

VOLKSWAGEN GROUP

Sustainability Report

2022

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

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

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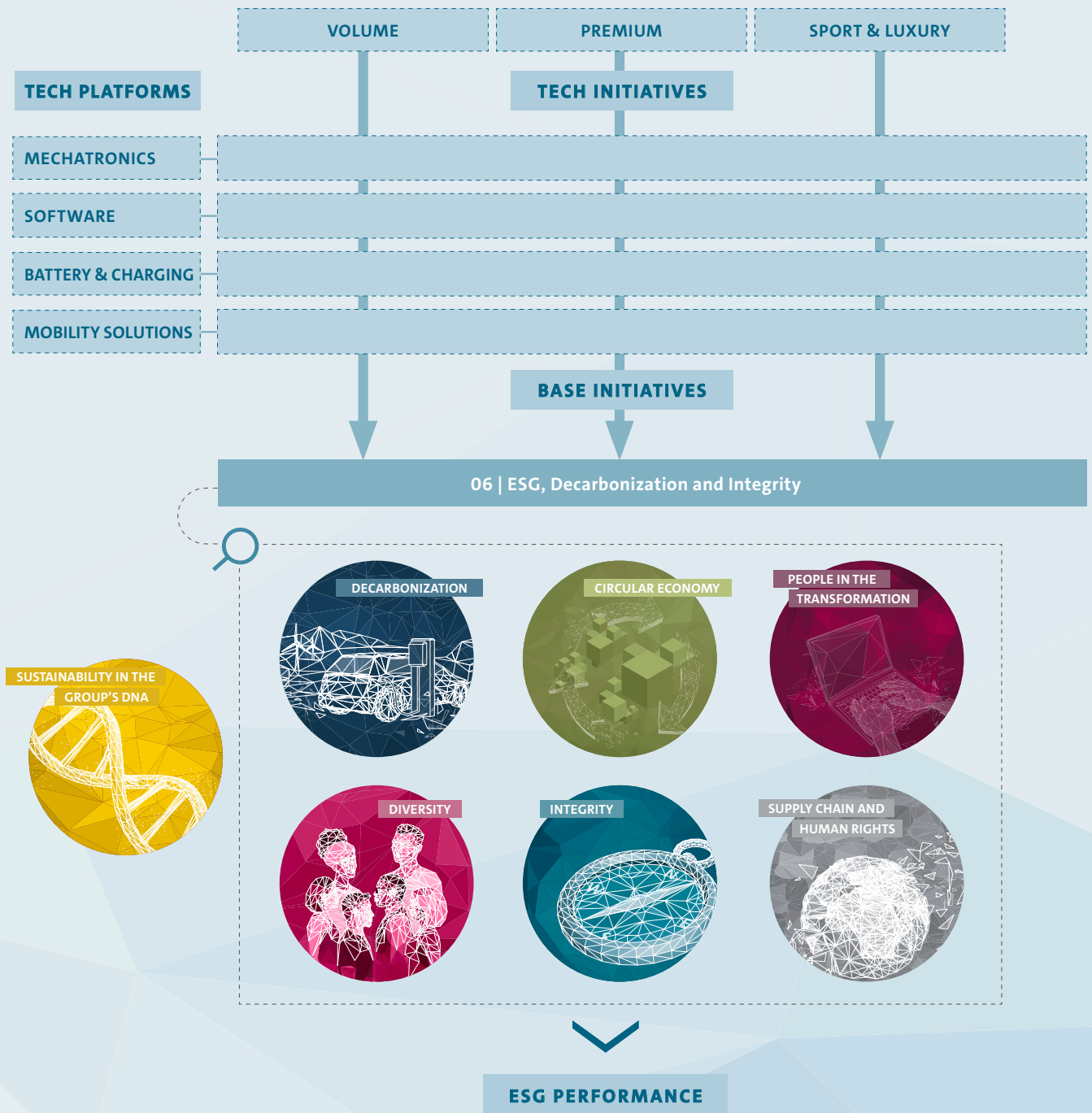
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# SUSTAINABILITY AND ESG (ENVIRONMENTAL, SOCIAL, GOVERNANCE) ARE PART OF THE NEW AUTO GROUP STRATEGY



The aim is to improve performance in the capital market's ESG ratings and rankings so as to increase the ability to invest and optimize the cost of capital.

As we transition from automotive manufacturer to mobility group, we are resetting our priorities with the NEW AUTO Group strategy and positioning ourselves for the future. We are keeping our aim of being a world-leading provider of sustainable mobility firmly in our sights and making the Group more focused, efficient, innovative, customer-oriented and sustainable, as well as systematically gearing it toward profitable growth.

The NEW AUTO Group strategy defines the six key focus issues shown above for the area of sustainability and ESG in Group initiative 6. This Sustainability Report including nonfinancial report is structured in accordance with these.

In addition, the Sustainability in the Group's DNA chapter provides a definition of sustainability for the Group and an insight into topics such as risk management, environmental management, stakeholder management and corporate citizenship.

# 2022 HIGHLIGHTS<sup>1</sup>

## CIRCULAR ECONOMY

**633,881**  
metric tons

of CO<sub>2</sub> saved through the Aluminum Closed Loop process since 2017.

Reconditioning a gearbox reduces CO<sub>2</sub> emissions  
**by 54%**  
and reduces the primary energy requirement by 52% compared with the new part.

## DECARBONIZATION

**+26% BEVs**

572,100 all-electric vehicles delivered to customers worldwide.

**1.5 °C**  
as goal

SBTi confirms tightened climate targets in production.

## DIVERSITY

Proportion of women in management worldwide and internationality of top management increased.

**94%**

of managers have taken part in the Diversity Wins@Volkswagen program.

## PEOPLE IN THE TRANSFORMATION

Training costs in the Volkswagen Group:  
**€398.6 m**

**12.8 m**

training hours in the Volkswagen Group.

## SUPPLY CHAIN AND HUMAN RIGHTS

Development and implementation of a new management approach for responsible supply chains.

**> 2,900**  
suppliers were trained on sustainability.

## INTEGRITY

The T4I program has been rolled out in **784** controlled companies to date.

**1,517**

inquiries were processed at the compliance information point.

<sup>1</sup> Further information on the figures on this page, such as definitions and scope, can be found in the relevant chapters.

# FOREWORD



Oliver Blume,  
Chairman of the Board of Management of Volkswagen AG



Daniela Cavallo,  
Chairwoman of the General and Group Works Council of Volkswagen AG

**Dear stakeholders and colleagues,**

Leaving a better world for future generations is, in our eyes, the greatest challenge of our times. Sustainability is not a fad. It's firmly embedded at Volkswagen as one of five principles of corporate governance. We think of sustainability holistically: It's about the environment – including climate protection – and about our social responsibility, the transformation of the workforce and the way we run our company.

In the Group, we have set ourselves the long-term goal of becoming net carbon neutral by no later than 2050 – this includes our supply chains, plants and business divisions and our customers' use of the vehicles. The biggest contribution to reducing our emissions has been made by electric mobility. And its share in our sales is rising: In 2022, almost 7% of all the vehicles we delivered globally were all-electric. At 572,000 units, we sold a good 26% more e-cars in total than in the previous year. Our attractive e-models, including the Volkswagen ID. Buzz, the ID.5 and the Audi RS e-tron GT, have been impressing customers since their launch. For this year, we're aiming for 11% of our sales to be electric vehicles, and we want to increase this to 20% by 2025.

The Volkswagen Group is also the first automotive manufacturer to directly support the expansion of renewable energy on an industrial scale. The Group brands have already supported the construction of wind farms in Germany, Sweden and Finland in 2022. It is planned that all the projects together will generate around seven terawatt

hours of additional green electricity by 2025. This should even better cover the electricity needs of the electric vehicles brought to market and mean a net carbon-neutral use phase can be achieved for the electric fleet. It's clear that Volkswagen is committed to the electric drive for decarbonization – for cars, trucks and buses.

We're delighted that the renowned Science Based Targets initiative last year honored our more stringent CO<sub>2</sub> targets in production. By 2030, we want to reduce our passenger cars and light commercial vehicles' production-related CO<sub>2</sub> emissions by 50% – instead of our previous target of 30%. The Science Based Targets initiative has confirmed to us that this means our Group meets the requirements for the 1.5 °C goal for the production phase.

In battery production too, we're mindful of sustainability. We laid the foundation for our own first battery cell factory at the Salzgitter site in 2022. Five more factories in Europe will follow by the end of the decade in order to cover the rising demand for electric cars. Each factory will be run entirely on renewable energy and will be designed for future closed loop recycling – with the aim of recycling as much material as possible and keeping our own raw materials loop as closed as possible.

Our first battery cell manufacturing facility shows that the focus on e-mobility and software development is going to change work. Volkswagen wants to make this transition in an employee-friendly and socially acceptable way.

In 2022, we continued to anchor sustainability in our core business. We were able to use our social power at the start of the year when many people were experiencing immeasurable suffering as a result of Russia's invasion of Ukraine. We provided help with donations of goods, financial support and the use of our vehicles. We're proud of our employees in Germany, who donated more than €2 million for emergency aid. The big Volkswagen family shows solidarity and holds together in times of crisis.

Not only does the transformation to e-mobility underline the need to safeguard jobs, so do other challenges from the past year, including the aftereffects of the Covid-19 pandemic, the impact of the war in Ukraine, the supply-chain bottleneck and striking increases in the prices of raw materials and issues with their availability. This makes it all the more crucial that job security, which we consider one of the most important action areas for our Group, has been planned in advance until 2029. This gives us a decisive competitive edge compared with other companies looking for new employees. This security plays a major role for our future colleagues when they are choosing where to work and increases our attractiveness as an employer. The codetermination tools, which were set up at an early stage, offer new talent attractive future prospects and ensure a high level of internationalization in top management, because codetermination is an important factor here as well.

Gender diversity is also taken for granted in codetermination at Volkswagen. We actively encourage an increase in the proportion of female managers and participate in the UN Global Compact's Target Gender Equality program. Our goal is gender equality at all levels of the Group.

We are in communication with our suppliers around the world in order to achieve environmental and social improvements in supply chains. We want to act as a role model in the design of circular, climate-neutral and fair supply chains. In order to identify particularly high risks in the chains, we introduced the human rights focus system in 2022. It identifies and addresses particularly high risks in the area of human rights and the environment. Our newly appointed human rights officer will independently monitor whether human rights due diligence requirements are being met.

As part of the 10-point plan, which defines the Group's most important action areas, we are going to anchor sustainability even more strongly in daily business in 2023. We are now going to go a step further and break down our ambitious ESG targets into brands and business divisions. It's about the brands and sites in the Group living up to their responsibility as a whole. In the end, there will be uniform ESG profiles for all brands. This is important because doing business sustainably is becoming increasingly important – including for our investors.

Sustainability is also firmly anchored in our strategy in 2023. We are going to continue to advance the key topics of decarbonization of transportation and production, the transformation of the workforce and our responsibility in supply chains. You are cordially invited to join us in this.




Oliver Blume and Daniela Cavallo

# ABOUT THIS REPORT

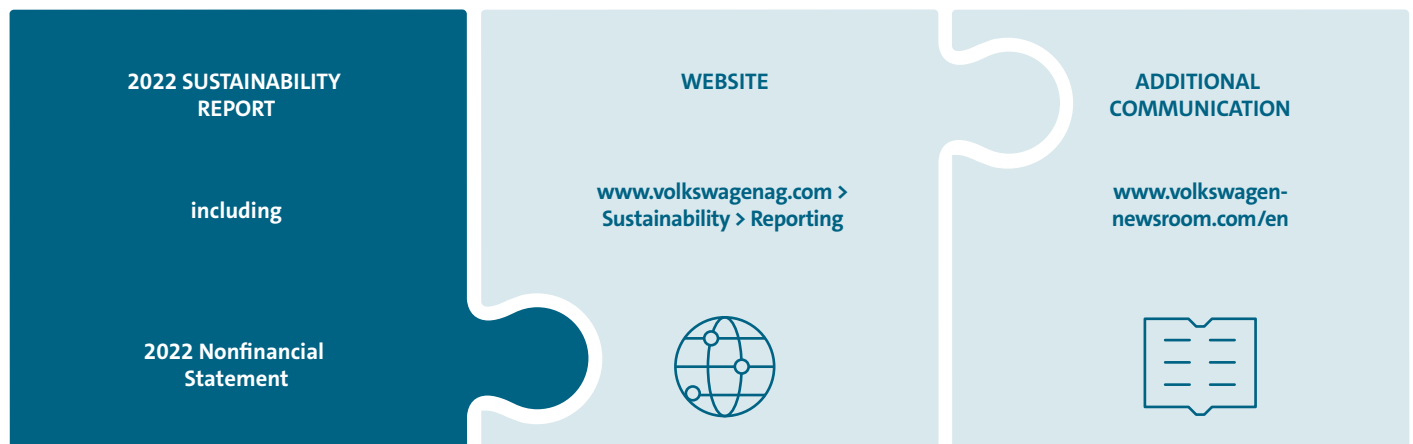
## REPORT STRUCTURE

This 2022 Group Sustainability Report is based on internationally established frameworks and requirements, such as the standards of the Global Reporting Initiative (GRI, see also following section), the German CSR Directive Implementation Act (*CSR-Richtlinie-Umsetzungsgesetz* – CSR-RUG), ESG sustainability ratings and stakeholder expectations. The report is supplemented by a detailed description of the sustainability activities of our brands and regions and of the Volkswagen Group’s corporate citizenship projects.

Further information, particularly information relevant to ESG investors – for example, on the brands’ and regions’ sustainability activities and also ESG KPIs – is available on the Group’s corporate website and is not part of this report.

-  > Sustainability in the Group’s DNA > Sustainability Management
-  > Sustainability in the Group’s DNA > ESG Performance Management and Materiality Analysis
-  > [www.volkswagenag.com](http://www.volkswagenag.com) > Sustainability > Reporting & ESG Performance

## VOLKSWAGEN GROUP SUSTAINABILITY COMMUNICATION




## BASIS FOR REPORT


For reporting year 2022, Volkswagen AG is issuing a nonfinancial statement at Company level and a nonfinancial Group declaration, which are being published together as a combined separate non-financial report within the meaning of German Commercial Code (*Handelsgesetzbuch* – HGB) sections 289b para. 3 and 315b para. 3. The nonfinancial report is drawn up in accordance with HGB section 315c, in conjunction with sections 289c through 289e. In line with the German CSR Directive Implementation Act (CSR-RUG), this non-financial report concentrates on the focus issues necessary for an understanding of the Volkswagen Group’s business development, overall performance and position as well as the Volkswagen Group’s impact on nonfinancial aspects. We are again reporting on our climate protection activities in line with the requirements of the Task Force on Climate-related Financial Disclosures (TCFD).

Furthermore, the GRI Standards are used as the framework for drawing up the nonfinancial report. In this Sustainability Report,

Volkswagen systematically uses the GRI Standards (with reference to) as the underlying structure for reporting on management approaches and the specific standard disclosures. The GRI Content Index has been separated from the 2022 Sustainability Report and can be found as a separate document in the Group portal:

-  > [www.volkswagenag.com](http://www.volkswagenag.com) > Sustainability > Reporting & ESG Performance > Sustainability Report

As a member of the United Nations Global Compact, we also continuously report how we are putting the Ten Principles into corporate practice. Our current progress report can be found on the UN Global Compact’s website:

-  > United Nations Global Compact

The strategy chapter and the six following chapters on focus issues in the report each consist of a text section plus a consolidated KPI table at the end of each chapter.

References to disclosures outside the nonfinancial report are supplementary information and do not form part of this report. The following passages are also not part of the nonfinancial report:

- Foreword (pp. 5–6)
- The German Corporate Governance Code – A Blueprint for Successful Corporate Governance (p. 12)
- Further Information and The Volkswagen Value Chain (p. 13)
- Making the Social and Environmental Impact of Our Actions Measurable (p. 19)

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. 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 production-related environmentally relevant data. The management approaches described in this report (e.g., the environmental compliance management system [ECMS] and the compliance management system for business and human rights [CMS BHR]) apply to all the Volkswagen Group's controlled companies. With our non-controlled companies – i.e., companies that are not controlled by a company of the Volkswagen Group as the majority owner – we work to the extent feasible and permitted by law toward implementation of the adjusted management approaches. The Chinese joint ventures are included in the information on the Volkswagen Group in the KPIs and the associated targets on the topics of the UEP, the DCI, the Opinion Survey, the diversity index, training hours per employee, accident indices and accident figures. The risks of the Chinese market are recorded by Volkswagen (China) Investment Company Ltd.

The KPIs presented in this report build on the indicators presented in previous years. Any material changes to the methods used to collect and measure the data on our sustainability performance are explicitly disclosed for the respective KPIs. All figures shown in the report are rounded, so minor discrepancies may arise from addition of these amounts.

## REPORT AUDITING

Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft (EY) 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. Further information on the engagement can be found in the independent practitioner's report on a limited assurance engagement on the nonfinancial reporting.

## DISCLOSURES IN CONNECTION WITH THE ANNUAL FINANCIAL STATEMENTS

Connections have been identified in this combined nonfinancial report to amounts reported in the 2022 annual or consolidated financial statements.

In fiscal year 2022, the operating result in the Passenger Cars Business Area was affected by negative special items of €0.4 billion in connection with the diesel issue. These special items were mainly attributable to additional expenses for legal risks.

To hedge the currently known legal risks related to the diesel issue, the provisions for litigation and legal risks as of December 31, 2022 include an amount of around €1.4 billion, based on existing information and current assessments. Insofar as these can be adequately measured at this stage, contingent liabilities relating to the diesel issue were disclosed in the notes to the consolidated financial statements in an aggregate amount of €4.2 billion, whereby €3.6 billion of this amount results from lawsuits filed by investors in Germany. The provisions recognized, the contingent liabilities disclosed, and the other latent legal risks in the context of the diesel issue are in part subject to substantial estimation risks given the complexity of the individual relevant factors, the ongoing coordination with the authorities, and the fact that the fact-finding efforts have not yet been concluded. Should these legal or estimation risks materialize, this could result in further substantial financial charges. In particular, adjustment of the provisions recognized in light of knowledge acquired or events occurring in the future cannot be ruled out.

The remaining provisions relate to a wide range of identifiable individual risks, price risks and contingent liabilities, which are factored in in the amount of their probable occurrence. Depending on the jurisdiction concerned, risk provisions for any non compliance with statutory emissions limits are also included. Their measurement takes into account, among other things, the respective sales volume and the legally defined fee or the cost of acquiring emission rights from other manufacturers. Advantage has been taken of synergies between individual brands of the Volkswagen Group by establishing emission pools where possible. Additional information on this matter and the valuation assumptions and bases can be found in the Annual Report in the notes to the consolidated financial statements.



## ADDITIONAL REPORTING WITHIN THE GROUP

By referencing this combined separate nonfinancial report, all Group companies that are required by national legislation to disclose nonfinancial and diversity-related information pursuant to Directive 2014/95/EU but do not issue their own nonfinancial statement are exempted from the obligation to submit their own nonfinancial reports.

## TERMINOLOGY RELATING TO CLIMATE PROTECTION

The use of the term CO<sub>2</sub> emissions in this report includes the consideration and identification of additional climate-damaging greenhouse gases such as methane (CH<sub>4</sub>) and laughing gas (N<sub>2</sub>O) (CO<sub>2</sub> equivalents). All figures in this report on CO<sub>2</sub> emissions correspond to CO<sub>2</sub> equivalents, except for fleet emission figures.

Net carbon neutrality is achieved when anthropogenic CO<sub>2</sub> emissions are balanced worldwide through avoidance, reduction and offsetting over a specific period of time. With regard to climate protection, in addition to CO<sub>2</sub> emissions Volkswagen also pays attention to all other relevant greenhouse gases. Avoidance and reduction have priority over offsetting for the Volkswagen Group. For offsetting measures, the Group follows internationally established standards.

## EDITORIAL NOTES

Whenever this report uses the term *Sustainability Report*, this expression includes the *nonfinancial report* each time it is mentioned to the extent described on page 8.

## REPORTING PRACTICES

The nonfinancial report is published annually. The last nonfinancial report was published on March 15, 2022. In addition to information about the Group's sustainability activities in the 2022 fiscal year (January 1 to December 31, 2022), this 2022 nonfinancial report also contains selected information from the 2023 fiscal year.

## ABOUT THIS REPORT

The editorial deadline was February 17, 2023. The Group Sustainability Report is published in the first quarter of 2023 and is also available in the original German. In the event of any discrepancies, the German authoritative version of the document takes precedence over the English translation.

## LEGAL INFORMATION

This sustainability report contains statements relating to the future business development of the Volkswagen Group. These statements are based on assumptions relating to the development of the economic, political and legal environment in individual countries, economic regions and markets, and in particular for the automotive industry, which we have made on the basis of the information available to us and which we consider to be realistic as of the time of going to press. The estimates given involve a degree of risk, and the 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, energy and other commodities or the supply of parts relevant to the Volkswagen Group, or deviations in the actual effects of the Covid-19 pandemic from the scenario presented in this report will have a corresponding effect 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 that affect the development of our business emerge.


# SUSTAINABILITY IN THE GROUP'S DNA



## CORPORATE GOVERNANCE

### OUTLINE OF THE LEGAL STRUCTURE OF THE GROUP

Volkswagen AG is the parent company of the Volkswagen Group. It develops vehicles and components for passenger cars and light commercial vehicles for 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 (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 German Commercial Code (*Handelsgesetzbuch – HGB*), which can be accessed on the website and is part of the annual financial statements.

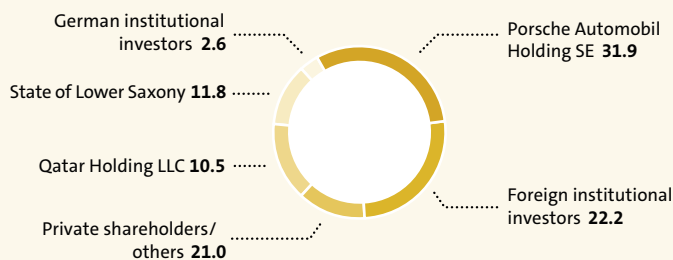
 > [www.volkswagenag.com](http://www.volkswagenag.com) > Investor Relations

Volkswagen AG is a vertically integrated energy supply company as defined by section 3 no. 38 of the German Energy Industry Act (*Energiewirtschaftsgesetz – EnWG*) and is therefore 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 and is directly consulted on decisions of fundamental significance for the Company.

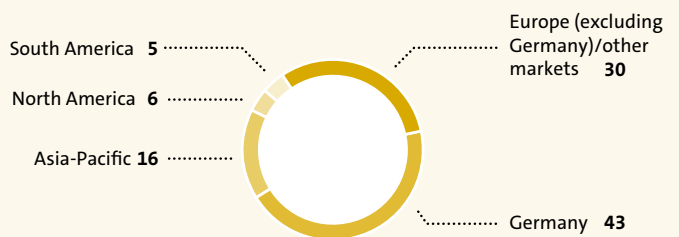
### VOLKSWAGEN AG SHAREHOLDER STRUCTURE

as of December 31, 2022, in % of voting capital



### EMPLOYEES BY MARKET

as of December 31, 2022, in %



The Volkswagen Group is one of the leading multi-brand groups in the automotive industry. The Group's business activities comprise the Automotive and Financial Services divisions. Our core 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, engines and vehicle software, 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. It also includes motorcycles and is supplemented by mobility solutions. The Commercial Vehicles Business Area primarily comprises the development, production and sale of trucks and buses, 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 commercial vehicle brands is coordinated within TRATON SE. The Power Engineering Business Area combines the large-bore diesel engines, turbomachinery and propulsion components businesses. The Financial Services Division's activities comprise dealer and customer financing, vehicle leasing, direct banking and insurance activities, fleet management and mobility services. With its

brands, the Volkswagen Group is present in all relevant markets around the world. The key sales markets currently include the Western Europe region and China, the USA, Brazil, Poland, Mexico, Türkiye and the Czech Republic.

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. Accordingly, responsibilities were divided among 11 board-level management functions starting from January 1, 2022. In addition to the Chair of the Board of Management, which also includes the Volume brand group, the other Board positions are Purchasing, Technology, Finance, Human Resources and Truck & Bus, Integrity and Legal Affairs, Premium, Sport & Luxury, IT, China, and Volkswagen Passenger Cars. A new Group Sales function was created with effect from February 1, 2022. As of September 1, 2022, the Volkswagen Group refined its Group management. The Board of Management was streamlined, and responsibilities were reallocated: The Purchasing and Group Sales Board functions were dissolved. In addition, the Volkswagen Passenger Cars function was renamed Volume. Since then, responsibilities have been divided between ten board-level management functions. In addition to the Chair of the Board of Management, the other Board positions are Technology, Finance, Human Resources and Truck & Bus, Integrity and Legal Affairs,

Volume, Premium, Sport & Luxury, IT, and China. The Chair of the Board of Management is also responsible for Sport & Luxury. Directly connected to the Board are a number of Group Management functions that act as an extension to the board-level management functions. These comprise the Group Sales, Group Production, Procurement and Technical Architecture functions.

The allocation of responsibilities of the Board of Management is based on the schedule of responsibilities decided by the Supervisory Board, which takes into account the changes in the management during the reporting period. Its structure contributes to enabling the Board of Management to focus on key tasks such as strategy, central decisions on the Company's direction, capital allocation and financial requirements. The tasks of the extended Group management serve to leverage synergies in the Group and to connect the brands and divisions.

In addition, at Group level, Board of Management committees address key strategic issues relating to products, technologies, investments, digital transformation, integrity and compliance, risk management, human resources and management issues. We are continually revising and optimizing the committees in order to verify that they still align with our corporate strategy and to further increase the efficiency of their decision-making. This is intended to reduce complexity and reinforce governance within the Group.

The matrix of brand groups and technology platforms created under the Group Steering Model base initiative from the Group strategy NEW AUTO was enhanced in both dimensions during the reporting period. This involved both strengthening the brand groups and creating new units for key technology areas of the future within our strategic technology platforms. The Group steering model will be further refined in the future on this basis.

The Volume brand group comprises the Volkswagen Passenger Cars, ŠKODA, SEAT/CUPRA and Volkswagen Commercial Vehicles brands. The Premium brand group comprises the Audi, Lamborghini, Bentley and Ducati brands. The Sport & Luxury brand group consists of the Porsche brand. The company responsible for this brand, Porsche AG, has been listed on the stock market since the end of September 2022. In the Truck & Bus brand group, TRATON SE acts as the umbrella for the Scania, MAN, Volkswagen Truck & Bus and Navistar commercial vehicles brands. TRATON SE is also a listed company. As well as strengthening the brand groups, the reorganization and creation of new units enabled substantial progress with the Software, Battery & Charging and Mobility Solutions technology platforms in the reporting period. The software subsidiary CARIAD was further expanded, getting a subsidiary of its own in China, among other things.

In addition to this, Volkswagen founded PowerCo SE in the reporting period as part of the Battery & Charging technology platform. This company is responsible for the Group's global battery business. In addition to producing battery cells, it will also take on other activities along the battery value chain in the future.

In the Mobility Solutions technology platform, Volkswagen strengthened the Group's expertise in advanced fleet management through the equity investment in the Europcar Mobility Group in the reporting period. The aim is to be able to achieve even better coverage of all customers' mobility needs based on a new mobility platform.


We are convinced that our corporate structure, which efficiently connects the brand groups and technology platforms, will enable us to make better use of existing expertise and economies of scale, leverage synergies more systematically and accelerate decision-making. Clear responsibilities and a high degree of business responsibility in the brand groups and technology platforms will enable comprehensive implementation of the Group's NEW AUTO strategy.

### LEGAL FACTORS INFLUENCING BUSINESS

Like other international companies, the business of the Volkswagen companies is affected by numerous laws in Germany and abroad. In particular, there are legal requirements relating to services, development, products, production and distribution, as well as supervisory, data protection, financial, company, commercial, capital market, antitrust and tax regulations and regulations relating to labor, banking, state aid, energy, environmental and insurance law.

### THE GERMAN CORPORATE GOVERNANCE CODE – A BLUEPRINT FOR SUCCESSFUL CORPORATE GOVERNANCE

Corporate governance provides the regulatory framework for corporate management and supervision. This includes a company's organization and values and the principles and guidelines for its business policy. The German Corporate Governance Code (the Code) contains principles, recommendations and suggestions for corporate management and supervision. Its principles, recommendations and suggestions were prepared by a dedicated government commission on the basis of the material provisions and nationally and internationally accepted standards of sound, responsible corporate governance. In the interests of best practice, the government commission regularly reviews the Code's relevance in light of current developments and updates it as necessary. The Board of Management and the Supervisory Board of Volkswagen AG base their work on the Code's principles, recommendations and suggestions. We consider good corporate governance to be a key prerequisite for achieving a lasting increase in the Company's value. It helps strengthen the trust of our shareholders, customers, employees, business partners and investors in our work and enables us to meet the steadily increasing demand for information from national and international stakeholders. You can find our published Declaration of Conformity with the German Corporate Governance Code here:


 > [www.volkswagenag.com](http://www.volkswagenag.com) > Investor Relations > Corporate Governance > Declarations

**FURTHER INFORMATION**

Explanations of the composition, working methods and diversity concept of the Board of Management and the Supervisory Board and information on voting rights are available in the Corporate Governance chapter in the 2022 Annual Report.

 > 2022 Annual Report > Corporate Governance


Extensive explanations of the remuneration system and the individual remuneration of the members of the Board of Management and Supervisory Board can be found in the Remuneration Report for fiscal year 2022, which forms part of the 2022 Annual Report, in the notes to Volkswagen's 2022 consolidated financial statements and in the notes to the 2022 annual financial statements of Volkswagen AG.

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Investor Relations > Corporate Governance > Remuneration

The Volkswagen AG Group Board of Management has adopted an update of the tax strategy principles, which has been published on Volkswagen AG's website.

Each year, Volkswagen AG sends the German Federal Central Tax Office a country-by-country report, which includes information on tax payments and tax expenses/income by country.

The Volkswagen Group has the ambition of implementing its marketing and communication activities transparently and responsibly. This includes attentiveness towards our environment and requires us to treat all individuals with respect and honesty and as equals. This applies internally and externally, online and off. To this end, the Group has developed principles that serve as a compass for implementing the Volkswagen Group's values with regard to marketing and communication activities.

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Sustainability > Strategy, Policy & Engagement > Policy

**THE VOLKSWAGEN VALUE CHAIN**

**RESEARCH & DEVELOPMENT**

The Automotive Division's research and development costs in the reporting year totaled €18.9 billion and were thus 21.3% higher than in the previous year. In addition to new models, our activities focused above all on the electrification of our vehicle portfolio, digitalization, new technologies and enhancements of our modular and all-electric toolkits and platforms.

**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 are important for fully assuming responsibility for human rights, environmental protection and the battle against corruption.

**PRODUCTION**

The Volkswagen Group manufactured an average of around 24,000 vehicles globally every working day in 2022. Efficient production ranks alongside environmental protection and employee health and safety as one of our core goals.

**MARKETING & SALES**

Business relationships with fleet customers are often long-term and stable partnerships. The Volkswagen Group's share of commercial fleet customers is 43.5% in Germany and 25.7% in the rest of Europe.

**AFTER-SALES & FINANCIAL SERVICES**

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

**RECYCLING**

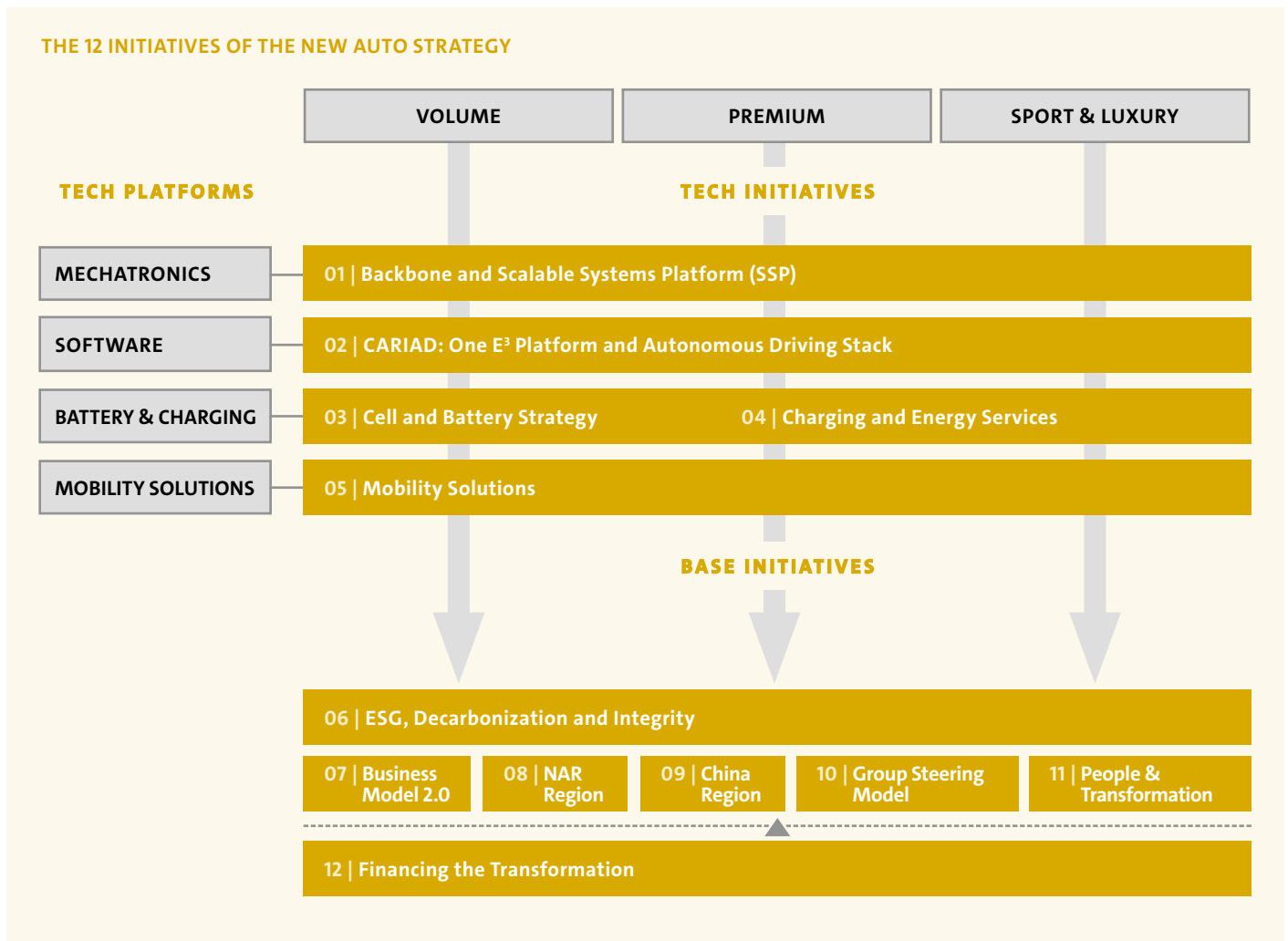
In addition to recycling vehicles at the end of their useful life, we pay close attention during the new-vehicle development stage to the recyclability of the required materials, the use of high-quality recycled materials, and the avoidance of pollutants.

## NEW AUTO GROUP STRATEGY

In the context of the fast-changing environment and the challenges resulting from it, the Group Board of Management adopted the Group strategy “NEW AUTO” – Mobility for Generations to Come in May 2021 with the approval of the Supervisory Board. The strategy’s focus is the world of mobility in 2030. As technology advances, the automotive industry is rapidly forging ahead with its transformation toward e-mobility and digitalization. We therefore expect the market for electric vehicles to grow strongly in the next few years, meaning that cost-efficient and sustainable production of battery systems and the expansion of charging infrastructure will be crucial to success. The shift to connected, intelligent and eventually self-driving vehicles, however, will bring more wide-reaching changes for the automotive industry. Autonomous driving will change the customer’s mobility experience forever and lay the ground for new business models. Sources of revenue will gradually shift and will expand beyond the core product of the automobile. This shift will be dependent on increasing software development capabilities so as to excite

customers with constantly improving digital functionality. As with technological trends, global economic as well as geopolitical constraints are increasingly confronting the automobile industry with greater challenges – for example, the economic influence wielded by the biggest mobility markets, China, the USA and Europe, and the way they are diverging.

Sustainability will continue to be a recurring theme in the business world and will gain further pertinence, driven by the increasingly noticeable consequences of climate change, a greater consciousness of sustainable lifestyles on the part of the customer and, not least, underlying factors such as the Paris Climate Agreement. As we transition from automotive manufacturer to mobility group, we are resetting our priorities with NEW AUTO and positioning ourselves for the future. We are keeping our aim of being a world-leading provider of sustainable mobility firmly in our sights and making the Group more focused, efficient, innovative, customer-oriented and sustainable, as well as systematically gearing it toward profitable growth.



To this end, we have established 12 Group initiatives across the brand groups. We will use these to develop the competences needed to implement the strategy. The focus is on the main multidisciplinary topics of mechatronics, software, battery & charging, and mobility solutions, on which the five tech initiatives described below are based. A further seven base initiatives form the basis for the Volkswagen Group's strategic realignment. These are ESG, Decarbonization & Integrity, Business Model 2.0, North America (NAR) and China Regions, Group Steering Model, People & Transformation and Financing the Transformation.

To make the progress in the relevant Group initiatives of our strategy as transparent as possible for management and employees, the Group Board of Management decided to structure and regularly measure the strategic goals and milestones using the OKR (objectives and key results) method. Achievable strategic objectives and envisaged key results are defined for each Group initiative. These are to be realized largely through time-limited projects and work packages, each of which is measured by specific key performance indicators. The degree of achievement is discussed three times a year with the Board of Management. The relevance of the initiatives, and their objectives, milestones, projects and work packages, are regularly reviewed at Group level. Their focus is continuously monitored and adjusted as necessary or integrated into standard operations.

#### **Mechatronics – Backbone and Scalable Systems Platform**

A future-oriented mechatronics platform will form the backbone for innovations, technology and lasting competitiveness at Volkswagen. With the Scalable Systems Platform (SSP), we are creating the next generation of an all-electric, fully digital and highly scalable mechatronics platform on the basis of a standardized software architecture. With this standardized platform, which can be scaled from the smallest vehicles all the way up to the premium segment, the Volkswagen Group aims to rapidly and efficiently provide its customers with innovative functions and technologies in their vehicles, across all brands. By reducing complexity and the number of versions, the SSP will offer us maximum synergy effects and make fast, regular technology updates possible, while lowering investment costs and ensuring the necessary differentiation between the products of the individual brands in the Group's portfolio.

#### **Software – CARIAD: ONE E<sup>3</sup> Platform and Autonomous Driving (AD) Stack**

The purpose of the Group's own software and technology company CARIAD is to create the technical basis for data-based business models, new mobility services and automated driving (Level 4) and to leverage cross-brand synergies. Our aim is to increase the proportion of software in the vehicle that is developed in house. CARIAD is already working with the Porsche and Audi brands to introduce the new E<sup>3</sup> 1.2 platform, which optimizes the harmonization of the hardware with the vehicle software from CARIAD. This facilitates the deployment of over-the-air updates and is a key lever for introducing new services even after vehicle production has begun. In the

long term, the standardized E<sup>3</sup> 2.0 software architecture that is already being developed, together with the VW.OS software platform and the Volkswagen Automotive Cloud, will form the basis of a complete digital ecosystem, offering customers a wide range of software-based services throughout the product life cycle. The aim is for every function that is needed or requested and every service to be customized for the users in the various markets and to be available for download at any time. This will also open up new sources of revenue for us. Automated driving applications at various levels (up to level 4) are to be gradually introduced to the new vehicle models in the Group brands.

