. More sites in North America and China are planned for 2020 and 2021. The business models for autonomous driving, such as

mobility-as-a-service (MaaS) and transport-as-a-service (TaaS) are designed under the leadership of Volkswagen Commercial Vehicles. The aim is to be able to offer the customer a custom mobility solution.

The Volkswagen Group will in future work more intensively with partners on future technical challenges – from algorithms through sensor technology to cyber security. In July 2019, we announced closer collaboration with Ford in the field of autonomous driving. This includes – subject to approval by the authorities – an investment in ARGO AI, a company that specializes in software platforms for autonomous driving.

At the start of 2019, a pilot project was launched in Hamburg on a nine km circuit in the city area. This means the autonomous over-all package will be tested on the roads of Hamburg, which are full of traffic lights, turn lanes and road signs and are used by other road users, such as truck drivers, car drivers, motorcyclists, cyclists and pedestrians. Around the middle of the decade, we want to start the commercialization of autonomous driving on a large scale.

## DIGITALIZATION AND CUSTOMER CONCERNS

### VOLKSWAGEN WE AS A DIGITAL ECOSYSTEM

“Volkswagen We” is a growing range of vehicle-related digital services and mobility offerings that can be used in the car or with a smartphone. These include apps for cashless parking and charging (“WeCharge”), opening your own car for delivery services and cleaning (“We Deliver”), simple and convenient parking (“WePark”) and the all-electric carsharing service “WeShare”.

With “WeShare”, we want to participate in the still growing carsharing market in Germany and at the same time assume environmental responsibility. With 1,500 e-Golf vehicles, the Volkswagen brand has put an all-electric fleet on the road in Berlin, all of which is powered by green energy. This should be followed by 500 additional e-up! vehicles at the start of 2020 and the first models of the new all-electric Volkswagen model after the launch of the ID.3 in mid-2020. An expansion of “WeShare” to Prague and then Hamburg is planned in 2020, initially jointly with ŠKODA.

### CHARGING INFRASTRUCTURE AS A KEY TOPIC

“WeShare” will use Berlin’s public network of charging stations to charge its fleet, including charging points to be created at 70 stores of supermarket chains Lidl and Kaufland. Volkswagen has concluded a partnership with the companies of the Schwarz Group in order to ensure the operation of Volkswagen’s electric fleet and to drive the expansion of charging infrastructure in public places.

If e-mobility is to achieve a breakthrough, it remains the case that there must be an accessible, available charging infrastructure geared to people’s needs as well as a customer-friendly charging procedure. Our charging strategy is based on around 50% of e-vehicle charging taking place at customers’ homes in the future, 20% at their workplace, 5% along highways and no less than 25% in public places. We are already equipping private homes and workplaces with charging systems via our subsidiary Elli (Electric Life) and are working towards the development of a fast-charging network on major European highways under the IONITY umbrella. By 2020, 400 stations will be in operation.

The Volkswagen brand aims to install around 4,000 charging points at its German sites by 2025. The Group is investing around €250 million across the Group in the expansion of charging infrastructure at its European sites. Together with the activities of dealers, around 36,000 new charging points are to be created in Europe.

Sufficient charging options at work are an important element of our electric offensive. Our employees should in the future be able to charge their electric vehicle easily and conveniently while at work. The first charging center was put into operation with 60 charging points at Volkswagen Group Components in Braunschweig in 2019. Setting up charging centers is also lucrative for companies because they frequently have favorable structural conditions and can create additional benefit for their employees. In light of this, Volkswagen is not only active at its own sites, but also offers complete charging solutions for employee parking spaces and fleets to other companies through its subsidiary Elli.

## **DIGITALIZATION THROUGH CAR.SOFTWARE AND THE AUTOMOTIVE CLOUD**

The proportion of software in cars is rising rapidly and as a result is a key influence on the performance and characteristics of our vehicles. That is why we are going to fundamentally strengthen software development. We will now transfer our Group's platform expertise in hardware to software. The aim is to develop cross-brand uniform software architecture. In a Group-wide fleet of more than ten million fully connected new vehicles, the software costs for each individual vehicle will decrease considerably.

To this end, we set a decisive course in 2019. Christian Senger has been the Member of the Volkswagen Passenger Cars Board of Management with responsibility for the newly created Digital Car & Services function since March 2019. He has also been appointed Head of the Digital Car & Services function for the Group. Senger thus assumes overall responsibility for the coordination and design of the Volkswagen Group's digital activities, including software. The new Board function is tasked with bundling software activities and strengthening the digital overall experience through the customer-centric development of Group brands. At the same time, the Volkswagen Group is to become a particularly attractive employer for digital experts and talents.

By 2025, we want to group together the skills of thousands of digital experts in the areas of software development, electrical and electronics development, connectivity, automated driving, user experience (UX), cloud architecture and e-commerce Group-wide in our newly established "Car.Software" unit. Our Group plans to develop significantly more software in the car and for vehicle-related services itself and to boost the in-house share of software development from the current figure of less than 10% to at least 60% by 2025.

In the future, there will be one uniform software platform with all the basic functions for all vehicles throughout the Group. This will consist of the vw.os vehicle operating system and the Volkswagen Automotive Cloud. The plan is that all new models of the Group will be built on this software platform by 2025. The first vehicle based on this software platform will be the ID.3. We are thus creating the conditions to meet customer expectations of further increasing digital performance from our vehicles.

The Volkswagen Automotive Cloud will be the global technological backbone of our digital ecosystem. It serves to link vehicles, a cloud-based platform and customer-oriented services provided by all brands. We have been developing the Automotive Cloud since 2018 in strategic partnership with Microsoft.

The Volkswagen Automotive Cloud will gradually be expanded to other regions of the world and thus be available in Europe, China and the USA – the core markets for the future all-electric and fully connected ID model family. In addition, Volkswagen and Microsoft are already working on the first flagship projects for connected

vehicle services, and the establishment of Volkswagen's first development center in North America is progressing rapidly.

## **ARTIFICIAL INTELLIGENCE AREAS OF APPLICATION**

Artificial intelligence is increasingly gaining industrial relevance for the Volkswagen Group and is already a competitive factor. The Group has therefore already created the conditions to be able to develop and use powerful AI systems itself at an early stage. The anchor point for the topic of artificial intelligence in the Volkswagen Group is the Data:Lab Munich, which was founded in 2013. Here, around 100 specialists advance research and development on applications of machine learning and data analytics. The teams in the Data:Lab have now developed more than 100 AI applications, many of which are being tested in various divisions.

Artificial intelligence is relevant for the Volkswagen Group in two major subject areas: in the vehicle and in business processes. The key is AI for autonomous driving that is based on the use of self-learning algorithms for environment and environmental recognition. Another area of application in the vehicle is natural language processing (NLP) – enhanced, intelligent voice control, for example for navigation and convenience functions.

In the Group itself, "cognitive ergonomics" is particularly important. This is what we call the use of self-learning algorithms that remove repetitive administrative work from employees and prepare it for the final decision. The use of AI for preparing information is also sensible: algorithms can search and organize highly complex quantities of data quickly, efficiently and continuously. This enables, for example, precise market forecasts that include a large number of variables.

Another important area of application is enabling intelligent robots to work hand-in-hand with human specialists. It is also a matter of powerful algorithms that can optimize manufacturing and logistics processes even more efficiently than has yet been possible. One example of this is predictive maintenance.

## **DIGITALIZATION OF DATA IN THE INDUSTRIAL CLOUD**

In the course of digitalization, the trend towards automation will continue to intensify in the future. Using this potential beyond borders in the Volkswagen Group will require the ability to process and utilize a large amount of technical data. To this end, the Group and Amazon Web Services have concluded a multi-year agreement to jointly develop this project. In the future, data from all the machinery, equipment and systems at all 124 Volkswagen Group factories will be combined in the Volkswagen Industrial Cloud. This facilitates more efficient control of material flow, the early detection and correction of supply bottlenecks and process disruptions, and the optimized operation of machinery and equipment in all factories.

The cloud-based platform as a standardized technical basis with its simplified data exchange is also a key prerequisite for providing innovations quickly and across multiple locations. Examples include smart robotics or functions of data analytics in order to analyze and compare cross-plant processes. Volkswagen encrypts all the data compiled in the Industrial Cloud. The Group is setting the highest standards for this. The Volkswagen Group and Amazon Web Services have decided to have the Deutsche Cyber-Sicherheitsorganisation (DCSO) in Berlin lead the way in developing the architecture for the cyber-security solutions needed.

The Industrial Cloud will continue to ensure the integration of the Volkswagen Group's global supply chain with more than 30,000 locations and of over 1,500 suppliers and partner companies in the future. Together with Amazon Web Services, we are therefore creating the Industrial Cloud as an open industry platform that other partners from industry, logistics and sales can use in the future. This will create a steadily growing global industrial ecosystem. At the end of 2019, the first version of the Volkswagen Industrial Cloud was put into operation with concrete services and functions.

#### BUNDLING DIGITAL KNOWHOW

We will also ensure our digital transformation through a forward-looking HR strategy. In 2019, Volkswagen opened the "We Campus" in Berlin, which brings together around 900 experts from the Group and its technology partners who previously worked at different locations. The cross-functional team includes product developers, software engineers and UX designers. In the future, they will develop digital added-value services and mobility services there that can be offered in the "Volkswagen We" ecosystem. At the new location, Volkswagen AG and its strategic partner diconium as well as UMI Urban Mobility International, Volkswagen Group Services and Elli, the Volkswagen Naturstrom® provider, will all join forces. In addition, the new Campus will in the future play an important role as a development center for the new "Car.Software" unit of the Volkswagen Group and be available as a location for the Group brands.

#### RESPONSIBILITY FOR DATA PROTECTION

The topics of information security and data protection require the greatest sensitivity in the face of accelerated digitalization. One of the ways in which Volkswagen has adapted to these challenges is by expanding sustainable data protection organization. Given the complexity of data processing, the establishment of and compliance with high organizational and legal standards is necessary. Experts at a broad range of levels in the Group's companies are working on connecting practical and legal aspects of new technologies with each other in a qualitatively sustainable way. In a technical world of constant updates, orderly life-cycle management is needed in order to master the complexity of the data processing.

#### HIGH CUSTOMER SATISFACTION IN ALL BUSINESS AREAS

GRI 203-2

We regard ourselves as an innovative and sustainable mobility provider for all commercial and private customers worldwide – with a unique product portfolio encompassing twelve successful brands and innovative financial services.

Together with their sales partners and importers, our passenger car brands have agreed on a procedure for integrating innovative products and services into the sales network. The priority is safe handling of customer data and the way in which this is processed for digital products and services or in connection with the vehicle purchase. The legal requirements for handling customer data have been tightened in many countries. At the same time, new Group vehicles that are permanently connected to the Internet are about to be launched. We are increasingly investing in distribution systems and processes with the goal of further digitalizing and improving the individual customer experience in all distribution channels.

The economic power and profitability of the Volkswagen Group is based on a broad portfolio of strong brands. The objective of our Best Brand Equity strategic module is to continuously sharpen the brand profiles and demarcate the vehicle segments serving the brands as clearly as possible. In this way, we want to achieve high market coverage with great efficiency and low cannibalization of the respective brands. Market positioning is an important element for increasing brand values. To this end, we are establishing automobile-specific customer segmentation to steer the positioning of our brands. It will be continuously applied in the strategy and product process.

The Volkswagen Group aims its sales activities at exciting its customers. This is our top priority, as enthusiastic customers remain loyal to our brands and recommend our products and services to others. In addition to satisfaction with our products and services, we value our customers' emotional connection to our brands. It is important for us to retain customers and win new ones. To measure our success in this area, we compile and analyze two strategic indicators for the passenger car-producing brands.

- Loyalty rate: Proportion of customers of our passenger car brands who have bought another Group model. The loyalty of Volkswagen Passenger Cars, Audi, Porsche and ŠKODA customers has kept these brands in the upper rankings in the core European markets in comparison with competitors for a number of years, even though the Group brands have seen a slight decrease in the loyalty rate. Compared to other manufacturer groups, the Volkswagen Group continues to hold a top spot in the core European markets in terms of loyalty, with a considerable margin over the competition.
- Conquest rate: Newly acquired passenger car customers as a proportion of all potential new customers. Here, too, the Volkswagen Group has a top ranking, primarily thanks to the good scores achieved by the Volkswagen Passenger Cars brand.



In the core European markets, Volkswagen Passenger Cars' scores for brand image and brand trust continued to stabilize in 2019. Porsche remains in a top position in the image ranking.

In the financial services business, we use two strategic indicators:

- Customer satisfaction: Satisfaction of our customers results from a customer-oriented product range and the service focus of our staff. In the annual measurement, the two aspects are suitable indicators for the critical assessment as to whether we will achieve our target of 90% customer satisfaction in 2025. In 2019, we were within the expected range with a satisfaction rate of 83% (82%). Our goal is to satisfy our customers completely. To do so, we are developing suitable measures at country level.
- Customer loyalty: Trust in and loyalty to our services rely on customer satisfaction with our product range and service. The new contract rates determined to date based on product sales to our customers – financing and leasing agreements for purchases of new Volkswagen Group vehicles – are being revised in the context of changing customer needs and the development of the product offering at our financial services companies.

As part of the Best Brand Equity module of the TOGETHER 2025+ Group strategy, a greater focus is being put on the establishment and management of the brands and of brand equity, i.e. the value of the brand, in all brands. Implementing the individual brands' brand strategies will allow us to communicate with our target groups in a way that is even more targeted and even more relevant to customers and enable us to deliver a better brand and product experience to them.

The individual brands will be responsible for the implementation of the brand strategy. The Group will assume a supervisory role and ensure that the brand strategies are implemented optimally and that the individual brands are differentiated from each other in order to offer every customer the right vehicle from the right brand.

## FLEET CUSTOMER BUSINESS

Business relationships with fleet customers are often long-term partnerships. In a volatile environment, this customer group guarantees more stable vehicle sales than the private customer segment.

The Volkswagen Group has an established base of business fleet customers in Germany and the rest of Europe in particular. Our extensive product range enables us to satisfy their individual mobility needs from a single source.

In the German passenger car market, which expanded as a whole by 5.0% in 2019, the share of fleet customers in total registrations was 14.8% (13.6%). The Volkswagen Group's share of this customer segment increased slightly to 44.1% (44.0%). Outside Germany, the Group's share of registrations by fleet customers in Europe was up slightly at 25.6% (25.2%). The upward trend shows that fleet customers still have considerable confidence in the Group.

## AFTER SALES AND SERVICE

In addition to individual service, the timely provision of genuine parts is essential in ensuring passenger car customer satisfaction in after sales. The genuine parts supplied by our passenger car brands and the expertise of the service centers represent quality and ensure the safety and value retention of our customers' vehicles. With our global after-sales network including more than 130 of our own warehouses, we ensure that almost all our authorized service facilities around the world can be supplied within 24 hours. We regard ourselves as a complete provider of all products and services relevant to customers in the after-sales business. Together with our partners, we ensure the worldwide mobility of our customers. The partner businesses offer the entire portfolio of services in all vehicle classes. We are continuously expanding our range of tailored services in order to improve convenience for our customers and increase customer satisfaction.

In the Digital After Sales project, we are modernizing processes and IT systems in After Sales. By adopting an approach that focuses product and service development on the specific needs of both dealers and customers, we aim to reduce the time needed for administrative tasks at the dealers through automated, interrelated services and also stabilize existing IT systems and boost efficiency. Innovative digital after-sales services will additionally improve the customer experience.

Around the world, our commercial vehicles business also prides itself on products of quality and on customer focus. Our range of trucks, buses and engines is complemented by services that guarantee fuel efficiency, reliability and good vehicle availability. The workshop service and service contracts offer customers a high degree of certainty, in addition to a high level of quality. We are reducing servicing times and costs with a view to the vehicles' total operating costs and helping to retain their value.

In the Power Engineering segment, we help our customers ensure the availability of machinery with MAN PrimeServ. The global network of more than 100 PrimeServ locations guarantees excellent customer focus and offers, among other things, replacement parts of genuine-parts quality, qualified technical service and long-term maintenance contracts.





## ADDITIONAL TABLES AND KPIS

The following tables provide an overview of the objectives for the focal topic of digital and provide information about the prevalence of

alternative drive technologies among the Volkswagen Group's vehicles in a year-on-year comparison.

### TARGET PROGRAM FOR THE DIGITALIZATION ACTION AREA

Focuses	Goals and Actions	Deadline	Status
Car.Software and Automotive Cloud	Increasing the in-house share of software in the car and for vehicle-related services from the current figure of less than 10% to at least 60%	2025	Creation of the Digital Car & Services function
	Grouping together the skills of thousands of digital experts in the areas of software development, electrical and electronics development, connectivity, automated driving, user experience (UX), cloud architecture and e-commerce	2025	Creation of the Digital Car & Services function
	Group-wide uniform software platform for all the Group's vehicles	2025	The software platform consists of the vw.os operating system and the Volkswagen Automotive Cloud. The ID.3 will be the first vehicle based on this software platform. The availability of the Volkswagen Automotive Cloud will gradually be expanded to Europe, China and the USA (ID. model family core markets)
Digital Production Platform (DPP)	Onboarding 18 Volkswagen AG plants and their production facilities from six Group brands and six countries to the DPP	Ongoing	<ul style="list-style-type: none"> <li>- Three Volkswagen AG plants are already connected.</li> <li>- Development, construction and rollout of more than 15 use cases (five already implemented) to increase efficiency in the plants</li> </ul>
	Further development of the DPP into an open industry platform for the global Volkswagen supplier and partner network	Ongoing	<ul style="list-style-type: none"> <li>- Standardization of the connection of equipment and production lines to DPP IoT services</li> <li>- Cross-plant and cross-supplier combination of data sources and standardization of data access and data exchange</li> <li>- Provision of tools for data analysis and machine learning solutions for plants, production planning and suppliers/partners</li> </ul>
	Development of a uniform localization service across the entire logistics and manufacturing process for vehicles, containers etc	Ongoing	<ul style="list-style-type: none"> <li>- Standardization across 124 Volkswagen AG plants along the value chain</li> <li>- Broad support of identification and localization technologies (e.g. 5G, GPS, RFID, BLE)</li> <li>- Increasing efficiency in the fields of reworking management, distribution logistics and JIT management</li> </ul>
Artificial Intelligence	Standardization and optimization of data processes	Ongoing	Definition and adoption of Group-wide standard processes
	Networking of relevant players across divisions and brands	Ongoing	Organization and holding of community meetings for brands and divisions in order to share best practices and highlight synergies
	Substantial cooperation on the development of global standards and certifications in connection with artificial intelligence and the ethical use of this technology, plus global networking with people with knowhow in order to further develop the technology	Ongoing	Initiation and management of the "etami" consortium for standardization and certification of ethical applications of artificial intelligence in Europe in cooperation with partners from business, politics and academia. etami, consisting of 12 major corporations and five universities, will implement the recommendations of the European High-Level Expert Group on AI (HLEG) for ethical applications of AI into standardization and certification in 2020

## TARGET PROGRAM FOR THE MOBILITY CONCEPTS ACTION AREA

Focuses	Goals and Actions	Deadline	Status
Zero Impact Mobility	Establishment of the mobility solutions field of business	2025	MOIA: on-demand mobility service in Hamburg: initial launch in April 2019 on the basis of a fully electric vehicle fleet with around 100 MOIA vehicles. During 2020 the fleet will grow to 500 vehicles
	Mobility trends	Ongoing	Volkswagen launched the e-mobility car sharing service "WeShare" in Berlin in 2019 with 1,500 e-Golf vehicles, all of which are powered by green electricity. This should be followed by 500 additional e-up! vehicles at the start of 2020 and the first models of the new all-electric Volkswagen model after the launch of the ID.3 in mid-2020.
Autonomous Driving	Gradually begin series production for autonomous driving in cooperation with our technology partner Argo AI (subject to all approvals by the authorities)	From roughly the middle of this decade	
	Conclusion of the investment in Argo AI, contract finalization and establishment of the collaboration	2020	
	Finalization of the corporate structure of the Volkswagen Autonomy companies in Germany and the USA	2020	
Charging Infrastructure	Expansion of the charging infrastructure	By 2025	36,000 charging points in dealerships and at the sites are to be created throughout Europe
Product and Road Safety	Systematic quality assurance along the entire value chain	Ongoing	
	Implementation of Vision Zero: zero fatalities or severe injuries in or due to vehicles manufactured by the Group – safety is digital	Ongoing	

## TARGET PROGRAM FOR THE CUSTOMER CONCERNS ACTION AREA

Focuses	Goals and Actions	Deadline	Status
Best Brand Equity	Realignment and tightening of the brand portfolio; significant increase in the value of our Group brands	2025	<ul style="list-style-type: none"> <li>- Establishment of automobile-specific customer segmentation to steer the positioning of the brands</li> <li>- Continuous application of the segmentation in the strategy and product process</li> </ul>

## ALTERNATIVE DRIVE TECHNOLOGIES IN THE GROUP<sup>1</sup>

Vehicles produced

		2019	2018	Change (2018 vs. 2019)
Worldwide	Gas drives (natural gas and LPG)	118,726 (1.15%)	99,016 (0.94%)	+19%
	Hybrid drives	55,268 (0.54%)	46,703 (0.44%)	+18%
	All-electric drives	110,721 (1.07%)	33,421 (0.32%)	+231%
	<b>Alternative drives (total)</b>	<b>284,715 (2.76%)</b>	<b>179,140 (1.71%)</b>	<b>+59%</b>
		2019	2018	Change (2018 vs. 2019)
Western Europe <sup>2</sup>	Gas drives (natural gas and LPG)	75,474 (2.12%)	48,445 (1.39%)	+56%
	Hybrid drives	27,462 (0.77%)	23,814 (0.69%)	+15%
	All-electric drives	64,010 (1.80%)	28,008 (0.81%)	+129%
	<b>Alternative drives (total)</b>	<b>166,946 (4.70%)</b>	<b>100,267 (2.88%)</b>	<b>+67%</b>

<sup>1</sup> Volkswagen Group production: Volkswagen Passenger Cars, Audi, ŠKODA, SEAT, Volkswagen light commercial vehicles, Audi light commercial vehicles excl. luxury brands.

<sup>2</sup> Western Europe: BEL, DNK, DEU, FIN, FRA, GRC, GBR, IRL, ISL, ITA, LUX, NLD, NOR, AUT, PRT, SWE, CHE, ESP, rest of Western Europe.

The background is a vibrant green with a low-poly, geometric mountain range on the left. White, concentric contour lines sweep across the right side of the image, creating a sense of depth and movement. The overall aesthetic is modern and eco-friendly.

# THE ENVIRONMENT

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Undamaged Environment

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We realize that the production and use of our vehicles pose risks for the environment and can have a negative impact on it. In light of climate change, the threat to air quality in urban areas and the use of natural resources, we must also refocus and transform our core business to take into account environmental needs.

Environmental protection is not only a central goal of our TOGETHER 2025+ Group strategy, we want to be a “role model as regards environment”. At the same time, the environmental compatibility of our products and processes is one of our Group Essentials. With electric drives, digital connectivity and autonomous driving, we want to make the automobile cleaner, more quiet, more intelligent and safer. We use our globally connected innovative power in order to reduce our environmental footprint – over the entire life cycle of our products and mobility solutions. Our innovations at the same time help our customers to be more environmentally friendly. They also make a significant contribution to maintaining our competitiveness and to job security, which we want to universally guarantee with site-related agreements and training programs despite the challenges of technological change.

## THE “GOTOZERO” MISSION STATEMENT: MINIMIZING OUR ENVIRONMENTAL IMPACT

The Volkswagen Group bundles all its measures in environmental protection under the new “goTOzero” environmental mission statement. This concept sets the agenda for a way of doing business that is as environmentally friendly and with a footprint that is as carbon-free as possible. The Volkswagen Group has set itself the Group-wide goal of achieving this by 2050.

Specifically, the environmental mission statement says: “For all our products and mobility solutions we aspire to minimize environmental impacts along the entire life cycle – from raw material extraction to end-of-life – in order to keep ecosystems intact and to create positive impacts on society. Compliance with environmental regulations, standards and voluntary commitments is a basic prerequisite of our actions.” This environmental mission statement combines all strategic and compliance-related aspects of the Group’s environmental activities for the first time and forms the basis for linking targets, key performance indicators, programs and measures.

In its “goTOzero” mission statement, the Volkswagen Group concentrates on four action areas.

- **Climate change:** Volkswagen is committed to complying with the United Nations’ Paris Agreement. The goal is to become a company with a carbon-neutral footprint by 2050. As early as by 2025, the Group plans to reduce the total life-cycle greenhouse gas emissions from passenger cars and light commercial vehicles by 30% compared to 2015. The Group will also actively drive the transition towards renewable energies along the entire life cycle.

- **Resources:** Volkswagen will further improve its resource efficiency and promote reuse and recycling approaches in the areas of materials, energy and water. By 2025, the Group plans to have reduced the production-related environmental impact with respect to CO<sub>2</sub>, energy, water, waste and volatile organic compounds by 45% per vehicle compared to 2010.
- **Air quality:** Volkswagen is also driving e-mobility forward to improve local air quality. By 2025, the proportion of electric vehicles in the model portfolio will be between 20 and 25%. The proportion of electric vehicles in the new passenger car fleet in Europe and China is to rise to at least 40% by 2030.
- **Environmental compliance:** With respect to integrity, Volkswagen aims to set an example for a modern, transparent and successful business by installing and monitoring effective management systems that cover the environmental impact of its mobility solutions across all life-cycle phases.

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Sustainability > Environment > Environmental Mission Statement

## MANAGEMENT AND COMPLIANCE IN MATTERS OF THE ENVIRONMENT

Volkswagen has written an environmental policy for its environmental decision making and for the management of projects and its conduct in environmental protection. This sets guiding principles for the conduct and working methods of managers and employees with regard to five topics: management conduct, compliance, environmental protection, cooperation with interest groups and continuous improvement.

The Group Board of Management is the highest internal decision-making level for environmental matters. Both the Volkswagen AG Board of Management and the boards of management of the brands take account not just of economic, but also social and environmental aspects when making important business decisions. The Group-wide management of environmental protection is the responsibility of the Group Steering Committee for the Environment and Energy. Other committees manage important individual aspects for our products – such as CO<sub>2</sub> and exhaust emissions. These include the Group Steering Committee for CO<sub>2</sub>, the Group Steering Committee for Fleet Compliance and Exhaust Emissions and the Group Steering Committee for Sustainability.

The Volkswagen Group coordinates the activities of the brands, which in turn manage measures in the individual regions. In organizational terms, the brands and companies themselves are responsible for environmental issues. They define their environmental protection activities on the basis of the targets, guidelines and principles that apply throughout the Group. In order to prove that we have met our objectives, we disclose environmental key performance indicators annually and report transparently on the progress of our efforts.

The Group Steering Committee for the Environment and Energy reports to the Board of Management as to how the measures are progressing. Environmental officers and experts from throughout the Group meet regularly for the Group Environmental Conference in order to optimize the environmental focus along the entire value chain. In 2019, 104 of our 124 sites including the central development areas were certified in accordance with ISO 14001 or EMAS. In terms of employee numbers, this equates to approximately 90%. In addition, 44 production locations have certified their energy management systems in accordance with ISO 50001. Since 2009, the “Integration of Environmental Factors into the Volkswagen Brand’s Product Development” model used in the Volkswagen Passenger Cars brand’s technical development has also been certified to ISO/TR 14062. SEAT development is certified in accordance with ISO 14006.

Our clear internal requirement is to comply with statutory and legal requirements. In addition, we adhere to our corporate standards and objectives. We implement environmental compliance management systems to ensure that environmental compliance obligations are understood and achieved in our business operations. We consider disregard of these, fraud or misconduct to be a serious compliance breach. Whether our actions conform to the requirements of our environmental policy and other environment-related Group specifications is evaluated annually and reported to the

Group Board of Management, to the respective boards of management of the brands and to the managing directors of the companies.

#### LIFE-CYCLE APPROACH DETERMINES ANALYSIS AND ACTIONS

We observe our environmental impact over the entire life cycle and all stages of the value chain. This includes the manufacturing process with the extraction of raw materials, the manufacture of materials for the production process, the processes at our suppliers and our own production at our sites, the usage phase with vehicle emissions and the necessary provision of fuel and the ultimate recycling of the vehicle at the end of its life cycle. For detailed, ISO-standardized life cycle assessments (LCA), we use special LCA software with our own LCA database LEAD (Life Cycle Environmental Assessment Database), which makes the exchanging of harmonized data throughout the Group and a standardized basis for calculating our environmental performance possible. In the next step, we identify hot spots in the life cycle and deduce suitable solutions with the greatest possible effect. We call this life cycle engineering. In line with our life-cycle approach, we involve our suppliers in our efforts to minimize our environmental impact early on. As a result, we can cover over 79% of production-relevant purchasing volume via the CDP Supply Chain Program (SCP).


## CLIMATE PROTECTION

GRI 308-2

### EFFECTIVE PROTECTION OF THE CLIMATE

The CO<sub>2</sub> emissions humans cause must be reduced as quickly as possible in order to protect the climate. Alongside other economic sectors, the transport sector, where greenhouse gas emissions are rising, also needs to make its contribution. The Volkswagen Group faces up to this responsibility and expressly acknowledges the objectives of the Paris Climate Agreement, which seeks to achieve a climate-neutral society by 2050.

In order to achieve this objective, the Group has decided on a comprehensive and holistic decarbonization program, which includes the whole life cycle of the vehicles. It focuses on a carbon-neutral footprint in production as well as in procurement and is geared entirely towards electric mobility. The objective is the complete decarbonization of the Group by 2050. As early as by 2025, the carbon footprint of the vehicle fleet with passenger cars and light commercial vehicles is to be reduced by 30% compared to 2015. The DCI was 43.0 t CO<sub>2</sub>e/vehicle in the reporting year.

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### MANAGEMENT OF GROUP-WIDE CLIMATE PROTECTION ACTIVITIES

The Group Steering Committees for the Environment and Energy, CO<sub>2</sub> and WLTP bear decisive responsibility for climate protection. Group steering committees are the preferred instrument to deal

with the complexity of this action area. Product and portfolio topics are managed by the Group product strategy. The Group Steering Committee for Sustainability and the Group Steering Committee for CO<sub>2</sub> provide information to the Group Board of Management at least twice a year. The Group Board of Management makes key decisions on topics relevant to climate protection.

The decarbonization program applies to the entire Group, to all brands and regions. The Group Steering Committee for Sustainability steers the program and objectives. The “Decarbonization Project Center” that we founded ourselves and which includes experts from all brands and departments is responsible for implementation. We use a predefined process overseen by the management of the Decarbonization Project Center to check measures with which we can achieve the objective of decarbonization. All measures are bundled in roadmaps and are furnished with corresponding levels of implementation.

### DECARBONIZATION INDEX MEASUREMENT INSTRUMENT

The Volkswagen Group measures progress in the reduction of CO<sub>2</sub> emissions with a decarbonization index (DCI). This figure covers major passenger-car manufacturing brands and light commercial vehicles in the Group portfolio for the Europe (EU-28, Norway and Iceland), China and US regions across their life cycle and is measured in tonnes of CO<sub>2</sub> emissions per vehicle. The DCI includes the CO<sub>2</sub> emissions from the supply chain, our own production, the



provision of fuel, emissions from 200,000 km of driving and from recycling and the remaining Scope 3 categories in accordance with the Greenhouse Gas Protocol (GHG Protocol). These include, for example, emissions from employee commuting, business travel or new production facilities. The diverse input variables for calculating the DCI include TÜV-tested life cycle assessments and the fleet emission figures to be reported publicly to the authorities in the various markets.

## USE OF SCENARIO ANALYSES

As a participant in the Mobility Model (MoMo) working group of the International Energy Agency (IEA), Volkswagen has contributed to the development of the IEA's various climate scenarios. This includes, for example, the 2DS scenario, which is based on the development trajectory of below two degrees Celsius.

In order to ensure the objectives of the decarbonization index are in line with the Paris Climate Agreement over the entire life cycle, Volkswagen used the 2DS scenario for orientation when defining the objectives. The results of the scenarios of the Mobility Model were combined at a global level with the Volkswagen Group's existing data, such as sales forecasts, energy consumption and life cycle assessments, and integrated in a company-specific model.

## TRANSPARENCY ON CO<sub>2</sub> EMISSIONS AND ENERGY CONSUMPTION

Every year, we calculate the Group's carbon footprint with the Scope 3 inventory. On this basis, we can determine the success of our measures and identify other areas for action. In order to reduce Group-wide CO<sub>2</sub> emissions, we are beginning by making improvements at our own production sites. Our most effective lever for reducing our global carbon footprint is to optimize CO<sub>2</sub> emissions from our vehicle fleet. After all, according to the Scope 3 GHG inventory, 77% of all CO<sub>2</sub> emissions are produced during the use phase.

CO<sub>2</sub> emissions from Scope 1 and 2 have fallen by more than 35% per vehicle for the Group since 2010, thanks to improved energy efficiency and a reduced-carbon energy supply. Despite the construction of new production sites, absolute CO<sub>2</sub> emissions in the passenger cars and light commercial vehicles category and in the entire Group have decreased since 2010. This reduction in the absolute volume of emissions goes hand in hand with the decline in direct CO<sub>2</sub> emissions per vehicle since 2010.

The direct CO<sub>2</sub> emissions from company vehicles in our possession are not shown separately. Across all production sites, they account for approximately 3% of the Group's Scope 1 and 2 CO<sub>2</sub> emissions. Additional Group CO<sub>2</sub>-compensation projects are not shown. The emissions which occur in the Volkswagen AG power plants for providing district heating and electricity to third parties are not included either. In 2019, these amounted to 382,488 t of CO<sub>2</sub>.