#### **Battery & Charging – Cell and Battery Strategy**

The battery is a key component in an electric vehicle and an important cost factor. The appeal and market success of e-mobility is determined not only by the price, but also by the range and the charging speed. We must become a profit-generating expert across the entire battery life cycle to achieve our objective of transforming into a world-leading provider of sustainable mobility. To this end, the Cell and Battery Strategy tech initiative pools expertise across the Group and is driving the transformation process in cooperation with our strategic partners. The aspects covered include battery management, cell production and recycling. Our aim is to develop battery cell technology into a core competence in the Group, and we are also working with partners to achieve this. At the heart of this strategy is the new unified cell, which can contain different chemistries and will be used in up to 80% of Group models by 2030. The excellent economies of scale this generates will reduce costs by up to 50% and put us in a leading cost position. To cover the high demand for battery cells, Volkswagen plans to build six gigafactories in Europe alone, with a production capacity totaling 240 GWh.

#### **Battery & Charging – Charging and Energy Services**

Charging, energy and a sustainable energy supply infrastructure for all-electric vehicles are key prerequisites for accelerating the transition to battery-electric mobility of the future. It is therefore our intention to also become a comprehensive charging and energy services provider in the future, and we are investing heavily in building an open fast-charging network worldwide. By 2025, we and our partners plan to create around 45,000 high-power charging points in Europe, China and the USA. The product portfolio also includes the full range of charging solutions for private customers and companies. In addition to the Group's own wall box and the flexible fast-charging station, contract-based charging services and smart green electricity tariffs in particular are becoming the focus. Charging processes will then systematically use renewable energy and reduce pressure on power grids. In a next step, Volkswagen intends to develop the electric vehicle as a mobile power bank, thus helping electric vehicles to become an active part of the energy system in the future as storage devices. In this way, Volkswagen wants to enable its customers to participate in one of the leading smart-charging and energy ecosystems for decarbonized mobility.

## Mobility Solutions

With the motto, "Mobility for Generations to Come," the Volkswagen Group is developing mobility solutions of the future, taking into account global trends and changing customer needs. The Group plans to bring together all of its brands' mobility services on one mobility platform over the coming years. Autonomous driving combined with new mobility solutions is expected to mark Volkswagen's transformation into a leading provider of sustainable mobility. A vehicle fleet covering all of the many services, from vehicle rental to car subscription and ride pooling, will ensure high availability, usage and profitability. With these solutions, we plan to gain market shares and generate long-term competitive and attractive margins.

## ESG, Decarbonization and Integrity

ESG (Environmental, Social, Governance) refers to the basic principles of doing business sustainably. The Group's stakeholders (e.g., investors, employees, customers and non-profit organizations) have high expectations of the Company's ESG performance, including in areas such as decarbonization and integrity, and also of its conduct as an employer and as part of society. The Group's ESG performance therefore directly affects its market capitalization, cost of capital and investing activities. We aim for a top position relative to our competitors in sustainability ratings. We are committed to the Paris Climate Agreement and align our own activities with the 1.5 °C goal. We aim to achieve net carbon neutrality by 2050. By 2030, we have also set ourselves the target of reducing CO<sub>2</sub> emissions from passenger cars and light commercial vehicles over the total life cycle by 30% compared with 2018. As part of this effort, we are looking for ways to increase the proportion of recyclable materials in our SSP-based vehicles. We also wish to become the benchmark for ethical corporate conduct. Volkswagen sees itself as an equal opportunities employer. The intention is therefore for at least a fifth of Company management positions to be held by women by 2025, and for at least a quarter to be held by international managers.

## Business Model 2.0

The Business Model 2.0 base initiative is developing a Group-wide portfolio of services, the purpose of which is to create a seamless and innovative product experience to connect brands, customers, dealerships, our partners and whole markets. The aim is for the key technologies needed for this to be integrated into a majority of the platform-based vehicles by 2030. Using connected vehicles, the Group's brands are to be able in the future to remain in contact with their customers throughout the entire vehicle life cycle and thus to offer them services and functions for their individual needs. This will allow us to build a competitive, data-driven service portfolio that also maintains our leading position in the automotive market in future.

## North America (NAR) region

For the Volkswagen Group, North America, and particularly the United States, is the region with the greatest growth potential, especially where e-mobility is concerned. We intend North America to become our third core region alongside Europe and China by 2030. Our aim there is to achieve a total market share for the Volkswagen Group of 10%. We aspire to expand our presence in the region with strong brands and prepare ourselves for the future with market-specific products.

We also wish to participate to a disproportionately high extent in the growth of the increasingly electrified markets in the USA and Canada. We will therefore substantially expand our range of all-electric models across the Group and develop models specifically for these markets. The proportion of battery-electric vehicles in our sales in the USA and Canada is to increase to 55% by 2030. In addition, we wish to maximize the potential for synergies in the region and build significantly more expertise, industrial capacity and vertical value chains in the North America region.

## China Region

China is of major strategic significance to the Volkswagen Group as its largest single market, and we expect it to continue growing in the future. This strategic base initiative therefore brings together all of the key measures needed to continue the success story of Volkswagen in China. These include a comprehensive program of measures with a focus on cost, long-term technological competitiveness, localized development activities that are tailored to the market, and the further consolidation of our existing partnerships. Our aim is to achieve high market shares in the electric vehicle segment and establish ourselves as a leading provider. For vehicles with combustion engines, our aim is to maintain our share of the market, as these will also make a contribution to profit in the future if unit sales remain high.

We are therefore continuing to accelerate our Group-wide localization strategy in China so as to offer our Chinese customers tailor-made products, and we are using not only global platform technologies (hardware and software), but are increasingly employing platform technologies that have been developed locally. In this way, we wish to stand our ground in the face of constantly growing competition in the new intelligent connected vehicle (ICV) segment.

## Group Steering Model

To achieve the objectives of the Group strategy and thereby safeguard the Volkswagen Group's long-term success, we are undertaking far-reaching optimization of our Group steering model. It is essential that we establish a consistently high level of mechanisms that facilitate swift decision-making, the development and use of



platform technologies and the exploitation of synergies, and that we constantly enhance these. The updated Group Steering Model places the brand groups and technology platforms center stage in order to scale the latter across the entire Group product portfolio, taking account of synergies. A new strategy and product planning process that has been optimized for efficiency is being developed on the basis of this approach. The package of measures for this initiative hones the definition of roles and responsibilities in the Group and improves transparency in this respect both inside and outside the Company. It also promotes the entrepreneurship of the independent units and brands and at the same time strengthens collaboration across the Group.

**People & Transformation**

As it becomes a global tech company, the Volkswagen Group will see the biggest transformation of its workforce in its corporate history. To ensure the Group remains competitive in the future, we need to attract top talent and support existing employees by providing extensive training where required. Our aim is to retain staff for the long term. It is therefore fundamental that we address the changing needs of our employees and offer them an outstanding employee experience. To achieve our Group's ambitious objectives, we must also create and promote an environment for productive teams, resulting in a strong, sustainable and socially responsible corporate culture that fosters a sense of belonging and loyalty to the Company. A further focus is on aligning the Company with society and the environment.

**Financing the Transformation**

The transformation being driven by digitalization and electrification will require extensive investment. To meet this need for financing, the Financing the Transformation base initiative aims to leverage even more Group-wide synergies across all functional areas along the value chain, focusing on costs and efficiency. The Group has therefore set itself the objective of lasting improvements to its fixed-cost structure, plant productivity, procurement, distribution expenses and working capital management.

**STRATEGIC KEY FINANCIAL PERFORMANCE INDICATORS:<sup>1</sup>**

	2015	2025 target
Operating return on sales <sup>2</sup>	6.0%	8 to 9%
Research and development ratio (R&D ratio) in the Automotive Division	7.4%	~6%
Ratio of capex to sales revenue in the Automotive Division	6.9%	~5%
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%	> 15%

<sup>1</sup> The content of the strategic financial KPI is currently being revised.  
<sup>2</sup> 2015 before special items.

## ESG PERFORMANCE MANAGEMENT AND MATERIALITY ANALYSIS

### MATERIALITY ANALYSIS LINKED WITH GROUP STRATEGY AND ESG PERFORMANCE

The materiality analysis is used to identify and evaluate the most important sustainability issues for the Group. Based on the business model and its impact on society, the focus is on key ESG requirements, stakeholder expectations, and compliance with legal requirements and internationally established reporting standards.

The Group conducted another materiality analysis in the reporting period. In reviewing a large number of potentially material issues, we considered both external and internal company perspectives. For the external side, 80 topic clusters were derived from 700 topics and weighted along 330 criteria. This was based on:

- Results of dialog processes with the Sustainability Council and the Stakeholder Panel
- Reputation surveys
- Requirements of relevant international and national frameworks such as the EU Taxonomy, the German Commercial Code (*Handelsgesetzbuch* – HGB), the UN Global Compact, the Sustainability Accounting Standards Board (SASB), the Global Reporting Initiative (GRI) or the Sustainable Development Goals (SDGs)
- Key ESG ratings
- KI-supported trend analyses and management studies

For the internal dimension, we primarily took account of all Group policies on sustainability management, materiality analyses of the Group brands and country-specific risk analyses of Volkswagen Group production sites.

The focus issues prioritized for the NEW AUTO Group strategy were confirmed with this year's materiality analysis and classified as material by the Group Sustainability Steering Committee. The five nonfinancial matters arising from the German CSR Directive Implementation Act (*CSR-Richtlinie-Umsetzungsgesetz* – CSR-RUG) are covered by the six focus issues. In addition, these six focus areas, in turn, cover a significant part of the assessment criteria of ESG ratings:

- Decarbonization
- Circular economy
- People in the transformation
- Diversity
- Integrity
- Supply chain and human rights

Each focus issue is – to the extent currently possible – linked with clear targets and milestones and with KPIs and packages of measures. ESG-related KPIs such as the decarbonization index (DCI) and the diversity index are already reflected in the remuneration of members of the Board of Management.

 > Corporate Governance


The topics classified as material also provide the foundation for the structure of this sustainability report and serve as the basis for managing the Volkswagen Group's sustainability program.

### ACTION PROGRAM FOR OPTIMIZED ESG PERFORMANCE


The NEW AUTO Group strategy focuses not only on technological and product-related initiatives but also on improving the Group's ESG performance. This is because this directly and indirectly impacts Volkswagen's market capitalization, costs of capital and attractiveness to investors. This is partly due to increasing density of regulations on sustainability as a result of frameworks such as the EU Taxonomy or regulations on the responsible shaping of supply chains. Moreover, capital market players such as institutional investors not only expect transparency on the Group's sustainability performance but also an effectively implemented strategy that leads to continuous improvement in sustainability performance. A significant share of globally managed assets is already oriented toward ESG criteria.

In the past reporting year, we significantly expanded our action program that targets improvement of our results in ESG ratings by 2025. It consists of four pillars:

1. ESG performance management: We are closing existing gaps in ESG performance and creating additional transparency by disclosing our measures and key performance indicators.
2. ESG engagement: We are intensifying our communication on ESG and sustainability in the capital market by communicating our messages and results in roadshows, investor conferences and other formats. In this way, we explain our current performance and at the same time benefit from the learning effects and knowledge transfer that this dialog makes possible.







 > [www.volkswagenag.com](http://www.volkswagenag.com) > Investor Relations > Financial Calendar

3. Management of controversies: We aim to reduce the negative impact of legal or media controversies regarding the Volkswagen Group on our rating results. We have developed a controversy management process for this, where a controversy forum was established that identifies existing and possible controversies and derives measures to be taken. Our own web-based information on existing ESG controversies around Volkswagen makes an additional contribution to clarification and objectivization.

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Investor Relations > Corporate Governance > ESG Controversies

4. Internal ESG data infrastructure: We are working on establishing comprehensive ESG data reporting tools for better data-supported infrastructure and will create comprehensive and custom ESG information offerings for relevant stakeholders in the future.

Compared with prior years, the Group's score in the ESG rating from Sustainalytics substantially improved from 29.6 to 26.1. In fiscal year 2022, Volkswagen continued to have a score of A- in the CDP climate rating and had an A rating in the Water Disclosure Project (WDP).


	2020	2021	2022	
 MSCI	CCC	B	B	
 SUSTAINALYTICS <small>a Morningstar company</small>	41.7 (severe risk)	29.6 (medium risk)	26.1 (medium risk)	
 ISS ESG	C	C	C	

ESG rating scales  
MSCI: CCC-AAA; Sustainalytics: 100-0; ISS: D--A+

### MAKING THE SOCIAL AND ENVIRONMENTAL IMPACT OF OUR ACTIONS MEASURABLE

The Volkswagen Group wants to measure the impact of its actions even more comprehensively in quantitative terms in the future and, if possible and reasonable, to monetize this. This involves assessing positive and negative effects on, among other things, the environmental and social systems for the purpose of the inside-out perspective. This impact relates to the Group's entire business, including its supply chain and its products and services. This means we are not only taking on board impetus from regulatory developments as it emanates from the EU CSR Directive or the EU Green Bond Standard, but also impetus from international initiatives and organizations such as the Organisation for Economic Co-operation and Development (OECD) and the World Business Council for Sustainable Development (WBCSD). At the same time, like other global companies, we are endeavoring to make even greater use of an impact assessment in our decision-making and management processes, risk management, reporting and communication with our stakeholders. Impact assessments already represent tried and tested tools at

Volkswagen, particularly for the assessment of mobility concepts. Here, new options are continuously investigated for their sustainability impact and readjusted as necessary.

 > Sustainability Impact of New Mobility Options

We are currently developing a Group-wide concept for measuring impact with the name of "Impact Valuation@Volkswagen Group." The concept is based on the successful implementation of two pilot projects at site and brand level.

In order to advance the topic of impact measurement and develop comparable concepts, the Volkswagen Group is a member of the Value Balancing Alliance (VBA) together with the Porsche brand. This initiative champions the development of uniform assessment standards for impact measurement and the financial balancing of sustainability impacts on an international level across sectors. In addition to the Volkswagen Group, the VBA's members include numerous global companies, such as Bosch, BASF, BMW, Michelin and SAP.

# SUSTAINABILITY MANAGEMENT

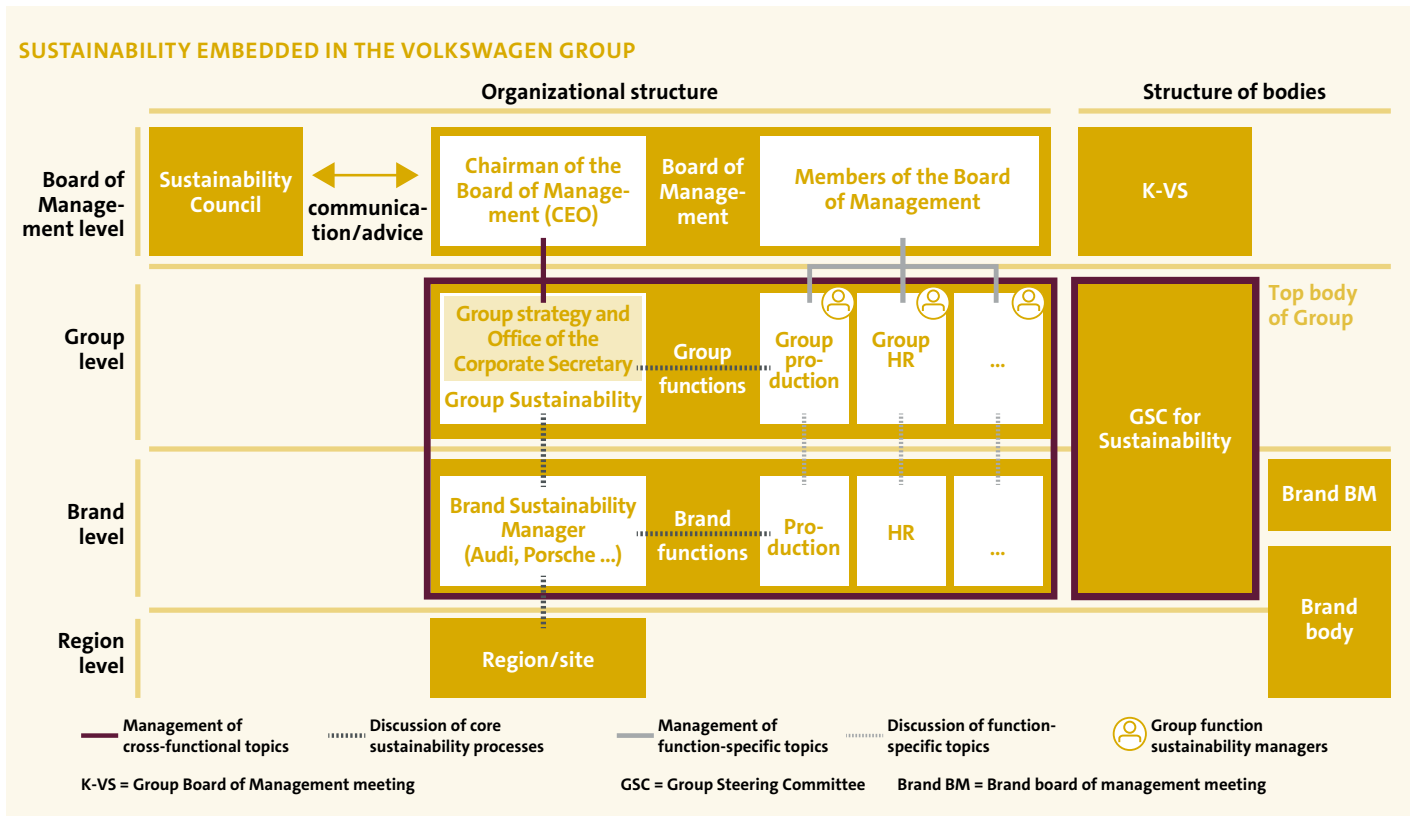
## STRUCTURE AND TASKS OF THE SUSTAINABILITY ORGANIZATION

Sustainability means maintaining intact environmental, social and economic systems with long-term viability at global, regional and local level. The Volkswagen Group can influence these systems in various ways and actively takes responsibility to make a contribution to preserving their sustainability. An extensive sustainability management system was set up for this purpose. The related structures, processes and responsibilities are codified in a specific Group policy. We view sustainability management as a continuous improvement process.

The Chairman of the Board of Management of Volkswagen AG has cross-functional overall responsibility for sustainability. Additional responsibility is taken by members of the Board of Management with their responsibility for specific management systems relating to sustainability and by the Group Steering Committee for Sustainability. The members of this steering committee include managers from central Board of Management business areas and Group functions, representatives of the brands and the Group Works Council. The steering committee 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. In addition, topic-specific questions on sustainability are addressed in Group initiative 6 of the NEW AUTO Group strategy.

The Group's sustainability function (Group Sustainability) coordinates all sustainability-related activities and the Group-wide and cross-functional network for sustainability. Communication with Group functions, brands and companies is structured via defined core processes. They serve to create transparency on external requirements and translate these into corporate action. The core processes include the sustainability strategy and materiality analysis, stakeholder management, ESG ratings and rankings, sustainability policies and sustainability reporting. Group Sustainability is allocated to Group strategy and the Office of the Corporate Secretary in order to ensure that sustainability is closely linked with the strategic corporate goals and the core business. It is also responsible for the office of the Group Steering Committee for Sustainability.

In addition to the Group Steering Committee for Sustainability, regular discussions within the Group-wide sustainability network take place through various formats. One example of this is the Group Sustainability Summit. In 2022, this was held in Berlin, and its focus areas were ESG, mobility of the future, community engagement and business models. The participants included managers from the Group and from the brands and regions. The Sustainability Manager Core Team is another central communication platform, where representatives from the Group and the brands regularly address current sustainability issues. In addition, there are specific steering models for individual topics, such as ESG performance management.




At brand level, the brand sustainability managers carry out the cross-functional coordination of sustainability topics, develop the sustainability strategy, are responsible for content and reporting on sustainability topics within the brand, represent the brand on sustainability topics externally and coordinate with Group Sustainability.

**THE SUSTAINABILITY COMMITTEE AS AN INDEPENDENT DRIVING FORCE AND PARTNER**

At Group level, the Sustainability Council has a prominent position. The advisory committee created in 2016 supports the Volkswagen Group with important strategic sustainability topics and 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.

In 2022, the dialog between the Group and the Sustainability Council focused on comprehensively enshrining sustainability topics in the NEW AUTO Group strategy, the future alignment of mobility solutions in this strategy and the impact of the war in Ukraine on the Volkswagen Group. In addition, in connection with various projects the Council dealt with the following topics, among others: Dealing with the German Supply Chain Due Diligence Act (*Lieferkettensorgfaltspflichtengesetz* – LkSG), digital technologies as enablers for sustainability, the Zero Impact Factory concept, workforce transformation, training staff and decarbonization of the Group.

Further information on the letters of recommendation to the Group Board of Management and the results of the Council projects are provided on the Sustainability Council web page.


 > [www.volkswagenag.com](http://www.volkswagenag.com) > Sustainability > Strategy, Policy & Engagement > Engagement > Sustainability Council

**UN GLOBAL COMPACT**

Since 2021, after a five-year hiatus, the Volkswagen Group has officially been reinstated as a participant of the UN Global Compact, the world's largest corporate sustainability initiative, and participates in national and international initiatives. AUDI AG has also been reinstated as a participant in the UN Global Compact. Porsche AG and Traton SE have been new participants of the UN Global Compact since 2022. In addition, the brands MAN Truck & Bus and Scania are also signatories of the UN Global Compact.

For investors and asset managers in the capital market, membership of the UN Global Compact is an important criterion for investability in Volkswagen AG shares and bonds. Sustainability-oriented funds


have grown significantly in the last few years and have become indispensable as stakeholders. The Volkswagen Group and its brands report on their progress in implementing the Ten Principles of the UN Global Compact and their activities for promoting sustainable development in the annual Communication on Progress, which can be viewed on the UN Global Compact website.

 > United Nations Global Compact

**GREEN FINANCE FRAMEWORK FOR INVESTMENTS IN SUSTAINABILITY**

Massive investment is needed to transform the Volkswagen Group. At the same time, investors are looking for sustainable investment options. Volkswagen AG has had a Green Finance Framework for various forms of financing such as green bonds since 2020. This document defines the framework for financial instruments geared to sustainability. In the reporting year, we refinanced fiscal year 2021 capital expenditure aligned with the EU Taxonomy on the basis of the Green Finance Framework newly published in 2022 by issuing €2.5 billion in green bonds. The Volkswagen Group has thus issued a total of €6.0 billion in green bonds to refinance capital expenditure for BEVs since 2020. In 2022, the Volkswagen Group published a new Green Finance Framework that was further developed in particular through the integration of the EU Taxonomy. As was the case in the previous Green Finance Framework, the Volkswagen Group continues to focus on the exclusive inclusion of all-electric vehicle models (BEVs) in sustainable financing. Under the new Green Finance Framework, the only investments that will be considered are investments for BEVs produced by the Volkswagen Group that are aligned with the EU Taxonomy. This systematically links our corporate objective of net carbon neutrality by 2050 with our financing strategy. The funds raised under the Green Finance Framework are specifically used on environmentally friendly projects such as e-mobility. This both fulfills the clean transportation category of the Green Bond Principles of the International Capital Market Association (ICMA) and is in line with the goals of the United Nations and the European Union for sustainable development. Sustainalytics has confirmed again for the new Green Finance Framework that the framework complies with the ICMA's Green Bond Principles and the Green Loan Principles of the Loan Market Association (LMA).

Volkswagen published the second Green Finance Report, which contains the Allocation Report and the Impact Report, during the reporting year. More information is available on our corporate website.

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Investor Relations > Fixed Income & Ratings > Green Finance

## SUSTAINABILITY IMPACT OF NEW MOBILITY OPTIONS

### MAKING MOBILITY SOLUTIONS MEASURABLY MORE SUSTAINABLE

Our global society today faces the major challenge of finding the right balance when shaping mobility. The pressures of noise, traffic jams, accidents, traffic areas or air quality need to be reduced in many areas. At the same time, many people do not have sufficient, affordable and accessible transportation, limiting their participation in society. This is not only the case in economically weaker regions but also in rural areas and suburbs.

The Volkswagen Group offers both innovative vehicle technologies and forward-looking mobility services. Through these, the Group wants not only to meet its customers' requirements but also to help to solve local environmental and traffic problems in urban and rural areas and to protect the climate worldwide. Global cooperation with partners outside the Group plays an important role. We are guided here by the "Mobility for Generations to Come" vision that our NEW AUTO Group strategy describes.

#### > NEW AUTO Group Strategy

Completion of the acquisition of Europcar Mobility Group (EMG) in July 2022 by the consortium company Green Mobility Holding S. A. (GMH) with the partners Attestor Limited and Pon Holdings B.V. represents another important milestone for Volkswagen in its NEW AUTO strategy. EMG will become the cornerstone of a new platform that will cover customers' mobility needs, from using a vehicle for a few hours to subscription for multiple months. Our expectation is that most people will still prefer individual mobility by 2030, but it will be more about using and less about owning vehicles.

### SIMULATION PLATFORM FOR MOBILITY CREATES TRANSPARENCY AND ENABLES IMPROVEMENTS

It has been shown many times that new mobility concepts in particular increase the range of options in urban areas but are not automatically sustainable. Creating a basis of assessment is therefore important so that mobility solutions can be assessed for their sustainability impact and also influenced. This is because determining the right framework conditions and regulations is of decisive importance to make substantial contributions to sustainable cities and tap into business models for the Group. Political players and cities are also increasingly requiring early proof that mobility solutions actually have sustainability effects, and operating licenses may be conditional on this proof.

Against this background, the mobility simulation framework is being continuously developed as part of the Volkswagen Group's sustainability management. Its focus is on impact assessments that digitally replicate mobility on the basis of real data. Technologies such as data analytics and machine learning help us to virtually pilot certain services in advance on a large scale in what is known as a digital twin. This means that possible improvements – and also any undesirable side effects – can be discovered early and taken into account when developing mobility solutions.

We endeavor to regularly communicate with stakeholders on these and other issues and continuously analyze trends so that we can update targets and criteria as needed. The methods and models for mobility simulation are also being continuously developed in collaboration with universities. In addition to having a practical application, our results feed back into the academic world through publications and dialogs. Moreover, we use real data and empirical figures from mobility providers to continue to improve this. For example, MOIA, a young mobility company in the Volkswagen Group, has developed on-demand ride pooling services and created and published an extensive and scientifically independent long-term study on the impact of (autonomous) ride pooling on the Hamburg traffic system as part of accompanying research in Hamburg.

We use various key figures that are scientifically recognized and also reflect the requirements of various players to evaluate mobility services. For example, short and reliable journey times are important for customers, while access for citizens and the reduction of CO<sub>2</sub> emissions is important for society; towns and cities for their part want traffic to occupy as little space as possible and to improve air quality, while good utilization of its services is essential to the mobility provider.

### IMPORTANCE OF OVERARCHING IMPACT ANALYSES

Measures for increasing efficiency and better capacity utilization continue to be important steps on the path to sustainable mobility. In the case of ride pooling services such as MOIA, the transportation needs of various customers must be linked as optimally as possible in order to balance detours and waiting times with capacity. Modeling and impact assessments provide valuable services here in order to represent the high level of complexity. It should be noted that these analyses always take an overarching view of traffic. This is because users take other options into account when making decisions. Central to the sustainability assessment is what users of new services – for example, ride pooling, e-scooters or car sharing – would otherwise use or have previously used.

For example, there is a much debated question about whether ride pooling might ever overtake public transportation. Initial fears are, however, proving wrong. MOIA's accompanying research instead proved the opposite: The research showed that the mobility network – and especially public transportation – would benefit from the expansion of ride pooling. MOIA has maintained a close partnership in Hamburg with the transportation company Hamburger Hochbahn since its service started in 2019. One example of this was the use of MOIA vehicles as a building block in the rail replacement service when fire damaged a suburban railroad bridge in August 2022. This strengthened the traffic system's resilience to disruptions.

#### ANALYSIS RESULTS SHOW POTENTIAL OF OPTIMIZED VEHICLE USE

The impact assessments provide important pointers to which levers can be used to improve the sustainability impact of new mobility solutions. This particularly applies with regard to reducing CO<sub>2</sub> emissions and better use of scarce space in towns and cities. In addition to ride pooling, the focus is also on more efficient use of vehicles. In particular, privately used cars are mostly underutilized. On average, they are only used for around an hour per day and occupy parking spaces in private or public areas for the rest of the time, which in turn takes up valuable urban space. The life cycle of the vehicle is long, which leads to less environmentally friendly, outdated technologies being used for too long on the roads. By contrast, electric robotaxis could operate around the clock in the future. Car sharing can increase the use of cars to several hours per day by means of multiple users using a vehicle over the course of a day. Both solutions lead to more efficient mobility with fewer cars and less need for parking space in towns and cities.

#### UNDERSTANDING URBAN MOBILITY AND DEVELOPING IT SUSTAINABLY TOGETHER

In general, 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 traffic-induced problems are the most urgent in urban centers and their commuter belts, and the potential for change is also the greatest here. As a member of the World Business Council for Sustainable Development (WBCSD) for many years, we seek dialog with other companies contributing to the transformation and with stakeholders in order to identify our own scope for action. For example, the Volkswagen Group continued its collaboration on the WBCSD's Transforming Urban Mobility (TUM) project in 2022. Focal topics included commuter traffic and digitalization. The research topics included the ways in which data and new technologies can positively impact sustainable development.

#### ASTYPALEA: TRANSFORMATION TO A SMART AND GREEN ISLAND

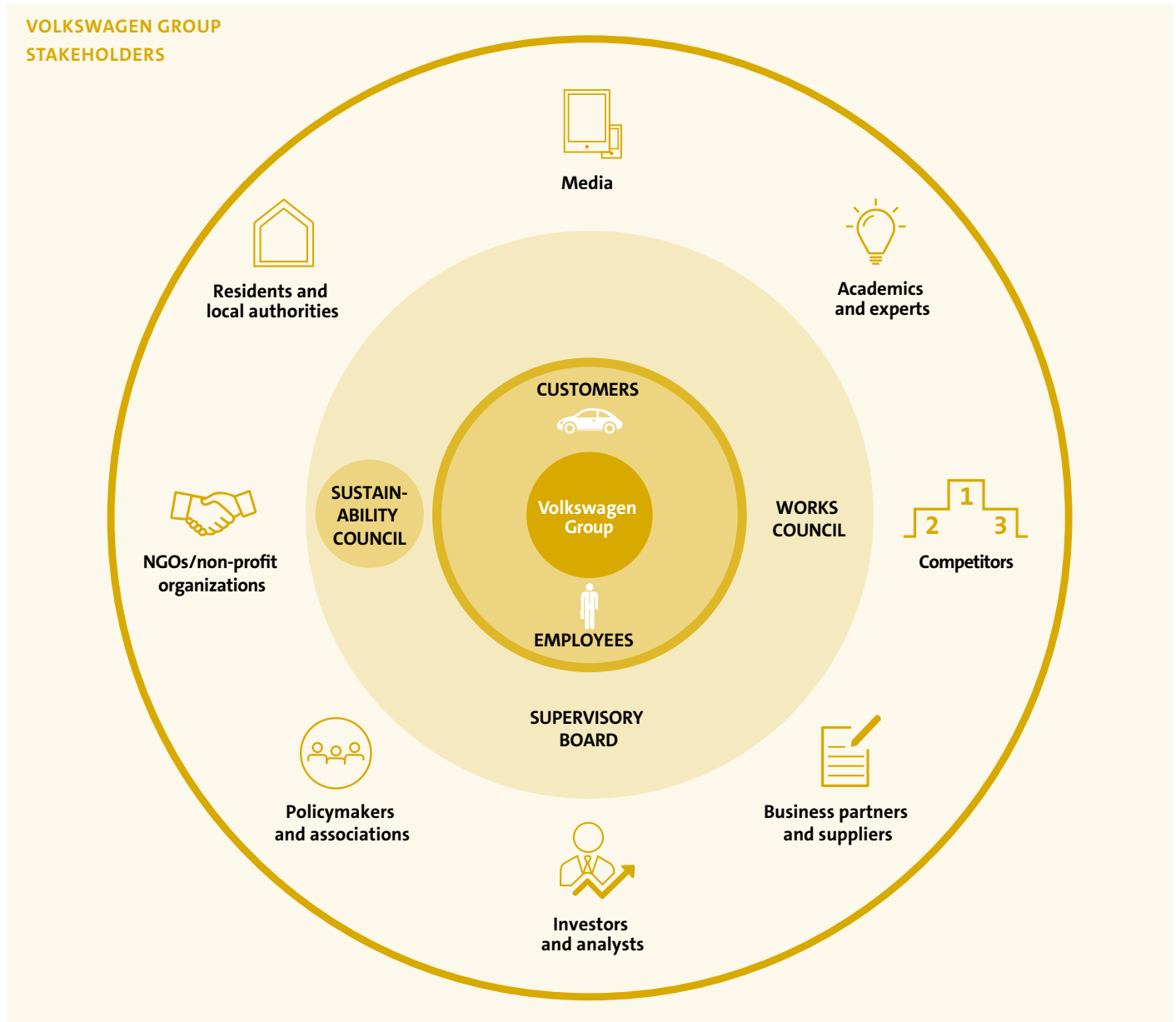
Astypalea is a living lab for smart and sustainable mobility solutions in Europe. The Greek island is located in the Aegean Sea, has 1,300 citizens and is similar in size to the German island of Sylt. In addition, 36,000 tourists on average visit the island every year. Originally, about 1,500 internal combustion engine vehicles and one bus line with two diesel buses were providing mobility on the island. Astypalea shall now be transformed into a smart and green island. To this end, the Volkswagen Group has joined forces with the Hellenic Republic. Traffic on Astypalea will be gradually converted to e-mobility. This includes the public transport system, local authority vehicles (e.g., police) as well as companies and the private vehicles of the inhabitants. At the same time, an extensive network of private and public charging stations will be set up. Fully electric vehicle sharing and ridesharing services have been furthermore newly launched on the island. Unlike the previous bus system, the new smart mobility services will operate the whole year and they will cover all the hotspots on the island. E-cars, e-scooters and e-bikes make up the vehicle sharing service. These services shall become an alternative to privately owned vehicles and perspective contribute to a reduction of the vehicle fleet size by around a third to approximately 1,000. Around 25,000 trips and 167,000 km in total have been carried out with the ridesharing service ASTYBUS alone in the first seven months since its implementation on the island in June 2022. The energy system of Astypalea will also be gradually converted to solar and wind energy under the leadership of the Hellenic Republic.

# STAKEHOLDER MANAGEMENT

## STRATEGIC STAKEHOLDER MANAGEMENT

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 implica-

tions of those decisions. Our employees and customers are at the center of our stakeholder network. In addition, we have identified eight further groups. Continuous communication between internal and external stakeholder groups is important to us. For this reason, the Group's supervisory and advisory bodies – i.e., the Supervisory Board, the Works Council and the Sustainability Council – act as a special interface between internal and external stakeholders.



For us, stakeholder management means interacting with the Company's key stakeholder groups systematically and continuously as part of the Group initiative with the focus topics of ESG performance, decarbonization and integrity, which is part of the NEW AUTO Group strategy. Our aim is open, constructive and also critical communication with the stakeholder groups listed in the diagram about their requirements and expectations of us, as well as central issues of our Group strategy and its implementation.

Our brands and regions have their own stakeholder management strategies. The Group's task is to bring together and orchestrate these activities in an integrated framework. This framework includes:

- Stakeholder engagement on a Group level with specific committees, formats and a focus on stakeholders relevant across the Group
- Advising and coordinating the brands and regions on the implementation of their stakeholder engagement activities
- Carrying out regular stakeholder analyses and stakeholder surveys




Stakeholder management is one of the core processes of sustainability management in the Group. Tasks, responsibilities and organization are set out in the Group policy on sustainability management.

As an international business, our business activities impact the lives of a large number of different people. Appropriately aligned stakeholder management is essential so as to determine the sustainability strategy's material areas for action and become aware of stakeholders' expectations of us at an early stage. It also involves continuously informing and regularly communicating with all business areas. This communication not only helps us to identify our stakeholders' requirements, it also plays a key role in achieving corporate goals and complying with reporting standards and legal requirements.

The transformation of the Volkswagen Group from a vehicle manufacturer to a world-leading, software-driven mobility provider will also change and expand the range of relevant stakeholder groups as a result of new areas of expertise such as autonomous driving, battery technology, charging infrastructure and energy services. Here, too, we aspire to involve all our stakeholders in this transformation process and actively use their feedback for the sustainable development of our Group and society. Our aim is to position our Group robustly for the future amid ever faster and more strongly changing economic, environmental and social framework conditions and sustainably improve its acceptance and reputation.

The Volkswagen Group is a player in numerous networks of experts and decision-makers who have a significant influence on our business and the agenda in the sociopolitical environment. An overview of the Group's most important memberships is available online.

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Sustainability > Strategy, Policy & Engagement > Engagement > Memberships

**REPUTATION KPI MEASURES STAKEHOLDER TRUST**

The reputation key performance indicator (KPI) makes a decisive contribution to anchoring stakeholder management in the sustainability strategy. The indicator reflects the degree to which external stakeholders trust the Volkswagen Group. Since 2017, we have asked annually for an assessment of the Volkswagen Group's reputation. Eliciting this KPI enables a holistic view of attitudes and opinions on the Group and allows us to identify whether and how evaluations change over the course of time.

The Audi, Porsche and Volkswagen Passenger Cars brands are consistently represented in the survey. The survey data are based on personal telephone interviews conducted with representatives of importance to the Volkswagen Group from the fields of politics and associations, media, academia, NGOs, investors and analysts and also business partners in the three markets (Germany, China and the USA). Fundamentally, representatives of the highest possible decision-making level are surveyed in all the stakeholder groups.

**In Germany, the 2022 reputation KPI for the Volkswagen Group is 78%.**

The Group obtained the following results in 2022: 78% of stakeholders in Germany stated that they trust the Volkswagen Group (2021: 80%). In China the proportion was 98% (2021: 97%) and in the USA it was 70% (2021: 67%). In Germany, the reputation KPI thus decreased slightly compared with 2021, which, however, is in line with the trend in results in the overall competitive environment in Germany. In China and the USA, the reputation KPI continued to steadily improve.

**STAKEHOLDER PANEL AS A CRITICAL COMPANION**

In addition to the Sustainability Council, Volkswagen Group has established a Stakeholder Panel, which has overseen the Group sustainability activities for over 20 years. The whole panel (Germany/Austria/Switzerland, EU) currently comprises more than 200 institutions and organizations. The pandemic meant that we had to interrupt communication with our stakeholders in 2020 and 2021. In the reporting year, we were able to resume it on a smaller scale. The focus was on the topics of decarbonization and sustainability in the supply chain. Accompanied by members of the Sustainability Council, an open and controversial discussion was held in April with NGOs and was also held in September as part of a larger stakeholder dialog. The key drivers of the discussion were the speed of electrification and the challenges of controlling supply chains. The plan for 2023 is to intensify communication with our stakeholders, and to extend and deepen its content.

## ENVIRONMENTAL COMPLIANCE MANAGEMENT

### COMMITMENT TO AN UNDAMAGED ENVIRONMENT

As one of the largest automotive manufacturers in the world, we have to observe extensive legal requirements for all sites and markets and aim to live up to our internal and external stakeholders' high expectations of the effectiveness of environmental compliance management – including, and especially following, the diesel issue. We also want to live up to our voluntary commitments on environmental matters and compliant behavior. The environmental compliance management system is therefore in particular a risk provision against breaches of regulations that may be associated with damage to the environment, our Group and society. Our environmental compliance management system helps us to continuously improve our environmental performance and reduce our environmental impact.