Since 2010, our total energy consumption has increased as a result of a continuous rise in production volumes. At the same time, we have been able to reduce energy consumption per vehicle since 2010.

Heat consumption relates to space heating demand for production and non-production areas in manufacturing facilities and heating demand for technical processes. Since space heating accounts for the greater proportion of the total heating demand, weather conditions have a major impact on trends in overall heating demand.

In line with the Scope 3 standards published by the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI), we have reported CO<sub>2</sub> emissions for 13 out of a total of 15 Scope 3 categories in 2019. Accordingly, around 93% of all Scope 3 emissions are in the "Purchased goods and services" and "Usage phase" emissions categories.

The calculation of CO<sub>2</sub> emissions in the usage phase of the Scope 3 GHG inventory is based on a Group fleet value representing the global passenger cars and light commercial vehicles fleet in the three major regions (Europe [EU-28, Norway and Iceland], USA and China<sup>2</sup>). In order to provide a picture that is as complete as possible, we also collect data on emissions in this category that are produced during the production and transportation of fuels ("well to tank" emissions).

The Volkswagen Group's new passenger car fleet in the EU (excluding Lamborghini and Bentley) emitted an average of 124 grams of CO<sub>2</sub> per kilometer<sup>1</sup> in the reporting year and thus complied with the 2019 European limit of 130 grams of CO<sub>2</sub> per kilometer. The small year-on-year increase is mainly attributable to increased demand for SUVs. As small-volume manufacturers, the Lamborghini and Bentley brands are each considered to have an independent fleet for the purposes of European CO<sub>2</sub> legislation; each was above its individual target. In the United States, the regulation of fleet emissions is different to that in Europe, for example in terms of the underlying test process, the period of evaluation, which corresponds to the model year rather than the fiscal year, and the calculation period, which comprises three model years. In the United States, we complied with the emissions budget regulations that apply there in fiscal year 2019 – subject to any response by official authorities.

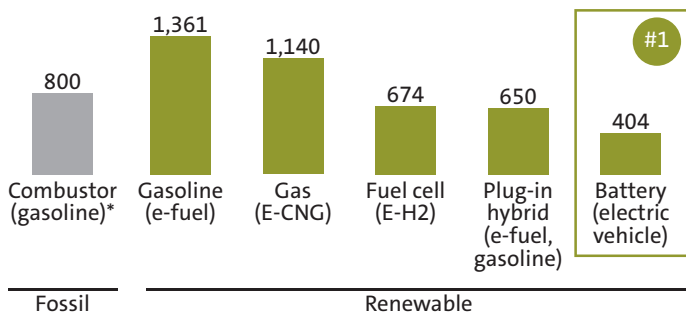
The Volkswagen Group closely coordinates technology and product planning with its brands so as to avoid breaches of fleet fuel consumption limits, since these would entail severe financial penalties.

<sup>1</sup> Subject to official publication by the European Commission in the annual CO<sub>2</sub> fleet monitoring report.

<sup>2</sup> Fleet emissions have been calculated on the basis of the rules applicable in China, including taking credits for BEVs and PHEVs into account.

## BATTERY CARS HAVE THE LOWEST PRIMARY ENERGY

Primary energy requirement in Wh/km, life-cycle carbon and energy footprint for 200,000 km of driving



\* Not comparable on an energy basis, not carbon neutral.

## ROADMAP E CREATES MORE CLIMATE-FRIENDLINESS IN THE USAGE PHASE

We consider electric mobility the most important key to reducing our vehicles' carbon emissions. With an investment volume of €33 billion by 2024, we have launched the greatest electrification drive in the automotive industry with Roadmap E. By 2028, we would like to be a world leader for e-mobility and in this context want to launch close to 70 new electrified models around the world and sell 22 million electric vehicles by then. The proportion of the fleet that is electric should rise to more than 20% by 2025 and to at least 40% by 2030. In 2019, the first electric vehicles of the new generation went into production: the Audi e-tron, the Porsche Taycan and the Volkswagen ID.3. The first wave will also include the ID. CROZZ, the SEAT el-born, the ŠKODA VISION E, the ID. BUZZ and the ID. VIZZION.

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For all drive technologies, the use of alternative fuels along with the use of green electricity is the most important CO<sub>2</sub> reduction measure. The use of "reduced-carbon" fuels is already possible across all brands, as their suitability for use in internal combustion engines has been proven on numerous occasions.

## CLIMATE PROTECTION IN MANUFACTURING

By 2025, the CO<sub>2</sub> emissions of all plants per vehicle is to be reduced by 50% compared to 2010. As part of our contribution to the Paris Agreement, we are also introducing absolute CO<sub>2</sub> targets at the same time.

The key to this is increasing energy efficiency and raising the proportion of renewable energies in our electricity supply. Globally, the proportion of renewable energies in the Volkswagen Group is 41% of electricity consumption. 100% of electricity is already obtained from renewable energy at 43 Group sites. We are also strengthening our approach with a new sourcing strategy that provides for the undifferentiated sourcing of energy for all new contracts only with corresponding proof of origin (Energy Attribute

Certificates) where the particular electricity market offers this option.

The conversion of the power plants in Wolfsburg from coal to gas was begun in the reporting year and is expected to bring an annual saving of 1.5 million tonnes of CO<sub>2</sub> from 2023, which is equivalent to 60%. A 33% increase in the energy efficiency of combined cycle gas turbine power plants and the use of natural gas instead of coal is intended to decrease the CO<sub>2</sub> emissions of the two power plants. The modernization means the CO<sub>2</sub> emissions of the Group's production facilities reduce by 15%.

The Volkswagen Group proportionally funds projects that make a contribution to reducing greenhouse gas emissions with an internal CO<sub>2</sub> fund. €25 million per year is currently available for this. Most of the electricity for the Volkswagen Group's German production sites that is not produced by the Group itself is carbon-neutral Volkswagen Naturstrom® electricity, i.e. renewable energy. Approval for building and operating certified wind power facilities producing 12.8 MW at the MAN Salzgitter site was granted in 2017 as part of a public procedure. The project was confirmed in the Federal Network Agency's EEG Tendering Process 2018. The four wind turbines were ordered from the manufacturer. The commissioning of the plant began at the end of 2019.

## CARBON-NEUTRAL PLANTS

Audi's manufacturing in Brussels has had a carbon-neutral footprint since 2018. The Zwickau site will also be operated with a carbon-neutral footprint. The energy for the production of the ID.3, which started at the site in 2019, is covered exclusively by our own highly efficient cogeneration via combined heat and power plants and Volkswagen Naturstrom®. CO<sub>2</sub> emissions have been reduced by 90,000 tonnes per year solely through the use of green energy. Efficiency measures in production include, for example, optimized thermal afterburning in the paint line, frequency-controlled fans and the use of energy-efficient air compressors. The remaining emissions from ID.3 production will initially be offset through climate protection projects, although the intention is to gradually reduce this. In addition, agreements are being entered into with suppliers so that customers who purchase an ID.3 will receive a vehicle which is produced with a completely carbon-neutral footprint throughout the supply and production chain. The Taycan model has also been manufactured in a carbon-neutral way and from 100% renewable energy at the Porsche site at Zuffenhausen since the end of 2019. The sourcing of Volkswagen Naturstrom® has been supplemented by two additional combined heat and power plants with a capacity of around two megawatts since 2019. These are exclusively run on biogas, which is obtained from biodegradable waste and residual materials. The site also uses biogas in the manufacturing process. The Group's head office and the main Bentley Motors plant in Crewe, England, received certification of their carbon neutrality in accordance with the PAS 2060 Carbon Neutrality Standard at the start of October. All of Bentley's electrical power is either

generated through solar panels on site or purchased as certified green energy.

These examples reflect our goal of manufacturing with a carbon-neutral footprint. We use correspondingly strict approval criteria when selecting climate protection projects for offsetting hard-to-avoid emissions:

- Evidence of a continuous increase in energy efficiency
- Submission of a feasibility study for complete avoidance of emissions at the site
- Complete cover of electrical power needs from renewable sources or highly efficient cogeneration
- Twice the investments in ongoing efficiency improvement compared to planned spending for offsetting

We also take extensive climate protection measures in the area of IT infrastructure. For example, the Volkswagen Group moved into a new climate-neutral data center in Rjukan (Norway) in 2019. The plan is to power the data center entirely by hydro-power, saving more than 5,800 tonnes of CO<sub>2</sub> per year compared to a conventionally operated data center. The maximum output of 2,750 kW will be used by the Volkswagen Passenger Cars and Audi brands for high-performance servers, which are used for computer-intensive vehicle development projects. These include the simulation of crash tests and virtual wind tunnel tests.

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#### **“GOTOZERO IMPACT LOGISTICS”**

In order to contribute to achieving the “goTOzero” Group environmental mission statement targets in logistics, Volkswagen Group Logistics is working together with colleagues from Brand Logistics in the goTozero Impact Logistics initiative. This builds on the previous Green Logistics initiative. Emissions are reduced through the continuous optimization of the production and transport network.

In addition, the use of new, low-emission technologies in the transportation of production materials and finished vehicles is being reviewed and pushed.

The measures taken by the Volkswagen Group for future carbon-neutral logistics comprise shifting transportation from road to rail and the carbon offsetting of rail transportation in Germany and Europe in collaboration with Deutsche Bahn AG. In addition, Volkswagen Group Logistics is putting into commission the world's first roll-on/roll-off (RoRo) ships powered by liquefied natural gas for vehicle transport across the North Atlantic and is committed to ensuring that transport companies operating for Volkswagen can use LNG trucks.

#### **PARTICIPATING IN EMISSIONS TRADING**

Thirty-two of our Group locations participate in European emissions trading and thus comply with a legal requirement of the EU. For 2019, a total of 975,009 emissions certificates were allocated to the Volkswagen Group free of charge (110,235 fewer than in the previous year). The European Commission is already planning to make further changes to emissions trading when the fourth trading period begins (from 2021). These could lead to a tightening of the system and thus to price increases for the certificates. In addition to the EU member states, other countries in which the Volkswagen Group has production sites are also considering introducing an emissions trading system. Seven corresponding pilot projects are running in China, for example, although they have not so far affected the Volkswagen Group. The Chinese government officially implemented a national emissions trading system at the end of 2017. Initially, the impact will only be on the energy generation sector; a gradual expansion is planned.

## E-MOBILITY FOR IMPROVING AIR QUALITY

Mobility adversely affects air quality worldwide, particularly in large cities. Nitrogen oxide emissions and particulate matter are primarily responsible for this. The political and legal environment is affected by the introduction of stricter limits – with correspondingly detailed approval processes for new vehicles.

The Volkswagen Group gives retaining air quality a high priority and has established this action area as one of the four decisive pillars in the environmental mission statement. The Group sees the broad expansion of electric mobility as a key step for improving local air quality because electrically powered vehicles are emission-free on the road. By 2025, the share of battery electric vehicles in our model portfolio will be between 20% and 25%. The proportion of electric vehicles in our new passenger car fleet in Europe and China is to rise to at least 40% by 2030. For us, this proportion is therefore the key indicator of improved air quality that the Volkswagen Group can influence.

In accordance with the new Group environmental mission statement, we have organizationally anchored the topic of air quality even more firmly in the Group's environmental management: measures are managed by the Group Steering Committees for the Environment and Energy, CO<sub>2</sub>, Fleet Compliance and Exhaust Emissions. In addition, a "Tires" working group was formed that checks, among other things, to what extent the higher weight of electric cars because of the battery has an impact on abraded particles from tires and particulate air pollution. At the same time, the diesel task force continues to work in Germany, which, among other things, coordinates follow-up measures from the results of the 2017 diesel summit. These measures also included trade-ins of scrap vehicles.

## CHECKING AND COMPLYING WITH LIMITS


In internal combustion engines, we strictly adhere to national and international legal norms and limits. The Euro 6d-TEMP standard has been obligatory for new registrations here since September 1, 2019. In addition to the use of the Worldwide Harmonized Light Vehicles Test Procedure (WLTP), it also requires measurement in accordance with the RDE (= Real Driving Emissions) standard. Unlike with WLTP, emissions are not measured on a test bench – they are measured in actual road traffic. The tests are carried out by external and independent test laboratories. Our vehicles approved since September 2019 meet the increased European requirements for complying with evaporation limits (evaporative emission limits). In vehicle manufacturing, evaporative emissions mean the evaporation of hydrocarbon compounds of organic materials and fuel, which leave the vehicle through evaporation or penetration of permeable components.

Each of our diesel vehicles has an SCR catalytic converter as standard. We equip all the new TSFI Otto engines with particulate filters, thus complying with the legal obligation under the Euro-6 standard.

## COOPERATION ON A LOCAL AND INTERNATIONAL LEVEL

In Germany, we are continuing the dialog and collaboration with large cities that have discussed the problems of nitrogen oxide emissions and possibly banning diesel vehicles. In 2018, the Group supported broad studies and assessments of measures regarding air pollution control in four cities. The result was that alongside local transport policy decisions, replacement of vehicle fleets with clean drive technologies is the most effective approach for better air quality. This collaboration with local government was also continued in 2019. Cities such as Kiel, Ludwigsburg, or Stuttgart have used the study findings to revise their air pollution control plans by adopting the measures identified as effective and feasible, in some cases directly.

We realize that air pollution in major cities and urban areas is a problem which is not confined to Germany. We are thus active on a global level, for example in the WBCSD project "Transforming Urban Mobility" which, together with other players, is searching for solutions for sustainable cities. In addition to climate protection, safety, efficiency and access, good air quality and fair use of space are among the core target areas of sustainable cities.

 > Digital > Mobility Concepts

It is not just our investments in electric mobility and modern combustion technologies that make a contribution to better air. We also take measures in this area in production and, for example, continuously reduce emissions of volatile organic compounds (VOCs) that arise from processes in our paint facilities. Among others, the China region makes a significant contribution to the reduction of the average VOC emissions in the Group. In the period from 2010 to 2019, the VOC emissions per vehicle decreased by more than 80% in the China region.

## CONSERVATION OF NATURAL RESOURCES

Human interference in ecosystems, pollution, damage and the use of finite natural resources through economic activity are reaching levels that make a rethink and a change of direction unavoidable. The production of vehicles also requires many natural raw materials. That is why the conservation of resources along the entire life cycle of our products and mobility solutions is a central pillar of our “goTOzero” concept. In this context, we want to maximize resource efficiency, promote circular economy approaches and set ourselves measurable targets.

By 2025, we want to reduce energy and water consumption, waste for disposal (production-specific volumes only), and CO<sub>2</sub> and VOC emissions in production by 45% for each vehicle produced – starting from 2010 levels and throughout the whole Group. This target figure – the environmental impact reduction production per unit (UEP) – was defined as part of the production strategy and includes targets for the Group and its brands. Given their high environmental relevance, we focus particularly on energy and CO<sub>2</sub>.

One element of the production strategy is the zero impact factory initiative. This involves us working on four key issues in the period leading up to 2025:

- Setting and achieving ambitious environmental targets for production
- Developing a long-term vision for environmental targets in production and rolling it out across the Group
- Strengthening employees' environmental awareness
- Integration of relevant environmental aspects into processes

In the Group, we have made significant progress on our way to achieving our targets. The following charts show the development of these figures from 2010 to 2019 (data: 11+1 months).

- Specific energy requirements: –20.2%
- Specific CO<sub>2</sub> emissions: –38.4%
- Specific VOC emissions: –59.3%
- Specific water consumption: –21.5%
- Specific waste for disposal (production-specific volumes only): –58.4%

The Group Steering Committee for the Environment and Energy and additional subject-specific Group steering committees are substantially responsible for implementing the results programs and monitoring target achievement. With the IT-supported “Massnahmen@web” system, we record environmental measures and encourage the Group-wide exchange of best practices. In the reporting year, around 1,240 implemented measures in the area of environment and energy were documented in this system. They serve to improve infrastructure and production processes for passenger cars and light commercial vehicles.

Overall, the high quality focus with a low need for repair ensures our vehicles have long lives in the usage phase, thus making an important contribution to resource efficiency.

## ZERO IMPACT FACTORY FUTURE STRATEGY

The Volkswagen Group is bundling its activities for greater resource efficiency in the future in the “goTOzero – zero impact factory” initiative, which targets production with no impact on the environment. An assessment system checks how far removed a factory is from zero impact on the environment. As well as the criteria of climate protection and energy, emissions, water and waste, this also includes aspects such as the appearance of the factory, commitment to biodiversity, protecting the soil, avoidance of business disruptions, functioning environmental management, better resource efficiency towards a circular economy or environmentally neutral mobility management for employees and the transportation of goods.

The assessment has already been tested at eight Group sites (Zuffenhausen, Mladá Boleslav, Bratislava, Martorell, Brussels, Września, Emden and Leipzig) and is being continuously further rolled out in the Group, including at other Audi sites, at the Volkswagen brand's sites and in China.

In 2019 the German Sustainable Building Council (Deutsche Gesellschaft für Nachhaltiges Bauen – DGNB) gave the Porsche plant in Leipzig, which is currently being expanded for the future requirements of electric mobility, the top grade of “platinum”. In addition to environmental protection, biodiversity and energy life cycle assessments, the DGNB assessed the use of resources, the design of the site, city climate effects and infrastructure facilities, ecological monitoring of construction work, life-cycle costs, value stability and the associated plans and processes. The DGNB rates the life cycle assessment of energy management and the adaptability of the site as particularly good.

## USE OF RECYCLED MATERIALS

We are stepping up efforts to use material loops in our production processes. When selecting raw materials, we opt for recycled ones obtained from production waste or end-of-life products. When developing new vehicles, we pay attention to the recyclability of the required materials, use high-quality recycled material and avoid pollutants. According to the European Directive on End-of-Life Vehicles, passenger cars and light commercial vehicles must be 85% recyclable and 95% recoverable at the end of their lives – our vehicles registered in Europe meet this legal requirement.

In order to calculate how much of a complete vehicle is recycled, we determine the materials for all relevant components in the vehicle and their recycled materials content and add these together. Reliable information straight from suppliers and sector-specific association data are essential for this.



The Aluminum Closed Loop Project, which for the first time achieved a closed loop for aluminum beyond Company boundaries in 2017, is an example of our approach. For instance, at the Neckarsulm site Audi uses the recycling concept in which the waste from aluminum sheet-metal parts from the press shop is delivered directly back to the suppliers. The supplier can recycle the scrap and use it to produce new material that Audi then uses again in the press shop. In this way, Audi not only saves energy and avoids CO<sub>2</sub> emissions, but also reduces the quantity of primary raw materials needed. In addition, the quality of the recyclate remains at the highest level and downcycling is avoided. This process has already avoided more than 150,000 tonnes of CO<sub>2</sub> since the start in 2017. Audi is currently testing rollout to all aluminum-processing press shops in the Group. If this closed-loop process is also implemented in full at the Ingolstadt, Győr and Bratislava sites, several hundred thousand tonnes of CO<sub>2</sub> emissions could be saved per year. The procedure has already received a sustainability certificate (Performance Standard) from the Aluminum Stewardship Initiative. With lithium-ion batteries too, we ensure not only the longest service life possible but also the use of materials from a closed loop. Another example is the pilot facility for recycling batteries being set up at the Salzgitter site, which is to be put into operation in 2020.

#### USE OF SUSTAINABLE MATERIALS

GRI 306-2

In order to reduce our resource consumption, we rely on environmentally friendly raw materials from renewable and nonrenewable sources when manufacturing our vehicles. Wherever possible, our Group brands use renewable raw materials such as the natural fibers flax, cotton, wood and cellulose. Such materials can be used if they comply with all the technical requirements and perform better than conventional materials over the life cycle. In addition, our strict sustainability standards naturally apply for our suppliers.

We take advantage of new opportunities in body construction where we improve existing products or design new ones in the interests of functionality, quality, safety and environmental compatibility. Intelligent lightweight construction is the guiding principle here. For volume models, we use hot-formed, high-strength steel. Although energy consumption in production is higher, the lighter vehicle body allows a reduction in CO<sub>2</sub> emissions and thus an improvement in the overall environmental impact of the product.

#### RESPONSIBLE USE OF WATER

The supply chain, in particular obtaining and processing raw materials, is responsible for most of our water use. Because we cannot influence these aspects directly, we concentrate on our production sites. Of all fresh water that we use, 55% (around 21 million m<sup>3</sup>) is used by sites in risk zones, i.e. regions with water shortages, such as Mexico. The concept for sustainable water management approved

by the Group Steering Committee for the Environment and Energy takes into account this aspect and defines four areas of activity:

- The safe supply and disposal of water by protecting groundwater reserves against pollution
- Efficient water use through closed loops over the life cycle
- Social and ecological work through projects to protect water reserves and raise public awareness of environmental issues
- Transparency through supporting the CDP Water Disclosure Project (WDP)

We manage water-saving processes at our Group's locations during production in line with Group-wide specifications. In 2019, we were given an A for our sustainable water management in the WDP ranking. Given our growing production figures and the integration of new sites, our Group's absolute fresh water use has increased in recent years. The amount of freshwater used per vehicle fell by 21.5% per vehicle from 2010 to 2019 – thanks to a range of recycling measures and the introduction of manufacturing processes requiring little water.

The amount of waste water produced is in line with the amount of fresh water that we use. Differences in quantities between fresh and waste water are the result of evaporation in cooling towers and during the manufacturing process.

#### ENVIRONMENTALLY FRIENDLY AND SAFE WASTE MANAGEMENT

Our waste strategy aims to reduce the quantity of waste per unit produced and to reuse unavoidable waste to create high-quality materials. The focus is on:

- Avoiding waste creation by optimizing production and auxiliary processes and increasing material utilization levels (material efficiency)
- Reducing the quantity of waste produced by processing waste at sites
- Prioritizing the reuse of waste and reducing the quantity of waste that needs to be disposed of

In order to optimize our management of waste, we are increasingly using digital waste management systems in all German and a number of European plants of the brands Volkswagen, Volkswagen Commercial Vehicles, Porsche, Audi and MAN. They make it easier to control waste management processes and facilitate state control of the disposal of hazardous waste (electronic government).

In order to monitor waste management and recycling processes, we carry out regular cross-site, cross-brand and cross-OEM waste disposal audits in Germany and the rest of Europe. In addition, the auditors receive further training and hold regular discussions to ensure that they have a common understanding of the quality requirements associated with waste disposal services, to carry out audits of consistently high quality and to allow other OEMs and suppliers to take advantage of the results.



We reuse waste from manufacturing, logistics, workshops and technical development to produce high-quality materials. Our Procurement Division has established a reliable Group-wide system for recovering waste materials which can generate income, for example paper, plastics, wood, or metal.

Under the umbrella of the zero impact factory initiative, we are intensifying our efforts to avoid plastic waste with the Zero Plastic Waste Factory project. Analyses at the Hanover and Pamplona sites have revealed considerable potential for action to achieve waste avoidance and cost savings. At the Hanover site, a plastic recycling center has been established as part of the project. Meanwhile, waste collection initiatives were undertaken at Porsche and the Poznan site and a mobile plastic collecting basin has been installed in the port of Brussels under the sponsorship of Audi Environmental Foundation. A joint approach is currently being developed with the Group brands in order to systematically entrench the topic of plastic avoidance in the long term.

**PERMANENT REDUCTION OF VOC EMISSIONS**

Painting processes are the main cause of VOC emissions. In modern paint facilities, paints and process materials containing low levels of solvents are used. We take suitable steps to intercept or eliminate emitted solvents. In order to do this, we mainly use thermal afterburning of outgoing air, which is downstream of the actual painting process. In spite of an increase in vehicle production and the resulting increase in the amount of painting carried out since 2010, we have reduced our absolute VOC emissions by 37.0%. We have also significantly reduced the VOC emissions per vehicle (passenger cars and light commercial vehicles) by 59.3% since 2010.

ADDITIONAL TABLES AND KPIS

GRI 302-1, 302-4, 305-1, 305-3, 305-5, 305-7, 306-2

The following tables give an overview of the objectives for the focal topic of the environment.

We report selected environmental data as regards production within the Volkswagen Group in the following tables of key indicators. The data is collected, checked and approved at our production sites in line with an internal standard (VW Standard 98 000). The values for December of the preceding year may include some estimated data if, for example, they are based on bills from power suppliers or waste disposal providers which were not yet available at the time of compilation. In the next data collection round, this estimated data will be replaced with the finalized figures for December.

In accordance with our environmental strategy, the various time series portrayed here refer to the baseline year of 2010 and show comparisons to both the reporting year and the previous year. Overall, environmental data is collected from the Group's production sites. Data in the "passenger cars and light commercial vehicles" category is reported for 2010, 2018 and 2019. Data for the brands Scania AB, MAN SE, Ducati Motor Holding S.p.A. and VW Kraftwerk GmbH is reported in the "other divisions" category; the respective proportions are shown separately in the tables. Unless otherwise indicated, all the Group's production sites, together with the power stations and boiler plants operated by Volkswagen AG in Wolfsburg, Kassel and Hanover in Germany, are included in both categories.

The data covers 116 of the Group's 124 production sites. There is no data available for the eight production sites not covered. These correspond to approximately 0.3% of the workforce at the production sites, and hence have no relevant influence on the Group's KPIs.

The Volkswagen Group is essentially an automotive manufacturer which produces passenger cars and light commercial vehicles as well as heavy-duty commercial vehicles and buses. MAN SE does, however, also manufacture marine engines and power station components. In view of this product diversity, our overall environmental impact cannot simply be expressed in terms of the volume of vehicles produced. Consequently, relative indicators are only shown for the "passenger cars and light commercial vehicles" category.

The changing production volumes and associated fluctuations in capacity utilization levels at our various locations are reflected in changes in the absolute values of many indicators. However, increased efficiency did result in improvements in the specific values of a number of indicators. Weather conditions have an appreciable but uncontrollable impact on the consumption of resources. This relates primarily to space heating demand for both production and nonproduction areas, since the annual average temperatures impact the direct consumption of energy sources as well as the amount of energy purchased from third parties.

The specific values are also influenced by a range of factors. On the one hand, absolute consumption or emissions levels may change, while on the other, rising or falling production volumes at the individual production sites also influence the indicators.

## ENVIRONMENT TARGET PROGRAM

Action Areas	Goals and Actions	Deadline	Status
Climate Change	Reduction of the decarbonization index (DCI) by 30% compared to the base year of 2015	2025	CO <sub>2</sub> reduction measures over the entire vehicle life cycle (passenger cars and light commercial vehicles) are identified, conceptualized and implemented Group-wide
	Unavoidable CO <sub>2</sub> emissions are offset in increasingly large amounts	Ongoing	
	Reduction of greenhouse gas emissions from energy supply to production facilities in Germany by 40% per unit produced by 2020 (compared with 2010 baseline)	2020	Investment of around €26 million in renewable energies – wind farms and photovoltaic plants; investment of around €15 million in a combined heat and power plant Investment of around €65 million in a combined cycle gas turbine power plant CO <sub>2</sub> emissions per vehicle from production operations in Germany have already been reduced by around 28.6% since 2010
Resources	Environmental impact reduction production (UEP): across the Group as a whole, energy and water consumption plus waste and emissions levels to be reduced by 45% per unit produced (baseline: 2010)	2025	UEP totals 36.1% in 2019.
Environmental Compliance	<ul style="list-style-type: none"> <li>- Further development of the Volkswagen Group and Volkswagen AG's environmental management system into an environmental compliance management system with comprehensive innovations on environmental risk management, audit, reporting, training, binding obligations and handling discrepancies/breaches</li> <li>- Adoption of corresponding Group and organizational policies, including support for global implementation</li> </ul>	2021	<ul style="list-style-type: none"> <li>- Design of the environmental compliance management system completed.</li> <li>- Group and organizational policies adopted by the Board of Management</li> <li>- Implementation (Group or Volkswagen Aktiengesellschaft) started</li> </ul>
Air Quality	Launch of the ID. family	Ongoing	The production of the ID.3 as the first vehicle based on the new, modular electric drive matrix (MEB) began in Zwickau in November 2019. Preproduction of the ID. family has already begun in the Anting plant in China as the second plant From 2021, up to 330,000 electric vehicles will be built in Zwickau per year
	World premiere of the first ID.3 on Europe's roads	2020	From summer, the first ID.3 vehicles will be driven on Europe's roads The first fully electric SUV – the series edition of the ID. CROZZ – will celebrate its world premiere during the year
	Substantial investment in electric mobility	By 2024 (intermediate goal 2023)	Volkswagen is investing €33 billion in electric mobility across the Group by 2024, of which €11 billion in the Volkswagen brand. The strategic goal of one million electric vehicles is expected already to be achieved at the end of 2023 and thus two years earlier than previously planned
		By 2025	For 2025, the Volkswagen brand plans on 1.5 million electric vehicles produced. By 2025 – depending on market trends – the Group wants to build and sell up to three million fully electric vehicles per year and launch more than 80 new, electrified Group models, including 50 fully electric vehicles
		By 2028	70 new fully electric Volkswagen Group models, 22 million Volkswagen Group electric vehicles are produced
	Construction of a 16-gigawatt-hour battery cell factory	From 2020	A 16-gigawatt-hour battery cell factory is to be built in Salzgitter. The start of production is planned for the end of 2023/start of 2024. Joint venture with Swedish battery manufacturer Northvolt.
	Opening of the modular electric drive matrix (MEB) for other manufacturers	2023	Ford plans to offer an MEB vehicle in Europe from 2023 and expects to sell more than 600,000 vehicles within six years

**ENVIRONMENTAL PROTECTION COSTS\***

in €/vehicle

	2019	2018	2010
Investments	8	12	11
Operating costs	218	206	179

\* Volkswagen AG production locations in Germany.

**ENERGY CONSUMPTION\***

in million MWh/year

	2019	2018	2010
<b>Total</b>	<b>23.42</b>	<b>24.12</b>	<b>19.37</b>
Electricity	12.39	12.74	9.45
of which cars and light commercial vehicles	11.14	11.47	8.72
of which other divisions	1.25	1.27	0.72
Heat	6.61	6.81	6.46
of which cars and light commercial vehicles	5.83	6.04	6.24
of which other divisions	0.77	0.78	0.22
Fuel gases for manufacturing processes	4.42	4.56	3.47
of which cars and light commercial vehicles	4.34	4.48	3.40
of which other divisions	0.09	0.09	0.06

\* Cars and light commercial vehicles and other divisions.

**ENVIRONMENTAL PROTECTION COSTS\***

in € million/year

	2019	2018	2010
Investments	9	13	12
Operating costs	233	230	197

\* Volkswagen AG production locations in Germany.

**ENERGY CONSUMPTION\***

in KWh/vehicle

	2019	2018	2010
<b>Total</b>	<b>2,010</b>	<b>2,038</b>	<b>2,519</b>
Electricity	1,051	1,063	1,197
Heat	550	560	855
Fuel gases for manufacturing processes	409	415	467

\* Cars and light commercial vehicles.

**SCOPE 1\* DIRECT CO<sub>2</sub> EMISSIONS**

in kg/vehicle

	2019	2018	2010
Direct CO <sub>2</sub> emissions (Scope 1)	338	346	588

\* Cars and light commercial vehicles.

**SCOPE 1 DIRECT CO<sub>2</sub> EMISSIONS**

in million tonnes/year

	2019	2018	2010
Direct CO <sub>2</sub> emissions (Scope 1)	3.77	3.91	4.32
of which cars and light commercial vehicles	3.58	3.74	4.29
of which other divisions	0.19	0.17	0.03

**SCOPE 1 + 2\* CO<sub>2</sub> EMISSIONS**

in kg/vehicle

	2019	2018	2010
CO <sub>2</sub> emissions (Scope 1 + 2)	675	720	1,096

\* Cars and light commercial vehicles.

**SCOPE 1 + 2\* CO<sub>2</sub> EMISSIONS**

in million tonnes/year

	2019	2018	2010
CO <sub>2</sub> emissions (Scope 1 + 2)	7.57	8.20	8.04
of which cars and light commercial vehicles	7.16	7.77	7.99
of which other divisions	0.41	0.44	0.05

\* Cars and light commercial vehicles and other divisions.

## CO<sub>2</sub> EQUIVALENTS\*

in million tonnes/year

	2019	2018	2010
CO <sub>2</sub> equivalents	0.118	0.095	0.067
of which cars and light commercial vehicles	0.112	0.092	0.067
of which other divisions	0.006	0.003	0.000

\* Cars and light commercial vehicles and other divisions.

## CO<sub>2</sub> EQUIVALENTS\*

in kg/vehicle

	2019	2018	2010
CO <sub>2</sub> equivalents	10.61	8.50	9.21

\* Cars and light commercial vehicles.

## SCOPE 3 GHG EMISSIONS

in the Volkswagen Group (cars and light commercial vehicles)

		2019 <sup>1</sup>		2018 <sup>2</sup>	
No.	Category	t CO <sub>2</sub>	%	t CO <sub>2</sub>	%
1	Purchased goods and services <sup>6</sup>	71,564,141	16.0	67,434,157	15.8
2	Capital goods	16,724,588	3.8	14,212,385	3.3
3	Fuel/energy	1,512,239	0.3	1,402,775	0.3
4	Transportation and distribution <sup>2, 3</sup>	4,817,890	1.0	4,374,823	1.0
5	Waste generated in operations	1,237,583	0.3	2,265,212	0.5
6	Business travel	721,168	0.2	708,180	0.2
7	Employee commuting	1,027,995	0.2	1,009,481	0.2
8	Leased assets <sup>3</sup>	not reported	–	not reported	–
9	Transportation and distribution <sup>4</sup>	included in cat. 4	–	not reported	–
10	Processing of intermediate products	included in Scope 1	–	13,000	0.003
11	Usage phase (200,000 km) <sup>5</sup>	344,474,742	77.0	332,364,361	77.7
12	End-of-life treatment <sup>2</sup>	1,187,992	0.3	1,145,858	0.3
13	Leased assets <sup>4</sup>	2,602,402	0.6	1,048,978	0.2
14	Franchises	1,550,000	0.4	1,550,000	0.4
15	Investments	not reported	not reported	not reported	not reported
<b>Total of reported Scope 3 emissions</b>		<b>447,420,740</b>	<b>100</b>	<b>427,529,210</b>	<b>100</b>

<sup>1</sup> Individual figures are rounded. This may lead to minor discrepancies in the sum total.