One of the focuses of the NEW AUTO Group strategy is the Group's ESG performance. In environmental protection, decarbonization and circular economy are the focus issues. These are also core elements of the "goTOzero" Group environmental mission statement. At the same time, the environmental compatibility of our products, services and processes is one of our Group Essentials. With electric drives, digital connectivity and autonomous driving, we want to make the car cleaner, more intelligent, quieter and safer. We use

our innovative power in order to reduce our environmental footprint – over the entire life cycle of our products and mobility solutions. Our innovations are at the same time intended to help our customers to be more environmentally friendly.

### THE "GOTOZERO" MISSION STATEMENT: MINIMIZATION OF NEGATIVE EFFECTS ON THE ENVIRONMENT

The "goTOzero" environmental mission statement serves as the framework for all the Volkswagen Group's environmental activities. This mission statement commits us to the vision of a carbon-neutral way of doing business with minimal environmental impact that we want to achieve by 2050 at the latest. We want to be a world-leading provider of sustainable mobility and a role model for environmental protection. To this end, we are systematically and verifiably reducing the environmental impact along the life cycle of our products and services. Compliance with environmental regulations, standards and voluntary commitments is a basic prerequisite of our actions. The Group mission statement combines all strategic and compliance-related aspects of the Group's environmental activities and forms the basis for linking targets, key performance indicators, programs and measures. The mission statement is continuously reviewed and its objectives adjusted to new requirements and changes in conditions. The mission statement, which has been revised in the current reporting year, puts the Group's focus on the four fields for action presented in the diagram below and their underlying objectives.

### "GOTOZERO" ENVIRONMENTAL MISSION STATEMENT: ACTION AREAS

#### Protecting THE CLIMATE



We are committed to the Paris Climate Agreement and aim for an ambition level of 1.5 degrees celsius.

We systematically focus on the electrification of our products, decarbonization of our entire value chain and expansion of renewable energy generation to supply our sites and customers.

We want to be a net-carbon-neutral company by 2050 at the latest.

#### Conserving RESOURCES



We reduce the volumes of primary raw materials needed by using recycled material and renewable raw materials.

We maximize our energy and resource efficiency and establish closed loops for materials and water.

Together with our business partners we cut down on the amount of natural resources utilized throughout our supply chain.

#### Conserving ECOSYSTEMS



We reduce harmful emissions in air, soil and water.

We mitigate the impact of our business operations on biodiversity and ecosystem performance and support projects to conserve these.

#### Ensuring ENVIRONMENTAL COMPLIANCE



Where integrity and compliance are concerned, we aim to be a role model for a modern, transparent, successful enterprise.

We use effective environmental compliance management systems to identify and manage environmental risks and opportunities throughout the lifetime of our mobility solutions.

We conduct open dialog with our stakeholders and incorporate their expectations into our decisions.

## MANAGEMENT AND COMPLIANCE IN MATTERS OF THE ENVIRONMENT

The Volkswagen Group has created an environmental policy that calls on managers and the workforce to implement environmental goals with joint responsibility. In its environmental policy, the Group commits to reducing the environmental impacts across the entire life cycle of the processes, products and services, to meet binding obligations and continuously improve its environmental compliance management system and environmental performance.

We have also implemented a Group policy for the environmental compliance management system describing requirements, tasks and responsibilities with regard to the environment and compliance. This policy provides the framework for implementing environmental compliance management systems across all phases of the business and the entire life cycle of vehicles in our brands and companies. The policy defines the minimum requirements for operating organizations regarding implementing an environmental compliance management system and gives them the flexibility to implement this in a manner in line with their business activities.

In general, all production and development sites in the Group are required to have their environmental management systems certified to ISO 14001 or validated to the Eco-Management and Audit Scheme (EMAS). Good progress has been made as regards external certification. In 2022, 105 of our 119 sites, including central development units, have ISO 14001 certification or EMAS validation. In terms of employee numbers, this equates to more than 98%. In addition, 61 of the production sites have certified their energy management systems in accordance with ISO 50001, meaning 80% of the total energy consumption of the Group's production sites is currently covered by a certified energy management system. SEAT development is also certified in accordance with ISO 14006.

These standards do not, however, answer the question of how to avoid misconduct and how to respond appropriately to it. The Volkswagen Group has therefore expanded the established environmental management systems to include important compliance aspects. The intention of our environmental compliance management systems is to ensure that environmental aspects and obligations are recognized and appropriately taken into account in our

business operations. We consider disregard of environmental obligations, fraud or misconduct to be serious compliance breaches and prosecute these. To what extent 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.

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 relevant business decisions. The Group-wide management of environmental protection, including implementing the resource-efficiency programs and monitoring target achievement, is the responsibility of the Group Steering Committee for the Environment and Energy. It is the highest environmental committee in the Volkswagen Group and is responsible for reporting to the Group Board of Management or the environmental officer in the Group Board of Management. The Group Steering Committee for Fleet Compliance manages important individual aspects for our products – such as CO<sub>2</sub> and exhaust emissions.

The Volkswagen Group coordinates the activities of the brands, which in turn manage measures in the individual regions. The brands and companies are organizationally responsible for themselves when it comes to environmental matters. They base their own environmental protection activities on the targets, guidelines and principles that apply throughout the Group. In order to prove that we have achieved our targets, we disclose environmental key performance indicators annually and report transparently on the progress on the environmental performance by the Group and the brands.

### Checking and Complying with Limits

In internal combustion engines, we adhere to national and international legal norms and limits. For example, the Euro 6d-ISC-FCM emissions standard has been obligatory for new registrations in the European Union since January 1, 2021. 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.

**LIFE CYCLE APPROACH DETERMINES ANALYSIS AND ACTIONS**

We consider the environmental impact we cause throughout the entire life cycle and at all stages of the value chain of our products. This includes the manufacturing process with the associated extraction of raw materials, the production of materials, the processes at our suppliers and our own production operations at our sites, the use phase with the resulting vehicle emissions and the necessary supply of charging current and fuel, and ultimately the recycling of the vehicle at the end of its life cycle. For detailed, ISO-standardized life cycle assessments (LCA), we use Sphera's GaBi software with the LCA database LEAD (Life Cycle Environmental Assessment Database), which is based on Sphera's Professional Database. This enables the exchange of harmonized data throughout the Group and a standardized basis for calculating our environmental performance. In the next step, we identify hot spots in the life cycle and deduce suitable solutions to reduce the environmental impact. In line with our life cycle approach, we involve our suppliers in our efforts to minimize our environmental impact early on.

 > Decarbonization

For example, for the life cycle analysis of the ID.3, in terms of impact categories we particularly consider the climate effect. CO<sub>2</sub> and all other emissions relevant to the climate are recorded here and converted into CO<sub>2</sub> equivalents. Here, Volkswagen AG commissioned TÜV NORD CERT Umweltgutachter GmbH as an independent external body to carry out the review of our own life cycle assessment study in accordance with the applicable standards DIN EN ISO 14040 and DIN EN ISO 14044. In accordance with the standard, the entire life cycle of the Golf 8 and the ID.3 were used as the framework: from the manufacturing phase starting with raw material extraction, through the use phase of 200,000 km for passenger transportation in the WLTP driving cycle to recycling. These studies show that a battery-electric vehicle operated with the European electricity mix already has a global warming potential over its life cycle that is about a quarter lower than a comparable gasoline vehicle. Similar life cycle analyses for the ID.4 and Tiguan confirm these results. If a battery-electric vehicle is operated with renewable energy, its global warming potential is more than 60% lower than the global warming potential of a comparable gasoline vehicle.

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Group > Carbon Footprint of the Electric Vehicle

**REDUCTION OF THE ENVIRONMENTAL IMPACT OF PRODUCTION (UEP)**

In connection with the production strategy, we have defined the KPI of the reduction in environmental impact in production (UEP) and underpinned it with targets for the Group and its brands. By 2025, the production-related environmental impact at all sites where we produce passenger cars and light commercial vehicles is to be reduced by 45% per vehicle compared to 2010. The figures below show the development from 2010 to 2022 (data: 11+1 months):<sup>1</sup>

**UEP: -37.4%<sup>2</sup>**  
(2021: -29.1%)

In the reporting year, the five indicators of the UEP KPI were as follows:

- Energy requirements per vehicle: -14.1% (2021: -3.4%)
- CO<sub>2</sub> emissions per vehicle: -43.1% (2021: -33.5%)
- Water consumption per vehicle: -17.4% (2021: -11.6%)
- Waste for disposal per vehicle: -68.5% (2021: -61.7%)<sup>3</sup>
- VOC emissions per vehicle: -65.9% (2021: -62.0%)

In 2022, the production situation remained strained due to supply chain disruptions on global markets and a structural shortage of semiconductors. Compared with the previous year, production volume nevertheless increased. Successfully implemented measures to further reduce the adverse environmental impact of our factories as well as the more stable utilization of production sites' capacity had a positive impact on the specific environmental KPIs per vehicle. The UEP improved significantly overall from -29.1% to -37.4%.

<sup>1</sup> The figures for December of the reporting year include an estimate. The estimated figures for the prior year were replaced in the current data collection.

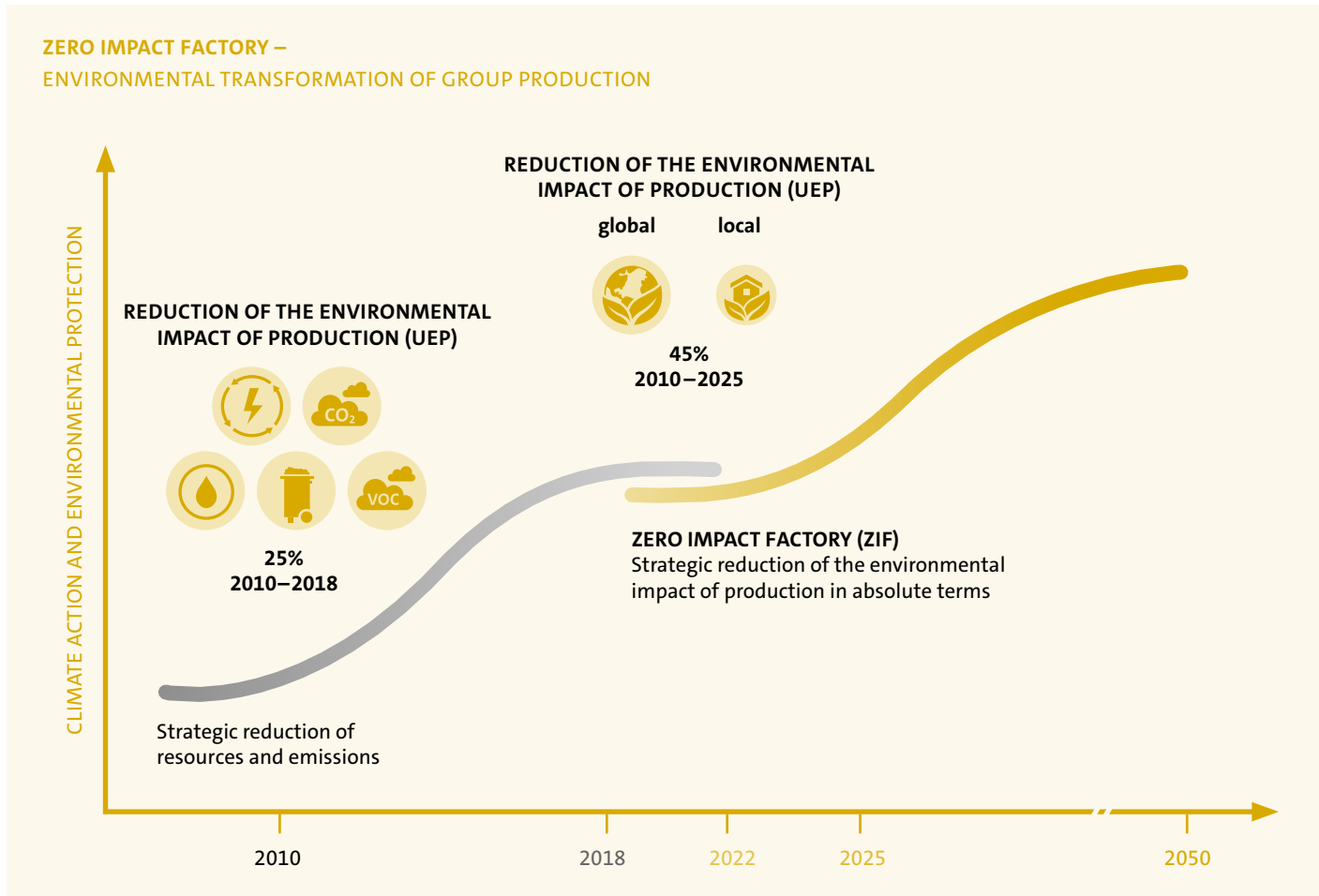
<sup>2</sup> Scope: Passenger Cars and Light Commercial Vehicles division.

<sup>3</sup> Scope: Waste for disposal includes only production-specific volumes.

**ANCHORING ENVIRONMENTAL PROTECTION IN MANUFACTURING: ZERO IMPACT FACTORY**

We are planning the production of tomorrow with our one.PRODUCTION Group production strategy. Emissions levels and the use of resources at Volkswagen Group locations require particular attention. The “goTOzero – Zero Impact Factory” program is developing specific steps for more sustainable production. It is guided by the vision of creating a factory that has no adverse environmental impact.

In the 2022 reporting year, we achieved an important milestone on the way to the Zero Impact Factory. The Production Group Committee confirmed the visionary aim of “Zero Impact” for 2050 as well as the measurement methods and management tools developed for this. The aim is to record and reduce the absolute environmental impact, particularly in the areas for action of climate protection and energy, emissions, water and waste. However, the focus will also be on qualitative aspects such as the appearance of the factory, commitment to biodiversity, protection of soil, avoidance of operational



disruptions, functioning environmental compliance management, improvement of resource efficiency towards a circular economy, and environmentally neutral mobility management for employee and goods transport.

From 2023, as part of an internal test phase, we will start collecting the following data and information at all sites where we produce passenger cars and light commercial vehicles:

- 22 quantitative environmental indicators (for example, CO<sub>2</sub> emissions, solvent emissions, freshwater requirements, wastewater loads or different types of waste) are measured locally and con-

verted into impact points. This makes the absolute environmental impacts comparable with one another and means we can implement reduction measures targeted precisely at the areas where greatest impact can be achieved.

- We use the site checklist to continuously review the implementation status of 143 predefined environmental criteria that cannot be easily quantified. Examples of this include specific projects for retaining biodiversity, creating conditions for environmentally friendly employee mobility or measures for promoting the circular economy.

From 2025, the Zero Impact Factory method will replace the existing KPI system measuring the UEP. This represents a shift away from steering based on purely performance-based indicators to a reduction in the environmental impact of our production processes in absolute terms. Our goal is to achieve zero-impact status for all of our manufacturing plants for passenger cars and light commercial vehicles by 2050.

**Group-wide Communication and Dialog on Environmental Issues**

We also held the environmental weeks – “goTOzero weeks” – in many brand and regions in the current reporting year. The aim of the Group-wide campaign was to exchange knowledge and facilitate employee networking in the Volkswagen Group so as to advance environmental protection activities across the Group. The program included participatory events, talks by experts, and many digital workshops and information programs on the topics of decarbonization, energy, environmental compliance, biodiversity, water, waste and circular economy.

We have been presenting the Zero Impact Factory Award to recognize particularly innovative environmental projects and increase awareness of the Zero Impact Factory initiative since 2021. In the first year, the focus was on measures with measurable success in the areas of avoiding plastic and recycling. In the current year, the sites are being asked to contribute the best measures for saving water to the competition.


Furthermore, we record environmental measures in the IT-supported “Massnahmen@web” system, thus encouraging the Group-wide exchange of best practices. In the reporting year, 1,431 implemented measures relating to the environment and energy were documented. They are aimed at improving infrastructure and production processes for passenger cars and light commercial vehicles.

**COMMITMENT TO BIODIVERSITY**

The manufacture and operation of our vehicles impacts biodiversity through immissions, land use and transportation – from raw material extraction through the use phase to recycling. Volkswagen is aware of its responsibility and has been involved in protecting and retaining biological diversity through conservation projects since 2007. As a founding member of the Biodiversity in Good Company e. V. initiative, we acknowledge the three goals of the international Convention on Biological Diversity (CBD). Moreover, we have defined corresponding action areas to make our contribution to achieving these goals within the framework of our business activities. This is documented every two years in our progress report on the initiative.


 > Business and Biodiversity > Volkswagen AG Progress Report

With a view to the CBD and the Conference of the Parties (COP 15), the areas for action in the reporting year were updated and extended and published in the Volkswagen Group's Biodiversity Commitment. This highlights our commitment to protecting and preserving biodiversity.

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Sustainability > Strategy, Policy & Engagement > Biodiversity Commitment

Furthermore, we support CBD's Action Agenda for Nature and People initiative by publishing our commitment on the CBD page of the German Business for Biodiversity platform set up by the German Federal Ministry for the Environment.

In addition to supporting conservation projects around the world, we have set ourselves the target of increasing biodiversity at our production sites as well. Local measures include creating wildflower meadows, planting trees and shrubs and installing nesting aids for bats, birds and insects. In order to increase biodiversity at the production sites, we have developed an internal assessment tool. The tool assesses both direct measures to increase biodiversity at the site and also indirect measures, such as integrating biodiversity into the strategy or communication. The comparison of measures with the tool also gives brands a basis for making decisions on the implementation of projects. Another step is introducing a biodiversity KPI at site and brand level to allow us to track the development of biodiversity at our production sites. Examples of the conservation projects we support around the world can be found on our website.

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Sustainability > Strategy, Policy & Engagement > Engagement

We use the environmental compliance management system to regularly check the effectiveness of biodiversity measures. Another component of our commitment is raising employees' awareness by informing and training them on the topic of biodiversity and involving them in the projects.

**ENVIRONMENTAL COMPLIANCE MANAGEMENT KPIS<sup>1</sup>**

KPI	Unit	2022	2021	Notes and comments
<b>"Massnahmen@web" measures implemented</b>				
Volkswagen Group	number	1,431	1,544	
of which Volkswagen AG	number	466	467	
<b>Sites certified pursuant to ISO 14001 or with EMAS validation</b>				
Volkswagen Group	number	105	110	
in relation to number of employees	in %	98.3	99.6	Based on all production sites across the Group
Volkswagen AG	number	6	6	
in relation to number of employees	in %	100	100	
<b>Sites certified pursuant to ISO 50001</b>				
Volkswagen Group	number	61	65	
based on the production sites' total energy consumption	in %	80	–	Recorded for the first time in the 2022 reporting year
Volkswagen AG	number	6	6	
based on the production sites' total energy consumption	in %	100	–	Recorded for the first time in the 2022 reporting year
<b>Reduction of the environmental impact of production (UEP)</b>				
<b>Volkswagen Group</b>				Passenger cars and light commercial vehicles
Change in overall environmental impact of production (UEP)	in %	–37.4	–29.1	
Change in specific energy requirements	in %	–14.1	–3.4	
Change in specific CO <sub>2</sub> emissions	in %	–43.1	–33.5	
Change in specific VOC emissions	in %	–65.9	–62.0	
Change in specific water consumption	in %	–17.4	–11.6	
Change in specific waste for disposal	in %	–68.5	–61.7	Only production-specific volumes
<b>Volkswagen AG</b>				
Change in overall environmental impact of production (UEP)	in %	–2.3	8.4	
Change in specific energy requirements	in %	6.5	20.5	
Change in specific CO <sub>2</sub> emissions	in %	3.6	19.9	
Change in specific VOC emissions	in %	–14.5	–18.8	
Change in specific water consumption	in %	11.4	19.0	
Change in specific waste for disposal	in %	–37.0	–28.6	Only production-specific volumes
<b>Total energy consumption</b>				
Volkswagen Group (absolute)	in million MWh/year	21.01	22.02	
of which Volkswagen AG	in million MWh/year	4.39	4.76	
Volkswagen Group (specific)	in kWh/vehicle	2,163	2,433	Passenger cars and light commercial vehicles
in Volkswagen AG	in kWh/vehicle	6,391	7,231	

<sup>1</sup> Scope: The following sites are not included in the Group assessment in the reporting year: the four Scania Service Centers (Johannesburg, Narasapura, Kuala Lumpur, Taoyuan City); two MAN Truck & Bus sites (Serendah, St. Petersburg); one site in China (Suzhou) and four other sites currently still under construction in China (a vehicle plant in Hefei, a vehicle plant in Changchun and two other component plants in Hefei with planned production start in 2023/2024). The figures for December of the reporting year include an estimate. The estimated figures for the prior year were replaced in the current data collection.

KPI	Unit	2022	2021	Notes and comments
<b>Electricity</b>				
Volkswagen Group (absolute)	in million MWh/year	11.08	11.08	
of which passenger cars and light commercial vehicles	in million MWh/year	9.73	9.91	
of which Volkswagen AG	in million MWh/year	2.04	2.04	
of which other divisions	in million MWh/year	1.35	1.17	
Proportion of electricity in total energy consumption, Volkswagen Group	in %	52.7	50.3	
in Volkswagen AG	in %	46.4	42.8	
<b>Heat</b>				
Volkswagen Group (absolute)	in million MWh/year	5.73	6.65	
of which passenger cars and light commercial vehicles	in million MWh/year	4.98	5.89	
of which Volkswagen AG	in million MWh/year	1.55	1.88	
of which other divisions	in million MWh/year	0.75	0.76	
<b>VOC emissions</b>				
Volkswagen Group (absolute)	in metric tons/year	13,364	13,502	
of which passenger cars and light commercial vehicles	in metric tons/year	11,849	12,525	
of which Volkswagen AG	in metric tons/year	1,188	1,069	
of which other divisions	in metric tons/year	1,515	977	
Volkswagen Group (specific)	in kg/vehicle	1.41	1.57	Passenger cars and light commercial vehicles
in Volkswagen AG	in kg/vehicle	1.78	1.69	
<b>Freshwater</b>				
Volkswagen Group (absolute)	in million m <sup>3</sup> /year	39.34	39.71	
of which passenger cars and light commercial vehicles	in million m <sup>3</sup> /year	31.57	32.07	
of which Volkswagen AG	in million m <sup>3</sup> /year	3.56	3.60	
of which other divisions	in million m <sup>3</sup> /year	7.78	7.64	
Volkswagen Group (specific)	in m <sup>3</sup> /vehicle	3.75	4.02	Passenger cars and light commercial vehicles
in Volkswagen AG	in m <sup>3</sup> /vehicle	5.34	5.70	
<b>Waste for disposal</b>				
				Only production-specific volumes
<b>Non-hazardous waste</b>				
Volkswagen Group (absolute)	in metric tons/year	23,323	28,333	
of which passenger cars and light commercial vehicles	in metric tons/year	17,639	25,051	
of which Volkswagen AG	in metric tons/year	1,373	1,439	
of which other divisions	in metric tons/year	5,684	3,283	
Volkswagen Group (specific)	in kg/vehicle	2.10	3.14	Passenger cars and light commercial vehicles
in Volkswagen AG	in kg/vehicle	2.06	2.28	
<b>Hazardous waste</b>				
Volkswagen Group (absolute)	in metric tons/year	56,970	54,102	
of which passenger cars and light commercial vehicles	in metric tons/year	44,089	46,244	
of which Volkswagen AG	in metric tons/year	7,726	8,335	
of which other divisions	in metric tons/year	12,882	7,857	
Volkswagen Group (specific)	in kg/vehicle	5.24	5.79	Passenger cars and light commercial vehicles
in Volkswagen AG	in kg/vehicle	11.59	13.20	



## RISK MANAGEMENT

### RISK MANAGEMENT AS AN EARLY WARNING SYSTEM

Promptly identifying the risks and opportunities arising from our operating activities and taking a forward-looking approach to managing them is crucial to our Company's long-term success. A foresighted risk management process and effective internal control systems are therefore vitally important to us.

### RISK MANAGEMENT SYSTEM AND INTERNAL CONTROL SYSTEM

A comprehensive risk management and internal control system (RMS and 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/or for the environment and society. It is thus also directly applicable to the assessment of nonfinancial risks. These could arise when pursuing goals and implementing measures in our Group strategy's focus areas.

#### > ESG Performance Management and Materiality Analysis

The organizational design of the Volkswagen Group's RMS and 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 and ICS. The Board of Management receives ad-hoc and quarterly risk reports.

The focus of our RMS and ICS is the three lines model, which is designed to protect us from the occurrence of material risks. The model is a basic element required by, among others, the European Confederation of Institutes of Internal Auditing (ECIA).

The first line comprises the operational risk management and internal control systems at the Group companies and business units. The RMS and ICS is an integral part of the Volkswagen Group's structure and workflows. Incidents that could constitute a risk are first identified and then assessed on the basis of multiple criteria with regard to the likelihood of occurrence, financial loss and reputational damage and the potential threat to adherence to external legal requirements. Countermeasures are introduced, the remaining potential impact is assessed, and the information incorporated into

the planning in a timely manner. Material risks are reported to the relevant committees on an ad-hoc basis. The results of the operational risk management process are incorporated into budget planning and financial control on an ongoing basis. The targets agreed in the budget planning rounds are continually reviewed in revolving planning updates. At the same time, the results of risk mitigation measures are promptly incorporated into the monthly forecasts regarding further business development. This means that the Board of Management also has access to an overall picture of the current risk situation via the documented reporting channels during the year.

The second line is the Group risk management organization, which, among other things, sets standards for the RMS/ICS, provides support to the divisions in the form of relevant training and coordinates the quarterly risk survey. It reports quarterly to the Group Board of Management on any material risks, which are defined using quantitative and qualitative assessment criteria and given probability ratings. The additional annual governance, risk and compliance (GRC) control process, with a focus on internal control activities, will be gradually replaced by a standardized ICS by 2025. In the standardized ICS, standardized control targets are now set for the key Group companies to cover process risks. The documented control activities are regularly tested for their effectiveness and the ICS is thus improved.

The third line of defense is Group Internal Audit, which carries out regular checks on the structure and implementation of the RMS and ICS as part of its independent audit activities.

The Volkswagen Group continuously develops its risk management in order to take account of constantly increasing internal and external requirements in the field of corporate responsibility.

### RISKS RELATING TO THE FOCUS ISSUES

Risks relating to our focus issues are taken into account in both the methodology and the content of our RMS and ICS. The standardized ICS uses master control catalogs. These contain standardized process risks and associated control targets as a specification for internal controls to be carried out in the Group companies. Risks and requirements in relation to product or environmental compliance are addressed in various master control catalogs, e.g., for production. We check whether the master control catalogs are up to date each year and adjust them if necessary. In the quarterly risk process, the risks are classified into risk clusters.

The focus areas are addressed in both the master control catalogs in the standardized ICS and the risk clusters of the quarterly risk process. For example, the content of the focus issue of decarbonization is taken into account in the environment and sustainability master control catalog via the risk that “the material environmental and sustainability risks of our products, production and services along the entire life cycle are not/insufficiently identified.” In the compliance master control catalog, the risk that “compliance breaches and risks (whistleblower information) are not addressed or not sufficiently addressed or not promptly/correctly dealt with” serves to take account of the focus issue of integrity. As part of the quarterly risk process, risk clusters involving environmental risks, emission risks, compliance risks or CO<sub>2</sub> risks, or product-related risks, for example, that address these focus issues are specified.


Risks that could impact on our bottom line also include general environmental risks and climate-change risks. These include risks that could result from different CO<sub>2</sub> and emissions regulations, but also extreme weather, storms or floods with effects on production, infrastructure and supply chains. The risks relevant from the Volkswagen Group's perspective are presented in the report on risks and opportunities in the Group management report. In fiscal year 2022, risks continued to be identified with regard to compliance with regulations on fleet CO<sub>2</sub> emissions in individual brands and markets that may result in charges for the Volkswagen Group.

A more detailed description is available in the report on risks and opportunities in the Annual Report under the heading “Environmental Protection Regulations.” Further risks can arise from the assertion of what are actually civil-law environmental policy objectives.

The Volkswagen Group produces CO<sub>2</sub> emissions with its business and products. We wish to make our contribution to limiting global warming to well below two degrees Celsius in accordance with the Paris Agreement by making our entire Group net carbon neutral by 2050. To this end, decarbonization has been firmly anchored as a focus area in the NEW AUTO Group strategy. More information on the effects, targets and measures can be found in the Decarbonization chapter.

 > Decarbonization

In addition, no further material risks within the meaning of section 289c (3) no. 4 of the German Commercial Code (*Handelsgesetzbuch – HGB*) relating to the focus issues have been identified.

 > 2022 Annual Report > Group Management Report > Report on Risks and Opportunities

## CORPORATE CITIZENSHIP

### SOCIAL RESPONSIBILITY

As a good corporate citizen, we aim to be a source of economic impetus for local structural development and equal opportunities. We have always believed in the importance of recognizing our social responsibilities towards our stakeholders. This aim is codified in our Group People Strategy and particularly in the fourth dimension “We@Volkswagen and the world around us” (aim: “aligned with society & environment”). We are continuing to systematically roll out this target. The main focus of our philanthropic activities is on supporting future, environmental, educational and community projects at many of our sites across the world.


We select specific projects and develop them on our own or in partnership with local partner organizations and NGOs. The following applies here:

- The projects are in line 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 dialog with the local stakeholders involved in implementation.
- Projects are managed locally under the responsibility of the competent units.

For example, in line with the strategic goal “We@Volkswagen and the world around us,” in 2022 Volkswagen AG created a pilot project for volunteering by employees under the heading of “Volkswagen Gemeinsam Engagiert” (Volkswagen Together Engaged). Charities can post requests for volunteers on a digital matching platform. Active employees of the German Volkswagen plants and those in the passive phase of semi-retirement can then respond to the requests. Volkswagen is thus making a positive contribution to society and the environment at its locations and bringing people who are looking for help together with helpers in an uncomplicated way.

In addition, the first volunteer day took place across locations at Volkswagen AG in September 2022. Employees supported local organizations with, for example, maintaining habitats, sorting food or renovation work.

Information on other social engagement activities can be found on our website:

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Sustainability > Strategy, Policy & Engagement > Engagement

### PARTNERSHIP WITH MICROSOFT FOR DIGITAL EDUCATION

The Volkswagen Group increasingly links sustainability with digitalization in its social engagement activities, relying on partnerships to do so. As part of a long-term collaboration with Microsoft Germany, one of our focuses is on projects in digital education and training. This is intended to give people access to digital technology, thus increasing participation in society and future opportunities.


During the reporting year, Volkswagen, Microsoft Germany and Autostadt appeared at the IdeenExpo in Hanover from July 2 to 10. At Europe's largest youth fair for science and technology, everything revolved around mobility, digitalization and sustainability under the motto of “Mach doch einfach!” (Simply do it!). Exhibits, workshops and hands-on activities invited school students from the age of 11 to creatively engage with the topic of “mobility of the future.”

### EXTENSIVE PHILANTHROPIC CONTRIBUTIONS AROUND THE WORLD

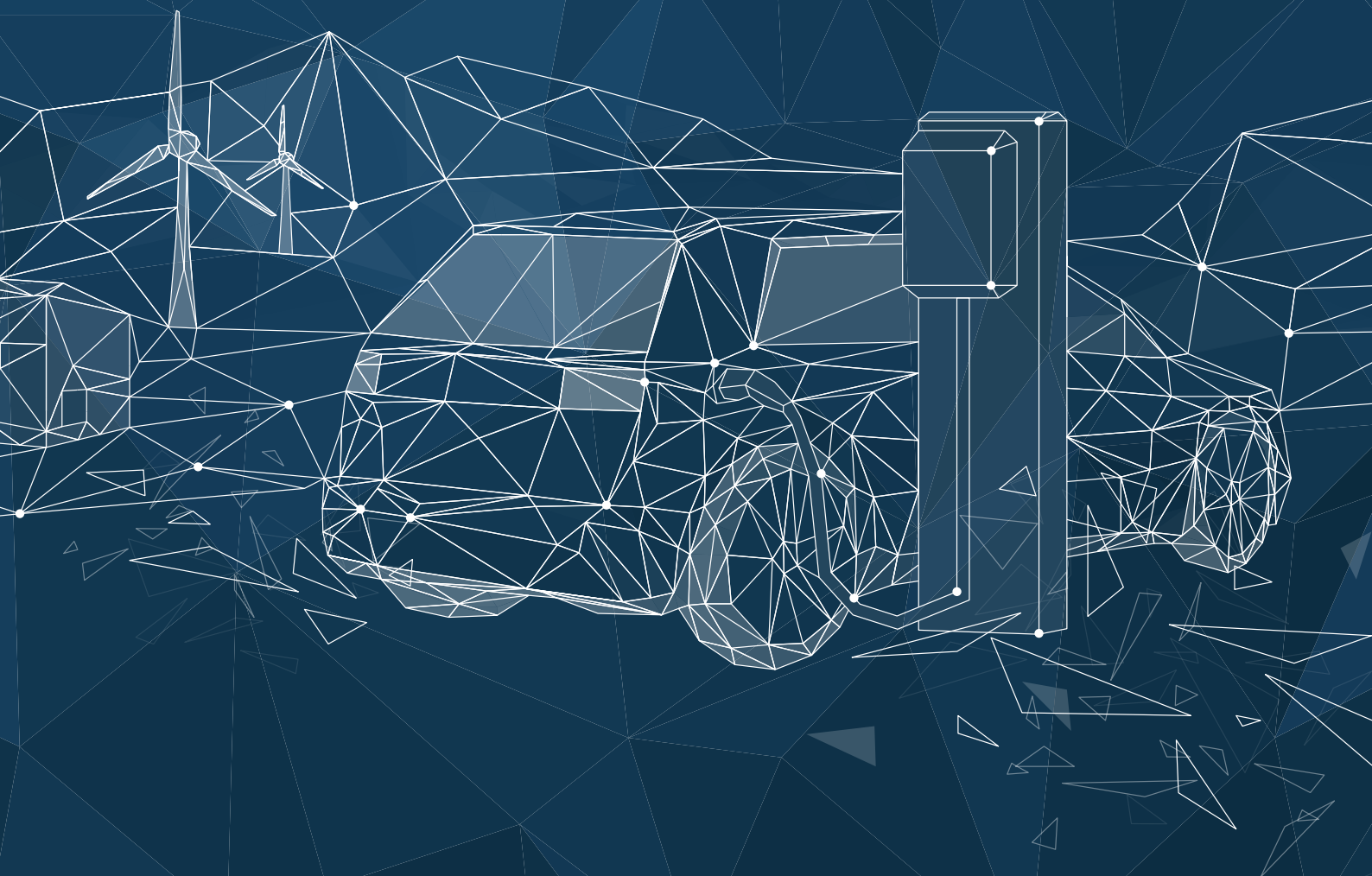
We have also further systematized our activities in corporate giving as the second important component of corporate citizenship. During the reporting year, we were active in the fields of the environment and society through numerous projects worldwide. We provide donations in cash and in kind to support activities and projects primarily devoted to education, culture, sports and social causes. Donations may only be given to recognized non-profit organizations or ones specifically endorsed to receive donations.

Around **800**  
projects and initiatives  
around the world.

In the reporting period, Volkswagen AG made donations amounting to €27.6 million. In 2022, the brands and companies supported around 800 projects and initiatives around the world. Information on the individual topics and projects can be found on our website:

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Sustainability > Strategy, Policy & Engagement > Engagement > CC Projects Worldwide

# DECARBONIZATION




**PARTICULAR RESPONSIBILITY REQUIRES PARTICULAR COMMITMENT**

Climate change and its consequences are threats to our planet and can already be felt in many places today. According to the Intergovernmental Panel on Climate Change's calculations, the transport and mobility sector currently accounts for around 23% of global energy-related greenhouse gas emissions. As one of the world's largest automotive manufacturers and mobility providers, Volkswagen is aware of the responsibility this entails. We are committed to the Paris Climate Agreement, which aims to keep the increase in global temperature by 2050 to well below two degrees Celsius. Volkswagen wants to become a net carbon-neutral company by 2050. We have set an intermediate goal for ourselves along the way: by 2030, Volkswagen wants to reduce the carbon footprint of its passenger cars and light commercial vehicles by 30% per vehicle (compared with 2018). We want to achieve this goal purely through reduction measures and switching to renewable energies – i.e., without any offset measures. In addition to the Group's electric offensive, we are concentrating to a greater extent on integrating renewably generated electricity in the use phase and switching the entire power supply for our plants to renewable energy.

For Volkswagen, climate-related topics have an important strategic and operative significance – e.g., with respect to regulatory requirements and the corresponding performance of our products and also our Group's ongoing transformation process. For example, the Group plans to invest around €89 billion in cutting-edge areas such as hybridization, electric mobility and digitalization by 2026. This equates to around 55% of capital expenditure and all the Group's research and development costs in the planning period. €52 billion alone is earmarked for investment in electric mobility.

Decarbonization of the Group's business activities occupies a key position in the NEW AUTO Group strategy and is one of six focus topics in the ESG, decarbonization and integrity Group initiative. The commitment to climate protection is also a core part of our "goTOzero" environmental mission statement, which stands for a net carbon-neutral way of doing business. In the reporting year, the environmental mission statement was updated and the importance of decarbonizing the Group's business activities was again underlined. You can find further information on our environmental mission statement in the Environmental Compliance Management chapter.

 > Environmental Compliance Management

**Reporting According to TCFD Recommendations**

This year too, the chapter on decarbonization is based on the guidelines of the Task Force on Climate-Related Financial Disclosures (TCFD), which was set up by the G20's Financial Stability Board. These guidelines create a coherent framework for voluntary and consistent reporting of entities' climate-related financial risks and opportunities.


We report along the four requirement categories that companies should take into account in the reporting according to the TCFD: governance, strategy, risk management, and metrics and targets.

**MANAGEMENT OF GROUP-WIDE CLIMATE PROTECTION MEASURES**

The Volkswagen Group has established Group-wide sustainability management. The related structures, processes and responsibilities are codified in a specific Group policy. The highest decision-making body for sustainability-related topics is the Group Board of Management. The Chairman of the Group Board of Management has cross-functional overall responsibility for sustainability. The Group Steering Committee for Sustainability bears the main responsibility for climate protection along the value chain as the highest body below the Board of Management. Product and portfolio topics are managed by the Group Steering Committee for Fleet Compliance. Both Group steering committees inform the Group Board of Management at least twice a year on topics such as corporate responsibility and sustainability (Group Steering Committee for Sustainability) and product-related greenhouse gas emissions (Group Steering Committee for Fleet Compliance).

**Clear Responsibilities**


The CEO of the Volkswagen Passenger Cars brand regularly informs the Group Board of Management on sustainability, environmental and energy-related topics. The member of the Board of Management is responsible for all environmental activities, including activities connected with climate-friendly mobility. The Group-wide management of environmental protection is the responsibility of the CEO of the Volkswagen Passenger Cars brand and of the Group Steering Committee for the Environment and Energy, which is supported by numerous specialist bodies. You can find further information on responsibilities and management in the Environmental Compliance Management chapter.


 > Environmental Compliance Management

Volkswagen's Group Head of Environment provides reports to the Group Board of Management on environment- and energy-related topics in their capacity as Head of the Group Steering Committee for the Environment and Energy. The Division Head of the Group Strategy and General Secretariat provides reports to the Chairman of the Group Board of Management in their capacity as Head of the Group Steering Committee for Sustainability and regularly informs the Group Board of Management on sustainability- and environment-related topics. The positions described have the task of coordinating and managing the sustainability, environmental and CO<sub>2</sub> activities decided by the Group Board of Management.