<sup>2</sup> Figure based on the 2019 CDP report – the figure for 2019 will appear in the 2020 CDP report.

<sup>3</sup> Upstream.

<sup>4</sup> Downstream.

<sup>5</sup> The calculation is based on an extrapolation of fleet values for the passenger cars and light commercial vehicles fleet in the three large regions (Europe [EU-28, Norway and Iceland], USA and China [fleet emissions have been calculated on the basis of the rules applicable in China, including taking credits for BEVs and PHEVs into account]).

<sup>6</sup> Major passenger-car manufacturing brands and light commercial vehicles.

## CO<sub>2</sub> EMISSIONS

of the Volkswagen Group's European  
(Europe [EU-28, Norway and Iceland])  
new passenger car fleet in g/km

	2019	2018	2017
CO <sub>2</sub> emissions	124 <sup>1,2</sup>	123 <sup>1,2</sup>	122 <sup>2</sup>

<sup>1</sup> Subject to official publication by the European Commission in the annual CO<sub>2</sub> fleet monitoring report.

<sup>2</sup> Up to and including 2020, European fleet legislation will be complied with on the basis of the New European Driving Cycle (NEDC). From 2021, the NEDC target value will be changed into a WLTP target value through a process defined by lawmakers; the changing of the target value is not expected to put additional strain on the target value.

## FRESH WATER AND WASTE WATER\*

in million m<sup>3</sup>/year

	2019	2018	2010
Fresh water volume	46.92	55.68	37.23
of which cars and light commercial vehicles	37.80	41.61	33.11
of which other divisions	9.12	14.07	4.12
Waste water volume	29.93	30.65	27.93
of which cars and light commercial vehicles	28.22	29.02	27.41
of which other divisions	1.70	1.64	0.52

\* Cars and light commercial vehicles and other divisions.

## FRESH WATER AND WASTE WATER\*

in m<sup>3</sup>/vehicle

	2019	2018	2010
Fresh water volume	3.57	3.86	4.54
Waste water volume	2.66	2.69	3.76

\* Cars and light commercial vehicles.

## WASTE FOR RECYCLING\*

in kg/vehicle

	2019	2018	2010
Nonhazardous waste	52.91	47.05	33.28
Hazardous waste	13.98	14.07	12.43
Metallic waste	204.96	208.89	217.27

\* Cars and light commercial vehicles.

## VOC EMISSIONS\*

in kg/vehicle

	2019	2018	2010
VOC emissions	1.68	1.93	4.13

\* Cars and light commercial vehicles.

## VOC EMISSIONS\*

in tonnes/year

	2019	2018	2010
VOC emissions	19,121	22,072	30,347
of which cars and light commercial vehicles	17,820	20,786	30,081
of which other divisions	1,302	1,286	266

\* Cars and light commercial vehicles and other divisions.

## WASTE FOR DISPOSAL\*

(production-specific volumes only) in kg/vehicle

	2019	2018	2010
Nonhazardous waste	3.62	5.46	14.03
Hazardous waste	6.06	6.74	9.27

\* Cars and light commercial vehicles.

## WASTE FOR DISPOSAL\*

(production-specific volumes only) in tonnes/year

	2019	2018	2010
Nonhazardous waste	48,804	65,588	103,037
of which cars and light commercial vehicles	38,408	58,856	102,291
of which other divisions	10,396	6,732	746
Hazardous waste	73,308	83,943	71,094
of which cars and light commercial vehicles	64,227	72,674	67,547
of which other divisions	9,081	11,269	3,547

\* Cars and light commercial vehicles and other divisions.

## WASTE FOR RECYCLING\*

in tonnes/year

	2019	2018	2010
Nonhazardous waste	649,233	594,283	298,753
of which cars and light commercial vehicles	560,847	507,531	242,611
of which other divisions	88,386	86,751	56,142
Hazardous waste	169,771	170,502	97,607
of which cars and light commercial vehicles	148,200	151,783	90,584
of which other divisions	21,570	18,719	7,023
Metallic waste	2,278,789	2,388,639	1,845,474
of which cars and light commercial vehicles	2,172,772	2,253,400	1,844,845
of which other divisions	106,017	135,239	629

\* Cars and light commercial vehicles and other divisions.







# PEOPLE

**76** Fairness and Responsibility

**78** Employer Attractiveness

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and KPIs

The role of companies in society has become an increasing focus of public attention in recent years. Financial crises, ethical misconduct and adverse social and environmental impacts of products and services have weakened trust in companies. Their future viability increasingly depends on whether they are able to restore their credibility and the legitimacy of their business model through responsible, socially sustainable actions.

For the Volkswagen Group, this means not only strengthening integrity and compliance and minimizing the environmental impact of its own manufacturing and products, but offering its employees good and fair working conditions and actively creating social added value as a mobility service provider of the future. We pursue a similar approach in the field of social sustainability. As a good corporate citizen, we want to act responsibly and fairly here towards all stakeholders. Internally, the cornerstones of this are the traits of a good employer, such as employee participation, job security, development opportunities and equal opportunities. Externally, we seek dialog with society, initiate and support social projects and encourage our employees to take responsibility for the community. This realignment should build on the Group's existing foundations, but also produce new things.

The Volkswagen Group's HR division and its Works Council in particular have for years been committed to the aim of strengthening the Group's contribution to society and strengthening the perception of Volkswagen as a responsible company and a socially responsible employer.

#### RESPONSIBILITY AS AN EMPLOYER

The Volkswagen Group is further advancing the transformation of the automotive industry towards climate-friendly e-mobility and digitally connected driving. We will only make a success of this change if we involve our employees, train them and prepare them for the forthcoming changes in the best way possible, as the success of our Group depends more than ever on the skills and commitment of our employees and on our attractiveness as an employer.

We employ more than 670,000 people, of which around one sixth are women. For every employee, we aim for an employment relationship that is characterized by fair and transparent pay, good development opportunities, participation and involvement in the work process and a high level of job security. We work in 36 countries in Europe and 38 countries in the Americas, Asia and Africa and operate 124 production facilities around the world. In all these places, we assume a major responsibility for the employees, their families, but also for social and economic development around our sites.

In many of our companies, we have guaranteed the existence of jobs through collective bargaining agreements. At Volkswagen AG in Germany, job security previously applied until 2019 and has been extended until 2029 through the Digitalization Roadmap. In order to successfully overcome the challenges of the digital transformation, the Group communicates with employee representatives on future agreements that both position the Group's individual brands more

efficiently and strengthen employees' career prospects. Examples of these are the Volkswagen brand's roadmap for digital transformation and the Audi brand's Audi.Zukunft agreement, both of which were announced in fiscal year 2019.

By 2023, and possibly beyond it, the Volkswagen brand in Germany wants to invest up to €4 billion in major digitalization projects within this framework and wants to make the administrative areas significantly more efficient as a result. To this end, approximately 4,000 jobs will be lost along the demographic curve. At the same time, the working environment will be made more attractive by targeted investments in new software generations. By 2023, around 2,000 digital experts will be recruited and the training budget will be centralized and increased to €160 million.

Agreements such as the Digital Transformation Roadmap provide the right answers to various challenges at a national or international level from an HR perspective. For example, Germany and other parts of Western Europe face not only risks resulting from demographic changes but continue to face shortages of skilled workers who we will need for IT and digitalization in the future. We are actively combating these problems through extensive recruitment measures, innovative employer branding campaigns and a training drive.

We regard the diversity of our employees with their broad range of experience, viewpoints and problem-solving ideas as a pillar of our future viability and as something that ought to be encouraged further. To this end we are in the process of raising all managers' awareness with the Diversity Wins@Volkswagen program currently being implemented across the Group, and deliberately expanding approaches for promoting diversity.

We have anchored our role as an excellent employer as one of four target dimensions in our Together 2025+ Group strategy. It highlights the importance of skilled and dedicated employees. We aim to increase their satisfaction and motivation by means of equal opportunities, an attractive and modern working environment, and a forward-looking organization of work. The basis for this is an open, positive and partnership-based culture, a high level of diversity in the workforce and exemplary and inspiring leadership. These elements help us to retain employees at Volkswagen and attract the best talent worldwide in order to work together on fully connected and sustainable mobility.

We want to be measured by concrete progress with regard to reaching our strategic objectives in the HR division. We have defined key performance indicators (KPIs) to this end: for internal employer attractiveness we conduct annual employee surveys and measure satisfaction using our Opinion Survey. For the assessment of external employer attractiveness, we make use of surveys and rankings by renowned institutions. The diversity index is the key performance indicator for us regarding increasing the proportion of women in management and the level of internationalization in top management.

Alongside the implementation of the Group strategy, the “Excellent Leadership” module defined a work package that drives the transition to an even more cooperative management culture with even greater integrity under the motto of “diversity, integrity, strong leadership”. We are radically reorganizing our management development and training to this end. We are systematizing succession planning in order to have the right talent in the right positions at the right time in the Group. We want to significantly increase the diversity in our management.

The common goal: by 2025, the Volkswagen Group will set an example for others with an open, partnership-based and value-based culture of collaboration.

#### **PERSONNEL MANAGEMENT AS A DRIVER OF EMPLOYMENT POLICY**

A responsible HR policy that is geared to the needs of employees requires a powerful HR organization guided by quality goals. In the course of 2018 and 2019, we radically restructured Volkswagen AG’s HR in order to increase the efficiency of HR work and customer focus.

The goals are the bundling of processes, flatter organizational structures, an improvement of customer care quality, clear responsibility and higher capacity for strategic topics and innovative HR products. Separate Group control units for the areas of HR principles and management, HR strategy and innovation, and diversity and the advancement of women were formed under the member of the Board of Management for HR. In addition, a unified model was developed for HR organization in the plants.

This modernization, which initially concentrates on Volkswagen AG, introduces the Group-wide transformation of human resources work. “One HR” will in the future create global standards for brands and companies and a common and consistent operating model for the Volkswagen Group’s HR division. “One HR” will in the future serve as a Group-wide blueprint for the strategic and organizational direction of the Group’s HR work.

We are guided by clear values here. The Volkswagen Group Essentials set out the common basic values for all brands and companies within the Group. Seven simple “We” statements describe what the Group stands for: “We take on responsibility for the environment and society”, “We are honest and speak up when something is wrong”, “We break new ground”, “We live diversity”, “We are proud of the work we do”, “We not me”, “We keep our word”.

We adhere strictly to the relevant national legal standards when dealing with all matters that affect our personnel. However, in line with our tradition of social partnership and the balancing of interests, we go beyond these standards: we want to allow all our employees throughout the world to share in Volkswagen’s social achievements and its high work and social standards.

Participation, initiative and individual creative opportunities are particularly important when it comes to keeping our promises as an employer. We would like our employees to be responsible, competent and confident “Company citizens” who actively take part in company affairs and get involved in decision-making processes.

For even better internal communication, we launched a digital service for employees in the form of the 360° Volkswagen app as a pilot project at Volkswagen AG in 2019. It should also be established internationally from 2020 onward. Its functions include news from various channels on the brands and sites and also services for the organization of day-to-day work. Moreover, there is also publicly accessible information for prospective employees and people interested in the Group, for example on the topic of mobility and career.

## OUR GOAL OF BEING AN EMPLOYER OF CHOICE

Our central goal is to be an attractive and reliable employer. For us, this primarily means keeping all the promises that we made to our employees and making our employees aware of this in their day-to-day work. Given that talented potential employees are becoming increasingly scarce, a high degree of credibility is another key requirement if the Group is to be perceived as a top employer and is to attract and keep the best employees. In order to fill jobs in cutting-edge fields with experienced and creative IT and digitalization experts, we are intensifying our efforts with the creation of a new recruitment unit. The Recruitment & Talent Marketing team supports Volkswagen AG's departments in the entire recruitment process. We are primarily looking for new employees who will actively help to shape the future of mobility and want to advance social change in this way. The "Recruiting@Volkswagen: Hello Possible" campaign is particularly aimed at IT and digital experts. With measures such as these, we also attract young talented employees to us, who in addition to monetary incentives are looking for a higher purpose in their work for a successful employment relationship.

## OPINION SURVEY MEASURES EMPLOYEE SATISFACTION

We attach great importance to actively involving our employees in processes and to ensuring that their opinions, assessments and criticism are heard. With our Opinion Survey, an employee survey in 180 companies of the Group, we measure the satisfaction of our employees and thus the status of our internal employer attractiveness. In addition, we are also interested in our employees' views on the questions of where the Group stands on the topic of integrity and how they assess working relationships in the Group. The results of the Opinion Survey serve to identify possible improvements and inform managers of where action needs to be taken in their organizational units. In defined follow-up processes, managers take suitable measures in dialog with their employees and are supported in doing this by the Opinion Survey Group team, which provides various tools for this – such as a method toolbox.

In addition, a new, compulsory top-down approach has been developed, which is being used for the first time in the discussions of results in January to March 2020. For the regular managers' measures discussion, a discussion of the measures derived and their implementation status will take place with a top-down approach, beginning with the respective division manager/board member and proceeding to the lowest management level. The aim is to ensure the implementation of the measures derived from the organizational units in a lasting manner.

The 2019 Opinion Survey was carried out at 180 companies in 50 countries. Approximately 500,000 of over 620,000 employees in the participating Group units responded; this is equivalent to a response rate of 81%. In 2019, the score on the employee satisfaction index – a principal indicator generated by the Opinion Survey – was 80.0 out of 100 possible index points and thus slightly above the score in the previous year (2018: 78.9 index points).

## REMUNERATION IN LINE WITH PERFORMANCE AND GEARED TO SUCCESS

Fair, transparent pay that enables a good life is the prerequisite for satisfied employees. In accordance with our global Social Charter, the remuneration and fringe benefits for our employees correspond at least to the legally required minimum level which is to be guaranteed in the particular country. This not only applies to our own workforce, but to all our suppliers' employees as well. As they are collectively agreed with trade unions, our rates of pay are usually considerably higher than the prevailing minimum levels.

When setting individual pay rates, we make no distinction between people of different genders or belonging to other groups: our employees are selected, appointed and nurtured exclusively on the basis of their qualifications and abilities.

Remuneration is based strictly on the job performed and individual performance.

Employees of Group companies enjoy further Company benefits. Depending on location, these may include subsidized transport and meals, low-cost accommodation, monthly childcare allowances and discounts on certain leisure activities. Additional healthcare or supplementary pension benefits round off the range of company benefits at specific sites. By offering occupational pension schemes, Volkswagen AG, its brands and subsidiaries make an important contribution towards securing their employees' income in old age.

## CREATING A WORK/LIFE BALANCE

We are constantly working on improving our employees work/life balance through flexible working time models. For example, we would like to take into account the specific needs of new parents, single parents or employees who are also carers. The rules and programs here vary from country to country and are determined by the legal framework and the results of collective negotiations with trade unions.

In Germany, the large number of people who take advantage of their legally governed parental leave entitlement proves how many employees wish for reconcilability of work and family life. In our Company regulations too, we endeavor to take into account the fact that many employees need greater flexibility as regards their working hours and place of work. Since 2016, a far-reaching Company agreement for working outside Company premises (mobile working) has been in place. Group brands such as Audi and Porsche have similar arrangements.

Our re-employment guarantee offers a very high level of flexibility. For the past 20 years or so, Volkswagen AG employees have been able to take up to eight years' leave of absence without having to give a reason. Regardless of whether this leave is used for a sabbatical, for parental leave or for career development purposes, employees have a guaranteed right to re-employment on the same terms and conditions as before.

We also help our employees to care for and look after close relatives. Employees can take up to ten days' leave at short notice in order to organize care for sick relatives, for instance. Employees can take up to six months' leave or reduce their working hours for the same period in order to care for a relative. Employees can work part-time for up to 24 months in order to care for their families.

We also consider organized childcare during working hours highly important for our employees' work/life balance. The Volkswagen Group in Germany and abroad therefore endeavors to offer childcare geared to specific groups of people. In addition to the existing facilities, a number of daycare centers near our operating locations have been set up in recent years. All German sites of the Volkswagen Passenger Cars, Audi, Porsche, Volkswagen Commercial Vehicles and MAN brands offer childcare during school holidays.

With these measures, we are helping not only to meet the expectations of a modern working environment geared to human needs, but also to provide answers to many of the most urgent questions of the current transformation.

#### EMPLOYEE PARTICIPATION AND CODETERMINATION

GRI 102-41

We include our employees in strategic decisions as early as possible in order to extensively inform our workforce about imminent changes and in many cases also to seek common solutions. When establishing cooperative labor relations marked by social harmony, we are guided by universally valid human rights and the standards of the International Labour Organization (ILO).