Climate-related topics are coordinated and managed by regular meetings of the Group steering committees and by continuous communication with the heads of the Group's and the brands' various

research and development units and other Group functions. Internal and external stakeholder engagement also play an important role in this context. For example, we use the feedback from regular shareholder dialogs to review our strategies and approaches and adjust them where necessary. The Group Board of Management regularly consults with Volkswagen's Sustainability Council on climate protection.

 > Stakeholder Management

 > Sustainability Management

**Decarbonization Progress Linked with Board of Management Remuneration**

The decarbonization index is the core key indicator in the Group related to climate protection and serves as a measurement tool for the CO<sub>2</sub> emissions of the brands of the EU27+3, China and US regions that manufacture passenger cars and light commercial vehicles over the entire life cycle. The Volkswagen Group has linked the remuneration of the members of its Board of Management to, among other things, the development of the decarbonization index to create additional incentives here. The Volkswagen Group's Remuneration Report provides further information on how key sustainability criteria are taken into account in the Board of Management's remuneration.

**THE VOLKSWAGEN GROUP'S CLIMATE-RELATED RISK AND OPPORTUNITY ANALYSIS**

The Group identifies both risks resulting from climate change (physical risks) and risks and opportunities due to the shift toward a decarbonized economy (transitional risks and opportunities), which are addressed by the internal control system's master control catalogs and the risk management system's risk clusters. They are not only identified but also assessed and handled in accordance with the procedures explained in the Risk Management chapter.

 > Risk Management

The following analysis shows an excerpt from the internal assessment of significant risks and opportunities.

**I. Transitional risks**

a. Politics & law

*Emissions standards*

Compliance with fleet and exhaust-emission limits can be technically challenging and require financial investment. Breaches of limits may also result in financial penalties. The Volkswagen Group closely coordinates technology and product planning with its brands so as to implement both existing and increasing legal requirements and to avoid breaches of limits.

*Carbon pricing*

Volkswagen supports ambitious carbon pricing, as this promotes the transformation to climate-friendly electric mobility in line with Group strategy. An increasingly effective carbon price, particularly in Europe, may, however, also lead to additional costs in energy and material consumption. The Group is countering this risk by switching its energy supply to renewable energies in the long term and integrating corresponding quotas for the use of renewably generated electricity in supplier-side procurement requirements.

*Climate-related lawsuits*

Requirements for greater climate-protection performance or incomplete disclosures on the impact of climate change may potentially result in lawsuits for companies. The Group counters this risk firstly through certification of its self-imposed decarbonization targets by independent and internationally recognized organizations and secondly through consistently aligning its nonfinancial reporting with legal and capital-market requirements.

b. Technology

*Increasing model diversity*

The increasing diversity of models as part of the electric offensive and shorter product life cycles translate to a global increase in vehicle launches. The technical systems and processes involved are complex, which means there is a risk that vehicle launches may be delayed. The Group counters this risk by identifying weak points in product creation early and on the basis of experience, with the aim of protecting vehicle launches in respect of quantity, quality and timing.

*Stranded assets*

Production capacity and technical equipment that are limited to the manufacture of high-emission products run the risk of losing value and becoming "stranded assets" during the transition to a low-carbon way of doing business. The Group counters this risk by focusing its investment program on capacity that serves the transformation of the Group to a leading provider of sustainable mobility.

c. Market

*Emission-based vehicle taxation*

Potential increases in vehicle taxes based on CO<sub>2</sub> emissions – as is already the case in many European countries – may lead to demand shifting in favor of smaller segments and engines and have an adverse financial impact for the Group. The Group counters this risk by constantly developing new and fuel-efficient vehicles and alternative drive technologies. The electrification of the portfolio and the Group's drive and fuel strategy form the basis for this.

*Availability of renewable energies*

The transition to a low-emission way of doing business is leading to market participants switching their energy supply to non-fossil sources and a concentration of demand for renewable energies. Excess demand for electricity from non-fossil sources potentially arising from this may result in higher market prices and consequently additional cost for the Group and also threaten the achievement of its decarbonization targets if the quantities required for achieving the targets cannot be provided by suppliers. The Group counters this risk with targeted support for the construction of additional generation capacity for electricity from renewable sources and entering into long-term contracts for existing resources.

d. Reputation

*Reporting & communication*

Critical media reports or defensive communication by the Group in relation to its CO<sub>2</sub> emissions, reduction targets and the decarbonization strategy might lead to reputational damage and, as a consequence, to reductions in the demand for the Group's products. The Group counters the risk through regular communication of its carbon footprint, emission reduction targets, and electrification and decarbonization strategies in the annual and sustainability reports and in its stakeholder management. In addition, the Group promotes the credibility of communication content of this nature through quality assurance measures as part of internal auditing of the Group and through embedding its decarbonization targets and management systems.

**II. Physical risks**

a. Acute

*Extreme weather events*

Extreme weather events in the form of floods, hurricanes and the like may cause disruptions of our own ability to operate or of the supply of critical input factors such as semiconductors or battery systems as key components of electrification, which may potentially lead to production downtime that has a financial impact for the Group. The Group counters risks caused by extreme weather firstly through adapted business continuity management and secondly through allocation strategies for distributing production-critical input factors to the brands accompanied by a prioritization of components and through the intensification of business relationship management with suppliers.

b. Chronic

*Water availability*

If the climate impacts water availability, this may lead to a need for site-related investments or cause added costs as a result of any adjustment measures needed or alternative

supply routes. The Group counters this risk by assessing the climate-related vulnerability of production sites and deriving appropriate countermeasures using environmental analyses.

*Rising sea levels*

The rise in sea levels may be accompanied by flooding of low-lying coastal areas and increased threat by storm surges in coastal areas, particularly if these are not well enough protected. The Group's production sites near to the coast run the risk of being affected by business interruptions with increasing probability and frequency, and consequently of being impacted by climate-related losses in value creation. The Group counters this risk through systematic analyses of the impact of climate change on its production sites in order to assess potential risks and derive recommendations for countermeasures.

**III. Opportunities**

a. Products

*Sales potential*

The transformation of transportation and the associated transition to lower-emission and electric mobility open up new sales potential for fuel-efficient vehicles, electric vehicles and other alternative drives. The Volkswagen Group is laying the groundwork to open up the sales potential of the transformation of transportation with its brands based on coordinated technology and product planning and the associated electric offensive.

b. Efficiency

*Cost savings*

Decarbonization measures can go hand in hand with tapping efficiency potential. These include, for example, measures for more efficient LED lighting, modernized heat supply and cooling at the sites or also optimized washing and drying processes in production. The Group identifies and taps such potential by systematically recording and assessing reduction measures to be implemented on the basis of various decision-making criteria as part of the decarbonization program. Furthermore, the Group has a tool that provides additional incentives for implementing efficiency measures in the form of its CO<sub>2</sub> fund.

c. Market

*Capital market performance*

A positive performance on CO<sub>2</sub> and reporting in line with capital market requirements may positively impact rating outcomes and the Group's capital market conditions. ESG criteria are therefore an integral component of the NEW AUTO Group strategy with the aim of achieving sustainable improvements in capital market performance. Furthermore, the Group is

gearing its reporting even more systematically to capital market requirements (e.g., TCFD). Volkswagen published its second Green Finance Report during the reporting year. The Green Finance Framework systematically links our corporate objective of carbon neutrality by 2050 with our financing strategy.

d. Resilience

*Climate-related adaptation measures*

Implementing measures to adapt to the impact of climate change may strengthen the resilience of production sites – for example, against extreme weather events but also against chronic effects such as the rise in sea levels – and thus prevent business interruptions. For this reason, in a first step the Group conducted an analysis of physical climate risks for 31 EU-taxonomy-relevant production locations, derived recommendations for implementing specific adaptation measures based on this and sent these to the individuals in charge locally for validation.

**Scenario Analysis as a Decision-Making Basis for Climate Protection**

Volkswagen is a member of the Mobility Model (MoMo) working group of the International Energy Agency (IEA). The Group uses model data and assumptions in a variety of contexts. MoMo uses IEA ETP (Energy Technology Perspectives) scenarios, including 2DS (2 °C Scenario) and B2DS (Beyond 2 °C Scenario). We have concentrated on the target year of 2030 here, which represents a milestone on the path to Group net carbon neutrality by 2050 and consequently acts as a reference for internal KPIs.

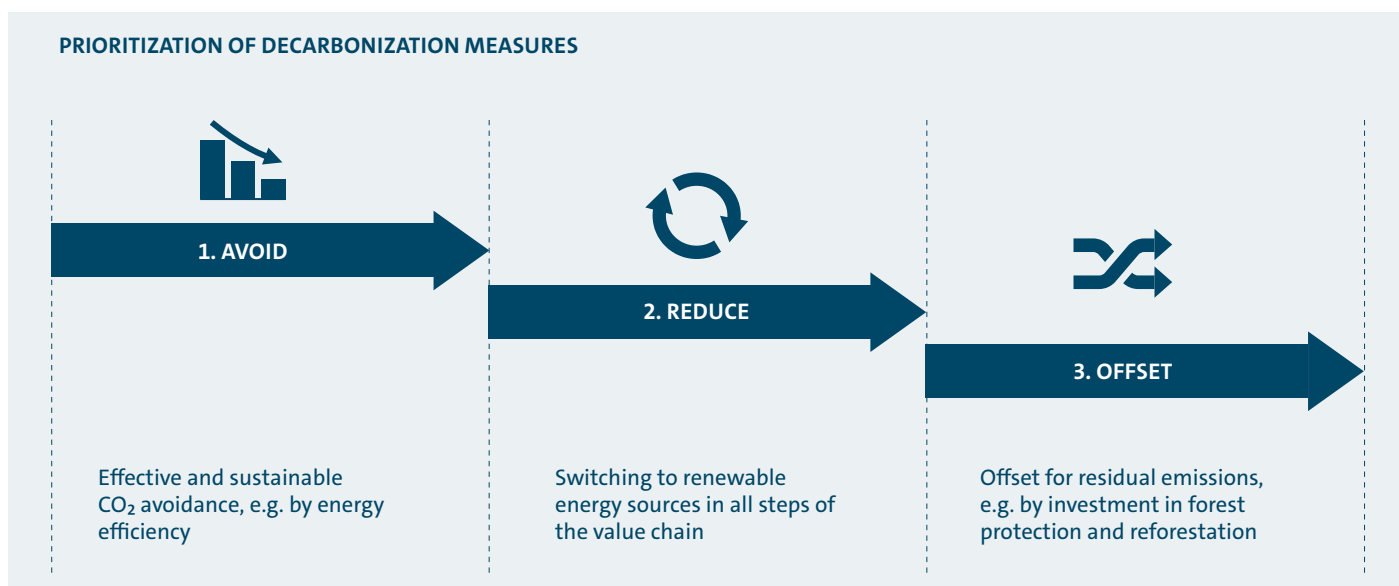
The scenario analysis focuses on the areas of production, sales and technology, the impact of products, and materials procurement. With respect to production-related emissions and the development

of the vehicle sector, the analysis shows that a significant reduction in emission intensity per vehicle is needed to achieve the UN climate goals, particularly in view of increasing unit sales. At the same time, the importance of electrification will grow considerably. In passenger cars and light commercial vehicles, combustion engines will, however, retain half the market share through 2035 even in a beyond 2 °C scenario (B2DS).

We use the analysis results to make decisions regarding our sales planning and materials production – e.g., through their integration into our DCI scenarios. The market- and product-related results support and affirm our decision reinforced by the NEW AUTO Group strategy to invest massively in electric mobility and in increasing the efficiency of the internal combustion powertrain.

**DECARBONIZATION PROGRAM TAKES ACCOUNT OF THE ENTIRE LIFE CYCLE**

To achieve the target of net carbon neutrality, the Volkswagen Group is implementing a comprehensive decarbonization program, which includes the whole life cycle of the vehicles and is characterized by a clear hierarchy of measures: The top priority is measures with which CO<sub>2</sub> emissions can be avoided or reduced. In second place follow measures with which we can gradually shift the energy supply in all steps of the value chain to renewable energy. Finally, unavoidable CO<sub>2</sub> emissions are offset in selected cases through climate protection projects that meet the highest international standards. One example of this is the voluntary offsetting measures in the net carbon-neutral delivery of electric vehicles.





**No Decarbonization without E-Mobility**

Electric vehicles do not cause any local emissions during use – and therefore have an advantage compared to cars with combustion engines in terms of tailpipe emissions. The same applies to the entire life cycle: Current calculations show that the carbon footprint of electric vehicles is already better on average in Europe in most markets than comparable gasoline or diesel vehicles.

The consistent electrification of our vehicle fleet opens up the path to net carbon-neutral mobility for our customers. We plan to invest around €52 billion in electric mobility across the Group by 2026. The Volkswagen Group also once again increased the planned shares of electric vehicles in the core markets of the EU, the US and China for the target year of 2030 in the reporting year. The new electric vehicles are manufactured at eight sites in Europe, China and the US. The modular electric drive matrix (MEB) serves as the technical backbone of the e-offensive and is used in many more of our electric models. From 2026, the e-offensive will be supplemented by the Scalable Systems Platform (SSP).

2022 saw the market launch of additional e-models from various brands, including the Audi Q5 e-tron in China, the Volkswagen ID.5 and the ID. Buzz.

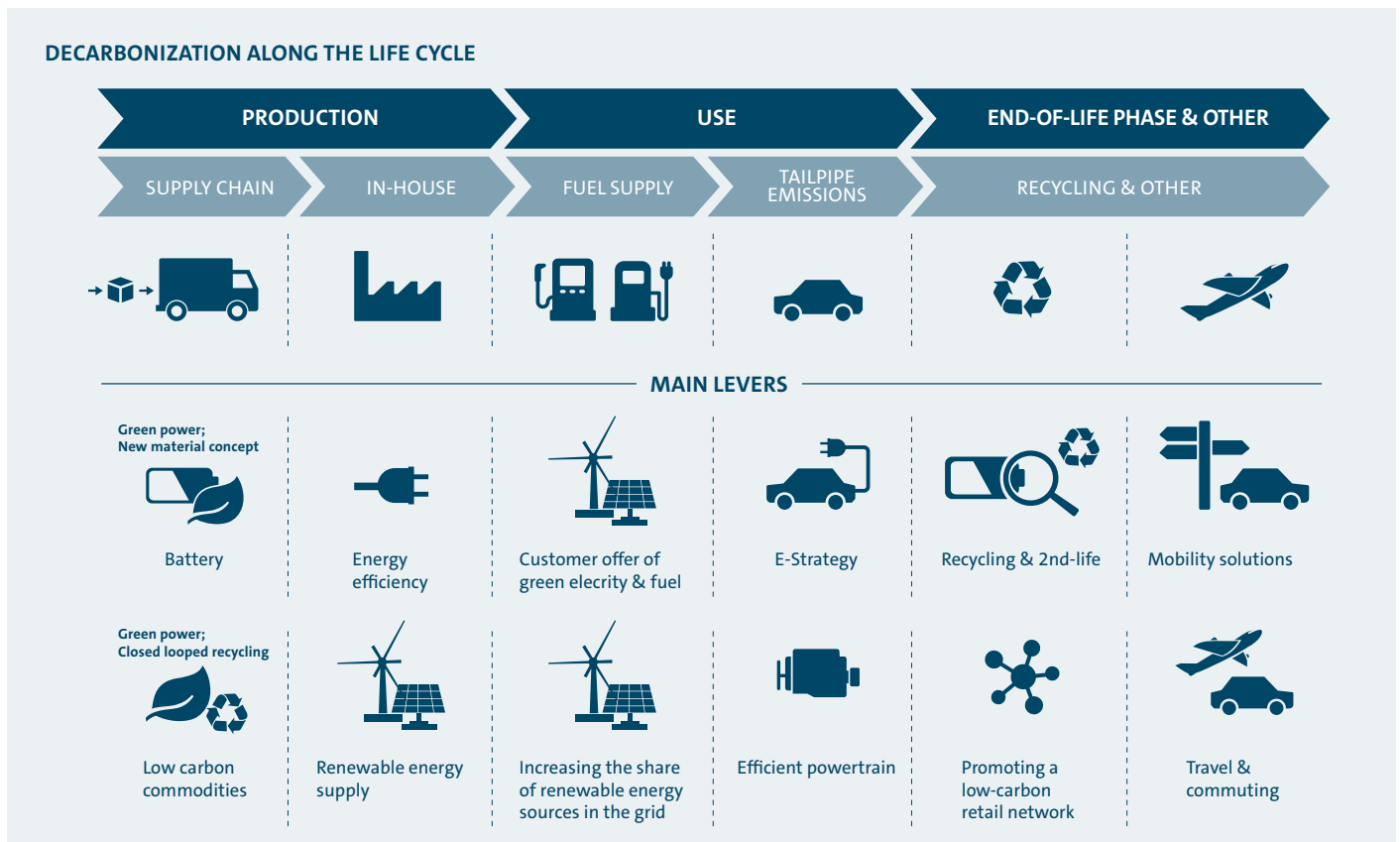
**Net Carbon-Neutral Use Phase Thanks to Renewable Energy**

It is important to us to make in particular the use phase of our vehicles net carbon neutral in the long-term. This is because around 75% of a car's CO<sub>2</sub> emissions arise in use ("well to tank" and "tank

to wheel"). E-vehicles and consistent charging with 100% renewably generated electricity play a key role in achieving carbon-neutral e-mobility. This is the only way that almost half of all CO<sub>2</sub> emissions can be avoided compared with the normal EU electricity mix. By supplying energy from 100% renewable sources via our subsidiary Elli (Electric Life), we can offer our customers the option of net carbon-neutral mobility in the use phase too.

**Volkswagen Supports the Construction of Wind Farms and Solar Parks**

The Volkswagen Group is the first automotive manufacturer to directly support the expansion of renewable energy on an industrial scale. New wind farms and solar parks are to be constructed in several regions of Europe by 2025. In Germany, for example, Volkswagen supported the construction of a solar plant with a total capacity of 170 million kWh per year. The plant in Tramm-Göthen in Mecklenburg in northeastern Germany has nearly 420,000 solar modules and is thus the largest independent solar project in Germany. In Sweden, Volkswagen Passenger Cars financially supported the construction of a wind farm: The park in the north of Sweden has a volume of around 100 GWh per year. In the reporting year, new photovoltaic systems were also constructed with Volkswagen's support: in Mosel, not far from the Zwickau vehicle plant, and in Sagunto, Spain. The ŠKODA brand was also involved in the construction of a wind farm in Finland in 2022. The wind farm is intended to produce around 570 GWh of electricity per year – enough to supply around 150,000 households with green power for a year.



It is planned that all projects together will generate around 7 TWh of additional green power by 2025. This should cover the electricity needs of the electric vehicles brought to market and enable a net carbon-neutral use phase for the electric fleet. In addition, in the reporting year, the supply of around 1 TWh was contractually agreed through entering into partnerships with electricity suppliers.

**Clear Requirements for Decarbonization in the Supply Chain**

We are aware that higher CO<sub>2</sub> emissions will initially arise in the supply chain during the transition to electric mobility and shares from the use phase are shifting to production. Against this background, we are systematically identifying the biggest drivers of CO<sub>2</sub> emissions in the supply chain and defining measures to reduce them. The difficulty of raw material extraction and the energy-intensive processes in manufacturing batteries are key drivers here. Around a third of CO<sub>2</sub> emissions that arise when manufacturing an electric car come from manufacturing high-voltage battery cells (HV). All suppliers (new contract awards) of high-voltage batteries are already contractually obliged to use certified power from renewable sources in their production processes. In addition, there are further requirements for upstream stages of the value chain, such as the CO<sub>2</sub> limits explained in the following paragraph. CO<sub>2</sub> emissions in battery manufacturing are therefore falling. More information on decarbonization measures in the upstream levels of the value chain can be found in the Supply Chain and Human Rights chapter.

 > Supply Chain and Human Rights

For new vehicle projects, the Volkswagen Group is going to make CO<sub>2</sub> emissions a technical feature for relevant components in the future. This means that we will set binding CO<sub>2</sub> targets for suppliers, and they must be able to prove compliance with these at all times. One example concerns the new mechatronics platform Scalable Systems Platform (SSP). For example, the SSP platform's batteries have a CO<sub>2</sub> limit. To be able to achieve these limits, suppliers need to implement measures in their own production processes and upstream chains – for example, the use of renewable energy. Measures like these can reduce the carbon footprint of many electric vehicle models. For the ID. models, the Volkswagen Passenger Cars brand will use additional sustainable components, including battery cases and wheel rims made of CO<sub>2</sub>-reduced aluminum. In this way, the ID. family's carbon footprint can be improved by around two metric tons per vehicle by 2025.


Volkswagen Group China is also working together with its suppliers on a more sustainable supply chain. For example, together with suppliers and partners, the group is developing a roadmap for switching to 100% renewably generated electricity by 2030. To date, more than 220 suppliers have already signed a declaration committing to switching to electricity from renewable sources.

**Battery Manufacturing: Reducing Emissions, Expanding Our Own Capacities**

As well as reducing CO<sub>2</sub> emissions in battery manufacturing, our focus is on expanding our production capacity. For example, Volkswagen Group Components has significantly expanded the production of battery systems for the latest generation of e-vehicles at its Braunschweig plant in the last few years. In connection with a second expansion step, the site will be able to install up to 500,000 batteries for models based on the modular electric drive matrix (MEB) each year following complete ramp-up.

The new unified battery cell for the volume segment is a component of the MEB. It will roll off the production line at the gigafactory operated by Volkswagen Group Components in Salzgitter from 2025. The business division also operates a modern laboratory center for cell research and development there.

In order to take a pioneering role on the key topic of battery cells, we are also making targeted investments in further production capacity outside Germany: By 2030, the Volkswagen Group wants to operate six battery factories with a production output of 240 GWh in Europe together with partners and in this way guarantee supply security. Each of the factories will operate solely on renewable power and will be designed for future closed-loop recycling. You can find further information on the battery raw materials cycle in the Circular Economy chapter.

 > Circular Economy

In Spain, the Volkswagen Group and SEAT S.A. mobilized €10 billion for the electrification of the country in the reporting year. The construction of a first battery gigafactory, which will be supplied with renewable energy from a new photovoltaic plant, is scheduled to begin in Spain at the start of 2023. The factory is set to create more than 3,000 jobs by 2030. A production plant for battery systems remains under construction in Hefei (China).

PowerCo, the Volkswagen Group's battery company, and Belgian materials technology group Umicore also announced the formation of a joint venture in the reporting year. The aim is to establish a supply chain for sustainable battery materials on an industrial scale. Together with Bosch, the Volkswagen Group also wants to explore the creation of a European supplier to equip battery cell factories. Both companies have signed a memorandum of understanding to this end.

In addition, Volkswagen and Indian SUV manufacturer Mahindra signed a cooperation agreement for MEB components in 2022. Mahindra plans to equip its Born Electric Platform with components from Volkswagen, including electric motors, battery system components and battery cells.

In the reporting year, the decision was made that the Volkswagen Group Components site in Kassel is to become a key supplier for e-mobility. Specifically, the number of manufacturing lines for e-motors and other e-components is to double over the next four years.

**Further Activities for Reducing Emissions in the Supply Chain**

With the use of emission-reduced steel, we want to further reduce our products' carbon footprint in the future – starting in the Sport & Luxury segment. To advance the transition to emission-reduced steel products, the Volkswagen Group is in discussions with selected steel manufacturers. For example, there is a cooperation between the Group subsidiary Scania and the start-up H2 Green Steel. Furthermore, Volkswagen AG has drawn up a memorandum of understanding with Salzgitter AG, under which Volkswagen is to become one of the first customers for Salzgitter AG's low-CO<sub>2</sub> steel. The steel is to be produced on a new production route at Salzgitter AG's headquarters in Lower Saxony from the end of 2025.

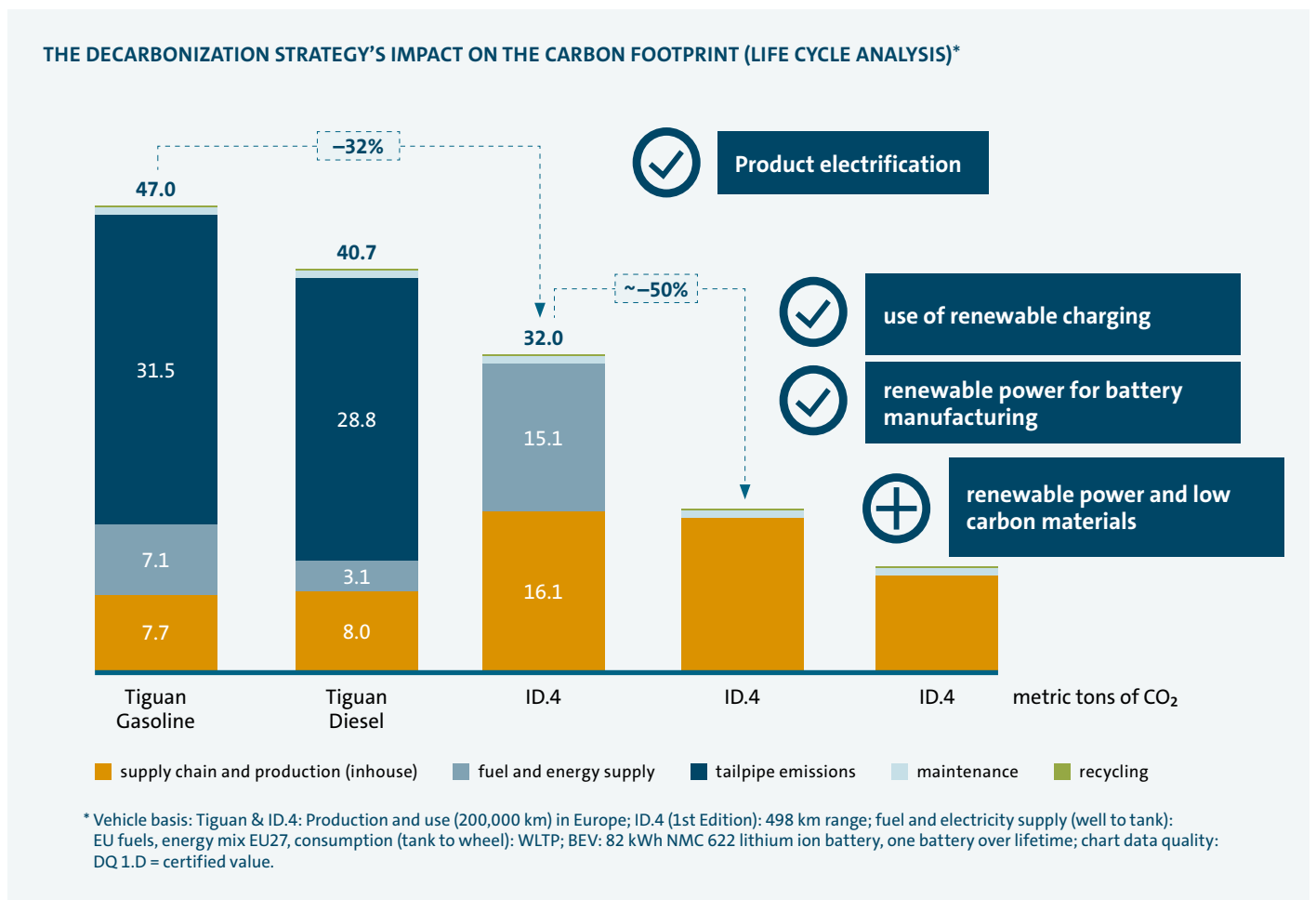
**goTOzero Impact Logistics**

In the joint "goTOzero Impact Logistics" initiative, Group and brand logistics departments work together to achieve the goals of the "goTOzero" environmental mission statement. The aim here is to reduce emissions by continuously optimizing the transport network and logistics processes – including by means of digitalization.

The use of new low-emission technologies for transporting production materials and vehicles will also be continuously analyzed and accelerated.

The measures the Volkswagen Group is taking to achieve future carbon-neutral logistics include, for example, moving shipments from road to rail and almost complete CO<sub>2</sub> avoidance through the use of green power in rail transport in Germany and other countries in collaboration with Deutsche Bahn AG and other rail service providers. Additional rail services in Poland were switched over to green power in the third quarter of 2022, for example.

In addition, Group Logistics is using the two roll-on/roll-off charter ships powered by low-pollution liquefied natural gas (LNG) for transporting vehicles across the North Atlantic. Group Logistics plans to replace conventionally operated ships on the North Atlantic route with four more car freighters with the same propulsion system from the end of 2023. In contrast to other LNG-fueled marine engines, Group Logistics' charter ships are climate-friendly because the high-pressure technology of the two-stroke engines from MAN Energy Solutions allows almost no methane to escape. The dual-fuel engines will also enable non-fossil fuels – biogas (bio-LNG), e-gas (synthetic gas) from renewable sources, or biofuel – to be used in the future so that carbon emissions can be reduced even further.



In addition, Group Logistics permanently operates two charter ships on European sea routes using certified renewable fuel. Used cooking oils and fats provide the raw material for the biofuel, which produces less CO<sub>2</sub> than conventional fossil fuels. These are waste and residual materials from the catering and food industries, which, for example, cannot be used for further processing into food or animal feed.

**Climate Protection in Manufacturing**

Volkswagen wants to reduce greenhouse gas emissions in production by 50.4% in absolute terms compared to 2018 by 2030. According to the Science Based Targets Initiative (SBTi), this corresponds to a 1.5 °C target path. By 2022, absolute greenhouse gas emissions had already been decreased by 27.2% compared with 2018. Key to this are increasing energy efficiency and switching to a renewable power supply as important components of the decarbonization strategy. The Volkswagen Group has set itself the goal of implementing energy efficiency measures from 2018 to 2030 that save a total of 4.9 million MWh of energy at the production sites. By 2022, 6,443 measures totaling 2.4 million MWh had already been implemented. In connection with the energy crisis in Europe, additional packages of measures were agreed and have in some cases already been implemented. This helps to counteract the impact of energy shortages in view of the current political situation.


Volkswagen is also paying particular attention to converting its own electricity generation. The conversion of the power plants in Wolfsburg from coal to natural gas, which commenced in 2019, is expected to reduce operational emissions. In 2021, a gas turbine system in the Wolfsburg Nord/Süd heat and power plant was put into operation. The project to switch from coal to natural gas at the Wolfsburg West heat and power plant is currently in the construction phase. Completion of the construction and installation work is planned for the second quarter of 2023. As a result of the current geopolitical situation, which is having a massive impact on the energy supply, and the associated possible gas shortage situation, Volkswagen believes that the originally announced annual savings of 1.5 million metric tons of CO<sub>2</sub> can only be realized from the second quarter of 2024. So far, it has been possible to achieve pro rata savings.

Further progress is being made in supplying clients with electricity from renewable energies. For example, the percentage of electricity purchased externally rose from 93.3% to 99.6% at EU production sites within one year. By 2023, all EU sites are to be supplied with 100% electricity from renewable sources. By 2030, the same target is planned for all global sites outside China. Volkswagen is also driving the energy transition at its own sites. For example, we have set ourselves the goal of generating 1.2 million MWh of power from renewable energies ourselves or in the immediate vicinity of the production sites by 2030. In 2022, 405,735 MWh of electricity was already generated from renewable energy in this way.

To date, 62 Group production sites have been supplied with external electricity from 100% renewable energy sources. Of these, 44 sites are within the EU and 18 sites are outside the EU.

In 2022, 54% of the Group's total global electricity consumption at its production sites (including China) was covered by electricity from renewable sources. Compared with the previous year, this is a rise of 3%. The Volkswagen Group is currently working together with its Chinese partners to develop their own targets for the Chinese production sites. The hurdles here include the high proportion of coal-fired power generation in the Chinese electricity mix and the fact that China's electricity market has not been liberalized.

As a result of our efforts in energy efficiency and renewable energy supply, we already operate eight production sites on a carbon-neutral basis (taking offset measures into account). These are the sites in Brussels and Győr (Audi), Zwickau and Dresden (Volkswagen), Zuffenhausen and Leipzig (Porsche), Crewe (Bentley) and Vrchlabi (ŠKODA). You can find further information on the certifications of our production sites' energy management systems (pursuant to ISO 50001 and ISO 14006) in the Environmental Compliance Management chapter.

 > Environmental Compliance Management

**Expanding the Fast Charging Infrastructure**

We are driving the further expansion of fast charging infrastructure worldwide. For example, Volkswagen founded the joint venture IONITY with other original equipment manufacturers (OEMs). IONITY had set up 430 fast charging stations on major highways across Europe by 2022. Along with its partners, the Group wants to operate around 18,000 public fast charging points in Europe by 2025 – five times as many as today and about one third of the total demand predicted for 2025 on the continent. This will be achieved through a series of strategic partnerships in addition to IONITY:

- BP wants to construct around 8,000 fast charging points across Europe together with Volkswagen.
- In cooperation with Iberdrola, Volkswagen will, in particular, cover main traffic routes in Spain.
- In Italy, Volkswagen collaborates with Enel to expand the fast charging network both along freeways and in urban areas.

Volkswagen plans to expand the public fast charging network in the US and China too:

- In North America, Electrify America's charging infrastructure is to be doubled to more than 1,800 locations and expanded by 10,000 fast chargers by 2026.
- In China, Volkswagen is planning a total of 17,000 fast charging points by 2025 through the CAMS joint venture.

By 2025, we and our partners plan to create around 45,000 fast charging points in Europe, China and the USA. Volkswagen wants to spend about €400 million for the European program as a whole by 2025.

### Increasing Vehicle Efficiency

Options in the system are intended to promote the efficiency of vehicle operation in terms of energy consumption. For example, driving mode selection supports fuel-efficient driving via one option. In addition, in the case of manual-transmission vehicles, there are recommendations for changing gear, the selection of environmental route planning in navigation systems and tips for saving gasoline.

### E-Cars Will Be Part of Energy Systems in the Future

Volkswagen plans to integrate the electric car into private, commercial and public energy systems in the future. This will allow green power from the solar plant to be stored in the vehicle and fed back into the home network if needed. The Group launched two pilot projects in connection with this in the reporting year. For example, our subsidiary Elli, the Elia Group and its start-up re.alto signed a joint memorandum of understanding. In the next few years, the partners want to develop solutions to overcome the obstacles that have previously been identified regarding integrating electric cars into energy systems. And in a pilot project in Saxony, Elli and the regional distribution grid operator MITNETZ STROM are trialing the smart network integration of e-vehicles. Volkswagen also plans to offer a complete package with all technical modules and digital services for bidirectional charging.

### Carbon-Neutral Delivery of Electric Vehicles

For a number of the Group's electric vehicles, we have decided to take the voluntary measure of making their delivery to our customers carbon-neutral. In this way, we want to make almost completely net carbon-neutral mobility possible for them, providing they choose a contract for renewable energy for charging the vehicle. For as long as we cannot avoid CO<sub>2</sub> emissions and cannot use renewable energies everywhere, we will do this by voluntarily offsetting the remaining greenhouse gas emissions from our supply chain, production and logistics. This applies to MEB vehicles from the Volkswagen Passenger Cars, Volkswagen Commercial Vehicles Audi, SEAT and ŠKODA brands in Europe. We expect the need for offsetting to increase for the next few years as a result of electrification and net carbon-neutral delivery in Europe. In 2022, this amounted to 5.9 million metric tons of CO<sub>2</sub> for the Group.

As part of net carbon-neutral delivery, we offset unavoidable emissions from the life cycle phases, such as from the supply chain or production, through climate protection projects with high certification standards. These include the Verified Carbon Standard (VCS), the Climate Community and Biodiversity Standards (CCB Standards)

or the Gold Standard. In addition to external certification standards, we also assess offsetting projects for quality assurance in accordance with our own criteria, which are outlined in the paragraph below on offset projects.

### CO<sub>2</sub> Fund Finances Decarbonization of Group's Own Processes

Up to €25 million is put into an internal CO<sub>2</sub> fund each year. In this way, the Volkswagen Group proportionally funds projects around the world that make a contribution to reducing greenhouse gas emissions and are transferable to as many sites, brands and companies as possible. One project that was funded this way in 2022 is "goTOzero Retail." The cross-brand team behind the project wants to improve the environmental performance of dealers and other partners. For example, a roadmap to reduce dealers' CO<sub>2</sub> emissions has been adopted. The starting point for this is more transparency about where in the dealer network which emissions occur. Specifically, the team works along three areas for action. Firstly, the plan is to improve customer perception at the point of sale in terms of sustainability and to empower dealers to save emissions and resources locally. Secondly, a steering mechanism is to be developed to systematically transform the dealer network and realize CO<sub>2</sub> reduction targets. And thirdly, the progress on the project will be regularly communicated internally and externally. The planned measures include certification of dealers in respect of the environmental performance, a KPI dashboard, the annual evaluation of CO<sub>2</sub> emissions in the retail network as well as a manual and web-based training options for dealers. Further money from the CO<sub>2</sub> fund was spent on research on plastic recycles and on replacing components such as ventilation systems or lighting to save energy in this way.

### Joint Venture for Offset Projects Has Started Work

We consider protecting natural carbon sinks to be an important task. Measures in this area should be both scalable and able to ensure the additionality and permanence of atmospheric carbon sequestration. To underpin our commitment to climate protection projects and be able to develop our own projects in accordance with the highest standards, VW Kraftwerk GmbH and ClimatePartner GmbH have established a joint venture (JV): Volkswagen ClimatePartner GmbH. It develops and funds certified climate protection projects that serve the recognized offsetting of CO<sub>2</sub> emissions. One key requirement for all projects is that they meet the highest quality standards. For this reason, the JV also takes control with regard to quality assurance. Core aspects include additionality, accuracy and permanence of the emission reductions, the socioeconomic and environmental advantageousness for the region, and regular audit by independent third parties. The initial project standards are the VCS, CCBS and GS. The JV commenced its operational work in 2022 and is focusing on forest protection projects and nature-based solutions. It is accompanied by a specially established independent project advisory board.

### **Commitment to Tropical Rain Forests**

In the reporting year, Volkswagen became the first automotive manufacturer to join the LEAF Coalition (Lowering Emissions by Accelerating Forest finance). Together with governments and companies around the world, the initiative supports the protection of tropical rain forests and thus makes an important contribution to achieving the Paris climate goals, protecting biodiversity and realizing sustainable development.

### **EXPANDING CAPITAL EXPENDITURE AND PARTNERSHIPS**

No single company can solve the great challenges of our time alone. This requires solid partnerships and cross-sector alliances. The Volkswagen Group also relies on collaboration with third parties in the context of decarbonization.

#### **Promoting Innovations: Collaboration with EIT InnoEnergy**

At the end of 2021, Volkswagen entered into a strategic partnership with EIT InnoEnergy, a world-leading innovation driver for the energy transition. Together, the companies want to promote technologies and business models that contribute to the decarbonization of the transportation sector and accelerate the transition to electric mobility. For example, investments are to be made in promising start-ups that are active in this area. In the course of the partnership, Volkswagen became a shareholder in EIT InnoEnergy.

#### **Driving Decarbonization: Corporate Venture Capital Fund**

Volkswagen wants to further drive decarbonization within and outside the Group from 2023 with a corporate venture capital (CVC) fund with a volume of more than \$300 million. The focus is on the areas of traffic, energy and materials. The fund is intended to promote innovations along the entire mobility value chain and serve as a technological multiplier for the decarbonization of the Volkswagen Group's future business model. It targets early- and growth-stage start-ups with an investment focus in the US and Europe (including Israel). The fund is to be set up with a term of ten years, which is customary in the market, and is to be managed by an independent management team. In addition to Volkswagen, the fund will also be open to other selected investors.