On this basis, we have agreed various charters and declarations with our Group European Works Council (GEWC) and Global Group Works Council (GGWC) that safeguard the collective rights of our employees in the workplace and set out basic work policy principles of the Volkswagen Group. We implement them rigorously throughout the Group together with the codetermination committees or the employee representatives at the relevant sites. They include:

- The Declaration on Social Rights and Industrial Relations at Volkswagen (Social Charter), which is geared to the relevant ILO conventions
- The Charter on Labor Relations, which sets out additional information, consultation and codetermination rights for employee representatives of the brands, companies and locations represented by the Group European Works Council and the Global Group Works Council
- The Charter on Temporary Work, in which Group management as well as the Group European Works Council and the Global Group Works Council have agreed on principles relating to temporary work, for example guide values for the ratio of temporary to permanent employees, equal pay (for equal work), training measures and the limitation of employment periods with a subsequent review as to whether to take on the employee permanently

- The Charter on Vocational Education and Training, in which professional training is established as a central part of labor relations. According to this charter, key aspects of training and the selection process, the duration and quality of professional training and the taking on of employees permanently are to be set out as part of the local implementation process for all sites.

In addition, there are a number of country and site-specific agreements that stipulate, for example, standards for further training or preventive healthcare measures. These policy foundations underpin the rights of employees and their elected representatives at Group level in the European and Global Works Councils. Executive managers and employee representatives meet regularly to consult on relevant issues. All members of the Group European Works Council and the Global Group Works Council attend at least one joint session of the two works councils every year. As well as discussing the current situation at the various sites, the respective HR managers and Group executive management also share information about product and workforce plans as well as social welfare and personnel standards.

We want to enable the most comprehensive representation of employee interests possible in our Group. There is a high level of trade union organization in our Group and the German model of codetermination is also practiced outside of Germany. For example, at many sites employees are represented in two ways: firstly, by a trade union, and secondly, by representatives elected to a works council at many sites. Many companies in the Group have a supervisory board on which the workforce is represented. The Charter on Labor Relations allows employee representatives around the world to conclude agreements with local management on specific rights to information, consultation and codetermination.

In committees made up of equal numbers of employee and employer representatives, both sides receive all relevant information at the same time. This far-reaching form of participation has proved highly successful over many decades. It ensures that change processes are approached together and are supported by the entire workforce.

Through their creativity, their knowledge and their initiative, employees take on responsibility for improving processes and products and ultimately help us to achieve our sustainability goals. In 2019, more than 25,000 ideas were submitted as part of idea management, resulting in savings of approximately €31 million for the Group at the German sites of Volkswagen AG, Volkswagen Sachsen GmbH and Volkswagen Osnabrück GmbH.



## TRAINING FOR THE TECHNOLOGICAL AND CULTURAL CHANGE

As an employer, we want our employees to be able to work creating value at workplaces in our Group for their entire working lives. This requires not just for them to retain their health, but also adjusting skills and capabilities to the quickly changing environment. This is why training our employees is a top topic in our HR strategy.

The comprehensive specialist qualifications of our employees remain the basis for the highest technological excellence. The electrification of the vehicle fleet, the transition towards connected, autonomous driving and the digital transformation of our Group mean, however, that employees already need very different qualifications today. We are well prepared for these changes with our highly differentiated vocational and advanced training system with its tailored training measures. At Volkswagen, the possibility of making a contribution through qualifications and developing new skills in each career phase is also an important part of our promise as an employer.

## DUAL VOCATIONAL TRAINING LAYS THE FOUNDATION

The majority of our employees in production are skilled workers with excellent qualifications. The conditions for this are created in particular by the dual vocational training in the Volkswagen Group. With its flexible combination of practical activities and theoretical knowledge, vocational training prepares our young professionals as well as possible for the forthcoming challenges. Dual vocational training is at the heart of our activities Group-wide and is the best way for our junior employees to acquire the qualifications they need. On an international level, we implement the high German training standards but also comply with the relevant national standards and regulations.

In 2019, the Volkswagen Group was training 19,399 young people. We also support the career development of new entrants once they have completed their apprenticeship. For example, particularly talented young specialists are nurtured in talent groups. In the reporting year, 103 skilled workers joined this development and qualification program. Through the "Wanderjahre" (year abroad) program, fully qualified vocational trainees also have the opportunity to move to an international Group company for 12 months. During the reporting year, 33 Volkswagen Group sites in 16 countries took part in this development program with a total of 79 young people. In 2019, 70 participants from Germany plus nine from other countries began their year abroad within the Volkswagen Group in Germany.

## TRAINING SKILLED WORKERS AND MANAGERS

At the Volkswagen Group Academy, which is responsible for vocational and advanced training, skilled workers can choose from a broad range of advanced training courses. These range from further training on topics of the future and occupational or cross-disciplinary areas of general interest to specific qualifications in vocational groups and even comprehensive personnel development

programs. The training offering is being continuously extended. In 2019, the Volkswagen Group Academy began its first collaborations with renowned external online training portals. For example, on the topic of IT, the video courses from the Pluralsight learning platform are now available to employees. Overall, around 118,000 training courses totaling 16.3 million hours of training were completed across the Group in 2019. We are preparing our managers for the challenges of the current transformation phase through targeted programs. In 2019, we created a new and high-quality training format in the form of the Senior Management Program. To this end, we are cooperating with the Hasso Plattner Institute (HPI) in Potsdam and the École des hautes études commerciales de Paris (HEC).

In 2020, for members of upper and top management in Germany we are planning the Transform Leadership 2025+ program with a focus on "leadership in the transformation". We want to cooperate with the energy factory St. Gallen, the University of St. Gallen's consultancy spin-off and Kienbaum Consultants International here. The majority of our development programs and selection procedures for executives, foremen and managers are standardized throughout the Group. In the reporting year, Volkswagen provided around 645 training courses and assessment centers for executives, foremen and managers in eight countries.

As part of the Volkswagen Group Academy, the AutoUni provides knowledge relevant to the future with a focus on digitalization to the Group by engaging external and in-house senior experts in addition to universities. In the future, the AutoUni will focus its activities entirely on digitalization and IT topics. The focus of their content is digitalization and its challenges for the transformation. In the reporting year, there were more than 600 national and international partnerships with universities, technical colleges and research institutions. Around 5,100 people took part in more than 90 AutoUni events all over the world in 2019.

## INVESTMENT IN ACQUIRING SKILLS FOR E-MOBILITY AND DIGITALIZATION

In the current upheaval of the automotive industry, the Volkswagen Group's particular focus in education is on training employees on important future technologies and closely supporting them in the transformation process. For example, the Group implemented a comprehensive qualification program for around 3,500 employees for a stable and successful ramp-up of the new electric models at the pilot site for e-mobility in Zwickau. In addition, more than 1,600 employees have passed through the e-mobility training center and completed its full-day training courses. In the special high-voltage trainings, the focus was mainly on dealing with modern battery systems and power lines. Using modern learning elements, such as gamification and virtual reality, participants were able to acquire basic skills for the use of the new high-voltage assembly groups and special product and process knowledge. A total of 8,000 employees were included in the change processes locally and prepared for the change in their work.

Audi also focuses on training for electric mobility at its sites, for example in the training for automotive mechatronics engineers. In this context, more than 300 trainees passed through high-voltage trainings in 2019 and acquired digital skills through hybrid learning concepts, including with the use of smart glasses.

Through the measures, we gained extensive knowledge about which trainings are necessary for the transformation and how employees can be optimally trained for their new work. The Group will disseminate this knowhow through its academies network to all sites around the world that are included in the transformation, for example Chinese sites that are also preparing for the production of electric vehicles.

By 2023, Volkswagen AG wants to create at least 2,000 new jobs connected to digitalization at its traditional West German sites. For the HR transformation in the course of the digitalization drive, the Group is increasing its training budget relating to new technologies by €60 million to a total of around €160 million. In addition, an online university will be set up, learning will be strengthened via

online platforms, and vocational and advanced training will be adapted to new requirements. This includes, for example, the Faculty 73 program with which we broaden the knowledge basis for the digital transformation in the Group. Here, we began training software developers ourselves for our own needs in spring 2019. In the future, 100 participants per academic year will complete the program. The AutoUni's two-year training program is designed for employees and in-house and external candidates with an affinity for IT. In this way, we open up highly attractive career advancement opportunities to undiscovered talents. More than 1,500 people applied for the program in 2019. The future experts acquire all the necessary skills for a successful career as a software developer in the automotive industry within the training. This includes, for example, programming in Java, mathematics for software developers, technical and theoretical computer science, expertise in computer networks, databases and mobile app programming. Volkswagen plans to transfer the participants of the first academic year to the permanent workforce at the start of 2021 following intensive training.

## DIVERSITY AND EQUAL OPPORTUNITIES

GRI 405-1

### COMMITMENT TO DIVERSITY AND EQUAL OPPORTUNITIES

A strong management team and the right values are the prerequisites for success in tomorrow's world of mobility. Diversity, respect, tolerance and equal opportunities are decisive factors here. Talented people of any age and gender ensure the future of our Group with their various backgrounds, skills and experiences.

The Volkswagen Group recognized this early on. The declaration "We live diversity" as one of the seven Group Essentials is thus an essential part of the Volkswagen Group's DNA. The importance of equal opportunities and a high level of diversity in the workforce is also firmly anchored in the Together 2025+ Group strategy. The goal: to bundle the potential of all the employees of different brands, countries and subsidiaries with their skills, perspectives and experience within the Group, to bring together the best talent and ideas and in this way to shape the future of the automotive industry together. This sort of corporate culture increases employee motivation and performance and also customer satisfaction. This is because we are most likely to achieve customer satisfaction if all employees work creatively on innovative solutions with their different experience and perspectives. To this end, we need an open, positive and partnership-based working atmosphere in which employees can make a contribution and work together with enthusiasm. This enables us to attract brilliant minds to our Group and retain them in the long term.

The key to this is the pursuit of a holistic diversity management approach: we manage the establishment of processes geared to equal opportunities and also set and pursue targets for systematic measurement of the effectiveness of our programs and measures.

In addition, we raise the workforce's awareness, train our employees and use best practice examples and role models within the Group. This approach is intended to sustainably promote diversity and equality of opportunity in our Group.

### EXCLUDING DISCRIMINATION AND BIAS

We exhibit a clear position: we stand for respect, for equal opportunities, for working together and for equal treatment of people, irrespective of their ethnic origin, skin color, gender, disability, ideology, faith, nationality, sexual orientation, social background, or political beliefs, provided the latter are based on democratic principles and tolerance towards those who hold different views. The Volkswagen Group Code of Conduct provides guidance throughout the Group.

We also enforce these rules in day-to-day business: all employees and managers are responsible for ensuring that colleagues work together in partnership. They are obliged to report any breaches immediately. If employees feel discriminated against, they can turn to trained experts for advice and support.

The culture change in the Group also has a direct influence on our organization of diversity issues. For example, the HR Compliance Group policy adopted in 2019 enshrines minimum standards for sustainably promoting and ensuring diversity and equal opportunities. They are largely based on the Group Essentials. It is compulsory for there to be at least one contact in each company for management and employees for the topic of diversity and equal opportunities. Emphasis is placed on the creation of Group-wide awareness of the importance and added value of the topic, which requires continuous

and credible communication and for management and managers to act as role models. In particular, a sustainable discussion of the topic of unconscious bias by all managers and personnel managers promotes the creation of a bias-free working environment and processes geared to equal opportunities in accordance with the Group policy.

#### RAISING AWARENESS OF DIVERSITY

Alongside the further development of diversity management, the Group-wide implementation of the mandatory awareness-raising program “Diversity Wins @Volkswagen” was at the center of activities in 2019. Managers, including foremen and trainers, are to be equipped to recognize new perspectives and skills in their teams and as a result to promote working together in a more efficient and innovative way. They will be motivated to integrate inclusive conduct into day-to-day management through interactive exercises and the joint development of measures. The intention is to reduce the influence of unconscious bias and stereotypes in important decision-making situations in the long term. The training will be adapted locally in the brands and companies in line with requirements and rolled out via a multiplier principle. A network of diversity managers and selected employees from all divisions is responsible for carrying out the trainings locally. The implementation is continuously tracked and evaluated via HR Compliance.

The Volkswagen Group holds a diversity conference each year to strengthen the global diversity network. In 2019, the third diversity conference took place with 67 diversity managers from more than 40 Volkswagen companies and brands and 23 countries at Porsche Holding in Salzburg. The exchange on best practices on more diversity and equal opportunities in the working environment was at the heart of it. The participants discussed topics including psychological security for employees, future forms of collaboration and Group-wide initiatives, such as the ongoing manager training “Diversity Wins @Volkswagen”.

#### NEW “WE DRIVE PROUD” NETWORK

The Group’s employees and diversity management founded the “We Drive Proud” LGBT\* and friends network in 2019 with the support of Volkswagen AG’s Board of Management. The network not only represents the interests of lesbian, gay, bisexual and trans\*, intersex\* and queer people, it first and foremost wants to help to shape cultural change in the Group. “We Drive Proud” sees itself as an open, Group-wide initiative that maintains dialog with existing networks, e.g. those at Audi or Porsche. The Volkswagen Group intends to support the formation of employee networks even more strongly in the future and thus to promote personal initiative and the willingness to take on responsibility.

#### DIVERSITY INDEX AS STRATEGIC KPI

Our diversity approach centers around quotas for women in managerial positions and targets for the internationality of our top management. These two figures are combined in our diversity index, which has been in force since January 1, 2017. The diversity index forms part of our HR strategy and applies throughout the Volkswagen Group with its active workforce. With this index, we manage measures and assess the extent to which they have been implemented. At 14.3% in 2019, the proportion of women in management was at the previous year’s level. We want to increase the proportion of women in management to 20.2% by 2025. We aim to increase the level of internationalization in top management, the uppermost of our three management tiers, to 25.0% by 2025. In the past fiscal year this was 18.4% (19.2%). These targets are decided by the Group’s Board of Management and are binding for the whole organization.

#### PURSUING GOALS FOR INCREASING THE PROPORTION OF WOMEN IN ACCORDANCE WITH GERMAN LAW

We have also formulated goals as regards the proportion of women in management for Volkswagen AG in accordance with German law. In line with Germany’s law on equal participation for women and men in executive positions, Volkswagen AG has set itself targets for increasing the proportion of women in management by the end of 2021: 13% on the first level of management and 16.9% on the second level within the active workforce. As of Tuesday, December 31, 2019, the proportion of women in the active workforce at the first level of management was 11.4% and at the second level of management it was 16.4%. The Group’s Board of Management and Supervisory Board are regularly updated on the progress we are making towards these targets.

In the reporting year, the proportion of women in managerial roles as part of the overall workforce of our Group in Germany rose to 9.7% in senior management and 13.7% in management generally (taking into consideration the whole Group retroactively from 2018). The proportion of women in top management increased from 6.1% in 2018 to 7.4% in the reporting year (taking into consideration the whole Group retroactively from 2018). The proportion of women in management across the Group in Germany (taking into consideration the whole Group retroactively from 2018) thus came to 12.1%, up from 11.5% the year before.



> [www.volkswagenag.com](http://www.volkswagenag.com) > Investor Relations > Corporate Governance > Diversity Concepts for the Board of Management and the Supervisory Board

## NURTURING FEMALE TALENT AND MANAGERS

In addition to meeting the statutory requirements for the proportion of women in management in Germany, we want to increase the proportion of women in all areas of the Volkswagen Group and are paving the way for this at an early stage. In Germany, for instance, we are specifically seeking to attract female talent, for example by arranging special work experience and orientation days for young women. Our aim is to increase the proportion of female trainees in industrial and technical trades from 18.5% in 2019 to 30% in 2020. By recruiting female academics, we also lay the foundation for a higher proportion of female managers and pursue the goal of achieving a proportion of women of 30% when recruiting from university graduates.

In the reporting year, the Volkswagen Group optimized its existing modular mentoring program (MMM) with a focus on Germany and adapted it to changing challenges. In the reporting year, the talent that was identified for the management development process was given the opportunity to attend modules from the modular mentoring program. The focus is on the targeted empowerment of high potential women in a male-dominated environment. Our medium-term goal is to raise the awareness of all managers regarding equal opportunity in the advancement of female talent at all hierarchy levels.

The program offers the departments support with achieving the targets regarding the proportion of women and providing female role models. We in part deliberately opened up the offering for men in order to gain them as supporters. The formats of the modular mentoring program include workshops, management seminars, dialog events and the establishment of the mentor-mentee tandem relationship.

In addition, Volkswagen offers the “Kompass” program specifically to support female talent with an aim for a career in management. In the reporting year, 60 high-potential women took part in this program. The program was further developed and is starting in the first quarter of 2020 as “Kompass 2.0”. The target group has been extended to women who are looking for empowerment on their way to management. The program addresses women from the brands and companies in the Group who are in the orientation phase in terms of management development. In the long term, the point of this program is also to increase the proportion of women in management. A networking day and a mentor-mentee tandem relationship stand at the heart of this program.