### **Making the EU a Pioneer for Climate Protection: Involvement in the CEO Alliance**

The CEO Alliance for Europe's Recovery, Reform and Resilience is a pan-European and cross-sector alliance of large corporations based in Europe that expressly support the EU's Green Deal and the associated climate protection targets. The CEO Alliance supports the goal of making the EU the leading region in the world in climate protection, accelerating investment, driving innovation and thus creating future-proof jobs. Oliver Blume, the new CEO of the Volkswagen Group, reinforced the commitment to the CEO Alliance once again in the reporting year.

13 member companies are currently working on more than ten joint projects. New additions last year included a project concept on the potential of digitally networked systems, one on the establishment of a European value chain for photovoltaics and one on sustainable financing and investments. In addition, the CEO alliance continues to work on an EU-wide charging infrastructure for heavy duty trucks, integrated energy systems, sustainable buildings, e-buses for Europe, a value chain for green hydrogen and the production of green steel.

The CEO Alliance supports the European Commission's Fit for 55 program and is proposing rapid measures for decarbonizing mobility and transport, the transformation of the building sector and a rapid decarbonization of the energy system in the EU. The CEO Alliance also expresses support for carbon pricing across industries and countries and is calling for political decision-makers in Europe to set a strong price signal and continuously develop the EU emissions trading system.

**DEFINING AND PURSUING AMBITIOUS DECARBONIZATION TARGETS**

The Volkswagen Group wants to become a net carbon-neutral company by 2050. To achieve this goal, offset action is also planned alongside carbon reduction measures and converting to renewable energies.

**50.4% reduction**  
targeted in production-related CO<sub>2</sub> emissions by 2030.







In the reporting year, the Volkswagen Group increased its target for reducing CO<sub>2</sub> emissions in production by 2030. For example, the Group wants to reduce the CO<sub>2</sub> emissions of its passenger cars and light commercial vehicles by 50.4% by 2030 – compared with the base year of 2018. The Group had previously been aiming for a reduction of 30%. The Science Based Targets initiative (SBTi) confirmed to the Volkswagen Group in the reporting year that the Company is fulfilling the conditions for limiting global warming to 1.5 degrees Celsius with its objective for the production phase (Scope 1 and 2). Group-wide production also makes a contribution to achieving Volkswagen AG's overall climate goals with its stricter CO<sub>2</sub> saving targets. SBTi has confirmed the aim of reducing CO<sub>2</sub>

emissions by 30% in the use phase (Scope 3) to the Volkswagen Group as in line with the limitation of global warming to two degrees celsius. By 2030, the Group wants to emit 30% less CO<sub>2</sub> on average per vehicle (passenger cars and light commercial vehicles) over the entire life cycle than in 2018. The targets are to be achieved through pure CO<sub>2</sub> reduction.

Decarbonization targets were also formulated in the area of heavy trucks and buses, and these represent sub-targets for the Group. For example, Scania is committed to reducing its absolute Scope 1 and Scope 2 greenhouse gas emissions by 50% by 2025 compared with the base year of 2015. In 2022, the company also announced its intention to decarbonize its supply chain as far as possible by 2030. This involves the most important production materials and largest sources of emissions: batteries, steel, aluminum and cast iron. The Scope 3 greenhouse gas emissions from the use of vehicles sold are to be reduced by 20% per vehicle kilometer at Scania by 2025, also compared with a 2015 baseline. The SBTi confirmed to Scania that these targets are at a level that allow global warming to be limited to 1.5 degrees celsius. MAN also received SBTi certification of its decarbonization target in the reporting year. In addition, Scania and MAN have committed to the SBTi's Net-Zero Standard.

This level of ambition for the decarbonization targets is considered a minimum requirement for the Group brands, which are also free to set higher targets themselves. The following figure shows the individual brands' ambitions.

**DECARBONIZATION TARGETS OF THE GROUP BRANDS FROM 2018 TO 2030 (DCI)**

	 Nutzfahrzeuge	 SKODA	 SEAT	 Audi	 PORSCHE
-40% <sup>1</sup>	-40% <sup>1</sup>	-40% <sup>1</sup>	-50% <sup>1</sup>	-40% <sup>2</sup>	Net carbon neutrality <sup>3,4</sup>

<sup>1</sup> Target applies to EU27+3.

<sup>2</sup> Target applies to the EU, US and China region excluding completely knocked down production.

<sup>3</sup> Target applies worldwide – offsets are part of Porsche's decarbonization strategy alongside CO<sub>2</sub> reductions and abatement.

<sup>4</sup> From 2030, all steps of the value chain of the new vehicles Porsche then puts on the market (production, use and recycling of vehicles) is to be net carbon neutral.

**Decarbonization Index for Target Achievement Measurability**

In the decarbonization index (DCI), we have a meaningful measuring instrument that makes our progress and interim results in this area public and verifiable. The DCI is calculated based on the CO<sub>2</sub> emissions of the brands of the Europe (EU27, UK, Norway and Iceland), China and US regions that manufacture passenger cars and light commercial vehicles over the entire life cycle. In this index, the use phase is calculated over 200,000 km and with reference to region-specific fleet values without legal flexibilities. The intensity of the CO<sub>2</sub> emissions from the electricity used to charge electric vehicles is also calculated on the basis of region-specific energy mixes. Maintenance of the vehicles is not taken into account here. Our vehicle life cycle assessments, which are used as the data basis for calculating supply chain and recycling emissions, have been verified externally and independently in accordance with the ISO 14040 standard.

**DECARBONIZATION INDEX (DCI)**

The DCI measures the average emissions of the CO<sub>2</sub> and CO<sub>2</sub> equivalents of the brands of the Europe (EU27, UK, Norway and Iceland), China and US regions that manufacture passenger cars and light commercial vehicles over the entire life cycle and is expressed in metric tons of CO<sub>2</sub> per vehicle. It includes not only the direct and indirect CO<sub>2</sub> emissions of the individual production sites (Scope 1 and 2) but also all other direct and indirect CO<sub>2</sub> emissions in the life cycle of the vehicles (Scope 3).

The DCI calculation methodology is regularly adjusted depending on internal and external requirements, such as new test cycles for fleet emissions. In order to present a methodologically consistent time series, published DCI values may therefore also be adjusted to the new methodology and thus changed.

In the reporting year, the DCI value averaged 48.0 metric tons of CO<sub>2</sub> per vehicle. Compared with the figure for 2021, which was adjusted due to the change in calculation assumptions (for example, taking region-specific life cycle assessments into account for Chinese models for the first time), this means a reduction of 0.4 metric tons of CO<sub>2</sub> per vehicle. This means that increases in emissions in indi-

vidual life cycle phases have been more than compensated for. As a result of a more specific data set, the emissions recorded in the DCI decreased by 0.6 metric tons of CO<sub>2</sub>/vehicle in 2022. Projects in the supply chain (e.g., closed-loop management of aluminum scrap and renewable energy for battery cell production) and our green power in the use phase led to a reduction of total emissions in the DCI by 0.4 metric tons of CO<sub>2</sub>/vehicle. The electrification of the portfolio combined with the use of renewable energies in production and the use phase is thus showing an impact.

**TRANSPARENCY ON CO<sub>2</sub> EMISSIONS AS A BASIS FOR IMPROVEMENTS**

Every year, we calculate the Group's carbon footprint using the Scope 1 to 3 inventory, in line with the requirements of the internationally accepted Greenhouse Gas Protocol (GHG Protocol). On this basis, we can determine the success of the measures we have put in place and identify other areas where we can take action.

Not shown are additional CO<sub>2</sub> offset projects – e.g., for the carbon-neutral delivery of electric vehicles. The compensation volume in the reporting period ran to 5.9 million metric tons of CO<sub>2</sub>. This equates to 0.9 metric tons of CO<sub>2</sub> per vehicle for all vehicles included in the decarbonization index.

In line with the Scope 3 standards published by the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI), we are reporting CO<sub>2</sub> emissions for 13 out of a total of 15 Scope 3 categories in 2022. According to this, around 20% of all Scope 3 emissions are in the “Purchased goods and services” emissions category, while 73.0% are in the “Use phase” emissions category (well to wheel). To calculate use-phase emissions in the DCI and in the Scope 3 GHG inventory, fleet values not including any legal flexibilities are used.

The calculation of CO<sub>2</sub> emissions in the use 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 [EU27, UK, Norway and Iceland], the USA and China). 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).



*Fleet CO<sub>2</sub> emissions in Europe (EU27+2)<sup>1</sup>*

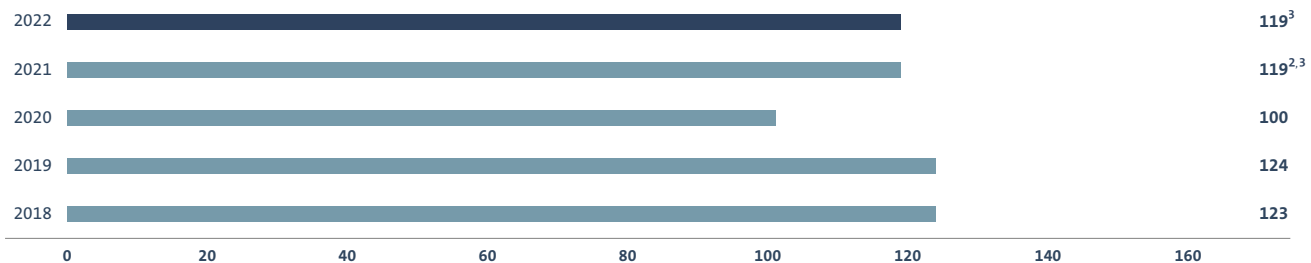
The Volkswagen Group's new passenger car fleet in the EU (from 2022 including Lamborghini and Bentley) (EU27+2) emitted an average of 119 g CO<sub>2</sub>/km (Worldwide Harmonized Light Vehicles Test Procedure – WLTP)<sup>2</sup> in the reporting period in accordance with the statutory measurement bases. The statutory target is 122 g CO<sub>2</sub>/km (WLTP).<sup>2</sup> This means that the Volkswagen Group outperformed the EU's fleet CO<sub>2</sub> target. All the figures mentioned are subject to confirmation of the CO<sub>2</sub> data in the context of official publication by the European Commission. The targets are expected to be tightened from 2025 (subject to publication in the Official Journal of the EU): The European Commission has thus set a target of a 15% reduction in CO<sub>2</sub>, which corresponds to a CO<sub>2</sub> target of less than 105 g CO<sub>2</sub>/km for our EU new passenger car fleet. A 55% reduction has been set for 2030, which corresponds to a CO<sub>2</sub> target of less than 55 g CO<sub>2</sub>/km. We expect our new passenger car fleet in the EU to be able to meet this target for 2025 and outperform the target for 2030. A CO<sub>2</sub> reduction target of 100% for passenger cars has been set for 2035.

The Volkswagen Group's new light commercial vehicles fleet in the EU emitted an average of 193 g CO<sub>2</sub>/km (WLTP)<sup>2</sup> in the reporting period as per statutory measurements bases, compared with a statutory

target of 199 g CO<sub>2</sub>/km (WLTP).<sup>2</sup> This means that the Volkswagen Group outperformed the EU's fleet CO<sub>2</sub> target. All the figures mentioned are subject to confirmation of the CO<sub>2</sub> data in the context of official publication by the European Commission. The targets are expected to be tightened from 2025 (subject to publication in the Official Journal of the EU): The European Commission thus stipulates a 15% reduction in CO<sub>2</sub>, which corresponds to a CO<sub>2</sub> target of less than 184 g CO<sub>2</sub>/km for our EU new light commercial vehicle fleet. A 50% reduction has been set for 2030, which corresponds to a CO<sub>2</sub> target of less than 108 g CO<sub>2</sub>/km. We expect our EU new light commercial vehicle fleet to be able to meet the target for 2025 and outperform the target for 2030. A CO<sub>2</sub> reduction target of 100% for light commercial vehicles has been set for 2035.

In the UK and Switzerland/Liechtenstein markets, the Volkswagen Group's light commercial vehicle fleets met the statutory requirements for the reporting period. The Volkswagen Group's passenger car fleet fell just short of the statutory requirements for the reporting year in Switzerland. However, the target for the CO<sub>2</sub> pool established with other manufacturers in the United Kingdom was reached.

**CO<sub>2</sub> EMISSIONS OF THE VOLKSWAGEN GROUP'S EUROPEAN (EU27+2) NEW PASSENGER CAR FLEET**  
in grams per kilometer (WLTP)



<sup>1</sup> Definition of EU27+2: Belgium, Malta, Bulgaria, the Netherlands, Denmark, Austria, Germany, Poland, Estonia, Portugal, Finland, Romania, France, Slovakia, Greece, Slovenia, Ireland, Spain, Italy, Sweden, Croatia, the Czech Republic, Latvia, Hungary, Lithuania, Luxembourg, Cyprus + Iceland, Norway.  
<sup>2</sup> The European Commission switched its calculation of CO<sub>2</sub> fleet emissions from NEDC to WLTP in 2021.  
<sup>3</sup> Subject to confirmation of the CO<sub>2</sub> data in the official publication by the European Commission.

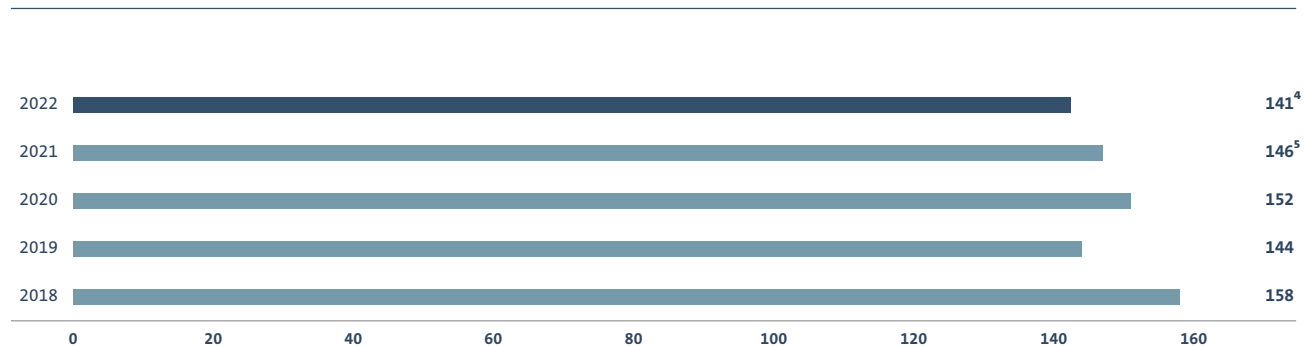
*CO<sub>2</sub> fleet emissions in the USA*

In the United States of America, the emission pool – comprising the Group brands Volkswagen Passenger Cars, Audi, Lamborghini, Bentley and Porsche – is obliged to comply with the Green House Gas (GHG) and Corporate Average Fuel Economy (CAFE) regulations. Due to a model year – the accounting period used in the USA – differing in length from the calendar year, internal calculations are used to determine the figures for the current and preceding model year. The passenger car and light commercial vehicle fleets' GHG CO<sub>2</sub> figure for model year 2022 (internal data as of September 2022) is an average of 141 g CO<sub>2</sub>/km (model year 2021: 146 g CO<sub>2</sub>/km) compared with a statutory target of 136 g CO<sub>2</sub>/km (model year 2021: 142 g CO<sub>2</sub>/km).

By applying the statutory flexibility provided for regarding GHG and in CAFE as well as externally acquired credits, the Volkswagen Group succeeded in complying with applicable requirements – subject to confirmation by the authorities – for model year 2021. The figure given for model year 2022 is also subject to confirmation by the Environmental Protection Agency (EPA).

We anticipate a CO<sub>2</sub> target of around 110 g CO<sub>2</sub>/km in the USA for 2025 and therefore expect to be able to achieve this target. We will increase the electric vehicle proportion of our new vehicle fleet to well over 50% by 2030 and are therefore within the current Administration's target range.

**VOLKSWAGEN GROUP CO<sub>2</sub> EMISSIONS ACCORDING TO THE GHG PROTOCOL FOR PASSENGER CARS AND LIGHT COMMERCIAL VEHICLES IN THE USA**  
*in grams per kilometer by model year*



<sup>4</sup> Subject to submission of the final MY report MY22 and subsequent confirmation by EPA and the California Air Resources Board (CARB) (internal data as of September 2022).  
<sup>5</sup> Subject to confirmation by EPA and CARB (final MY report MY21 submitted but not yet confirmed).

## ACHIEVING DECARBONIZATION TARGETS

We have two levers in particular available to us to impact greenhouse gas emissions across the entire life cycle of Volkswagen products: the Group's electric offensive and the Renewable Energies strategy. Around 90% of the decarbonization targeted by the Group can be realized through electrification of the fleet and switching to renewably generated energy. We track and manage whether we are meeting our targets in these areas at a higher level.

The Group Steering Committee for Sustainability is responsible for our decarbonization program and target achievement. The Group Steering Committee for Fleet Compliance and a specially founded Decarbonization Project Center is responsible for strategy and target development and also for implementation of the program and fleet compliance. The Decarbonization Project Center includes experts from all brands and relevant departments. We use a predefined process overseen by the management of the Decarbonization Project Center and the Group Steering Committee for Fleet Compliance to check measures with which we can achieve the objective of decarbonization. All production locations and the brands and regions have prepared decarbonization roadmaps. The degree of target achievement is measured with a tracking system. If we miss our target, we implement corrective measures.

TRATON SE's heavy commercial vehicles have a significant carbon footprint and are therefore part of a separate decarbonization program that is connected with the existing decarbonization program for passenger cars and light commercial vehicles via interfaces. The program and associated measures are intended to facilitate progress with reducing greenhouse gas emissions.

Internal carbon pricing tools are an integral component of our decarbonization controlling. For example, when managing the portfolio, we work with shadow prices to integrate emission-related risks into decision-making processes and with internal emissions trading to optimize reduction paths of CO<sub>2</sub> fleet compliance. In the decarbonization program, we assess the efficiency of reduction measures using abatement costs and aggregate these in an abatement cost curve. As part of this, we are currently working with an internal carbon price or abatement costs of up to €20 per metric ton of CO<sub>2</sub>. This figure is reviewed annually based on target achievement and adjusted by a resolution of the Board of Management.

**DECARBONIZATION KPIS**

KPI	Unit	2022	2021	Notes and comments
<b>Decarbonization Index</b> WLTP strategic KPI	metric tons of CO <sub>2</sub> /vehicle	48.0	48.4 (45.9)	Passenger-car manufacturing brands and light-commercial-vehicle-producing brands in the Europe (EU27, United Kingdom, Norway and Iceland), China and USA regions. As a result of a more specific data set, the emissions recorded in the DCI decreased by 0.6 metric tons of CO <sub>2</sub> /vehicle in 2022. Projects in the supply chain (e.g., closed-loop management of aluminum scrap and renewable energy for battery cell production) and our green power measures in the use phase led to a reduction of total emissions in the DCI by 0.4 metric tons of CO <sub>2</sub> /vehicle. The calculation of the CO <sub>2</sub> savings from the Aluminum Closed Loop was updated compared with the prior year because the press shop offcuts were reassessed. The DCI for 2021 and 2022 is reported without taking offset measures into account. To enable comparability, the DCI reported in 2021 (45.9 metric tons CO <sub>2</sub> /vehicle) was adjusted to new calculation assumptions.
<b>Average emissions of the new passenger car fleet</b> (strategic KPI)				
EU	g CO <sub>2</sub> /km	119	119	From 2022 including Lamborghini and Bentley
USA	g CO <sub>2</sub> /km	141	147	Emission pool: Volkswagen Passenger Cars, Audi, Lamborghini, Bentley and Porsche Forecast value: The figure given for model year 2022 is also subject to confirmation by the EPA.
<b>Alternative drive technologies in the Group</b>				Volkswagen Group production: Volkswagen Passenger Cars, Audi, ŠKODA, SEAT, Volkswagen light commercial vehicles
Worldwide				
Gas drives (natural gas and LPG)	number of vehicles produced/percentage change	15,387/ -56.3	35,192/ -24.0	
Hybrid drives	number of vehicles produced/percentage change	229,882/ -4.2	239,998/ +18.9	
All-electric drives	number of vehicles produced/percentage change	580,023/ +35.5	427,946/ +112.2	
<b>Alternative drives (total)</b>	<b>number of vehicles produced/percentage change</b>	<b>825,292/ +17.4</b>	<b>703,136/ +56.3</b>	

KPI	Unit	2022	2021	Notes and comments
Europe				EU27, United Kingdom, Norway and Iceland
Gas drives (natural gas and LPG)	number of vehicles produced/percentage change	15,240/ -56.4	34,917/ -23.6	
Hybrid drives	number of vehicles produced/percentage change	166,415/ -16.2	198,550/ +46.7	
All-electric drives	number of vehicles produced/percentage change	340,952/ +17.8	289,389/ +65.0	
<b>Alternative drives (total)</b>	<b>number of vehicles produced/percentage change</b>	<b>522,607/ 0.0</b>	<b>522,856/ +46.7</b>	
Product carbon footprint (DCI)	in metric tons of CO <sub>2</sub> /vehicle	48.0	48.4 (45.9)	See also Decarbonization Index note
Scope 1 GHG emissions (absolute) <sup>1</sup>	in million metric tons of CO <sub>2</sub>	4.46	4.67	
of which Volkswagen AG	in million metric tons of CO <sub>2</sub>	2.02	2.22	
Scope 1 GHG emissions (specific)	in kg of CO <sub>2</sub> /vehicle	415	476	Passenger cars and light commercial vehicles
in Volkswagen AG	in kg of CO <sub>2</sub> /vehicle	3,024	3,507	Adjustment of figure for 2021 due to incorrect unit
Scope 2 GHG emissions (absolute) <sup>1</sup>	in million metric tons of CO <sub>2</sub>	2.11	2.41	
of which Volkswagen AG	in million metric tons of CO <sub>2</sub>	0.11	0.14	
Scope 2 GHG emissions (specific)	in kg of CO <sub>2</sub> /vehicle	236	288	Passenger cars and light commercial vehicles
in Volkswagen AG	in kg of CO <sub>2</sub> /vehicle	167	223	
<b>Scope 3 GHG emissions</b>	<b>in million metric tons of CO<sub>2</sub></b>	<b>395.62</b>	<b>364.14</b>	
Category 1: Purchased goods and services	in metric tons of CO <sub>2</sub> /in %	80,786,280/ 20.4	58,092,388/ 16.0	The category 1 CO <sub>2</sub> emissions relate to the supply chain emissions of all passenger cars and light commercial vehicles produced in the reporting year. They were calculated on the basis of 63 production-volume-weighted life cycle assessments (LCAs). In the 2022 reporting year, region-specific LCAs for Chinese models were taken into account for the first time. All vehicle LCAs (passenger cars and light commercial vehicles) have been independently certified in accordance with ISO 14040/44. The calculation of the CO <sub>2</sub> savings from the Aluminum Closed Loop was updated compared with the prior year because the press shop offcuts were reassessed. Additional drivers of change include an increased average vehicle weight and increased production number.

<sup>1</sup> Scope: The following sites are not included in the Group assessment in the reporting year: the four Scania Service Centers (Johannesburg, Narasapura, Kuala Lumpur, Taoyuan City); two MAN Truck & Bus sites (Serendah, St. Petersburg); one site in China (Suzhou) and four other sites still currently under construction in China (a vehicle plant in Hefei, a vehicle plant in Changchun and two other component plants in Hefei with planned production start in 2023/2024). The figures for December of the reporting year include an estimate. The estimated figures for the prior year were replaced in the current data collection.

KPI	Unit	2022	2021	Notes and comments
Category 2: Capital goods	in metric tons of CO <sub>2</sub> /in %	6,633,357/ 1.7	5,523,322/ 1.5	The emissions associated with capital goods were calculated on the basis of an economic input-output analysis using the investment data in the Volkswagen AG Annual Report.
Category 3: Fuel- and energy-related emissions (not included in Scope 1 or 2)	in metric tons of CO <sub>2</sub> /in %	1,034,162/ 0.3	1,224,681/ 0.3	The Group-wide consumption of energy is recorded annually in our internal environmental information system and converted into CO <sub>2</sub> equivalents using emission factors for the various energy sources from a representative generic database.
Category 4: Upstream transportation and distribution	in metric tons of CO <sub>2</sub> /in %	4,124,894/ 1.0	3,929,898/ 1.1	This number is equivalent to the CO <sub>2</sub> emissions from energy-source supply and use, both from inbound and out-bound transports and transportation processes between our sites worldwide. Transportation data are manually derived from internal transport IT systems for all modes of transport and manually recorded processes. Figure based on the 2022 CDP report – the figure for the 2022 reporting year will appear in the 2023 CDP report.
Category 5: Waste	in metric tons of CO <sub>2</sub> /in %	909,775/ 0.2	911,348/ 0.3	The waste produced across the Group is recorded annually in our internal environmental information system and converted into CO <sub>2</sub> equivalents using emission factors for the various waste streams from a representative generic database.
Category 6: <sup>2</sup> Business travel	in metric tons of CO <sub>2</sub> /in %	123,816/ 0.0	721,059/ 0.2	Due to the low proportion of emissions (< 0.5%), the previous calculation was based on a generic approach. For the 2022 reporting year, the emissions were, for the first time, calculated using a new measurement approach based on Volkswagen AG's actual air and rail travel and extrapolated for the Group.
Category 7: <sup>2</sup> Employee commuting	in metric tons of CO <sub>2</sub> /in %	1,099,091/ 0.3	1,096,418/ 0.3	The CO <sub>2</sub> emissions are based on activity data that were collected in a specific survey representing commuting to/ from our largest site in Wolfsburg. The calculation assumes 220 working days per year and a distribution between modes of transport of 75% by car, 10% by train (long-distance transport), 5% by public transport (land transport) and 10% by public transport (urban). The corresponding emission factors for these four modes of transport were calculated on the basis of external generic data sources. The global Scope 3 emissions caused by commuting were extrapolated from the Wolfsburg results on the basis of headcount.
Category 8: Upstream leased assets	in metric tons of CO <sub>2</sub> /in %	413,446/ 0.1	342,703/ 0.1	The calculation is based on Group-wide payments for rights to use land, buildings and buildings on third-party land. The emissions for this category were estimated using an economic input-output analysis.
Category 9: Downstream transportation and distribution				Included in category 4

<sup>2</sup> Due to the low proportion of emissions (< 0.5%), the previous calculation was based on a generic approach. In the reporting year, specific reference data were used to further develop the methodology for emissions in the business travel category, and the plan is to do this for emissions in the commuting category in the 2023 reporting year.

KPI	Unit	2022	2021	Notes and comments
Category 10: Processing of sold products				Included in Scope 1
Category 11: Use of sold products	in metric tons of CO <sub>2</sub> /in %	287,767,802/72.7	279,380,915/76.7	The CO <sub>2</sub> emissions comprise the well-to-wheel emissions of all passenger cars and light commercial vehicles sold in 2022 at an assumed lifetime mileage of 200,000 km. The calculation is based on the weighted average fleet emissions [g CO <sub>2</sub> /km] in the main markets of the EU27 (plus IS + NO + UK), China and the USA in accordance with the currently legally applicable driving cycles. Region-specific emission factors for fuel and electricity supply chains from a representative generic database were used to calculate the corresponding well-to-tank emissions.
Category 12: End-of-life treatment of sold products	in metric tons of CO <sub>2</sub> /in %	552,289/0.1	747,070/0.2	The category 12 CO <sub>2</sub> emissions relate to the potential end-of-life emissions of all passenger cars and light commercial vehicles produced in the reporting year. They were calculated on the basis of 63 production-volume-weighted life cycle assessments (LCAs). In the 2022 reporting year, region-specific LCAs for Chinese models were taken into account the first time. All vehicle LCAs (passenger cars and light commercial vehicles) have been independently certified in accordance with ISO 14040/44.
Category 13: Downstream leased assets	in metric tons of CO <sub>2</sub> /in %	9,162,826/2.3	10,619,440/2.9	The calculation is based on, among other things, payments received by the Group for rights to use land, buildings and buildings on third-party land. The emissions for this category were estimated using an economic input-output analysis.
Category 14: Franchises	in metric tons of CO <sub>2</sub> /in %	3,009,100/0.8	1,550,000/0.4	Due to the low proportion of emissions (< 0.5%), the previous calculation was based on a generic approach. From the 2022 reporting year, the calculation is based on an annual evaluation of the CO <sub>2</sub> emissions of the Volkswagen Group's trading and service partners on the basis of the sites' energy consumption and country-specific emission factors. The latter come from a representative generic database.

## EU TAXONOMY

Doing business in an environmentally sustainable way is one of the central challenges of our time. The EU has defined criteria for determining the degree of a company's environmental sustainability.

With our taxonomy-aligned investments in development activities and in property, plant and equipment, we are today already shaping the future in an environmentally sustainable way as envisaged by the EU Taxonomy.

### BACKGROUND AND OBJECTIVES

As part of the European Green Deal, the European Union (EU) has placed the topics of climate protection, the environment and sustainability at the heart of its political agenda in order to achieve climate neutrality by the year 2050. The finance sector is expected to make an important contribution to realizing this objective. In this context, the EU published the "Strategy for Financing the Transition to a Sustainable Economy" in 2021. Aimed at supporting the financing of the transition to a sustainable economy, the published strategy contains proposals relating to transition finance, inclusiveness, resilience and contribution of the financial system, and global ambition. It is based on the EU's action plan on Financing Sustainable Growth of 2018. In addition to "Disclosures" and "Tools", another key module is the EU Taxonomy (Regulation (EU) 2020/852 and associated delegated acts).

The EU Taxonomy is a classification system for sustainable economic activities. An economic activity is considered taxonomy-eligible if it is listed in the EU Taxonomy and can therefore potentially contribute to realizing at least one of the following six environmental objectives:

- Climate change mitigation
- Climate change adaptation
- Sustainable use and protection of water and marine resources
- Transition to a circular economy
- Pollution prevention and control
- Protection and restoration of biodiversity and ecosystems.

An activity is only considered environmentally sustainable, i.e., taxonomy-aligned, if it meets all three of the following conditions:

- The activity makes a substantial contribution to one of the environmental objectives by meeting the screening criteria defined for this economic activity, e.g., level of CO<sub>2</sub> emissions for the climate change mitigation environmental objective.
- The activity meets the Do-No-Significant-Harm (DNSH) criteria defined for this economic activity. These are designed to prevent significant harm to one or more of the other environmental objectives, e.g., from the production process or by the product.
- The activity is carried out in compliance with the minimum safeguards, which apply to all economic activities and relate primarily to human rights and social and labor standards.

The Volkswagen Group supports the EU's overarching goal. We are committed to the Paris Climate Agreement and align our own activities with the 1.5 °C goal. We aim to achieve net carbon neutrality by 2050.

### REPORTING FOR FISCAL YEAR 2022

Under the EU Taxonomy, the Volkswagen Group is required to report on the climate change mitigation and climate change adaptation environmental objectives for fiscal year 2022; the EU has not yet defined the disclosure requirements for the other four environmental objectives. The figures reported on sales revenue, capital expenditure and operating expenditure relate to the companies consolidated in the Volkswagen Group's financial statements. Volumes and financial data for our Chinese joint ventures are therefore excluded.

The wording and terminology used in the EU Taxonomy are still subject to some uncertainty in interpretation, which could lead to changes in the reporting when it is subsequently clarified by the EU. Ultimately, there is a risk that the key performance indicators presented as taxonomy-aligned would need to be assessed differently. Our interpretation is set out below.

### ECONOMIC ACTIVITIES OF THE VOLKSWAGEN GROUP

With the Group strategy "NEW AUTO" – Mobility for generations to come, we are preparing ourselves for the global changes in mobility and thus playing a substantial role in driving Volkswagen's transformation into a software-oriented company. In so doing, we pay particular attention to the use of resources and the emissions of our product portfolio, as well as those of our sites.

The Volkswagen Group's activities in its vehicle-related business with passenger cars, light commercial vehicles, trucks, buses and motorcycles cover the development, production and sale of vehicles and extend to our financial services and other vehicle-related products and services. Activities in these areas are suited under the EU Taxonomy to making a substantial contribution to the environmental objective of climate change mitigation by increasing clean or climate-neutral mobility.

The Volkswagen Group's activities in the Power Engineering Business Area comprise the development, design, production, sale and servicing of machinery and equipment. These activities also fall under the environmental objective of climate change mitigation.

An analysis of our economic activities in the context of the EU Taxonomy has not revealed any activities that contribute specifically to the environmental objective of climate change adaptation.

The table below sets out the allocation of our activities in the vehicle-related business and in Power Engineering to the economic activities listed in the EU Taxonomy under the environmental objective of climate change mitigation. Changes may be made to the economic activities in future as the rules around the EU Taxonomy dynamically evolve.



Economic activity in accordance with the EU Taxonomy	Description of economic activity	Allocation in the Volkswagen Group
<b>Environmental objective: climate change mitigation</b>		
<b>3. Manufacturing</b>		
3.2 Manufacture of equipment for the production and use of hydrogen	Manufacture of equipment for the production and use of hydrogen.	Power Engineering
3.3 Manufacture of low-carbon technologies for transport	Manufacture, repair, maintenance, retrofitting, repurposing and upgrade of low-carbon vehicles, rolling stock and vessels.	Vehicle-related business
3.6 Manufacture of other low-carbon technologies	Manufacture of technologies aimed at substantial greenhouse gas emission reductions in other sectors of the economy, where those technologies are not covered by other economic activities in the manufacturing sector.	Power Engineering
<b>9. Professional, scientific and technical activities</b>		
9.1 Close to market research, development and innovation	Research, applied research and experimental development of solutions, processes, technologies, business models and other products dedicated to the reduction, avoidance or removal of greenhouse gas emissions for which the ability to reduce, remove or avoid greenhouse gas emissions in the target economic activities has at least been demonstrated in a relevant environment, corresponding to at least Technology Readiness Level 6.	Power Engineering

**Economic Activities in Vehicle-Related Business**

*Economic activity 3.3 Manufacture of low-carbon technologies for transport*

We allocate all activities in our vehicle-related business associated with the development, production, sale (including financial services), operation and servicing of vehicles to this economic activity. This includes all passenger cars, light commercial vehicles, trucks, buses and motorcycles manufactured by us, irrespective of their powertrain technology, and also includes genuine parts.

In our vehicle-related business, we have detailed the vehicles manufactured by us by model and powertrain technology and analyzed the CO<sub>2</sub> emissions associated with them in accordance with the current regulations. In this way, we have identified those vehicles among all of our taxonomy-eligible vehicles that meet the screening criteria and with which the substantial contribution to climate change mitigation is measured. These include all of the Volkswagen Group's all-electric vehicles. Until December 31, 2025, they also include passenger cars and light commercial vehicles with CO<sub>2</sub> emissions of less than 50 g/km in accordance with the WLTP. This encompasses the majority of our plug-in hybrids. Buses meeting the EURO VI standard (Stage E) were also included until December 31, 2022.

At this stage, other activities that are directly associated with the primary vehicle-related business and that in our view should also be allocated to this economic activity have not yet been included or have been interpreted as not yet being taxonomy-eligible. This is because, as the rules of the EU Taxonomy currently stand, it is still unclear where to record them in accordance with the EU Taxonomy. These activities particularly include the sale of engines and powertrains, as well as parts deliveries, the sale of non-Group products and production under license by third parties. Based on current assumptions, hedging transactions and individual activities that we

present primarily under Other sales revenue in the consolidated financial statements cannot be classified as economic activities under the EU Taxonomy, and we have therefore initially classified them as not being taxonomy-eligible.

**Economic Activities in Power Engineering**

In the Power Engineering Business Area, we have analyzed our activities with respect to their classification under the EU Taxonomy and, with the exception of the heavy fuel oil engine new building business and individual components for the extraction and processing of fossil fuels, have identified them as taxonomy-eligible.

*Economic activity 3.2 Manufacture of equipment for the production and use of hydrogen*

Our activities relating to the manufacture of equipment for the production and use of hydrogen that meet the screening criteria and make a substantial contribution to the climate change mitigation objective are taxonomy-eligible. One example is the use of green hydrogen. At Volkswagen, the activities cover the power-to-X technology for the production of low-carbon or carbon-neutral synthetic fuels, as well as components for the storage of hydrogen.

*Economic activity 3.6 Manufacture of other low-carbon technologies*

The description of this economic activity means that only those technologies manufactured for the purpose of reducing greenhouse gas emissions substantially in other sectors of the economy are taxonomy-eligible. At Volkswagen, this comprises all new-build activities that enable the use of gas and climate-neutral synthetic fuels (e.g., manufacturing of gas and dual-fuel engines), all industrial solutions for energy storage and sector coupling (e.g., heat pumps) and all solutions for carbon capture, storage and usage; it also includes subsea compression (a solution close to the wellhead for the extraction of natural gas). These activities are rounded off by the

service and after-sales business, comprising the upgrading and modernization of existing equipment. For example, we retrofit existing maritime fleets with technology that makes it possible to reduce CO<sub>2</sub> emissions.

#### *Economic activity 9.1 Close to market research, development and innovation*

The description of this economic activity includes applied research in technologies for the reduction or avoidance of greenhouse gas emissions. We allocate our licensing business to this economic activity. In the course of such business we provide our development services in the form of production documents, based on which our licensees are authorized to manufacture corresponding gas and/or dual-fuel engines.

With regard to economic activity 3.2 Manufacture of equipment for the production and use of hydrogen, we meet the screening criteria that determine whether a substantial contribution has been made to the mitigation of climate change. As the reporting obligations and the complex requirements specified therein, such as for life cycle analyses, were not introduced until very recently, it has not yet been possible to provide corresponding proof of economic activities covered by 3.6 Manufacture of other low-carbon technologies and 9.1 Close to market research, development and innovation.

### **DO NO SIGNIFICANT HARM (DNSH)**

The DNSH criteria were analyzed in the reporting year for economic activities covered by 3.3 Manufacture of low-carbon technologies for transport and 3.2 Manufacture of equipment for the production and use of hydrogen.

In the vehicle-related business, an analysis was performed for each vehicle production site where passenger cars, light commercial vehicles, trucks and buses are or will be produced that meet the screening criteria for the substantial contribution of economic activity 3.3 Manufacture of low-carbon technologies for transport, or that are to meet them in future according to our five-year planning, and based on current regulations. Of the approximately 40 sites included, the majority are located in the EU, with some in the United Kingdom, Türkiye, South Africa, the USA, Mexico, Brazil, Argentina and China. In addition to these, we also included the sites that manufacture specific components for electric vehicles.

For the Power Engineering Business Area, an analysis was performed for each site that produces relevant components for systems or is responsible for supply chains that meet the screening criteria for the substantial contribution of economic activity 3.2 Manufacture of equipment for the production and use of hydrogen, or that are to meet them in future according to our five-year planning. There are three such sites in Germany and one in Sweden.

Below, we set out our interpretation and describe the main analyses we used to examine whether there was any significant harm to the other environmental objectives. The wording and terminology used in the EU Taxonomy are subject to some uncertainty in interpretation and supposedly go beyond the regulations to be applied in regular business operations. In addition, the application of the EU Taxonomy to sites outside the EU leads to particular challenges due to the possibility of diverging legislation. We took applicable laws as well as external and internal regulations and guidelines as the basis for our assessments, which confirm that we meet the requirements of the DNSH criteria in the reporting period for the vehicle-related business and the Power Engineering sites.