## SUPPORTING INCLUSION AT THE WORKPLACE

Our understanding of diversity extends beyond gender equality, sexual orientation and internationality. We also pay attention to the integration of employees with disabilities. We have launched the initiatives described below for this in Europe.

On an international level, we operate five protected workshops and are setting up additional workstations for more than 300 people with disabilities at the ŠKODA production sites in the Czech Republic. In the Czech Republic, these activities won an award as one of the “Personnel Projects of 2018”.

Our responsibility for keeping employees in valuable activities for their entire career if possible also extends to the needs of employees with a restricted working capacity. After all, individual forms of work organization can result in higher performance and job satisfaction levels for these groups of employees. The Work2Work program provides a good example. Since 2001, Volkswagen AG has opened up new career opportunities within the business for employees with differing abilities. In Wolfsburg, more than 700 employees are currently employed in Work2Work jobs in around 130 different areas.

We want to strengthen not only our employees' specialist skills but also their health. This is important if they are to perform well at work and cope with physical and mental stress which is typical when working in a changing production company. In the area of health, sustainability means for us that as many employees as possible can retire from work healthy. This long-term approach also helps our Group to cope with demographic change in the form of an aging population, which is now typical of many industrial countries in which we operate.

Holistic health management at Volkswagen already goes far beyond the statutory preventive healthcare and occupational health and safety requirements. It also includes aspects such as work organization, ergonomics, prevention, integration and rehabilitation, along with leadership culture.

### HOLISTIC HEALTH MANAGEMENT

Our employees receive medical care at all our sites in accordance with the relevant national legal regulations and internal rules and on the basis of Group guidelines on protecting and promoting health. All Group sites have at least one facility for dealing with medical emergencies. Most of them also offer medical care provided by a company doctor.

A Group policy regulates the responsibility for occupational health and safety uniformly for all companies of the Group. New occupational health and safety requirements are addressed in cross-brand steering committees and prepared for implementation in the companies.

### PREVENTION AND REHABILITATION PROGRAMS

In addition to meeting statutory requirements, Volkswagen's Health Department focuses to a large extent on preventive approaches. Employees are therefore offered regular checkups. In fiscal year 2019, 2,213 initial and 5,166 subsequent checkups were carried out by the Health Department. Since the introduction of the service in 2010, a total of 91,170 Volkswagen checkups have been completed. As part of the discussion of the checkup findings, employees are offered customized healthcare services. New scientific knowledge is piloted in this context and quickly made available to employees. One example of this in 2019 was a pilot project by Audi BKK and Hanover Medical School (MHH) for reducing the risk factors in the case of metabolic syndrome, such as high levels of body fat, blood lipids and blood pressure. Telemonitoring, exercise programs, nutritional advice and customer support services have led to significant improvements in combination with modern technologies such as wearables, in particular among shift workers. Another of the Health Department's tasks is to advise the Group on the introduction of new production technologies that may have an impact on employee health.

### GREATER OCCUPATIONAL SAFETY THROUGH THE SAFETY FIRST STRATEGY

Like preventive healthcare and emergency health provision, the continuous improvement of occupational health and safety is vitally important to us. In 2004, the Volkswagen Group established an internationally valid occupational health and safety policy. Among other things, it is intended to ensure compliance with legal requirements and the development of concepts in Group companies for continually improving occupational health and safety at work. This policy is currently being revised.

In the area of occupational health and safety, sustainability means for us that employees do not suffer accidents when working. Volkswagen is supporting this objective through the introduction of the Safety First strategy. The strategy requires all Volkswagen Group production sites to comply with the ISO 45001 standards and more specific Group requirements. The corresponding management systems will be introduced by the Group brands themselves by the end of 2021.

A Group process standard was introduced to provide cross-brand information in the event of serious or fatal accidents involving our own employees or workers from partner firms. On this basis, specific measures can be taken to prevent similar accidents across all our sites in the future.

The Health Department and the Occupational Health and Safety Department carried out the first cross-brand internal audits in accordance with the new ISO 45001 in Mexico at the Volkswagen Guanajuato and Audi San José Chiapa sites in October 2019 as part of the Safety First strategy. The interdisciplinary and cross-brand collaboration and auditing support the sites in reaching the ISO 45001 international standard required and the related Volkswagen Group requirements. In order to track the long-term trend in accidents, figures on accident frequency and accident severity are collected for the Volkswagen Group's production sites. These figures were lower in 2019 compared to the previous year.

### RESPONSIBLE EMPLOYER IN THE MIDDLE OF SOCIETY

With the HR policy concepts, measures and initiatives presented here, we make it clear: Volkswagen AG wants to be a good and fair employer that addresses the concerns of all its stakeholders in an open discussion as well as a company that lives up to its responsibility as an employer and towards society. We use a large number of levers for this. The repertoire of our HR tools ranges from innovative remuneration models and working-time models through participation mechanisms that have been rolled out Group-wide through social initiatives at our sites to a systematic diversity management system and diverse preventive healthcare options.



The following tables provide an overview of the objectives for the focal topic of people. The following tables of key indicators disclose the development of relevant indicators on the Volkswagen Group's workforce. In addition to the number of employees and trainees, these also include structural data such as age, type of work, or

regional distribution. Accident figures and the proportion of women are also documented. Specific information, such as the take-up of parental leave or the employee turnover rate, relates exclusively to Volkswagen AG.

## PEOPLE TARGET PROGRAM

Strategic Initiatives	Action Areas	Goals and Actions	Deadline and Status
Innovative Working Environments	Occupational health and safety Qualification Employer attractiveness Participation and codetermination	Innovative practices on the shop floor for factories and offices Greater participation and individual responsibility Technology interpretation with a focus on employees Creation of modern working environments	The initiative's activities were transferred to the newly established HR Strategy and Innovation division
Corporate Culture	Diversity and equal opportunities Social responsibility Employer attractiveness Participation and codetermination	Creation of an open corporate culture with minimal hierarchy; encouragement of transparency and participation	The initiative's projects have been implemented and completed
Personnel Management 4.0	Diversity and equal opportunities Employer attractiveness Participation and codetermination	Digitalization of personnel instruments Improved data transparency for employees Creation of self-administration options for employees	The restructuring of HR has been completed
Employer of Choice	Diversity and equal opportunities Employer attractiveness	Improve external employer attractiveness and focus on new target groups in the context of digital transformation	A central recruiting center for Volkswagen AG began operations in 2019
New Approaches to Personnel Development	Qualification Employer attractiveness Participation and codetermination	More transparent routes into management with greater emphasis on personal initiative	The initiative's projects have been implemented and completed
Realignment of Management Development	Diversity and equal opportunities Qualification	New management mission statement and new appointment criteria for management; transparency about vacant management positions	The planned implementation of content was completed in 2019
Strategic Skills Management	Employer attractiveness Participation and codetermination	Systematic management of the personnel transformation Better and qualification-appropriate use of employees Opening up of additional training opportunities	The content of the initiative was transferred to the Group HR Principles & Management division
Next-level Diversity	Diversity and equal opportunities Social responsibility Qualification	Development of diversity and internationality	The initiative's activities were transferred to the newly established Group Diversity and Advancement of Women division
Health	Employer attractiveness Human rights Occupational health and safety	Development of preventive measures and healthcare	The initiative's activities were completed and the results transferred into regular operations with the publication of a Group policy

The Strategic Initiatives were completed in 2019. The content has in some cases been transferred to newly established HR divisions.



## TOTAL WORKFORCE

of the Volkswagen Group and the AG

	2019	2018	2017
Employees (AG)	119,204	119,394	117,420
Employees (Group)	671,205	664,496	642,292

## NUMBER OF EMPLOYEES IN THE VOLKSWAGEN GROUP

by region

	2019	2018	2017
Europe	498,162	492,445	474,522
America	56,889	58,930	59,086
Africa	6,520	6,350	5,918
Asia	108,276	105,544	101,643
Australia	1,358	1,227	1,123
<b>Total</b>	<b>671,205</b>	<b>664,496</b>	<b>642,292</b>
of which: fixed-term employees	25,086	29,157	27,684
permanent employees	646,119	635,339	614,608

## EMPLOYEE AGE STRUCTURE

of the Volkswagen Group (in %)

	2019
< 20 years old	
- of which women	0.4
- of which men	1.6
20–29 years old	
- of which women	3.6
- of which men	16.2
30–39 years old	
- of which women	5.2
- of which men	24.3
40–49 years old	
- of which women	4.3
- of which men	20.7
50–59 years old	
- of which women	2.9
- of which men	16.8
> 60 years old	
- of which women	0.5
- of which men	3.8

## EMPLOYEE TURNOVER<sup>1</sup>

in Volkswagen AG (in %)

	2019	2018	2017
Women	0.9	0.5	0.4
Men	1.0	0.6	0.5
<b>Total</b>	<b>1.0<sup>2</sup></b>	<b>0.6</b>	<b>0.5</b>

<sup>1</sup> Excluding age-related employee turnover.

<sup>2</sup> Including changes between companies internally within the Group that were recorded as resignations.

## NUMBER OF EMPLOYEES IN THE VOLKSWAGEN GROUP

by type of work

	2019	2018	2017
Production employees	317,440	313,650	310,083
Nonproduction employees	334,366	331,602	313,002
Apprentices	19,399	19,244	19,207
<b>Total workforce</b>	<b>671,205</b>	<b>664,496</b>	<b>642,292</b>
of which: active workforce*	641,838	636,156	615,081
Employees in non-working phase of partial retirement	9,968	9,096	8,004

\* All employees with an active employment contract in the Group who participate in the value creation process.

## PARENTAL LEAVE\* AT VOLKSWAGEN AG

	2019	2018	2017
Women	939	986	889
Men	3,198	3,027	2,743
<b>Total</b>	<b>4,137</b>	<b>3,995</b>	<b>3,632</b>

\* Number of employees who started their parental leave in the year concerned.

## APPRENTICES

in the Volkswagen Group in Germany

	2019	2018	2017
In percent	4.5	4.6	4.6

## EMPLOYEE AGE STRUCTURE

Average age at Volkswagen AG

	2019	2018	2017
Women	40.4	39.9	39.5
Men	45.0	44.7	44.5
<b>Total</b>	<b>44.2</b>	<b>43.9</b>	<b>43.6</b>

## APPRENTICES IN THE VOLKSWAGEN GROUP

	December 2019			December 2018		
	Total	Germany	Rest of the world	Total	Germany	Rest of the world
Volkswagen Passenger Cars	6,023	5,045	978	6,341	5,036	1,305
Audi	2,758	2,681	77	2,793	2,725	68
ŠKODA	1,250	2	1,248	959	1	958
Porsche	853	813	40	903	845	58
Porsche Holding Salzburg	1,887	1,080	807	1,853	1,098	755
SEAT	221	47	174	229	69	160
Bentley	129	—	129	140	—	140
Additional	399	322	77	454	372	82
<b>Passenger Cars Division</b>	<b>13,520</b>	<b>9,990</b>	<b>3,530</b>	<b>13,672</b>	<b>10,146</b>	<b>3,526</b>
MAN*	2,881	1,743	1,138	3,279	2,157	1,122
Scania	1,224	230	994	1,189	233	956
Volkswagen Commercial Vehicles	892	734	158	906	728	178
<b>Commercial Vehicles/Power Engineering Division</b>	<b>5,674</b>	<b>3,161</b>	<b>2,513</b>	<b>5,374</b>	<b>3,118</b>	<b>2,256</b>
Financial Services Division	205	151	54	198	149	49
<b>Group</b>	<b>19,399</b>	<b>13,302</b>	<b>6,097</b>	<b>19,244</b>	<b>13,413</b>	<b>5,831</b>

\* Excluding Power Engineering in 2019.

## FEMALE EMPLOYEES

in the Volkswagen Group

	2019	2018	2017
In percent	16.8	16.5	16.3

## PROPORTION OF WOMEN

in the Volkswagen Group in Germany (in %)

	2019	2018
Total management	12.1	11.5
Total apprentices <sup>1</sup>	24.1	25.6
Industrial apprentices <sup>1</sup>	18.5	19.6
Commercial apprentices <sup>1</sup>	49.8	52.1
Students on “dual system” courses <sup>1</sup>	30.6	33.4
Female university graduates recruited <sup>2</sup>	31.7	28.7
Total Volkswagen Group in Germany <sup>1</sup>	17.9	17.8

<sup>1</sup> Excluding Scania

<sup>2</sup> Volkswagen AG

## ACCIDENT INDICES<sup>4</sup>

of the Volkswagen Group's production sites

	2019 <sup>3</sup>	2018 <sup>1</sup>	2017
Accident frequency	3.7	4.1	3.9
Accident severity <sup>2</sup>	5.3	5.6	5.0

<sup>1</sup> Excluding FAW VW.

<sup>2</sup> Excluding Scania.

<sup>3</sup> Excluding Renk AG.

<sup>4</sup> Excluding Bugatti.

The accident frequency index provides information on the number of accidents at work as a proportion of the total of all hours worked. It is calculated as the number of accidents at work reported x 1 million divided by total number of hours worked. The accident severity index shows the severity of the accidents reported by showing the total number of working days lost due to accidents reported in the fiscal year as a proportion of the total of all hours worked. It is calculated as the number of working days lost through accidents reported in the year x 100,000 divided by the number of hours worked.

## ACCIDENT FIGURES<sup>1,5</sup>

of the Volkswagen Group's production sites

	2019 <sup>4</sup>	2018 <sup>2</sup>	2017
Working days lost <sup>3</sup>	42,021	40,294	39,730
Number of occupational accidents	3,100	3,273	3,144

<sup>1</sup> Accidents reported.

<sup>2</sup> Excluding FAW VW.

<sup>3</sup> Excluding Scania.

<sup>4</sup> Excluding Renk AG.

<sup>5</sup> Excluding Bugatti.

There were three fatal accidents affecting Porsche AG and FAW-VW Changchun in the reporting year.



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## REPORT STRUCTURE

The Volkswagen Group is committed to providing transparency to all its stakeholder groups. For the third time, this Group Sustainability Report 2019 includes a combined separate nonfinancial report that complies with sections 289b para. 3 and 315b para. 3 of the Handelsgesetzbuch (HGB – German Commercial Code), hereinafter referred to as the “nonfinancial report”. The nonfinancial report serves to meet the disclosure requirements of the CSR Richtlinie-Umsetzungsgesetz (CSR-RUG – German CSR Directive Implementation Act).

All text passages, tables and graphics in the Group Sustainability Report that form part of the nonfinancial report are highlighted. The Group Sustainability Report 2019 is supplemented by a detailed description of the sustainability activities of our brands and regions and of the Volkswagen Group’s CSR projects. This additional information, which does not form part of the nonfinancial report, can be found on the Volkswagen Group’s corporate website at:

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Sustainability > Reporting

The latest continuously updated news on sustainability in the Volkswagen Group can be found on the Group portal at:

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Sustainability

Further information regarding sustainability can be found in our separate sustainability magazine, Shift 2019, at:

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Sustainability > Shift

## BASIS FOR REPORT

For reporting year 2019, Volkswagen AG will for the third time issue a nonfinancial statement at company level and a nonfinancial Group statement, which will be published together as a combined separate nonfinancial report in the sense of HGB sections 289b para. 3 and 315b para. 3 as part of the Group Sustainability Report 2019. The nonfinancial report is drawn up in accordance with HGB section 315c, in conjunction with sections 289c through 289e. Furthermore, the GRI Standards of the Global Reporting Initiative (GRI) were used as the framework for drawing up the nonfinancial report. In this nonfinancial report, Volkswagen has systematically used the GRI Standards as the underlying structure for the materiality analysis and reports on management approaches as well as the specific standard disclosures. In line with CSR-RUG, this nonfinancial report will concentrate on those action areas that are necessary for an understanding of the Volkswagen Group’s business development, overall performance and position as well as the Volkswagen Group’s influence on nonfinancial aspects.

Unless indicated otherwise, any information provided for the Group also applies to Volkswagen AG. In addition to Volkswagen AG, the Group includes all major subsidiaries inside and outside Germany that are directly or indirectly controlled by Volkswagen AG. In the

financial data, our joint ventures in China are reported using the equity accounting method. However, they are included in full (100%) in volume-related data (sales, production and workforce) and in environmentally relevant data.

In terms of content, the Group Sustainability Report was prepared in compliance with the GRI Standards of the Global Reporting Initiative (GRI), applying the “Core” option. Every chapter on a focus issue in the report consists of a text section followed by an appendix with a target program and tables of key indicators for that chapter. At the same time, the GRI Content Index shows how we are implementing the requirements of the United Nations Global Compact (UNGC) and are using as guidance the United Nations Sustainable Development Goals (SDGs) as well as the criteria of the German Sustainability Code (DNK). The GRI Content Index has been separated from the Sustainability Report 2019 and can be found as a separate document in the Group portal at:

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Sustainability > Reporting

Important ideas for the report’s content were provided by the questionnaires and appraisals of sustainability-oriented rating agencies. We also took our lead from Stakeholder Engagement Standard AA1000.