#### *Climate change adaptation*

We performed a climate risk and vulnerability assessment to identify which production sites may be affected by physical climate risks. The physical climate risks we identified were assessed on the basis of the lifetime of the relevant fixed asset.

Volkswagen's climate-based DNSH assessment is based on Representative Concentration Pathway (RCP) scenario 8.5 to the year 2050 and thus assumes the highest concentration of CO<sub>2</sub> according to the Intergovernmental Panel on Climate Change (IPCC). The relevance of the identified threats was assessed for the local environment and, if appropriate, the measures needed to mitigate the risk were developed.

#### *Sustainable use and protection of water and marine resources*

We evaluated our economic activities with respect to the sustainable use and protection of water and marine resources looking at the following three criteria: preserving water quality, avoiding water stress, and an environmental compatibility assessment (EIA or comparable process). Risks identified in an EIA are examined during the approval process and, if relevant, result in measures and regulatory requirements. We based the analysis primarily on ISO 14001 certificates, information from site approvals and other external data sources related to sites with a high risk exposure.

#### *Transition to a circular economy*

Environmentally compatible waste management in the manufacturing process, reuse and use of secondary raw materials and a long product lifespan are a major part of Volkswagen's environmental management system. Volkswagen defines clear and unambiguous guidelines on the circular economy in its environmental principles, in its overall factory white paper and in its "goTOzero" strategy.

The product-related requirements for passenger cars and light commercial vehicles are taken into account through implementation of the statutory end-of-life vehicle requirements in conjunction with the type approval of the vehicle models. In addition to this, each brand has targets and measures for the use of recycled materials in new vehicles. For trucks and buses, a review was conducted at the level of each brand to establish the extent to which local legislation or internal rules and regulations cover the specific requirements.

### *Pollution prevention and control*

To be considered as environmentally sustainable, an economic activity must not significantly increase air, water or soil pollutant emissions as compared with the situation before the activity started. The DNSH criteria for this environmental objective require that the economic activity in question does not lead to the manufacture, distribution or use of substances listed in a variety of EU chemical regulations and directives or product-specific rules and regulations. In this context, we also consider the use of alternative substances in our analyses and assessments. Overall, the automotive sector is tightly regulated already, as demonstrated, for example, by the publicly accessible Global Automotive Declarable Substance List (GADSL). Approval and monitoring processes have been implemented with the aim of ensuring compliance with the legal requirements and internal rules and regulations applicable to regular business operations. This also ensures compliance with the legislation specified in the DNSH criteria. For this purpose, we applied the requirements applicable to regular business operations in the European Union in 2022. Outside of the EU we applied the regulations specific to the country in question.

### *Protection and restoration of biodiversity and ecosystems*

In order to verify adherence to the requirements on biodiversity and ecosystems, the relevant areas were identified. Where biodiversity-sensitive areas are located close to a production site, we checked whether a nature conservation assessment had been performed and whether nature conservation measures had been defined in the environmental approvals and subsequently implemented. We also checked whether changes had occurred in an area's conservation status.

## **MINIMUM SAFEGUARDS**

The minimum safeguards consist of the OECD Guidelines for Multinational Enterprises, the United Nations Guiding Principles on Business and Human Rights, the Fundamental Conventions of the International Labour Organization (ILO) and the International Bill of Human Rights.

The Volkswagen Group accepts its corporate responsibility for human rights, fully recognizes these conventions and declarations and reaffirms its agreement with the contents and principles stated therein.

Below, we describe the main analyses we used to examine whether the minimum safeguards are adhered to.

The Volkswagen Group has conducted and completed human rights risk assessments for 802 controlled Group companies worldwide; this includes all sites that were also examined under the DNSH criteria. This risk analysis takes into account the prior-year results and risk assessments. The companies were given risk-specific measures to counteract the risks identified in the analysis, and were required to implement these. The status of implementation of the respective measures is continuously monitored by the Group.

Relationships with our business partners are based on the Code of Conduct for Business Partners. We review compliance with the binding requirements defined in the Code, using sustainability ratings for relevant suppliers. We address existing sustainability risks and violations of sustainability principles by systematically defining and implementing measures to correct the violations; this also includes the upstream supply chain. We implemented a Human Rights Focus System in 2022 to comply with international frameworks and requirements and specifically the German Supply Chain Due Diligence Act (*Lieferkettensorgfaltspflichtengesetz –LkSG*). The system aims to identify particularly high risks in our supply chain in connection with human rights violations and the environment and to manage these appropriately. The assessments confirm that we meet the requirements of the minimum safeguards in the reporting year.

## **Key Performance Indicators in accordance with the EU Taxonomy Regulation**

The EU Taxonomy defines sales revenue, capital expenditure and operating expenditure as the key performance indicators that must be reported on. We explain these below. The tables required by the EU Taxonomy are included at the end of the section.

The financial figures relevant for the Volkswagen Group are taken from the IFRS consolidated financial statements for fiscal year 2022. As we differentiate between economic activities, we have avoided double counting. Where possible, the figures have been directly allocated to an economic activity. In our vehicle-related business, for example, we compiled the financial figures based on the vehicle model and powertrain technology. This applies both to the vehicles themselves and to the corresponding financial services and other services and activities.

Only where this was not possible for capital expenditure and operating expenditure were allocation formulas used based on the planned vehicle volumes. In the Power Engineering Business Area, we used allocation formulas based on planned sales revenue. This data and planning form part of the medium-term financial planning for the next five years on which the Board of Management and Supervisory Board have passed a resolution.

### **Sales revenue**

The definition of turnover in the EU Taxonomy corresponds to sales revenue as reported in the IFRS consolidated financial statements. This amounted to €279.2 billion in fiscal year 2022 (see also note on "Sales revenue" in the notes to the consolidated financial statements).

Of this total, €254.5 billion, or 91.1% of Group sales, was attributable to economic activity 3.3 Manufacture of low-carbon technologies for transport, and was classified as taxonomy-eligible. This includes sales revenue after sales allowances from the sale of new and used vehicles, including motorcycles, from genuine parts, from the rental and lease business, and from interest and similar income, as well as sales revenue directly related to the vehicles, such as workshop and other services.

Of the taxonomy-eligible sales revenue, €26.1 billion meet the screening criteria used to measure the substantial contribution to climate change mitigation. This includes all of our all-electric vehicles, the majority of the plug-in hybrids, and the buses meeting the EURO VI standard (Stage E).

In 2022, there were 596 thousand such vehicles, 6.5% more than in the previous year. Their share of the relevant sales volume – excluding the vehicles from the Chinese joint ventures – rose to 11.1 (10.1)%. Passenger cars and light commercial vehicles made up the bulk at 594 thousand vehicles; trucks and buses recorded a ninefold increase year-on-year. Sales of all-electric vehicles were up significantly.

Taking into account the DNSH criteria and minimum safeguards, €26.1 (21.1) billion of the sales revenue generated from our vehicle-related business, equating to 9.4 (8.5)% of consolidated sales revenue, was taxonomy-aligned. Of this amount, €19.6 billion, or 7.0% of consolidated sales revenue, was attributable to our all-electric models (BEVs). In 2022, compliance with the DNSH criteria was also demonstrated for truck and bus sites.

In the Power Engineering Business Area, the majority of our taxonomy-eligible sales revenue was attributable to economic activity 3.6 Manufacture of other low-carbon technologies (€2.5 billion). A further €35 million was contributed by economic activity 9.1 Close to market research, development and innovation. Our activities that fall under economic activity 3.2 Manufacture of equipment for the production and use of hydrogen generated taxonomy-aligned sales revenue of €18 (5) million, taking into account the DNSH criteria and minimum safeguards. The increase in taxonomy-aligned sales revenue is attributable to the expansion of business and above all to the initial consolidation of H-TEC SYSTEMS GmbH.

Of the Volkswagen Group's total sales revenue in fiscal year 2022,

- €257.0 (227.8) billion, or 92.1 (91.0)%, was taxonomy-eligible sales revenue and
- €26.1 (21.2) billion, or 9.4 (8.5)%, was taxonomy-aligned sales revenue.

## SALES REVENUE 2022

Economic activities	Sales revenue		Substantial contribution to climate change mitigation		Compliance with DNSH criteria	Compliance with minimum safeguards	Taxonomy-aligned sales revenue	
	€ million	% <sup>1</sup>	€ million	% <sup>1</sup>	Y/N	Y/N	€ million	% <sup>1</sup>
<b>A. Taxonomy-eligible activities</b>	<b>257,043</b>	<b>92.1</b>	<b>26,145</b>	<b>9.4</b>	<b>Y</b>	<b>Y</b>	<b>26,145</b>	<b>9.4</b>
<b>Vehicle-related business</b>								
3.3 Manufacture of low-carbon technologies for transport	254,502	91.1	26,128	9.4	Y	Y	26,128	9.4
of which taxonomy-aligned BEVs	–	–	–	–	Y	Y	19,589	7.0
<b>Power Engineering</b>								
3.2 Manufacture of equipment for the production and use of hydrogen	18	0.0	18	0.0	Y	Y	18	0.0
3.6 Manufacture of other low-carbon technologies	2,488	0.9	–	–	–	–	–	–
9.1 Close to market research, development and innovation	35	0.0	–	–	–	–	–	–
<b>B. Taxonomy-non-eligible activities</b>	<b>22,189</b>	<b>7.9</b>						
<b>Total (A + B)</b>	<b>279,232</b>							

<sup>1</sup> All percentages relate to the Group's total sales revenue.

## Capital Expenditure

Capital expenditure for the purposes of the EU Taxonomy refers to the following items in the IFRS consolidated financial statements: additions to intangible assets, additions to property, plant and equipment, and additions to lease assets and investment property. These are reported in the notes to the 2022 consolidated financial statements in the notes on “Intangible assets”, “Property, plant and equipment” and “Lease assets and investment property”. Additions from business combinations, each of which is reported under “Changes in consolidated Group”, are also included. By contrast, additions to goodwill are not included in the calculation.

In fiscal year 2022, additions in the Volkswagen Group as defined above amounted to

- €11.7 billion from intangible assets,
- €12.9 billion from property, plant and equipment and
- €24.1 billion from lease assets (mainly vehicle leasing business) and investment property.

Other additions to be included resulted from changes in the consolidated Group, amounting to €0.4 billion in fiscal year 2022. Total capital expenditure to be included in accordance with the EU Taxonomy therefore came to €49.1 billion.

All capital expenditure attributable to our vehicle-related business is associated with economic activity 3.3 Manufacture of low-carbon technologies for transport. Taxonomy-eligible capital expenditure for the vehicle-related business amounted to €48.8 billion, or 99.4% of the Group's capital expenditure.

To determine the substantial contribution in the vehicle-related business, we compiled the financial figures based on the vehicle model and powertrain technology in the same way as for sales revenue. Where possible, capital expenditure was directly attributed to vehicles. It was included if the vehicles in question make a substantial contribution to the climate change mitigation objective. Any capital expenditure directly attributable to vehicles that do not meet the screening criteria was not included. Capital expenditure that was not clearly attributable to a particular vehicle was taken into account on a proportionate basis using allocation formulas. In our vehicle-related business, we developed allocation formulas based on planned vehicle volumes for the Group companies. In the sales companies, for example, we used allocation formulas related either to individual vehicle brands or to all vehicle brands, depending on the primary

business activity, while site-based allocation formulas were used for production companies. This means that capital expenditure was counted in full via the allocation formulas for sites that according to our medium-term planning will only produce vehicles meeting the screening criteria for the substantial contribution in the next five years. In contrast, capital expenditure on sites that only produce vehicles not meeting the screening criteria was not counted under the allocation formula. Calculated in this way, capital expenditure relating to vehicles that meet the screening criteria for the substantial contribution amounted to €16.9 billion.

Taking into account the DNSH criteria and minimum safeguards, capital expenditure of €16.9 (14.2) billion was taxonomy-aligned. This represented 34.5 (26.2)% of the Group's total capital expenditure. Of this figure, €5.8 billion was attributable to intangible assets, €5.7 billion to property, plant and equipment and €5.4 billion to lease assets and investment property. The figure includes additions to capitalized development costs of €4.4 billion and additions to property, plant and equipment of €5.4 billion for our all-electric vehicles (BEVs). The increase in taxonomy-aligned capital expenditure – both the absolute value and the proportion – is attributable to the growing number of environmentally sustainable vehicle projects under the EU Taxonomy.

In the reporting period, we refinanced taxonomy-aligned capital expenditure from fiscal year 2021 based on the Green Finance Framework updated in October 2022 by issuing green bonds in the amount of €2.5 billion. Only capital expenditure in connection with all-electric vehicles was included here. Also in 2022, Scania issued a green bond totaling SEK 3.0 billion to finance research and development activities relating to battery-electric vehicles. €178 million of this total was used in the year under review already, of which €98 million was attributable to taxonomy-aligned capital expenditure. Adjusted for this figure, taxonomy-aligned capital expenditure attributable to the vehicle-related business accounted for 34.3% of total capital expenditure in accordance with the EU Taxonomy.

€27 million of the taxonomy-eligible capital expenditure in the Power Engineering Business Area is attributable to economic activity 3.2 Manufacture of equipment for the production and use of hydrogen and 60 million is attributable to economic activity 3.6 Manufacture of other low-carbon technologies. For the latter, operating expenditure was broken down based on planned sales revenue.

Taxonomy-aligned capital expenditure for the manufacture of equipment for the production and use of hydrogen was disclosed for the first time in the amount of €27 million, almost two thirds of which was attributable to intangible assets and around one third to property, plant and equipment. The expenditure relates predominantly to the initial consolidation of H-TEC SYSTEMS GmbH.

Of the Volkswagen Group's total capital expenditure in fiscal year 2022,

- €48.9 (53.6) billion, or 99.6 (99.2)%, was taxonomy-eligible capital expenditure and
- €16.9 (14.2) billion, or 34.5 (26.2)%, was taxonomy-aligned capital expenditure.

## CAPITAL EXPENDITURE 2022

Economic activities	Capital expenditure		Substantial contribution to climate change mitigation		Compliance with DNSH criteria	Compliance with minimum safeguards	Taxonomy-aligned capital expenditure	
	€ million	% <sup>1</sup>	€ million	% <sup>1</sup>	Y/N	Y/N	€ million	% <sup>1</sup>
<b>A. Taxonomy-eligible activities</b>	<b>48,873</b>	<b>99.6</b>	<b>16,943</b>	<b>34.5</b>	<b>Y</b>	<b>Y</b>	<b>16,943</b>	<b>34.5</b>
<b>Vehicle-related business</b>								
3.3 Manufacture of low-carbon technologies for transport	48,786	99.4	16,917	34.5	Y	Y	16,917	34.5
of which additions to capitalized development costs for BEVs					Y	Y	4,415	9.0
of which additions to property, plant and equipment for BEVs					Y	Y	5,398	11.0
<b>Power Engineering</b>								
3.2 Manufacture of equipment for the production and use of hydrogen	27	0.1	27	0.1	Y	Y	27	0.1
3.6 Manufacture of other low-carbon technologies	60	0.1	–	–	–	–	–	–
9.1 Close to market research, development and innovation	–	–	–	–	–	–	–	–
<b>B. Taxonomy-non-eligible activities</b>	<b>205</b>	<b>0.4</b>						
<b>Total (A + B)</b>	<b>49,078</b>							

<sup>1</sup> All percentages relate to the Group's total capital expenditure.

## Operating Expenditure

The operating expenditure reported by us for the purposes of the EU Taxonomy comprises non-capitalized research and development costs, which can be taken from the note on "Intangible assets". We also include the expenditure for short-term leases recognized in our consolidated financial statements, which can be found in the note on "IFRS 16 (Leases)", and expenditure for maintenance and repairs.

The allocation of operating expenditure to the economic activities followed the same logic as that described for capital expenditure.

All operating expenditure attributable to the vehicle-related business is associated with economic activity 3.3 Manufacture of low-carbon technologies for transport and has been classified as taxonomy-eligible.

Where possible, non-capitalized research and development costs were directly attributed to vehicles. They were included if the vehicles in question make a substantial contribution to the climate change mitigation objective. We did not include any non-capitalized research and development costs directly attributable to vehicles that do not meet the screening criteria. Non-capitalized research and development costs that were not clearly attributable to a particular vehicle were taken into account on a proportionate basis using allocation formulas. For these and other operating expenses, allocation formulas were used, similarly to capital expenditure. Of the taxonomy-aligned operating expenditure of €4.9 (3.3) billion, 85.8% was attributable to non-capitalized research and development costs. The increase in taxonomy-aligned operating expenditure – both the absolute value and the proportion – is attributable to the growing number of environmentally sustainable vehicle projects under the

EU Taxonomy. Including the share of the bond issued by Scania attributable to taxonomy-aligned operating expenditure, the share of taxonomy-aligned operating expenditure declined from 42.7 (32.7)% to 42.0% of total operating expenditure in accordance with the EU Taxonomy.

€4 million of the taxonomy-eligible operating expenditure in the Power Engineering Business Area is attributable to economic activity 3.2 Manufacture of equipment for the production and use of hydrogen and €199 million is attributable to economic activity

3.6 Manufacture of other low-carbon technologies. For the latter, operating expenditure was broken down based on planned sales revenue.

Taxonomy-aligned operating expenditure for the manufacture of equipment for the production and use of hydrogen was disclosed for the first time in the amount of €4 million, which was attributable to non-capitalized research and development costs and related predominantly to the initial consolidation of H-TEC SYSTEMS GmbH.

**OPERATING EXPENDITURE 2022**

Economic activities	Operating expenditure		Substantial contribution to climate change mitigation		Compliance with DNSH criteria	Compliance with minimum safeguards	Taxonomy-aligned operating expenditure	
	€ million	% <sup>1</sup>	€ million	% <sup>1</sup>	Y/N	Y/N	€ million	% <sup>1</sup>
<b>A. Taxonomy-eligible activities</b>	<b>11,395</b>	<b>98.9</b>	<b>4,926</b>	<b>42.7</b>	<b>Y</b>	<b>Y</b>	<b>4,926</b>	<b>42.7</b>
<b>Vehicle-related business</b>								
3.3 Manufacture of low-carbon technologies for transport	11,191	97.1	4,922	42.7	Y	Y	4,922	42.7
<b>Power Engineering</b>								
3.2 Manufacture of equipment for the production and use of hydrogen	4	0.0	4	0.0	Y	Y	4	0.0
3.6 Manufacture of other low-carbon technologies	199	1.7	–	–	–	–	–	–
9.1 Close to market research, development and innovation	–	–	–	–	–	–	–	–
<b>B. Taxonomy-non-eligible activities</b>	<b>131</b>	<b>1.1</b>						
<b>Total (A + B)</b>	<b>11,525</b>							

<sup>1</sup> All percentages relate to the Group's total operating expenditure.

## CAPEX PLAN UNDER THE EU TAXONOMY

The EU Taxonomy requires the reporting to state the extent to which taxonomy-aligned capital and operating expenditures a) relate to assets or processes associated with environmentally sustainable economic activities or b) are part of a plan to expand taxonomy-aligned economic activities or to allow taxonomy-eligible economic activities to become taxonomy-aligned (CapEx plan). A CapEx plan under the EU Taxonomy shows the total capital expense, i.e., the sum of capital and operating expenditures expected to be incurred in the reporting period and during the five-year medium-term planning to expand taxonomy-aligned economic activities or allow taxonomy-eligible economic activities to become taxonomy-aligned.

For the vehicle-related business, the CapEx plan drawn up under the EU Taxonomy relates to economic activity 3.3 Manufacture of low-carbon technologies for transport within the climate change mitigation environmental objective.

Additions from lease assets (mainly vehicle leasing business) are based on existing environmentally sustainable activities and have therefore not been included in the CapEx plan. We allocated additions from intangible assets and property, plant and equipment as well as non-capitalized research and development costs to the CapEx plan if they allow taxonomy-eligible economic activities to become taxonomy-aligned or lead to the expansion of taxonomy-aligned economic activities. For this we compared the average taxonomy-aligned production volume from the medium-term planning with the taxonomy-aligned vehicles from the reporting period and allocated the taxonomy-aligned capital expenditure according to this ratio whereby we considered the share exceeding the current taxonomy-aligned production volume.

As a result, €9 billion of the taxonomy-aligned capital expenditure and €3 billion of the taxonomy-aligned operating expenditure in the reporting period is attributable to the CapEx plan under the EU Taxonomy. The total capital expense from the CapEx plan under the EU Taxonomy that is expected to be incurred in the reporting period and during the five-year medium-term planning amounts to €100 billion.

In the Power Engineering Business Area, the CapEx plan under the EU Taxonomy relates to economic activity 3.2 Manufacture of equipment for the production and use of hydrogen listed in the climate change mitigation environmental objective. Based on the ratio of sales revenue in the reporting period to the average sales revenue envisaged in the medium-term planning, we allocated €26 million of the taxonomy-aligned capital expenditure and €4 million of the taxonomy-aligned operating expenditure to the CapEx plan. The total capital expense from this CapEx plan under the EU Taxonomy that is expected to be incurred in the reporting period and during the medium-term planning amounts to approximately €300 million.



**SALES REVENUE 2022**

**DNSh criteria (do no significant harm)**

Code(s)	Absolute sales revenue € (m)	Criteria for a significant contribution							DNSh criteria (do no significant harm)										
		Proportion of sales revenue	Climate change mitigation % <sup>1</sup>	Climate change adaptation % <sup>1</sup>	Water and marine resources <sup>2</sup> % <sup>1</sup>	Circular economy <sup>2</sup> % <sup>1</sup>	Pollution <sup>2</sup> % <sup>1</sup>	Biodiversity and ecosystems <sup>2</sup> % <sup>1</sup>	Climate change mitigation	Climate change adaptation	Water and marine resources	Circular economy	Pollution	Biodiversity and ecosystems	Minimum safeguards	Taxonomy-aligned proportion of sales revenue 2022 % <sup>1</sup>	Taxonomy-aligned proportion of sales revenue 2021 % <sup>1</sup>	Enabling activities category	Transition activities category
<b>Economic activities</b>																			
<b>A. Taxonomy-eligible activities</b>																			
<b>A.1 Environmentally sustainable activities (taxonomy-aligned)</b>																			
Manufacture of low-carbon technologies for transport	3.3	26,128	9.4	9.4	-	-	-	-	-	-	-	-	-	-	9.4	8.5	8.5	E	
Manufacture of equipment for the production and use of hydrogen	3.2	18	0.0	0.0	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.0	E	
<b>Sales revenue from environmentally sustainable activities (taxonomy-aligned) (A.1)</b>		<b>26,145</b>	<b>9.4</b>	<b>9.4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>9.4</b>	<b>8.5</b>	<b>8.5</b>		
<b>A.2 Taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities)</b>																			
Manufacture of low-carbon technologies for transport	3.3	228,374	81.8																
Manufacture of other low-carbon technologies	3.6	2,488	0.9																
Close to market research, development and innovation	9.1	35	0.0																
<b>Sales revenue from taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities) (A.2)</b>		<b>230,898</b>	<b>82.7</b>																
<b>Total (A.1 + A.2)</b>		<b>257,043</b>	<b>92.1</b>																
<b>B. Taxonomy-non-eligible activities</b>																			
Sales revenue from taxonomy-non-eligible activities (B)		22,189	7.9																
<b>Total (A + B)</b>		<b>279,232</b>	<b>100.0</b>																

<sup>1</sup> All percentages relate to the Group's total sales revenue.  
<sup>2</sup> Criteria for a significant contribution to the environmental objective not yet defined.

**CAPITAL EXPENDITURE 2022**

**DNSh criteria (do no significant harm)**

Code(s)	Absolute capital expenditure	Proportion of capital expenditure	Criteria for a significant contribution							DNSh criteria (do no significant harm)							Transition activities category							
			Climate change mitigation % <sup>1</sup>	Climate change adaptation % <sup>1</sup>	Water and marine resources <sup>2</sup> % <sup>1</sup>	Circular economy <sup>2</sup> % <sup>1</sup>	Pollution <sup>2</sup> % <sup>1</sup>	Biodiversity and ecosystems <sup>2</sup> % <sup>1</sup>	Climate change mitigation Y/N	Climate change adaptation Y/N	Water and marine resources Y/N	Circular economy Y/N	Pollution Y/N	Biodiversity and ecosystems Y/N	Minimum safeguards Y/N	Taxonomy-aligned expenditure 2022 % <sup>1</sup>		Taxonomy-aligned expenditure 2021 % <sup>1</sup>	Enabling activities category					
<b>Economic activities</b>																								
<b>A. Taxonomy-eligible activities</b>																								
<b>A.1 Environmentally sustainable activities (taxonomy-aligned)</b>																								
Manufacture of low-carbon technologies for transport	3.3	16,917	34.5	-	-	-	-	-	-	34.5	0.1	0.1	0.1	Y	Y	Y	Y	Y	26.2	34.5	0.1	-	E	
Manufacture of equipment for the production and use of hydrogen	3.2	27	0.1	-	-	-	-	-	-	0.1	0.1	0.1	0.1	Y	Y	Y	Y	Y	-	0.1	0.1	-	E	
<b>Capital expenditure of environmentally sustainable activities (taxonomy-aligned) (A.1)</b>		<b>16,943</b>	<b>34.5</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>34.5</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>						<b>26.2</b>	<b>34.5</b>	<b>0.1</b>	<b>-</b>		
<b>A.2 Taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities)</b>																								
Manufacture of low-carbon technologies for transport	3.3	31,870	64.9																					
Manufacture of other low-carbon technologies	3.6	60	0.1																					
Close to market research, development and innovation	9.1	-	-																					
<b>Capital expenditure of taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities) (A.2)</b>		<b>31,930</b>	<b>65.1</b>																					
<b>Total (A.1 + A.2)</b>		<b>48,873</b>	<b>99.6</b>																					
<b>B. Taxonomy-non-eligible activities</b>																								
Capital expenditure for taxonomy-non-eligible activities (B)		205	0.4																					
<b>Total (A + B)</b>		<b>49,078</b>	<b>100.0</b>																					

<sup>1</sup> All percentages relate to the Group's total capital expenditure.  
<sup>2</sup> Criteria for a significant contribution to the environmental objective not yet defined.

OPERATING EXPENDITURE 2022		Criteria for a significant contribution						DNSH criteria (do no significant harm)						Transition activities category					
Code(s)	Absolute operating expenditure	Proportion of operating expenditure	Climate change mitigation % <sup>1</sup>	Climate change adaptation % <sup>1</sup>	Water and marine resources <sup>2</sup> % <sup>1</sup>	Circular economy <sup>2</sup> % <sup>1</sup>	Pollution <sup>2</sup> % <sup>1</sup>	Biodiversity and ecosystems <sup>2</sup> % <sup>1</sup>	Climate change mitigation Y/N	Climate change adaptation Y/N	Water and marine resources Y/N	Circular economy Y/N	Pollution Y/N	Biodiversity and ecosystems Y/N	Minimum safeguards Y/N	Taxonomy-aligned proportion of operating expenditure 2022 % <sup>1</sup>	Taxonomy-aligned proportion of operating expenditure 2021 % <sup>1</sup>	Enabling activities category	T
<b>Economic activities</b>																			
<b>A. Taxonomy-eligible activities</b>																			
<b>A.1 Environmentally sustainable activities (taxonomy-aligned)</b>																			
3.3	4,922	42.7	42.7	-	-	-	-	-	Y	Y	Y	Y	Y	Y	Y	42.7	32.7	E	
Manufacture of low-carbon technologies for transport																			
3.2	4	0.0	0.0	-	-	-	-	-	Y	Y	Y	Y	Y	Y	Y	0.0	-	E	
Manufacture of equipment for the production and use of hydrogen																			
	<b>4,926</b>	<b>42.7</b>	<b>42.7</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>								<b>42.7</b>	<b>32.7</b>		
<b>Operating expenditure for environmentally sustainable activities (taxonomy-aligned) (A.1)</b>																			
<b>A.2 Taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities)</b>																			
3.3	6,269	54.4																	
Manufacture of low-carbon technologies for transport																			
3.6	199	1.7																	
Manufacture of other low-carbon technologies																			
9.1	-	-																	
Close to market research, development and innovation																			
	<b>6,469</b>	<b>56.1</b>																	
<b>Operating expenditure of taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities) (A.2)</b>																			
	<b>11,395</b>	<b>98.9</b>																	
<b>Total (A.1 + A.2)</b>																			
<b>B. Taxonomy-non-eligible activities</b>																			
	131	1.1																	
Operating expenditure for taxonomy-non-eligible activities (B)																			
	<b>11,525</b>	<b>100.0</b>																	
<b>Total (A + B)</b>																			

<sup>1</sup> All percentages relate to the Group's total operating expenditure.  
<sup>2</sup> Criteria for a significant contribution to the environmental objective not yet defined.

# CIRCULAR ECONOMY



## STRENGTHENING THE CIRCULAR ECONOMY

The finite nature of natural resources and the social and environmental consequences of mining raw materials make uncoupling economic growth from resource consumption and the development of a circular economy key sustainability topics. Against this background, there are extensive opportunities for companies to tap into new business models and markets or to give themselves an edge in the competition for limited resources with changed use concepts. At the same time, new legal requirements need to be met. For example, policymakers at international and national level have made it their aim to regulate markets more aggressively in the future in an effort to speed up the transformation towards resource efficiency and a circular economy. One important driver of the circular economy is the ongoing decarbonization of the Volkswagen Group: The growing use of secondary materials and the establishment of closed material loops is helping to significantly reduce our CO<sub>2</sub> emissions.

### GROUP-WIDE WORKING STRUCTURES AND STEERING COMMITTEES

Recognizing the importance of this topic, Volkswagen has anchored circular economy as a focus topic in Group Initiative 6 of the NEW AUTO Group Strategy. Cross-divisional and cross-brand working structures have been developed at Group level for managing the topics to be developed. These build on the work of committees such as the Group Steering Committee for the Environment and Energy, the Group Steering Committee for Sustainability, the Group Steering Committee for Product Recycling and the Group Working Committee for Environment Product.

We want to intensify our efforts for a transition to a loop-oriented and resource-conserving way of doing business even further in the future. To achieve this, we rely on alliances and the implementation of joint projects with various partners, such as suppliers, plant manufacturers, the recycling sector and universities.

### OUR PATH TO CLOSED MATERIAL LOOPS

Fundamentally, we pursue four lines of action at Group level in the area of circular economy: Firstly, we are already stepping up efforts to use recyclable and reusable materials in our vehicle projects – for example, from production waste. In addition, we want to further improve the supply of circular materials, i.e., secondary materials and renewable raw materials – for example, by buying back end-of-life vehicles – and thus bring valuable materials back into the loop. Another approach is to preserve recyclable materials through reuse and repurposing – for example, in the recycling of high-voltage vehicle batteries in Salzgitter. And last but not least, we are working intensively on developing business models that simplify the recovery of

raw materials from our products. The topic of circular economy is also a core element of the “goTOzero” Group environmental mission statement, on which we orient the strategic design of this action area. With this Group mission statement, the Volkswagen Group is setting itself the target of, among other things, further improving its resource efficiency and promoting reuse and recycling approaches in the areas of materials, energy and water. Other topics that contribute to the topic of circular economy are embedded in the “goTOzero – Zero Impact Factory” program. It is guided by the vision of creating a factory that has no adverse environmental impact.

#### > Environmental Compliance Management

With a circular way of doing business in mind, we aim to minimize our consumption of resources, to live up to extended producer responsibility and to reduce energy consumption. The vehicles already have a long service life: The average age of an end-of-life vehicle is 14 to 20 years according to national authorities in Europe. For the first steps regarding circular economy, we have concentrated on the aspects of batteries, steel, aluminum and plastics. The results obtained from this are used to further develop the overall circular economy strategy and for devising new business models. In geopolitically difficult times, the topic of circular economy is also about strengthening the Group's resilience and minimizing dependencies.

Our approach to waste disposal in production aims to reduce the quantity of waste we produce and to reuse unavoidable waste to create high-quality materials – i.e., to close loops. 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 addition to waste, another focus is on the resource of water. We focus on the following areas of activity in sustainable water management:

- Reduction of freshwater consumption and efficiency in water use, particularly in water stress areas
- Minimization of pollution and no worsening of the environmental and chemical status in the receiving waters (waters into which the treated wastewater is introduced)
- Increased soil and groundwater protection when using water-polluting substances

## MEASURES ALONG THE ENTIRE LIFE CYCLE

The most important measures that we want to take to implement the circular-economy strategy include further clarifying targets and indicators and also realizing circular business models. This applies to the most important components and materials, such as batteries, steel, aluminum or plastics. We are planning to add a specific KPI set for the topic of circular economy to the existing KPIs (DCI, reduction of the environmental impact of production). It will include a description of the use of circular materials at vehicle level and a breakdown by different vehicle projects. The KPI set will also be used in battery production and show the progress in this area. In addition, in the future the Group wants to indicate which revenue we generate through closed-loop circulation.

To make our contribution to a circular way of doing business, 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, using high-quality recycled materials and avoiding pollutants. Under the European Directive on end-of-life vehicles, passenger cars and light commercial vehicles must be 85% recyclable and 95% recoverable at end of life. All our vehicles registered in Europe comply with these standards.

Our Procurement Division has established a Group-wide system for recovering waste materials that can generate income – for example, paper, plastics, wood, electronic components 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 project. This includes the project for recycling plastic waste in diesel tank production, which is described below.

### Vehicle Development Measures

We include the circularity of our vehicles in our thinking as early as the development stage. For example, all operating fluids can later be removed from the end-of-life vehicle and parts to be removed are disassembled. Other measures include:

- The use of recycled materials is permitted for many components if they meet the same quality standards as the primary material.
- All components made of plastic are labeled in accordance with international ISO standards so as to be able to later identify them and separate them by type.

### Use of Renewable Raw Materials

To reduce our resource consumption, we rely on raw materials from renewable sources when manufacturing our vehicles. Wherever possible, our Group brands use raw materials from renewable resources 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 sustainability standards apply to our suppliers.

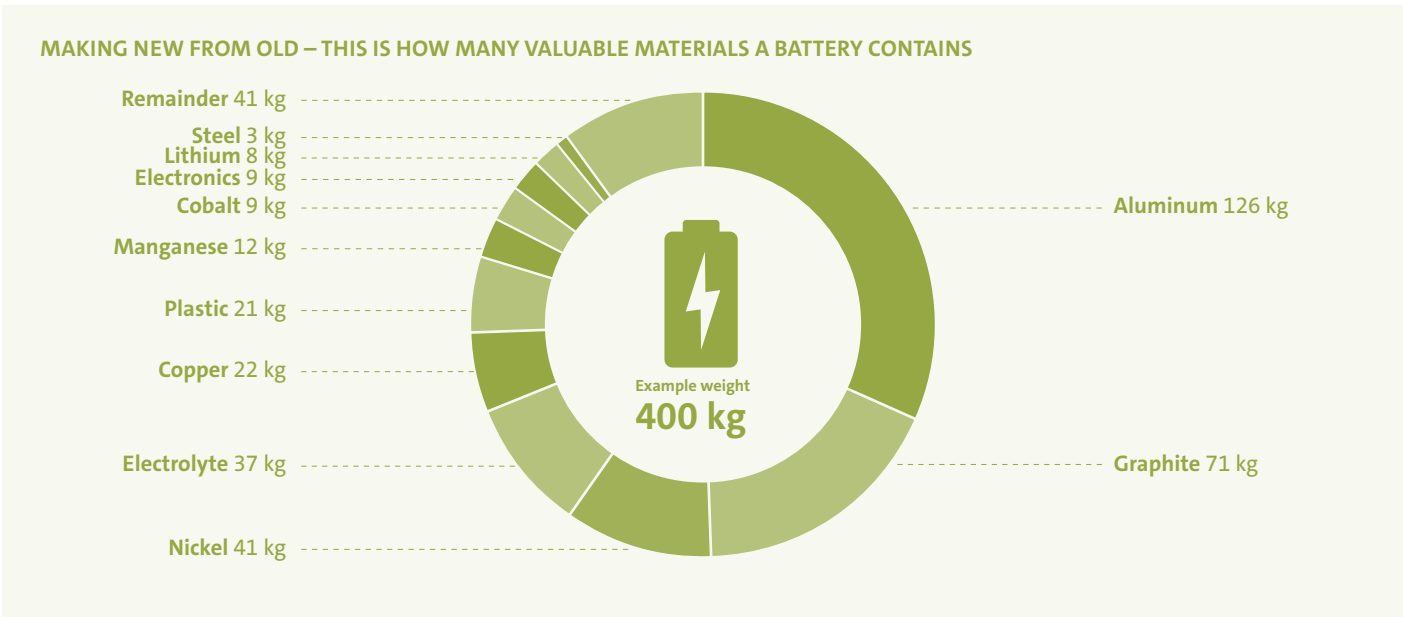
ŠKODA is an example of this. For instance, in collaboration with the Technical University of Liberec and the supplier, the brand has developed a sustainable, ecological material made from sugar beet pulp which can be used in dyed form in the interior of vehicles to create certain design accents. In addition, ŠKODA is working on another material based on the miscanthus reed which will also be used in the interior of models in the future. In addition, the Group is investigating the use of other ecologically sourced materials, such as materials based on cellulose. One flagship project is cooperation with a recycling company. As part of this, a process has been developed to turn painted bumpers into granules. These can then be used for new bumpers.

### Use of Recycled Materials in Vehicles

Using the highest possible proportion of recycled materials is very important for us. In the ID. family, for example, ceiling headliners, fabrics, carpets, seats, door trim and decorative inlays are being made from sustainable material. The seat textiles for all lines are partly made of up to 100% recycled PET – these were frequently previously PET bottles. In the Golf 8, 28% of the textiles and 6% of the thermoplastics are made from recycled materials.

### In-House Expertise in Battery Recycling

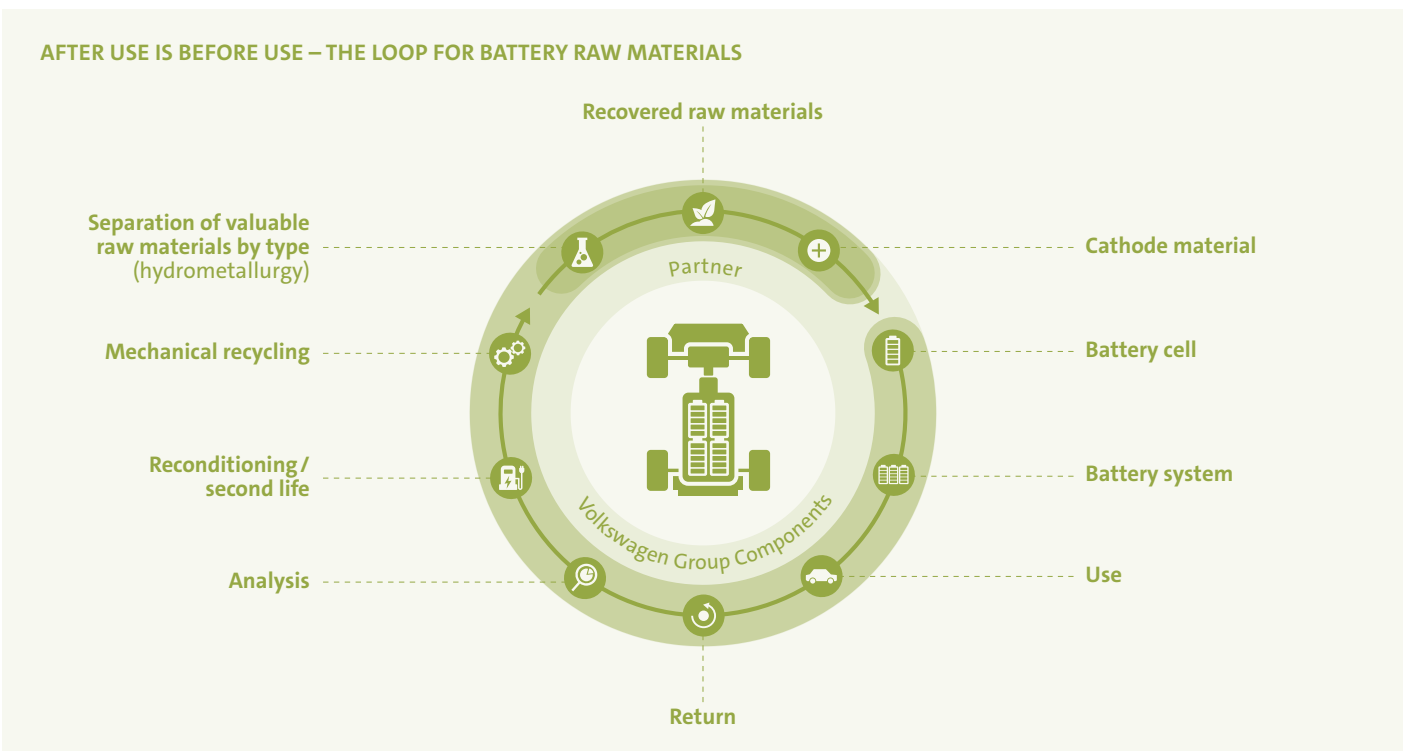
Electric drives are an important step toward low-emission mobility and thus help to protect the climate. At the same time, their production results in different materials entering circulation from the production of conventional vehicles – for example, high-voltage batteries. The raw materials these contain are valuable and it is important for them to remain in circulation for many reasons. For example, the mining and use of these raw materials is associated with emissions and other adverse environmental impacts. If we use battery raw materials multiple times instead, this significantly reduces these impacts and helps us to reduce our carbon footprint. Moreover, making use of materials multiple times also helps to save costs. Volkswagen Group is already working on a recycling concept for batteries. Volkswagen has also entered into strategic partnerships for this, particularly with the recycling group Umicore.



Volkswagen Group Components opened the Group's first pilot facility for recycling high-voltage vehicle batteries at the Salzgitter site at the start of 2021. The objective is industrialized recovery of valuable raw materials such as lithium, nickel, manganese and cobalt in a closed loop and also of aluminum, copper and plastic, with a recycling rate of more than 90% in the future. Batteries are only recycled if they can no longer be used in other ways – for example, in reconditioned form in mobile energy storage systems such as flexible fast-charging stations or charging robots. The facility has been initially designed to recycle up to 3,600 battery systems per year in pilot operation.

The innovative and CO<sub>2</sub>-saving recycling process does not require energy-intensive melting in a blast furnace. The used battery systems are delivered, deep discharged and dismantled. The individual parts are ground into granules in the shredder and then dried.

In addition to aluminum, copper and plastics, the process mainly yields valuable "black powder" containing lithium, nickel, manganese, cobalt and graphite, which are important raw materials for batteries. The separation and processing of the individual substances by hydrometallurgical processes – using water and chemical agents – is subsequently carried out by specialized partners. As a consequence,



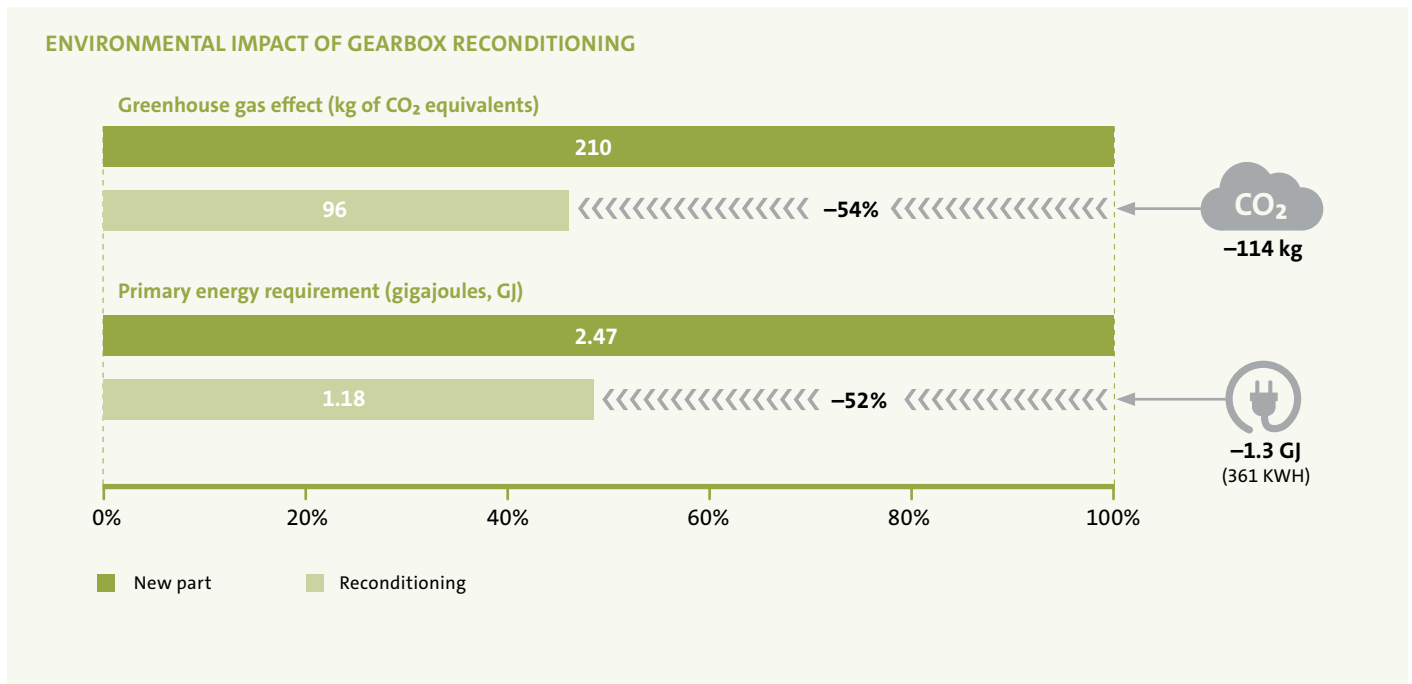
essential components of old battery cells can be used to produce new cathode material. The material recovered can be used to support battery cell production at Volkswagen in the future. The CO<sub>2</sub> savings are calculated to be approximately 1.3 metric tons per 62-kWh battery manufactured using cathodes made from recycled material and green electricity.

**Recycling of Vehicle Parts and Tools**

The aim of our focus on high quality with a low need for repair is to give our vehicles long lives in the use phase, thus making an important contribution to resource efficiency. If a part nevertheless fails, we additionally offer new parts through the Exchange Parts program of the Group's after sales segment and its brands. The worldwide return of used parts from the workshops and their subsequent industrial reconditioning are a key component of the replacement program. By means of our development skills and structured quality standards and processes, we make the part ready to be used

again for another life cycle in the vehicle's use phase. Cross-brand uniform standards and structures are created from within the Group's after sales segment to jointly implement new circular economy projects in a targeted and efficient way. If customers choose the reconditioned part as an alternative to a new part, they are actively supporting sustainable resource conservation and the reduction of energy requirements and CO<sub>2</sub> emissions.

The environmental impact of a brand-new gearbox has been compared with that of its reconditioned equivalent in a certified environmental impact study. Ultimately, a 54% reduction in CO<sub>2</sub> emissions and a 52% decrease in primary energy requirements can be achieved through reconditioning. The amount of energy this saves per reconditioned gearbox is 1.3 gigajoules, which is equivalent to the range of an electric car of more than 2,200 km (ID.3 on the basis of WLTP).



Currently, the product range includes around 8,300 parts for central vehicle components, such as motors, gearboxes or electronic components. In 2022, we took back around 407,000 used parts from 67 countries in the central used parts warehouse through our return process. This is equivalent to a return rate of 97%.

Furthermore, it is not just vehicle parts that are reconditioned at Volkswagen but also production tools. This is what, for instance, the center of excellence for tools at the Salzgitter site is for. An average of 160,000 tools have been processed here each year since 2009 to make them suitable to return to use.



**Recovery of Precious Metals from Catalytic Converters and Particulate Filters**

The Exchange Parts program also makes a contribution to the circular economy through taking back used catalytic converters and particulate filters. The recovery of the precious metals platinum, palladium and rhodium, which are contained in them, is achieved through cross-brand processes. Around 80,000 catalytic converters and particulate filters are taken back from the Group brands' workshops each year. In addition, catalytic converters from engine testing facilities and production batches are also fed into the recycling process. In this way, more than 600 kg of precious metals are recovered as raw materials and are available to the Group as secondary material. The recovered raw materials are used in the production of new exhaust systems for Group vehicles, with the result that materials loops are closed and the need for new precious metals can be reduced.

**Aluminum Closed Loop at Audi**

A closed loop for aluminum was achieved for the first time beyond Company boundaries in the Neckarsulm plant in 2017 with the Aluminum Closed Loop Project. The waste from aluminum sheet-metal parts from the press shop is delivered directly back to the suppliers, who can recycle the scrap and use it to produce new material that Audi then uses again in the press shop. Compared with using primary aluminum, recycling aluminum waste can save up to 95% of the energy used in manufacturing. In this way, Audi avoids CO<sub>2</sub> emissions and reduces the quantity of primary raw materials needed. In addition to the plant in Neckarsulm, the Audi plants in Ingolstadt and Győr have now also joined the Aluminum Closed Loop process. The process itself and the resultant net CO<sub>2</sub> savings of more than 633,881 metric tons of CO<sub>2</sub> since 2017 have been verified by independent third parties. The calculation of the CO<sub>2</sub> savings from the Aluminum Closed Loop Project was updated compared with the prior year because the press shop offcuts were reassessed.

**633,881 metric tons of CO<sub>2</sub>**  
 have been saved since 2017  
 through the Aluminum Closed Loop process.

**Recycling Production Waste**

Waste with recyclable content generated in production is also being increasingly systematically included in our closed-loop processes. For example, in the Volkswagen Group Components foundry in Kassel, all aluminum chips generated on the site are returned to the cast-

ing process. Around 20 metric tons of aluminum chips are produced here each day and melted down in the plant. According to forecasts, this alternative to regular aluminum production reduces the energy requirements by around 3,250 MWh per year and reduces CO<sub>2</sub> emissions by more than 1,400 metric tons per year. In the medium term, the foundry wants to melt down a further 40 metric tons of material from other European Volkswagen plants per day. In the long term, the quantity is set to rise to up to 80 metric tons of chips per day.

At the Volkswagen plant in Wolfsburg, plastic waste produced in the process of manufacturing gasoline tanks (co-extrusion) is prepared and used again for the production of diesel tanks (mono-extrusion). As a result, around 1,600 metric tons of material that would otherwise be disposed of can be used in plastic tanks in this way each year. This can save the plant 2,500 metric tons of CO<sub>2</sub> and €2 million in costs of materials each year.

**Responsible Use of Water**

We want to use the resource of water as sparingly as possible. The supply chain, in particular obtaining and processing raw materials, is responsible for the greater part of our water use. Because we cannot influence these aspects directly – despite our sustainability requirements for suppliers – we concentrate on our production sites. Of all freshwater that we use for manufacturing passenger cars and light commercial vehicles, 50.3% (around 15.9 million m<sup>3</sup>) is used by sites in risk zones. These are regions with water shortages, such as Mexico. The closed-loop circulation or recirculation of cooling and process water mean the need for freshwater and the quantity of wastewater can be reduced considerably. The San José Chiapa (Mexico) Audi site, which can be considered a wastewater-free site due to closed-loop circulation, provides a good example of this.

We manage water-saving processes at all our Group's locations during production in line with Group-wide specifications. In addition, Volkswagen supports the Water Disclosure Project (WDP), which was launched by the Carbon Disclosure Project (CDP), through the transparency of its water management. In 2022, we were given the top grade of A in the WDP ranking for our sustainable water management and are thus back in the leadership index. Given our growing production figures and the integration of new sites, our Group's absolute freshwater use has increased in recent years. From 2010 to 2022, the quantity of freshwater used for the manufacture of passenger cars and light commercial vehicles decreased by 17.4% per vehicle thanks to a wide range of recycling measures and the introduction of manufacturing processes requiring little water. The amount of wastewater produced is in line with the amount of freshwater that we use. Differences in quantities between fresh and wastewater are the result of, for example, evaporation in cooling towers and during the manufacturing process.

**CIRCULAR ECONOMY KPIS**

KPI	Unit	2022	2021	Notes and comments
CO <sub>2</sub> avoided since 2017 through the Aluminum Closed Loop Project	in metric tons of CO <sub>2</sub>	633,881	467,671	The calculation of the CO <sub>2</sub> savings from the Aluminum Closed Loop was updated compared with the prior year because the press shop offcuts were reassessed.
Proportion of freshwater needed at sites in risk zones	in million m <sup>3</sup> /year	15.9	15.8	Passenger cars and light commercial vehicles

# PEOPLE IN THE TRANSFORMATION

The background is a dark red color with a complex, abstract geometric pattern. It consists of numerous white lines and triangles of various sizes and orientations, creating a sense of depth and movement. The lines and triangles are interconnected, forming a network-like structure that resembles a stylized architectural or digital design. The overall effect is a dynamic and modern aesthetic.

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**SOCIAL RESPONSIBILITY FOR A NEW ERA OF SUSTAINABLE MOBILITY**

The automotive industry is in the middle of a far-reaching technological transformation in order to live up to rising societal expectations, international treaties and political regulations which require targeted decarbonization of products and business processes. Shifting from internal combustion engines to electric drives, digitally connecting the car with its environment or autonomous driving do not just lead to corresponding increases in revenues and higher value-added shares in software and electric mobility; digitalization and electrification as drivers of future technological development also increase knowledge intensity in the sector, with a focus on coding, programming and engineering activities. This transition will be completed within a decade. This means the whole automotive world is currently in a transformation corridor, at the end of which the role of automotive manufacturers and their suppliers as employers and the qualifications needed in the industry will be radically different from at the start of this process. With our Group People Strategy, we are setting a course to make this change employee-friendly and socially acceptable.

**HUMAN RESOURCES MANAGEMENT**

The Board Member for Human Resources has overarching responsibility for all social issues. Within Volkswagen AG, they have a direct right to issue instructions in connection with this. Internationally, the members of the brands' and regions' boards of management responsible for HR issues have responsibility and report to the Board Member for Human Resources. The significant management tools in this context include charters that cover employee issues, Group and brand policies, and business regulations at company level. As part of implementing the NEW AUTO Group strategy, targets are defined and worked on at various levels of the Group in the Group People Strategy. A KPI set was established as a tool to measure strategic implementation.

 > Managing the Transformation and Making It Measurable

Firmly established committee structures facilitate the regular flow of information and decision-making.


**Sustainability Principles as the Foundation of HR Work**

Volkswagen is a socially responsible employer, which, as a member of the UN Global Compact, follows international sustainability frameworks and standards in its HR activities, such as the Sustainable Development Goals, the Global Reporting Initiative (GRI) and recognized ESG standards. How we conduct our working relationships is also managed through a number of other charters and declarations that we have agreed with the Group European Works Council and Global Group Works Council. These give our employees security with regard to their collective rights at the workplace and set out

the principles of the Volkswagen Group's labor policy. Together with the codetermination committees or the employee representatives, we implement these agreements at the respective sites.

The relevant HR frameworks include:

- The Declaration by the Volkswagen Group on Social Rights, Industrial Relations and Business and Human Rights (Social Charter). Here, we commit to paying all employees the legally required national minimum wage that is to be guaranteed, to protecting the right to privacy, personal safety and freedom of opinion, to the rights of indigenous peoples and to preventing cruel, inhuman or degrading treatment. The Social Charter is geared to the conventions of the International Labour Organization (ILO). The scope of the charter extends to Volkswagen AG and the Volkswagen Group's controlled companies. The principles of the Social Charter were also integrated as a component of the sustainability requirements in the supply chain and in the Volkswagen Code of Conduct for Business Partners.

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Sustainability > Strategy, Policy & Engagement > Policy > Declaration on Social Rights

- The Charter on Labour 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.
- The Charter on Vocational Education and Training, in which professional training is anchored as a central part of the Charter on Labour Relations.

**SOCIAL CHARTER**

The Social Charter provides a binding basis for the Volkswagen Group's social and industrial relations. It is geared to the conventions of the ILO and applies to Volkswagen AG and the Volkswagen Group's controlled companies.

In addition, there are a number of locally applicable agreements with the relevant responsible trade unions that stipulate, for example, standards for further training and for preventive healthcare measures. These fundamental standards and agreements underpin the

rights of employees and their elected representatives at Group level in the Group European Works Council and the Global Group Works Council. 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.

**Employee Rights to Participation**

We want to enable the most comprehensive representation of employee interests possible in our Group. When establishing cooperative labor relations marked by social harmony, we are guided by universally valid human rights and the standards of the ILO. Volkswagen is committed to global compliance with freedom of association and recognizes the basic right of all employees to form trade unions and workers' representations. Employees' right to negative freedom of association is also respected. The recognition of the right of all employees to form trade unions and workers' representations also includes the value chain and represents a key component of the Social Charter. Due to different political and legal conditions, it is not possible to implement the OECD and ILO standards at all Group's production sites around the world to the same extent as in the European Union. Freedom of association is realized in compliance with the laws applicable in the various countries and locations. A particular challenge therefore arises in states that have not signed the ILO Convention on Freedom of Association and Protection of the Right to Organize.

Our aim is to bridge the tension between the different national conditions and the interest in the greatest possible achievement of the right to organize. The Volkswagen Group relies here on a long tradition of also organizing company labor relations in countries in which the ILO Convention on Freedom of Association and Protection of the Right to Organize has not been recognized. Concrete examples include Volkswagen do Brasil Indústria de Veículos Automotores Ltda., ŠKODA AUTO Volkswagen India Private Limited and Ducati Motor (Thailand) Co., Ltd., where we pursue a participation approach that goes well beyond the legal framework.


Cases of discrimination due to membership of a trade union can be reported in the Volkswagen Group's whistleblower system. These cases have, to date, not been recorded as separate statistics as the recording of discrimination incidents does not differentiate between the causes of the discrimination.

**Cooperative Organization of Labor Relations at Brands and Companies**

We cooperate with the relevant trade unions all over the world. Many companies in the Group also have a supervisory board on which the workforce is represented. In this way, Volkswagen's Commercial Vehicle division, with the holding company TRATON SE and its subsidiaries MAN, Scania, Navistar and Volkswagen Truck & Bus, enables far-reaching participation of employee representatives.

The TRATON SE Works Council can, for example, exercise extensive rights of information and consultation within the framework of a participation agreement between the board of management and employee representatives. The agreement also regulates the equal representation of employee representatives in the highest body of TRATON SE – the supervisory board. Scania also has a European works council with participation rights, the SEC (Scania European Committee). In addition, Scania has introduced a global corporate policy that regulates minimum standards such as working hours, weekly rest periods, vacation time and sick leave for its employees. Moreover, the Swedish truck brand is an active partner of the Global Deal platform, a multi-stakeholder initiative for social dialog and partnership between governments, companies, employers' associations and trade unions.

The Volkswagen Group is aware that ESG-related controversies – including with regard to the protection of employee rights – are becoming increasingly important in investors' decisions. To make how we deal with current and ongoing controversies transparent, the Group has provided its own information online.

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Investor Relations > Corporate Governance > ESG Controversies

**SOCIALLY RESPONSIBLE TRANSFORMATION**

Our aim at Volkswagen is a successful and socially responsible transformation of the workforce into the new era of sustainable mobility. We want to continue to employ the most highly qualified employees possible in attractive, promising professional fields, to pay them competitive salaries, and to provide secure jobs.

The transformation of the automotive industry, which is driven by digitalization and electrification, has a significant impact on our production strategy – and thus on the qualifications needed and the composition of the workforce. Since 2020, we have been converting more and more vehicle and component plants: from the production of vehicles with combustion engines to the production of e-vehicles. Examples of this include the ongoing processes of retooling the plants in Emden, Salzgitter and Hanover and in Chattanooga, USA. Electric cars are now being built at 14 Volkswagen Group sites. Although their production is less complex compared with cars with internal combustion engines, new fields of employment for highly qualified workers are emerging as a result of new digital functionalities in the vehicle. Overall, the current structure of Volkswagen's workforce does not yet reflect the expected changes; for example, around half of employees continue to work in manual jobs in production. One core endeavor of our HR strategy is therefore to train employees from traditional areas of production in the areas of work required along our NEW AUTO Group strategy. It is also to be expected that the further implementation of the NEW AUTO Group strategy and the transformation into a software-driven business

could lead to asynchronicity in human capital development, for which it is vital to prepare. For example, a surplus of staff may arise in traditional areas, while a shortage is probable on talent markets for tech professions, where businesses such as Volkswagen will have to compete with IT businesses.

As a result, the Volkswagen Group workforce is facing a process of simultaneous recruitment, job cuts and restructuring. This transformation will only be successful if we involve our employees, train them, prepare them for the forthcoming changes as well as possible, give them a clear perspective and allow them to participate. We also need to preserve our employees' performance and motivation in this modernization process as well as seek to efficiently manage labor costs in order to stay competitive.

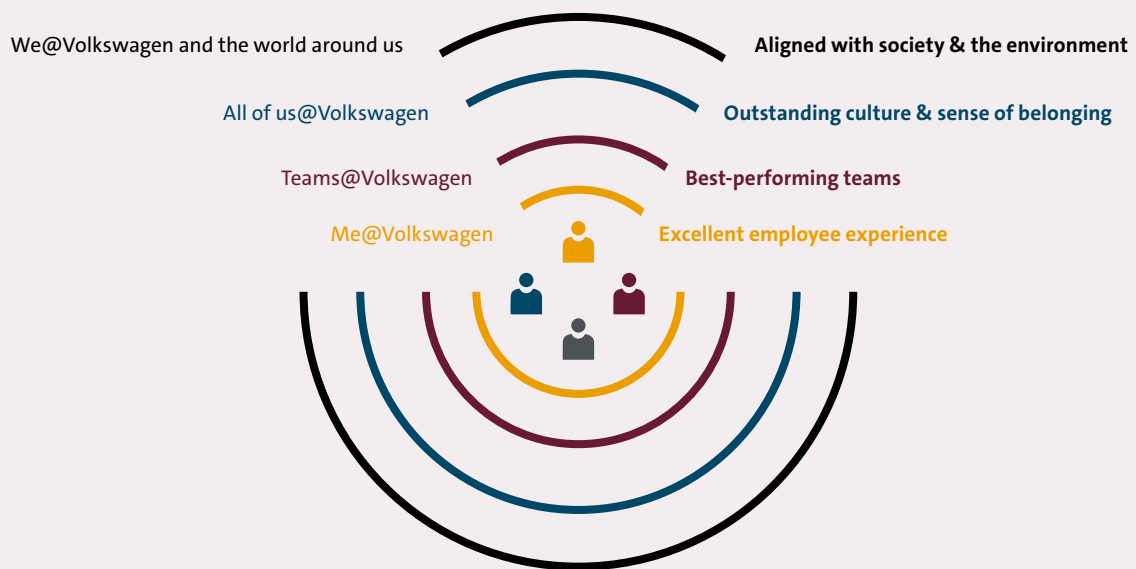
### TRANSFORMATION IN HUMAN RESOURCES AS A FOCUS TOPIC OF THE GROUP STRATEGY

The responsibility for "people in the transformation" is at the core of our current and future activities in human resources. However, this responsibility extends beyond this: For the Volkswagen Group,

the transformation of the workforce as part of its NEW AUTO Group strategy is defined as one of the central focus topics. We have also embedded the topic in our Group-wide People & Transformation initiative. The Group People Strategy, which was adopted by the Group Board of Management in 2021 and is entitled "Transform to Tech," plays a key role for our three brand groups. The Volkswagen Group also continued with key, successful approaches in its Human Resources policy in the reporting year. These include the pronounced stakeholder focus in corporate governance, comprehensive participation rights for employees, forward-looking training opportunities, the principle of long-term service through systematic employee retention and remuneration that is fair and transparent.

At the same time, the Group People Strategy is setting innovative trends: The employee experience is being systematically improved; teams, as the most important units in the Company's organization, are being strengthened, and modern forms of working such as agile working are set to be expanded. In this way, we want to increase our employer attractiveness and raise our organization's performance.

#### OUR APPROACH: FOUR DIMENSIONS OF THE "TRANSFORM TO TECH" GROUP PEOPLE STRATEGY



In our Group People Strategy we have identified different dimensions with the aim of addressing employees' needs and expectations in a holistic manner. Together, these four dimensions make up the work experience, job satisfaction and, ultimately, the success of the work and the Group's integration into society.

- Me@Volkswagen
- Teams@Volkswagen
- All of us@Volkswagen
- We@Volkswagen and the world around us

Through our initiatives and programs in these four dimensions, we are targeting an improvement in the individual and group-related work situations at Volkswagen and also taking the Volkswagen Group's cultural cohesion and social legitimacy into consideration.

### 1. INITIATIVES IN THE ME@VOLKSWAGEN DIMENSION

We want to systematically improve the employee experience and are striving to ensure that all employees have the best possible conditions in which to do their job. That starts with excellent equipment and tools, continues via the avoidance of red tape and overly complex process steps through state-of-the-art workspaces, 360-degree feedback opportunities, individual health coaching and personally tailored advanced training opportunities.

#### Transformation-Oriented Human Capital Development

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. That is why training our employees and adjustment to new work and career profiles is a key action area in the workforce transformation. The electrification of the vehicle fleet, the transition towards connected, autonomous driving and the digital transformation of our Group mean that employees currently need very different qualifications. We handle these changes through our comprehensive vocational and advanced training system with individual training measures.

In the current upheaval of the automotive industry, the Volkswagen Group's particular training focus is on training employees on important future technologies and closely supporting them in the transformation process. For example, Volkswagen specifically added courses on the topic of e-mobility to its professional training program at the site in Chattanooga, USA, with the aid of the Volkswagen Group Academy. It largely comprises the two program lines high-voltage qualification and automation qualification, which have had more than 3,000 participants since their launch. From the middle of the reporting year, the program was transferred to the regular training structures.

Dual vocational training at the Volkswagen Group supports the workforce transformation. With its flexible combination of practical activities and theoretical knowledge, vocational training prepares our young professionals for the forthcoming challenges. On an international level, we are guided by the high German training standards. In 2022, the Volkswagen Group trained 16,590 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 particular, we are broadening the knowledge base for the digital transformation in the Group with the Faculty 73 program. We train software developers here for our own needs. The two-year training program is designed for employees and external applicants with an affinity for IT. The future experts acquire all the necessary skills for a successful career as a software developer in the automotive industry within the training. Since Faculty 73 was introduced (in 2019), 186 junior software developers have already successfully completed this training program. The people who have completed the program are primarily employed in the Group and brand IT departments and the Technical Development and CARIAD departments. In December 2022, a fourth year of trainees began this innovative transformation program – the largest group to date with 200 colleagues.

Volkswagen AG, CARIAD and Skoda supported the establishment and operation of innovative programming schools in Wolfsburg, Berlin and Prague in cooperation with the non-profit École 42. In the reporting period, Volkswagen made donations amounting to €3 million. To date, more than 400 students have been admitted to learn from and with each other in accordance with an innovative training concept. Like at École 42 in Paris, the free training is also open to applicants who have not graduated high school or college, irrespective of their age, sex or origin.

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.

Degreed, the innovative learning platform that we have established, will open up a wide range of further training opportunities for our employees. The platform creates a simple, individual learning experience and will be progressively rolled out in the Group. Degreed is aimed at supporting the results of strategic HR planning with appropriate training programs. Another focus is developing important skills – for example, in areas such as data analytics, software development, leadership, machine learning and artificial intelligence. The “Individual career orientation” (ICO) module offers all Volkswagen AG employees the opportunity to reflect on career goals, interests and

personal skills and compare these with the development opportunities in the Group. Various methods of self-reflection or assessment by others, practical exercises, literature recommendations and podcasts are also offered in a toolkit.

In our extensive training measures, we set store by an overarching system and uniform standards. This also applies to the leadership and management programs we currently use, which are summarized in the following overview.

Program	Participating brands and companies <sup>1</sup>	Target audience
<b>Foreman base training (FBT)</b> The FBT teaches the basic skills necessary for performing the work of a foreman. The participants optimize the management of their own foremanship, are strengthened in their foreman role and expand their leadership skills. They experience their own behavior in real management situations and learn to reflect on themselves even better.	VW AG, MAN Truck & Bus	Foreman
<b>Manager base training (MBT)</b> In the MBT, participants get to know the relevant management tools and successfully use them situationally within Volkswagen AG's value system. The MBT also includes content on reflection on your own management style.	VW AG	Subsection manager
<b>Management development program</b> The management development program for prospective managers focuses on diversity, business management and personal responsibility. Two new modules train prospective managers on agility in management and on day-to-day management.	VW AG, CARIAD	Management candidates
<b>Senior management program</b> The Group-wide senior management program provides experienced managers with knowledge from research and practice with focuses on customer focus, innovation and leadership, supplemented by learning content including design thinking methods, tools such as Triple Impact and Lean Canvas, and decision biases.	VW AG, VW Commercial Vehicles, AUDI AG, Porsche AG, Bentley Motors, CARIAD, ŠKODA	Newly appointed members of senior management
<b>Group training catalog</b> A decentralized catalog of training and qualifications that have been conceptually designed by the individual brands and can be used by other brands. For example, the Group Leadership Academy provides seminars that support and inspire management in the transformation of the Group with the Group Training Catalog for Leadership and Transformation. For example, the “Building a sustainable organization. Together.” training teaches how sustainability can be factored into operational management decisions.	Audi, Porsche, Bentley, CARIAD, SEAT, MAN, Scania, TRATON SE, VW AG, VW Commercial Vehicles	Management, senior management, top management
<b>Transform Leadership 2030 program</b> The Transform Leadership 2030 program provides the opportunity to explore all the aspects of the transformation in dialog with experts and members of the Board of Management in eight core modules and, in particular, to deepen technology-specific knowledge.	VW AG and guests from other brands and companies	Management, senior management, top management

<sup>1</sup> To improve readability, subsidiaries and microenterprises have not been mentioned.

**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. That is why we conduct the Opinion Survey each year. In this employee survey, in which 159 companies of the Group took part in 2022, we measure the status of our internal employer attractiveness with a targeted question. 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 help us 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. The Opinion Survey's Group team supports them in this with various tools – such as a method toolbox.



The regular communication with managers on the measures derived and their implementation status takes place using 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.

In 2022, the survey covered 159 companies in 49 countries. Of the 614,142 employees in the companies surveyed, 475,778 participated. This is equivalent to a response rate of 77%. The employee satisfaction index, which is calculated from 22 questions, is the principal indicator of the Opinion Survey. It is calculated from the total of all the related answers in the survey and, in 2022, stood at 82.4 out of a possible total of 100 index points in the Volkswagen Group (2021: 82.3 index points) and at 76.2 index points in Volkswagen AG (2021: 76.2 index points). The result of the employee satisfaction index influences the level of the annual bonus as part of the variable remuneration for the Board of Management.

**In 2022, the score on the employee satisfaction index in the Volkswagen Group was**  
**82.4 out of 100**  
**possible index points and thus slightly above the score in the previous year.**

**Successfully Contributing Their Own Ideas**

Through their creativity, knowledge and initiative, employees take on responsibility for improving processes and products and ultimately help us to achieve our sustainability goals. In 2022, 13,953 ideas were submitted as part of idea management, and savings of around €38 million were achieved at Volkswagen AG's sites.

In addition, Volkswagen AG supports the development of business ideas fit for the future with its own separate innovation fund. The associated "intrapreneurship" program offers employees the opportunity to implement their own business ideas at Volkswagen and expand the existing portfolio of services and products. It consists of an incubator phase for developing a business plan and an accelerator phase for constructing prototypes and customer tests. Under an agreement between IG Metall and Volkswagen AG, the Group makes €20 million available to the fund each year for projects in new areas of business.

**2. INITIATIVES IN THE TEAMS@VOLKSWAGEN DIMENSION**

High-performance teams in the Volkswagen Group are groups that trust each other, have a common goal and can rely on each other, yet also discuss matters critically and speak their minds. As our transformation takes shape, the way in which teams in the Volkswagen Group collaborate is fundamentally changing. Hybrid digital forms of collaboration are becoming more important. They require modern office environments that simplify collaborative, flexible work. The same applies to opportunities for digital collaboration – an aspect that the Covid-19 pandemic has reinforced.


**Transition to Hybrid Work Formats**

Hybrid working – a combination of remote working and working on-site – gives employees greater flexibility in terms of when and where they work and is increasingly becoming the norm for the Volkswagen Group. In the reporting period, we again refined and expanded virtual and hybrid communication and collaboration, as well as new formats of knowledge transfer and training. Major topics included:

- Drafting and expanding the company agreements on remote working at AUDI AG and Volkswagen AG
- Maintaining mental health and strengthening the management culture and culture of trust (Culture and Change Factory) in light of the changing world of work

In addition, we continued developing the Guide for Digital and Hybrid Collaboration, which is intended to provide guidance on successful communication and organization for employees, managers and teams. We also continued working on the Office 2025 initiative, which is to be used to advance the modernization of the office and working environment within Volkswagen AG. Office 2025 pursues a holistic perspective and takes the categories of people, space and technology into consideration. In addition we promote the modernization of digital infrastructure, opportunities for collaboration and social spaces within Volkswagen AG's production areas through the modernization fund, which distributes an average of €25 million per year at the request of the plants and departments. The size of the fund is €125 million over a term of five years.

The flexibility that new forms of working bring has a positive impact on work/life balance. Information on strategies, measures and programs on this topic is summarized in the chapter on the focus topic of diversity.

 > Diversity

**Promoting Agility and Cultural Change**

The Volkswagen Group attaches particular importance to its employees being able to act with agility and entrepreneurial drive. Together with 30 publicly traded large companies from Germany, Austria and Switzerland, we developed a skills matrix for training and professional development in the area of agile business processes under the umbrella of the DACH30 initiative. In the course of this, the Volkswagen Group Academy established a training portfolio on agility.

In order to actively support divisions, departments and project teams with implementing strategic realignments, the Culture & Change Factory was founded at Volkswagen in 2021. This area, which is under the umbrella of the Group Academy, supports and steers various transformation projects with around 40 experts. The team's expertise includes change management, culture change, agile training, coaching, process design and continuing training.

**3. INITIATIVES IN THE ALL OF US@VOLKSWAGEN DIMENSION**

The Volkswagen Group Essentials define the shared underlying values across all of the Group's brands and companies. 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 want our corporate culture to create a feeling of belonging for our workforce – a feeling that increases in importance in particular in times of change and in an environment that is becoming increasingly diverse. We see fair remuneration as an important part of our self-image. It is intended to motivate and express our appreciation for the performance of each individual. And last but not least, we need to empower our leaders to contribute to a successful transformation and act as role models.

**Leading by Example As a Manager**

Role models motivate, give people courage for change and create trust. These are key factors for successfully working together. The role model program supports managers in strengthening these factors. Concise catalogs give managers suggestions and instructions for different activities that can be implemented easily and without any additional budget. The binding framework with minimum requirements for managers supports implementation of this program to improve the corporate culture.

**Social Compatibility of the Transformation in Focus**

Collective job security agreements play an important role in the transformation. In Volkswagen AG in Germany, the job security applies until 2029 as a result of the Digital Transformation Roadmap, which underlines our appreciation for industrial work.

We also strive to act in a socially responsible way anywhere we have to cut jobs for economic reasons. For example, as it did many other companies, the coronavirus pandemic also challenged Volkswagen do Brasil to reduce fixed costs. Volkswagen do Brasil, metalworker trade unions and employee representatives of all four plants came together to negotiate a restructuring agreement. In addition to cost-cutting, it was also a matter of applying flexibility measures and adjusting the headcount through a program of voluntary resignations.

At MAN Truck & Bus SE, partial retirement contracts, termination agreements, a change of Group and the establishment of a transfer company were used as tools for the socially responsible headcount reduction that was also necessary there. The basis for this was the negotiation of a joint key issues paper between the company's management and the employee representatives. The corresponding rules and programs that were implemented in 2021 continue to apply until 2023.

We provide the HR answers to various challenges at a national or international level with future-proofing programs that we have concluded as part of codetermination. 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 cutting-edge areas of work.

**Fair and Transparent Pay**

A fair and transparent pay system and payment of fair remuneration make a significant contribution to employees' work satisfaction. In accordance with our 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. As they are collectively agreed with trade unions, our rates of pay are usually higher than the prevailing minimum levels. Our employees are generally selected, hired and promoted on the basis of their qualifications, experience and abilities. Individual pay is generally based on the job performed.

Employees of Group companies enjoy further Company benefits. Depending on location, these may include subsidized transport and meals, employee terms at cooperation partners and discounts on certain leisure activities. Additional healthcare or supplementary pension benefits may round off the range of company benefits at specific sites. By offering occupational pension schemes, Volkswagen AG and many of its brands and subsidiaries make an important contribution towards securing their employees' income in old age. Employee participation in the Company's success in the form of an employee share program – such as a stock option plan – is not currently offered.

#### 4. INITIATIVES IN THE WE@VOLKSWAGEN AND THE WORLD AROUND US DIMENSION

The Volkswagen Group employs more than 675,805 people, of whom more than 116,677 at Volkswagen AG. We work in 35 countries in Europe and 37 countries in North and South America, Asia, Australia and Africa and operate 119 production sites around the world. In all these places, we assume responsibility for the employees and their families, but also for social and economic development around our sites.


We are aware that without long-term social legitimacy at our locations and in our markets, we will not be able to continue our business model in times of accelerated changes in values – this applies from an economic, environmental and social perspective. We see our employees as representatives of the Volkswagen Group who communicate our values to society. Together with them, we also assume responsibility above and beyond our core business – such as through foundation work and corporate volunteering. The topics of our social engagement activities range from education, diversity, a culture of remembrance, culture, climate and environmental protection through various site commitments. More information on this is available in the Corporate Citizenship chapter.

 > Corporate Citizenship

#### MANAGING THE TRANSFORMATION AND MAKING IT MEASURABLE

The transformation means that we are on a long-term path of change and renewal. It is important to us to keep checking whether we are keeping to the course we have set out on and are achieving our goals. The Group People Strategy's strategic KPIs help us to measure our progress and take countermeasures where necessary:

- **Internal Employer Attractiveness:** The indicator is derived by asking respondents as part of the Opinion Survey, which is conducted for the majority of our Group workforce, whether they perceive their respective company as an attractive employer. The Volkswagen Group's target for 2025 is 89.1 out of a possible total of 100 index points. 86.6 index points were achieved in the reporting year, i.e., the intermediate target for 2022 of 88.7 index points was missed. 86.8 points were achieved in the previous year. For Volkswagen AG, the value for 2022 was 87.1 index points (2021: 87.7 points).
- **Diversity Index:** As part of our Group-wide diversity management, in this strategic indicator we report on the trends in the proportion of women in management and the internationalization of top management, in each case as a percentage of the active workforce<sup>1</sup> globally. In particular, this indicator underpins the objective of the human resources strategy, which is aimed at contributing to an exemplary leadership and corporate culture.