To validate issues of material significance for the Volkswagen Group resulting from various global challenges, we drew upon the findings of the Volkswagen Group’s Stakeholder Panel, which has been in place for many years now, as well as the results of the latest comprehensive stakeholder surveys conducted by Group companies Audi, MAN, Porsche and Volkswagen Financial Services.

To manage its sustainability performance, the Volkswagen Group records strategic key performance indicators (KPIs) in accordance with the requirements of the Global Reporting Initiative (GRI) and the framework for ESG (environment, social and governance) indicators defined by the European Federation of Financial Analysts’ Societies (EFFAS). Increasingly, shareholders and investors are calling for transparency, making them an important target group for our sustainability reporting.

The KPIs presented in this report build on the indicators presented in previous years. We have made no changes to the methods used to collect and measure the data on our sustainability performance. The Volkswagen Group’s global production network comprised 124 production sites as of the end of the reporting year. This is now the eighth time we have reported our emissions in line with Scope 3 of the WBCSD/WRI Greenhouse Gas Protocol (GHG).

GRI 102-45, 102-48, 102-49

## REPORT AUDITING

PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (PwC) conducted a voluntary, limited assurance engagement in accordance with ISAE 3000 (Revised) on the combined separate

nonfinancial report prepared in accordance with HGB sections 289b para. 3 and 315b para. 3 to verify that its disclosures comply with the relevant statutory requirements and with the relevant criteria of the Sustainability Reporting Standards of the Global Reporting Initiative.

Further information on the engagement can be found in the independent practitioner's report on a limited assurance engagement on the nonfinancial reporting.

#### ADDITIONAL REPORTING WITHIN THE GROUP

The nonfinancial report is drawn up in accordance with HGB section 315c, in conjunction with sections 289c through 289e. By referencing this combined separate nonfinancial report, all Group companies required by national legislation to disclose nonfinancial and diversity-related information pursuant to Directive 2014/95/EU are exempted from the obligation to submit their own nonfinancial reports.

More detailed insights into our environmental management approach can be found in the environmental statements published by numerous Group locations as part of their voluntary participation in the European Eco-Management and Audit Scheme (EMAS). The sustainability reports published by the Audi, MAN, Porsche, Scania and ŠKODA brands also bear testimony to the Group's commitment to sustainability.

#### EDITORIAL NOTES

The information in this report relates to the Volkswagen Group as a whole. Where information relates to individual Group divisions only, this is clearly indicated in the text.

#### REPORTING PRACTICES

The nonfinancial report and Group Sustainability Report are published annually. In addition to information about the Group's sustainability activities in the 2019 fiscal year (January 1 to December 31, 2019), the sustainability report also contains selected information from the 2020 fiscal year.

The editorial deadline was February 6, 2020. Both reports appear in German and English. The next nonfinancial report will be published in the first quarter of 2021, and we anticipate that the next Group Sustainability Report will appear in the second quarter of 2021.

#### LEGAL INFORMATION

This sustainability report contains statements relating to the future business development of the Volkswagen Group. These statements are based on assumptions regarding the development of the economic and legal conditions in individual countries and economic regions, and in particular as they relate to the automotive industry, which we have made on the basis of the information available to us and which we consider to be realistic at the time of publication. The estimates given entail a degree of risk, and actual developments may differ from those forecast. Any changes in significant parameters relating to our key sales markets, or any significant shifts in exchange rates relevant to the Volkswagen Group, will have a corresponding impact on the development of our business. In addition, there may be departures from our expected business development if the assessments of the factors influencing sustainable value enhancement, and of risks and opportunities, presented in this sustainability report develop in a way other than we expect at the time of publication, or if additional risks and opportunities or other factors emerge that affect the development of our business.

#### CALCULATION OF FLEET EMISSIONS IN EUROPE

The figure for Group fleet CO<sub>2</sub> emissions is the figure annually recorded in the course of official monitoring pursuant to "Regulation (EC) 443/2009 of the European Parliament and of the Council of 23 April 2009 setting emission performance standards for new passenger cars as part of the Community's integrated approach to reduce CO<sub>2</sub> emissions from light-duty vehicles" by the European Environment Agency (EEA) on behalf of the European Commission for the brands belonging to the group of connected manufacturers "VW Group PC". This figure is the volume-weighted average of all specific CO<sub>2</sub> emissions from new passenger cars registered for the first time in the respective calendar year, based on the calculation logic defined in EU Regulation 443/2009. Provided that the figure for fleet CO<sub>2</sub> emissions is set down in a Commission Implementing Decision to confirm or amend the average specific CO<sub>2</sub> emissions and specific emissions targets for manufacturers of passenger cars for the respective calendar year in accordance with Regulation (EC) 443/2009 of the European Parliament and of the Council, this figure is published; otherwise, provisional CO<sub>2</sub> emissions figures are published, which are evaluated on the basis of internal systems using the same logic.



NOTICE PURSUANT TO DIRECTIVE 1999/94/EC

Further information on the official fuel consumption and official specific CO<sub>2</sub> emissions of new passenger cars can be found in the “Guide on the Fuel Economy, CO<sub>2</sub> Emissions and Power Consumption of All New Passenger Car Models Offered for Sale on the German

Market”, which can be obtained free of charge from all sales outlets of and directly from DAT Deutsche Automobil Treuhand GmbH, Hellmuth-Hirth-Strasse 1, 73760 Ostfildern, Germany.

 > [www.dat.de](http://www.dat.de)

ABOUT THE NONFINANCIAL REPORT

The following index provides an overview of the disclosures required for the nonfinancial report in accordance with HGB section 315c in conjunction with sections 289c to 289e, together with appropriate references to the sections of this Group Sustainability Report in which these disclosures may be found.


PwC has conducted a voluntary limited assurance engagement in accordance with ISAE 3000 (Revised) on the elements of the Group Sustainability Report that make up the nonfinancial report.

All text passages, tables and graphics in the Group Sustainability Report that form part of the nonfinancial report are highlighted.

References to disclosures outside the combined management report are supplementary information and do not form part of the nonfinancial report.

Based on various global challenges, the Volkswagen Group has drawn up a list of 16 key action areas. This analysis was based on external studies, industry analyses and stakeholder surveys as well as internal policies and guidelines from our different divisions. These action areas were largely defined on the basis of the findings of expert workshops held in the past that addressed topics relating to the economy, the environment and civil society.

In the course of evaluating the statutory reporting requirements, Volkswagen expanded its materiality analysis in 2017 and revised the action areas in terms of the requirements of the CSR Directive Implementation Act (CSR-RUG): in line with CSR-RUG, this non-financial report will concentrate on those action areas that are necessary for an understanding of the Volkswagen Group’s business development, overall performance and position as well as the Volkswagen Group’s influence on nonfinancial aspects. The action areas identified during the 2017 materiality analysis were revised in the 2019 reporting year.

 > Responsibility > Sustainability Management

NONFINANCIAL REPORT INDEX

	Relevant Content in Sustainability Report	Page(s)
Description of the Business Model	- Group Profile - Goals and Strategies	14–15 17–19
Material Risks	- Risk Management	20–21

Nonfinancial Aspect	Action Area	Section of Sustainability Report	Page(s)
Cross-company Topics affect all Nonfinancial Aspects	Integrity, Compliance, Governance	- Group Profile	14–15
		- Goals and Strategies	17–19
		- Risk Management	20–21
		- Integrity	24–26
		- Compliance	26–29
		- Sustainability Management	30–36
		- Additional Tables and KPIs	44–45
	Supplier Management	- Supply Chain - Additional Tables and KPIs	38–42 44–45

Nonfinancial Aspect	Action Area	Section of Sustainability Report	Page(s)
Customer Matters	Customer Matters	- Mobility Concepts	48–51
		- Digitalization and Customer Concerns	51, 53–54
Environmental Matters	Environmental Compliance	- Commitment to an Undamaged Environment	60–61
	Climate Change	- Decarbonization	8–12
		- Commitment to an Undamaged Environment	60–61
		- Climate Protection	61–64
		- Additional Tables and KPIs	69–72
	Air Quality	- Commitment to an Undamaged Environment	60–61
		- Mobility Concepts	48–51
		- Air Quality	65
		- Additional Tables and KPIs	69–72
	Resources	- Mobility Concepts	48–51
		- Commitment to an Undamaged Environment	60–61
		- Resources	66–68
		- Additional Tables and KPIs	69–72
Employee Matters	Qualification	- Qualification	80–81
		- Additional Tables and KPIs	85–87
	Participation and Codetermination	- Employer Attractiveness	78–79
		- Additional Tables and KPIs	85–87
	Employer Attractiveness	- Fairness and Responsibility	76–77
		- Employer Attractiveness	78–79
		- Additional Tables and KPIs	85–87
	Diversity and Equal Opportunities	- Fairness and Responsibility	76–77
		- Diversity and Equal Opportunities	81–83
		- Additional Tables and KPIs	85–87
	Occupational Health and Safety	- Occupational Health and Safety	84
		- Additional Tables and KPIs	85–87
Social Matters	Social Responsibility*	- Sustainability Management	30–36
		- Social Responsibility	36–37
Respect for Human Rights	Human Rights	- Sustainability Management	30–36
		- Human Rights	42–44
Combating Corruption and Bribery	Integrity, Compliance, Governance	- Integrity	24–26
		- Compliance	26–29
		- Sustainability Management	30–36
		- Additional Tables and KPIs	44–45

\* This action area relates to both environmental and social matters.

Reportable connections have been identified in this nonfinancial report to amounts reported in the 2019 annual or consolidated financial statements.

Additional special items in connection with the diesel issue amounting to € 2.3 billion were recognized in fiscal year 2019. Charges of € 2.6 billion were recognized under other operating expenses, which arose from the administrative fine order of € 0.5 billion issued in May 2019 by the Stuttgart Public Prosecutor, which ended the ongoing regulatory offense proceeding against Dr. Ing. h.c. F. Porsche AG, and higher provisions for legal risks result. This was set against the reversal of reserves for technical measures of € 0.3 billion, which reduced cost of sales.

An amount of around € 2.9 billion has been included in the provisions for litigation and legal risks as of December 31, 2019 to hedge the currently known legal risks related to the diesel issue based on existing knowledge and current assessments.

The contingent liabilities that exist in connection with the diesel issue total € 3.7 billion, of which € 3.4 billion results from lawsuits filed by investors in Germany. In addition, information on these amounts reported in the annual financial statements can be found in the Annual Report in the "Results of Operations, Financial Position and Net Assets" chapter and in the "Report on Risk and Opportunities" under the headings "Environmental protection regulations", "Litigation" and "Diesel Issue" (particularly "Assessment of risks arising from the diesel issue").

# INDEPENDENT PRACTITIONER'S REPORT ON A LIMITED ASSURANCE ENGAGEMENT ON NONFINANCIAL REPORTING

GRI 102-56

## TO VOLKSWAGEN AG, WOLFSBURG

We have performed a limited assurance engagement on the combined separate non-financial report pursuant to §§ (Articles) 289b Abs. (paragraph) 3 and 315b Abs. 3 HGB ("Handelsgesetzbuch": "German Commercial Code") of Volkswagen AG, Wolfsburg, (hereinafter the "Company") for the period from 1 January 2019 to 31 December 2019 (hereinafter the "Nonfinancial Report").

## RESPONSIBILITIES OF THE EXECUTIVE DIRECTORS

The executive directors of the Company are responsible for the preparation of the Non-financial Report in accordance with §§ 315c in conjunction with 289c to 289e HGB and the principles stated in the Sustainability Reporting Standards of the Global Reporting Initiative (hereinafter the "GRI Criteria").

This responsibility of Company's executive directors includes the selection and application of appropriate methods of non-financial reporting as well as making assumptions and estimates related to individual non-financial disclosures which are reasonable in the circumstances. Furthermore, the executive directors are responsible for such internal control as they have considered necessary to enable the preparation of a Non-financial Report that is free from material misstatement whether due to fraud or error.

## INDEPENDENCE AND QUALITY CONTROL OF THE AUDIT FIRM

We have complied with the German professional provisions regarding independence as well as other ethical requirements.

Our audit firm applies the national legal requirements and professional standards – in particular the Professional Code for German Public Auditors and German Chartered Auditors ("Berufssatzung für Wirtschaftsprüfer und vereidigte Buchprüfer": "BS WP/vBP") as well as the Standard on Quality Control 1 published by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany; IDW): Requirements to quality control for audit firms (IDW Qualitätssicherungsstandard 1: Anforderungen an die Qualitätssicherung in der Wirtschaftsprüferpraxis - IDW QS 1) – 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.

## PRACTITIONER'S RESPONSIBILITY

Our responsibility is to express a limited assurance conclusion on the Non-financial Report based on the assurance engagement we have performed.

Within the scope of our engagement, we did not perform an audit on external sources of information or expert opinions, referred to in the Non-financial Report.

We conducted our assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): Assurance Engagements other than Audits or Reviews of Historical Financial Information, issued by the IAASB. This Standard requires that we plan and perform the assurance engagement to allow us to conclude with limited assurance that nothing has come to our attention that causes us to believe that the Company's Non-financial Report for the period from 1 January 2019 to 31 December 2019 has not been prepared, in all material aspects, in accordance with §§ 315c in conjunction with 289c to 289e HGB and the relevant GRI-Criteria.

In a limited assurance engagement, the assurance procedures are less in extent than for a reasonable assurance engagement, and therefore a substantially lower level of assurance is obtained. The assurance procedures selected depend on the practitioner's judgment.

Within the scope of our assurance engagement, we performed amongst others the following assurance procedures and further activities:

- Obtaining an understanding of the structure of the sustainability organization and of the conduction of the materiality analysis
- Inquiries of relevant managerial personnel involved in the preparation of the Non-financial Report regarding the preparation process, the internal control system relating to this process as well as disclosures in the Non-financial Report
- Identification of the likely risks of material misstatement of the Non-financial Report
- Analytical evaluation of disclosures in the Non-financial Report
- Evaluation of the implementation of group management requirements, processes and specifications regarding data collection through on-site visits at selected sites and brands of the VW Group

- Audi AG (Neckarsulm, Germany)
- Audi AG (Ingolstadt, Germany)
- Audi Hungaria Zrt. (Győr, Hungary)
- Dr. Ing. h.c. F. Porsche AG (Stuttgart-Zuffenhausen, Germany)
- FAW-Volkswagen Automotive Co. Ltd. (Changchun, China)
- Porsche Leipzig GmbH (Leipzig, Germany)
- SAIC Volkswagen Automotive Co. Ltd. Shanghai (Anting, China)
- Scania Latin America Ltda. (São Paulo, Brazil)
- Seat S.A. (Martorell, Spain)
- Škoda Auto a.s. (Mladá Boleslav, Czech Republic)
- Škoda Auto Volkswagen India Pvt. Ltd. (Pune, India)
- Volkswagen AG (Wolfsburg, Germany)
- Volkswagen AG (Salzgitter, Germany)
- Volkswagen Argentina S.A. (Pacheco, Argentina)
- Comparison of selected disclosures with corresponding data in the consolidated financial statements and in the group management report which is combined with the Company's management report
- Evaluation of the presentation of the information

Frankfurt am Main, den 26 February 2020  
PricewaterhouseCoopers GmbH  
Wirtschaftsprüfungsgesellschaft

Frank Hübner  
Wirtschaftsprüfer  
[German public auditor]

## ASSURANCE CONCLUSION

Based on the assurance procedures performed and assurance evidence obtained, nothing has come to our attention that causes us to believe that the Company's Non-financial Report for the period from 1 January 2019 to 31 December 2019 has not been prepared, in all material aspects, in accordance with §§ 315c in conjunction with 289c to 289e HGB and the relevant GRI-Criteria.

## INTENDED USE OF THE ASSURANCE REPORT

We issue this report on the basis of the engagement agreed with the Company. The assurance engagement has been performed for purposes of the Company and the report is solely intended to inform the Company about the results of the limited assurance engagement. The report is not intended for any third parties to base any (financial) decision thereon. Our responsibility lies only with the Company. We do not assume any responsibility towards third parties.

Nicolette Behncke  
Wirtschaftsprüfer  
[German public auditor]









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### NOTE

At the brands of the Volkswagen Group, work on all types and models never ceases, so please allow for the fact that changes in design, equipment and technical specifications may be made at any time. Consequently, the data and descriptions in this report cannot give rise to claims of any kind.

### FORWARD-LOOKING STATEMENTS

This report contains forward-looking statements on the development of the Volkswagen Group and its companies as well as on economic and political developments. These statements are assumptions that we based on all the information available to us at the time of reporting. If the assumptions made fail to materialize or additional risks occur, then the actual results, development and performance of the Group may differ from the forecasts given. The Volkswagen Group therefore assumes no liability for the forward-looking statements presented here.

The German version of the nonfinancial report is binding. The English version is a convenience translation for information purposes only.

### YOUR FEEDBACK

In the interests of improving and advancing our commitment to sustainability, we would be delighted to receive your feedback on our sustainability report. You can send us your views online under the above-mentioned e-mail address.