 > Diversity

- **Strategic HR Planning Implementation Status:** Strategic HR planning supplements operational HR planning by adding a qualitative, long-term and strategic planning perspective. It allows us to identify qualitative and quantitative surpluses and shortfalls in the business units at an early stage and derives necessary qualification, training and restructuring requirements, the implementation of which helps to support the transformation. To map progress in strategic HR planning, we will measure the percentage of the workforce taken into account in the strategic HR planning from 2023.
- **Number of Training Hours per Employee:** Due to the transformation in the automotive industry, we are facing the biggest process of change in expertise and cultural change in the history of the Group. As a result, individual opportunities for change for employees are becoming an enhancing important success factor. Volkswagen is increasing access to training by leveraging economies of scale in connection with digitalization and through the Degreed platform. The goal is to increase the average number of training hours per employee in the Volkswagen Group – based on the active workforce<sup>1</sup> – by 35% to 30.0 hours per year by 2030. The baseline value is 22.3 hours and represents the average for the years 2015 to 2019. The years 2015–2019 were chosen as the baseline due to the outbreak of the Covid-19 pandemic, which temporarily curtailed training activities in 2020 and 2021. The target for the reporting year was 22.0 hours. An average of 19.9 hours per employee meant it was not achieved.

<sup>1</sup> Definition of active workforce: total workforce not including trainees or employees in the passive phase of semi-retirement. In addition, when compiling the data for the diversity index and within the framework of the German Act on the Equal Participation of Women and Men in Leadership Positions (*Gesetz zur gleichberechtigten Teilhabe von Frauen und Männern an Führungspositionen*), an adjustment is made for employees in the withdrawal phase of the Time Asset scheme (Time Asset scheme: time credits from deferred compensation).

## PREVENTIVE HEALTH AND OCCUPATIONAL SAFETY

Particularly in the transformation, ensuring a safe and healthy working environment is a significant component of sustainable corporate governance and an important building block of employer attractiveness. In the area of health, sustainability means for us that we want to help all employees to retire healthy. This long-term approach also helps our Group to cope with demographic change, which is now typical of many industrial countries.

## MANAGEMENT AT GROUP LEVEL

Health care is managed at Group level by the Head of Group Occupational Health and Safety, who is also Volkswagen AG's senior physician. They report directly to the Board Member for Human Resources, reporting to the latter on the topics of health and occupational safety. The Group Steering Committee for Health and the Group Steering Committee for Occupational Safety make decisions on strategic direction and coordinate topics of fundamental importance across brands. In addition, the steering committees initiate projects, ensure that expert knowledge is made transparent, and leverage synergies in health care and occupational safety. Compliance with legal requirements, the identification and assessment of work-related risks, the derivation of measures and checking effectiveness form the basis for successful occupational health and safety and thus make a positive contribution to keeping employees healthy as part of society.

The spread of the coronavirus SARS-CoV-2 underscores the great importance of effective occupational health protection to protect employees and reduce the risk of process disruptions and production stoppages.

## STRATEGIC DIRECTION

### Guidelines and Policies Regulate Occupational Health and Safety

A Group policy regulates the responsibility for occupational health and safety uniformly for all the Group's brands and companies. The Occupational Health and Safety Policy was revised in 2022. By doing this, the Volkswagen Group's Board of Management underscored the importance of occupational health and safety while complying with national and international regulations. Our aim here is to ensure the protection and promotion of physical and mental health, taking into account psychosocial risks and their effects. We believe in providing employees with health care that is above the standard set by law in the country in question.

At Volkswagen AG, the maintenance, promotion and restoration of our employees' mental health are defined premises of our strategic focus and are anchored not only in the internal "Health 2025+" agenda of the Volkswagen Health department but also in the "Mental Health" position paper and in the Volkswagen Group's Occupational Health and Safety Policy.

### Safety First Strategy

Sustainable occupational safety means for us that employees do not suffer accidents when working. Volkswagen is supporting this objective through the Safety First strategy. The vision of this strategy is to anchor "safety first" as a guiding principle in the actions of all managers and employees. All occupational safety processes are to be known and to be applied reliably. Workplaces are to be safe and the Occupational Safety department is to be involved in shaping them. All managers and employees are to be informed and trained and act in line with safety requirements. At Group level, occupational health and safety form part of the Code of Conduct, on which the Group's employees are trained regularly. At Volkswagen AG, compulsory web-based training on occupational health and safety was rolled out for managers in the reporting year. The Safety First strategy requires all Volkswagen Group production sites to comply with the standards of ISO 45001 occupational health and safety management systems.

## PREVENTIVE MEASURES

The implementation of the Safety First strategy is followed up in the Group Steering Committee for Occupational Safety by means of reports on progress and measures taken by the brands and companies, and an exchange of experiences supported. In the area of health, in addition to meeting statutory requirements, the Volkswagen Group focuses to a large extent on preventive approaches. For example, employees are offered regular checkups. As part of the discussion of the checkup findings, employees are offered customized healthcare services based on current scientific knowledge. However, the pandemic meant it was only possible to maintain these services to a restricted degree in the reporting year. To further improve the services, employee feedback on the checkup and the practical experiences of employees in the Health department are continuously incorporated and a Checkup 2.0 project team was established in the reporting year.

**MEASURING EFFECTIVENESS**

To evaluate the Group companies' current performance in occupational health and safety, in the reporting year the Volkswagen Group conducted a risk analysis based on self assessments at the level of the companies. For example, we were able to identify improvement potential and introduce measures to reduce sustainability-related risks. The content of the risk analysis focused on the topics of external certification, organization, safety standards for workplaces, work equipment, workstations and protective measures, training and instruction, and emergency planning. The implementation of requirements and compliance with standards is audited in a risk-based Group audit program on occupational health and safety. Two Group audits were conducted in the 2022 reporting year.

**At the end of 2022, a total of**

**61**

**Volkswagen Group sites were certified in accordance with ISO 45001.**

Collecting key figures is a core element for assessing the effectiveness of our measures. At the end of 2022, a total of 61 (2021: 48) Group sites were certified in accordance with ISO 45001. This corresponds to coverage of 27% of the Volkswagen Group's employees. In addition to the number of ISO 45001 certificates and their level of coverage, the Volkswagen Group uses the accident frequency for employees, excluding temporary agency workers, as a key performance indicator for reporting.

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. In 2022, the accident frequency was 3.7 (2021: 3.7), and in Volkswagen AG it was 6.3 (2021: 6.8). The Group uses a Group process standard 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, measures can be taken to prevent similar accidents across all our sites in the future. The Volkswagen Group recorded one fatal accident involving our own employees in the reporting year.

In fiscal year 2022, the Health department carried out 548 initial and 2,398 subsequent checkups in Volkswagen AG. Since the introduction of the service in 2010, a total of 84,799 Volkswagen checkups have been completed (active workforce).

**PEOPLE IN THE TRANSFORMATION KPIS**

KPI	Unit	2022	2021	Notes and comments
<b>Number of countries in which the Volkswagen Group is active by continent</b>				
Europe	number	35	35	
North and South America, Africa, Asia, Australia	number	37	37	
<b>Production facilities worldwide</b>	<b>number</b>	<b>119</b>	<b>120</b>	
of which Volkswagen AG production facilities	number	6	6	
<b>Number of employees in the Volkswagen Group by continent</b>				
Europe	number	490,777	492,559	
The Americas	number	73,236	71,192	
Africa	number	5,702	5,842	
Asia	number	104,574	101,726	
Australia	number	1,516	1,470	
<b>Total workforce (of which Volkswagen AG)</b>	<b>number</b>	<b>675,805 (116,677)</b>	<b>672,789 (117,633)</b>	
<b>Number of employees in the Volkswagen Group by type of work</b>				
Fixed-term employees	number	25,536		– Recorded in the Sustainability Report for the first time in the 2022 reporting year
Permanent employees	number	650,269		– Recorded in the Sustainability Report for the first time in the 2022 reporting year
Temporary agency workers	number	26,171		– Recorded in the Sustainability Report for the first time in the 2022 reporting year
Apprentices	number	16,590	17,151	
in Volkswagen AG	number	4,452		– Recorded in the Sustainability Report for the first time in the 2022 reporting year
<b>Employee age structure in the Volkswagen Group</b>				
		<b>Women/ men</b>	<b>Women/ men</b>	
< 20 years old	in %	0.3/1.2	0.3/1.3	
20–29 years old	in %	3.4/12.2	3.4/13.0	
30–39 years old	in %	5.6/25.0	5.5/24.9	
40–49 years old	in %	4.7/21.1	4.7/21.0	
50–59 years old	in %	3.4/17.8	3.3/17.6	
> 60 years old	in %	0.7/4.6	0.7/4.4	
<b>Proportion of women in the Volkswagen Group</b>				
Total management	in %	16.8	15.9	
Total apprentices	in %	20.3	20.1	Excluding Scania and Navistar
Volkswagen Group, total	in %	18.1	17.9	

KPI	Unit	2022	2021	Notes and comments
<b>Proportion of women in Volkswagen AG</b>				
Total management	in %	15.9	14.7	
Total apprentices	in %	25.0		– Recorded in the Sustainability Report for the first time in the 2022 reporting year
Volkswagen AG, total	in %	18.3	17.9	
<b>Staff turnover at Volkswagen AG</b>				
Women	in %	0.5	0.5	
Men	in %	0.6	0.5	
<b>Opinion Survey</b>				
Participating companies	number	159	165	
Participating countries	number	49	40	
Eligible employees	number	614,142	596,905	
Participating employees	number	475,778	466,021	
Percentage of participating employees	in %	77	78	
Internal employer attractiveness	index score	86.6	86.8	
Internal employer attractiveness in Volkswagen AG	index score	87.1	87.7	
Employee satisfaction index	index score	82.4	82.3	
Employee satisfaction index in Volkswagen AG	index score	76.2	76.2	
<b>Idea management at Volkswagen AG</b>				
Ideas submitted	number	13,953	12,631	
Savings	in € million	38.0	37.6	
<b>Training<sup>1</sup></b>				
<b>in the Volkswagen Group</b>				
Training hours per employee	average number of hours	19.9	20.9	
Time	million hours	12.8	13.9	
Training costs	in € million	398.6		– Recorded in the Sustainability Report for the first time in the 2022 reporting year
Training costs per employee	average cost in €	619.4		– Recorded in the Sustainability Report for the first time in the 2022 reporting year

<sup>1</sup> Change in methodology: Figure from 2022 relates to the active workforce. Figure for 2021 relates to the entire workforce. Definition of active workforce: total workforce not including trainees or employees in the passive phase of semi-retirement.

KPI	Unit	2022	2021	Notes and comments
<b>in Volkswagen AG</b>				
Training hours per employee	average number of hours	10.6	9.9	
Time	million hours	1.1	1.2	
Training costs	in € million	91.1		– Recorded in the Sustainability Report for the first time in the 2022 reporting year
Training costs per employee	average cost in €	861.9		– Recorded in the Sustainability Report for the first time in the 2022 reporting year
<b>Preventive health and occupational safety<sup>2</sup></b>				
Initial checkups by the Health department	number	548	10	
Subsequent checkups by the Health department	number	2,398	38	
Total Volkswagen AG checkups since 2010	number	84,799	86,027	
Volkswagen Group sites certified in accordance with ISO 45001	number	61	48	
Proportion of these in terms of number of employees	in %	27	29	
Volkswagen AG sites certified in accordance with ISO 45001	number	2		– Certification for the six Volkswagen AG sites is scheduled to be achieved by 2024.
Proportion of these in terms of number of employees	in %	19.8		– Recorded in the Sustainability Report for the first time in the 2022 reporting year
<b>Accidents reported<sup>2</sup></b>				Temporary agency workers and internal commuting accidents not included in the KPI. Absence days are included through December 31 of the respective fiscal year.
Index of accident frequency in the Volkswagen Group	value	3.7	3.7	
Index of accident frequency in Volkswagen AG	value	6.3	6.8	

<sup>2</sup> Scope: The following sites are not included in the Group assessment in the reporting year: the four Scania Service Centers (Johannesburg, Narasapura, Kuala Lumpur, Taoyuan City); two MAN Truck & Bus sites (Serendah, St. Petersburg); one site in China (Suzhou), two other sites still currently under construction in China (a vehicle plant in Changchun and another component plant in Hefei with planned production start in 2023/2024); and the six Navistar sites.



# DIVERSITY



**CRUCIAL IMPORTANCE OF DIVERSITY AND INCLUSION**

Especially during the transformation, our HR policy's core tasks include creating a working environment in which talent of any age or gender, irrespective of origin and cultural background, can optimally contribute skills and viewpoints. 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. Diversity, respect, tolerance and equality of opportunity are critical success factors for an open corporate culture. It increases employee motivation and performance as well as our customers' satisfaction.

**DIVERSITY MANAGEMENT ESTABLISHED ACROSS THE GROUP**

Group diversity management is directly assigned to the member of the Volkswagen Group Board of Management with responsibility for Human Resources and reports to this individual. More than 85 diversity managers are working on the topic in the Volkswagen Group. They meet at an annual diversity convention to promote the sharing of best practices and to discuss the implementation of programs and action.

**INTEGRATION INTO GROUP STRATEGY**

Diversity was defined as a focus topic for sustainability as part of the NEW AUTO Group strategy and Group initiative 6, which was derived from it. We have enshrined the topic of diversity and equal opportunities in the HR Compliance Group policy. The particular importance of this action area is further underpinned in the Volkswagen Group by the fact that the diversity index as a strategic KPI has acquired direct remuneration relevance at Group Board of Management level.

We have also set out the aim of diverse workforces in key documents. The declaration "We live diversity" as one of the seven Group Essentials is thus a firm part of the Volkswagen Group's cultural DNA. Our understanding of diversity extends beyond gender equality, sexual orientation and internationality. For example, we also focus on the inclusion and integration of employees with disabilities.

**Stakeholder Engagement through the Diversity Panel and Diversity Charter**

The Volkswagen Group created an advisory committee in the form of the Diversity Panel in 2021. The panel includes experts from civil society, business and academia but also high-ranking managers from various areas of the Group. The aim is to raise awareness of discriminatory content and conduct and enhance in-house skills to systematically counteract everyday discrimination and racism. The panel met twice in the reporting year and issued concrete recommendations for action regarding organization, processes and activities in the Group.

The Volkswagen Group has also underscored its commitment to diversity in Germany by its signature of and financial support for the Diversity Charter initiative and through Chefsache – a network of managers from business, academia, the public sector and the media for promoting equal opportunities for women and men.

**Antidiscrimination**

We at Volkswagen strongly reject discrimination. This is because we stand for respect, for equal opportunities, for working together and for equal treatment of people, irrespective of their ethnicity, race, gender, disability, ideology, religion, 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 and we sanction any breaches of the rules set out in it. Under the code, every employee and manager is responsible for ensuring that colleagues work together in partnership and for taking action if rules are breached. We also keep central statistics on this: In 2022, 14 Volkswagen Group employees were dismissed due to breaches in the area of discrimination, harassment or stalking.<sup>1</sup>

**TARGETS FOR MORE DIVERSITY**

**More Diversity in the Volkswagen Group's Management**

We not only want to establish processes geared to equal opportunities but also aim to set targets for measures and programs at all levels of management. 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 Group People Strategy and data are collected for the whole Volkswagen Group with its active workforce.<sup>2</sup> With this index, we manage measures and assess the extent to which they have been implemented.

**DIVERSITY INDEX**  
 The diversity index tracks the changes in the proportion of women in management and the internationalization of top management, in each case as a percentage of the active workforce<sup>2</sup> globally.

The proportion of women in management positions – comprising line management, senior management and top management (including members of the Group Board of Management) – was 17.2% in 2022, which is significantly above the previous year's level. We aim to raise this figure to 20.2% by 2025.

<sup>1</sup> Basis: 110 companies, each with more than 500 employees.

<sup>2</sup> Definition of active workforce: total workforce not including trainees or employees in the passive phase of semi-retirement. In addition, when compiling the data for the diversity index and within the framework of the German Act on the Equal Participation of Women and Men in Leadership Positions (*Gesetz zur gleichberechtigten Teilhabe von Frauen und Männern an Führungspositionen*), an adjustment is made for employees in the withdrawal phase of the Time Asset scheme (Time Asset scheme: time credits from deferred compensation).

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 23.4% (2021: 20.3%).<sup>3</sup>

The figures for the proportion of women and internationalization are each included with equal weighting in an index that was set to 100 in each case for 2016. Both indices were included in equal proportions when setting targets and in the compilation of the overall index (proportion of women figure and top management internationalization figure). An increase in this index to 136 was planned for 2022. This target was beaten with a figure of 140. The targets are decided by the Group Board of Management.

**Pursuing Goals for Increasing the Proportion of Women at Volkswagen AG**

We have also formulated goals as regards the proportion of women in management for Volkswagen AG in accordance with section 76 (4) of the German Stock Corporation Act (*Aktiengesetz – AktG*). In line with the German Act on the Equal Participation of Women and Men in Leadership Positions (*Gesetz zur gleichberechtigten Teilhabe von Frauen und Männern an Führungspositionen*) and section 76 (4) of the German Stock Corporation Act (*Aktiengesetz – AktG*), Volkswagen AG set targets for the period until the end of 2025 of 16.5% for the proportion of women in the active workforce<sup>2</sup> at the first level of management (senior management, top management and brand board of management) and 23.4% for the second level (line management). As of December 31, 2022, the proportion of women in the active workforce<sup>2</sup> at the first level of management was 14.2%, and at the second level of management it was 19.7%. The Group's Board of Management and Supervisory Board are regularly updated on the progress we are making toward these targets.

**PROGRAMS AND OPTIONS**

**Diversity Wins@Volkswagen: Global Training Initiative for Managers**

Through our diversity management and the implementation of the Diversity Wins@Volkswagen program, we want to deliberately expand approaches for promoting diversity and inclusion. We pursue a holistic approach that considers diversity in its overriding importance for businesses and society and does not give priority to the needs of any particular group.

**94%**  
of our managers have taken part in the Diversity Wins@Volkswagen program.<sup>4</sup>

The program includes mandatory training for managers, from foremen to top managers. The training participants develop an understanding of why diversity and inclusion are important for the Group, what design approaches and activities can be developed and what responsibility as a manager means in concrete terms. Managers are primarily to be supported and encouraged in avoiding unconscious bias – i.e., unconscious prejudice and stereotypes – in their decisions. 94% of managers from companies with more than 1,000 employees had been trained across the Group and around the world by December 31, 2022. Participation in the training is tracked.

**Programs for Greater Equality of Opportunity in Career Development**

By offering various programs, we are aiming at increasing the proportion of women at management levels within the Group and at ensuring greater equality of opportunity and equal rights in career development. The Volkswagen AG-wide Kompass-2.0 program provides female talent with guidance and a decision aid for starting a management or leadership career and is also aimed at production workers. The program centers around a nine-month period of mentoring accompanied by networking days, dialog events, seminars and feedback meetings. A total of 229 employees started the program in 2022.

In order to achieve a sustainable increase in the proportion of women in management, we continuously work on the further integration of diversity and gender equality into HR processes. Volkswagen AG also offers managers the option of job sharing. In addition, there is an impat program aimed at top talent of non-German origin and both genders, who take on responsibility at the first level of management at the Group's head office. This ensures greater visibility of international managers, leverages their expertise and promotes Group-wide networking.

The Volkswagen Group actively participates in the Target Gender Equality program, which was set up by the UN Global Compact and targets increased gender equality. The program is based on the UN Women's Empowerment Principles. These provide all companies with guidance on how they can promote the empowerment of women and gender equality in the workplace, in business and in society. The program is also accompanied by workshops each focusing on different issues, such as the gender pay gap, cross-sector peer-to-peer learning processes and multi-stakeholder dialogs. This is intended to help companies achieve their gender equality goals and increase the proportion of women in leadership positions.

<sup>3</sup> Change in methodology: from 2022, both nationalities are taken into account in the event of dual nationality.

<sup>4</sup> Proportion of managers from companies with more than 1,000 employees who had participated in the program across the Group and around the world by December 31, 2022.

### Encouragement of Networks

The Volkswagen Group supports the formation of employee networks to promote personal initiative and the willingness to take on responsibility. This includes, for example, the LGBTQI+ & friends network "We Drive Proud." The network not only represents the interests of lesbian, gay, bisexual, transgender\*, intersex\* and queer people but first and foremost helps 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, Porsche or SEAT. The cross-divisional Women Career Network advocates for equal development opportunities for women and more diversity in leadership positions in the Volkswagen Group. There are now also fathers' networks in existence at Audi (Dads@Audi) and in Volkswagen AG (VäterConnection).

### More Flexibility in Work/Life Balance

Volkswagen has recognized its employees' need to be able to respond flexibly and at short notice in various life situations. We are therefore constantly working on improving our employees' work/life balance through flexible working time models. For example, we want not only to take into account the specific needs of parents, single parents or carers for relatives but to facilitate more flexibility for all employees. The rules and programs here vary from country to country and are determined by the legal framework, cultural circumstances and the results of collective negotiations.

For example, Volkswagen AG and Volkswagen Financial Services AG have the instrument "Meine AusZeit," through which employees can take a career break at short notice and flexibly without saving time credits beforehand. In the leave of three to six months, remuneration continues to be paid, financed by advance payment by the employer. This is repaid in the subsequent period of work immediately after the leave.

In addition, we are working on meeting the need many employees have for more flexibility in their working hours and place of work. It has become apparent that many employees also want to continue to work remotely to a greater extent after the pandemic. Volkswagen AG, Audi, Porsche, SEAT and Volkswagen Financial Services AG, among others, have therefore concluded far-reaching company agreements regarding working outside company premises (mobile working).

Our guarantee of reemployment also offers a 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 for career development purposes or for parental leave, employees have a guaranteed right to reemployment on comparable terms subject to the economic situation.

Employees at Volkswagen AG and Audi have an annual option: A conversion to paid leave may be made in place of payment of additional remuneration in accordance with the collective agreement. In Germany, the large number of people who take advantage of their statutory parental leave entitlement proves how many employees wish for reconcilability of work and family life. For parents, we grant additional benefits that go beyond statutory entitlements. Thus, Volkswagen AG employees that are entitled to company cars may continue using their vehicles privately for a limited period during parental leave. Volkswagen AG and subsidiaries with corresponding rules grant their employees a benefit provision in the employer-financed occupational pension plan (basic plan) during parental leave.

We also consider childcare during working hours highly important for enabling work/life balance for our employees. The Volkswagen Group therefore endeavors to offer childcare geared to specific groups of people. Additionally, we provide daycare centers near a number of our sites.

### Inclusion in the Workplace

We assume social responsibility by supporting workshops for people with disabilities. To this end, we awarded contracts worth around €11.2 million in various Group companies during 2022. But we also champion the inclusion of people with disabilities internally. In 2022, the proportion of employees with disabilities at Volkswagen AG was 8.8%.

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 significantly higher performance and job satisfaction levels for precisely 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, 620 employees are currently employed in Work2Work jobs in more than 50 different areas.

**DIVERSITY KPIS**

KPI	Unit	2022	2021	Notes and comments
<b>Diversity index</b>				Active workforce <sup>1</sup>
<b>Proportion of women in management</b>				
Target for proportion of women in management	in %	17.0	16.0	
Actual proportion of women in management	in %	17.2	16.3	
Actual level of proportion of women sub-index   weighting 0.50		142	135	
<b>Internationalization in top management<sup>2</sup></b>				
Target for internationalization in top management	in %	22.3	21.4	
Actual level of internationalization in top management	in %	23.4	20.3	
Actual level of internationalization in top management sub-index   weighting 0.50		138	119	
<b>Cumulative diversity index figure</b>				
Target cumulative diversity index figure	value	136	129	
Actual cumulative diversity index figure	value	140	127	
<b>Proportion of women (as per legal situation in Germany: Executive Positions Act)</b>				
Actual figure for women at first management level <sup>3</sup>	in %	14.2	13.5	Volkswagen AG, active workforce <sup>1</sup>
Actual figure for women at second management level <sup>4</sup>	in %	19.7	18.3	Volkswagen AG, active workforce <sup>1</sup>
<b>Discrimination</b>				
Dismissals due to breaches in the area of discrimination	number	14	15	Basis: 110 companies, each with more than 500 employees (previous year: 111 companies, each with more than 500 employees)

<sup>1</sup> Definition of active workforce: total workforce not including trainees or employees in the passive phase of semi-retirement. In addition, when compiling the data for the diversity index and within the framework of the German Act on the Equal Participation of Women and Men in Leadership Positions (*Gesetz zur gleichberechtigten Teilhabe von Frauen und Männern an Führungspositionen*), an adjustment is made for employees in the withdrawal phase of the Time Asset scheme (Time Asset scheme: time credits from deferred compensation).

<sup>2</sup> Change in methodology: From 2022, both nationalities are taken into account in the event of dual nationality.

<sup>3</sup> Definition of first level of management: senior management, top management and brand board of management.

<sup>4</sup> Definition of second level of management: line managers.

# INTEGRITY



**OUR UNDERSTANDING OF INTEGRITY**

For us, integrity means doing the right thing in a professional context on the basis of our own convictions. This includes steadfastness in adhering to these principles regardless of economic or social pressures. Integrity is an attitude. It provides an inner compass for correct action. This becomes crucial particularly in gray areas where there are no explicit (compliance) rules, these are contradictory or conflicting goals exist.

In addition to personal integrity, organizational integrity matters to us too. It is based on anchoring integrity in the Group's processes and decisions and offers people a fixed framework for interaction. In a third dimension, we understand integrity as an intangible corporate asset: It strengthens our stakeholders' trust and makes us more attractive for investors, customers and employees.

**HOLISTIC MANAGEMENT APPROACH TO INTEGRITY AND COMPLIANCE**

As the highest Group body, the Integrity and Compliance Group Board of Management Committee (K-VAC) deals with the design and guiding principles of the integrity and compliance management system. It is overseen by the Group Board of Management Integrity and Legal Affairs function. The committee includes the members of the Group Board of Management responsible for human resources and finance and other members of the boards of management and top management of the brands. K-VAC analyzes the design of the respective compliance management systems for each risk area and harmonizes the intervening processes. It reviews reports from the brands and regions on integrity, compliance and the Together4Integrity (T4I) initiatives and strategically develops the program.


In particular, the structures and processes changed in the context of the Monitorship have proven to be an important foundation for our Group. At the same time, they are a task for the future. In 2020, the boards of management of Volkswagen AG, AUDI AG, Volkswagen Group of America, Inc. and Volkswagen Group of America Chattanooga Operations LLC in particular committed to continuing on the course adopted and to further promote integrity and compliance (I&C) in the Group on a permanent basis. The independent audit by the U.S. Environmental Protection Agency shows that Volkswagen AG is making progress in this respect. The audit was successfully completed in the reporting year.

I&C should form the core of our business activities, including in our transformation from a vehicle manufacturer to a provider of sustainable mobility. We set binding standards for this in all areas. For example, every proposed resolution submitted to the Group Board of Management must demonstrate that it is in line with integrity and compliance requirements and state which relevant risks the targeted resolution includes and how the risks can be reduced. This I&C statement is also binding for decisions of the boards of management of the individual Group brands and companies and for bodies to which the board of management in question has dele-

gated decision-making powers. The I&C statement is thus anchored in the proposed resolutions of the Group's and the brands' top bodies.

**ACTING WITH INTEGRITY AS THE FOUNDATION OF SUCCESS**

Acting with integrity and in compliance with the rules is of key importance for the success and resilience of our Group. This is why we have made I&C a key element of our NEW AUTO Group strategy and chosen it as one of six focus topics of our sustainability program. Information on potentially negative effects of the Volkswagen Group in this area can be found in the "Compliance" section.

 > Compliance

We are aware that violations of laws, rules and regulations have consequences. We would not only lose our shareholders', customers' and employees' trust, we would also have to expect legal consequences and face the threat of fines.

This is another reason why we want to act as a role model in this area and thus retain the trust of existing and future employees, customers, shareholders and partners. We have set out the ethical basis of our actions in our Code of Conduct (CoC) and in the Group Essentials.

The aim is to gear our rules, processes and corporate culture to enabling every employee to act with integrity and in compliance with the rules at all times. At the same time, we want to ensure that, as a metric, I&C permanently has the same strategic and operational priority as, for example, sales revenue, profit, product quality or employer attractiveness.

**TOGETHER4INTEGRITY: UMBRELLA FOR INTEGRITY AND COMPLIANCE**

We bundle almost all our integrity and compliance measures in the Group-wide Together4Integrity (T4I) program. It is designed to protect the Group from risks in the long term.

**TOGETHER4INTEGRITY**  
 T4I bundles almost all the Volkswagen Group's integrity and compliance activities under a single umbrella in eleven key initiatives.

T4I works with uniform, robust process and implementation standards: The program gathers together relevant content and processes from 16 departments – including Integrity, Compliance, Risk Management, Production, Technical Development, Procurement and Sales – reviews, consolidates and coordinates the content, puts together packages of measures from it (concept), distributes them in the Group (rollout), checks successful implementation (quality control) and measures the effectiveness (success measurement).

The T4I rollout now encompasses 784 controlled companies in around 80 countries and has largely been completed. Implementation will be completed by 2025 at the latest. The Integrity and Legal Affairs function of the Board of Management has responsibility for it. The measures are each implemented locally in the companies.

**Sustainable Success through Long-Term Monitoring**

Success measurement and quality control play a key role in the T4I program. The Effectiveness Assurance department performs risk-based audits of whether the T4I measures have been introduced in the companies and how they are working. The central planning and reporting system of the T4I program provides permanent transparency on the implementation status of the core initiatives. This serves both internal Board of Management reporting and effective project management.

Launch events and perception workshops supplement the tools at the level of the local companies. The perception workshops measure the effectiveness of the T4I measures and involve representatively selected employees and managers as players in the change process.

Since the start of the program in 2018, 739 events have been initiated at more than 680 companies, of which around 244 were recurring perception workshops. More than 42,000 managers and employees have already taken part. Repeating the events makes it possible to measure the progress of the various companies.

**244**  
perception workshops  
have been taking place since 2018.

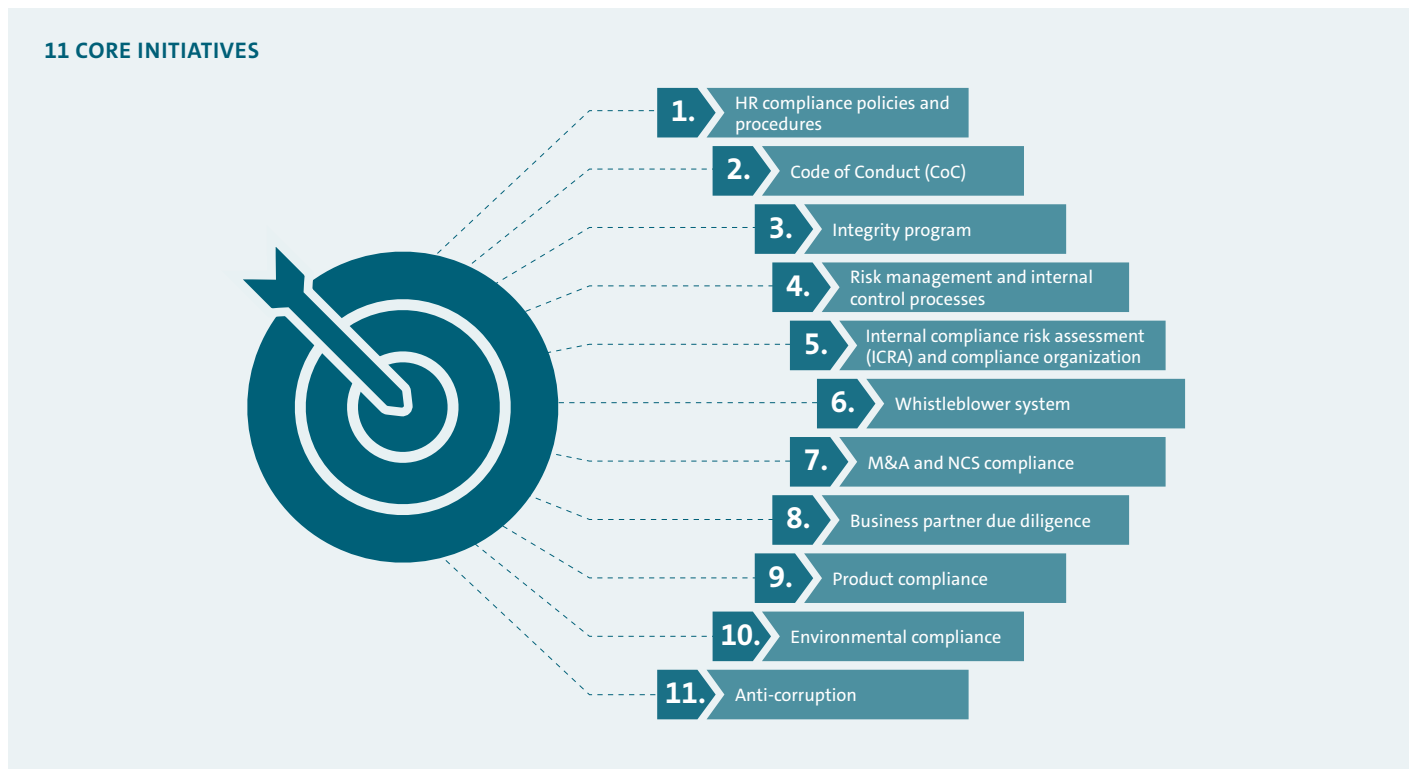
We have made further progress on this: More than 87% of participants in perception workshops surveyed stated that the anchoring of I&C in the companies is progressing successfully. This means a further increase compared with the previous year (around 83%) and a significant increase compared with the first measurement point in 2019 (around 71%).

**Cultural Change and Other Changes**

T4I not only establishes a worldwide integrity and compliance management system for all Group and brand companies but also advances one of the most extensive change and cultural programs in the history of the Volkswagen Group.

We want to increase awareness of each individual's valuable contribution. T4I is intended to motivate employees to act with integrity in all situations. Communication plays a key role here. For example our senior executives regularly spell out the central importance of I&C for the Group and the workforce in their "Tones from the top."

T4I thus means more for us than the sum of the parts.





**T4I Initiatives and Packages of measures**

The T4I packages of measures are grouped in 11 core initiatives:

- 1) HR compliance policies and procedures: I&C is integrated into standard HR processes such as recruitment, training, promotion and remuneration. It is also a compulsory topic in annual employee appraisals and is part of training measures for employees. Volkswagen AG and other defined companies keep anonymized statistics on misconduct and the resulting sanctions. These are regularly communicated to employees.
- 2) Code of Conduct: The Code of Conduct (CoC) lays the foundations for compliance in the Volkswagen Group. It acts as the key element for reinforcing awareness of responsible conduct and decision-making within the workforce, providing help, and finding the right contact persons in cases of doubt. The CoC is a component of the Group's employment contracts and is mandatory for all the Group's employees. The CoC is also part of employee appraisals as a measurement criterion for "setting an example of integrity and compliance."
- 3) Integrity program: The integrity program aims to anchor integrity as a strategic success lever and a control variable for decision-making processes. The objective is to communicate the importance of integrity to employees, to support them in acting with integrity in their day-to-day work and to make integrity visible and tangible. The most important tools included dialog-oriented communication measures, event formats and so-called integrity ambassadors, who carry the topic into the structures of the Group and promote dialog.  
  
One focus of the program is raising awareness of making decisions with integrity. Specific training modules for all levels of management, including foremen, have been developed for this. These are integrated into all Volkswagen AG's obligatory management training programs. Brands and companies that do not use these programs are required to include corresponding modules in their own development programs.
- 4) Risk management and internal control processes: Binding structures and processes are intended to create transparency and help manage risk from our business activities. These include the quarterly risk process, which is focused on acute risks, the standard internal control system (ICS), which is intended to protect key processes, business continuity management, which identifies business-critical processes and protects them with contingency plans, and root cause analysis.
- 5) Internal compliance risk assessment (ICRA) and compliance organization: The ICRA determines the compliance risks in the Group. Based on their risk profile, measures are defined for each company and their implementation is tracked. The ICRA also defines implementation standards for the CoC, the whistleblower system, compliance training and communication. The Group Chief Compliance Officer reports to the K-VAC on an ad hoc basis, but at

least annually, on the implementation status of the measures. In the reporting period, the ICRA process was brought into line with the requirements of the German Supply Chain Due Diligence Act (*Lieferkettensorgfaltspflichtengesetz*). These changes will be applied in 2023.

- 6) Whistleblower system: The whistleblower system is the central point of contact for reporting cases of rule-breaking by Group employees, direct and indirect suppliers, and selected other business partners. These include, for example, economic crimes, corruption, tax offenses and breaches of the CoC. A detailed description of the whistleblower system follows on p. 101.
- 7) M&A and NCS compliance: In the case of planned mergers and acquisitions (M&A) requiring the involvement of the Compliance team, the companies and transactions are audited for human rights risks and for integrity and reputation risks, including corruption, money laundering and fraud – for example, in a due diligence. This also applies to joint ventures, industrialization projects such as the construction of new foreign production sites with external partners, and collaborations with third parties. The business units are then given recommendations for risk-reducing measures. Furthermore, Group Compliance deals with compliance management at noncontrolled shareholdings (NCSs), i.e., companies that are not controlled by a Volkswagen Group company as a majority shareholder. This also includes the Chinese joint ventures.
- 8) Business partner due diligence: The business partner due diligence process reviews the integrity of business partners and suppliers on the procurement side and the sales side, particularly for corruption risks. This also encompasses constantly monitoring the business partners for whether they are complying with laws and ethical standards.
- 9) Product compliance: The product compliance management system (PCMS) supports our products in meeting the statutory and regulatory requirements of the exporting and importing countries, internal and external standards, contractually agreed customer requirements and externally communicated commitments over their entire service life. The PCMS defines roles and responsibilities for design, implementation and monitoring. We train employees and managers on product compliance and have central points of contact to which our employees can address their questions.
- 10) Environmental compliance: The Group's environmental policy and the environmental compliance management system stipulate that environmentally relevant aspects and requirements must be taken into account in all strategy, planning and decision-making processes of the brands and Group companies. This includes a KPI system that measures progress on environmental targets.

 > Environmental Compliance Management

11) Anti-corruption: The Volkswagen Group has a zero-tolerance policy toward active or passive corruption. This is anchored in both the Code of Conduct for Employees and in the Code of Conduct for Business Partners. Further Group policies set out how to deal with conflicts of interest, donations and sponsorship or benefits in the form of gifts or invitations. In addition, there are operating guidelines addressing approval procedures, record-keeping and appropriate behavior. Reported breaches of the code are pursued and investigated by managers and HR, and in serious cases also by our investigation offices. If personal misconduct is found, the HR department in question takes the appropriate disciplinary action.

#### Further Increasing the Measurability of Integrity

In addition to the perception workshops, the annual employee survey – the Opinion Survey – in particular provides information about the progress of our culture of integrity. The Group-wide survey includes a question on whether it is possible for each individual to act with integrity. If employees have any doubts about this, the relevant manager needs to identify and clear possible obstacles together with their team.

The brands that manufacture passenger cars use the “compliance, culture of dealing openly with mistakes and acting with integrity” strategic indicator as an additional metric. This is also based on the Opinion Survey and asks about compliance with regulations and processes, dealing with risks and errors, and whether it is possible to act with integrity. The key performance indicator has continuously improved through to 2022 from an already good starting point: since compilation of this indicator began, employee agreement has always been in the highest category of the underlying five-point scale.

#### COMPLIANCE: CLEAR RULES IN THE VOLKSWAGEN GROUP

Sustainable economic success can only be achieved if each individual complies with laws, internal regulations and voluntary commitments. Compliant behavior should be a matter of course for all Group employees. The compliance organization provides support through programs, guidelines for action, processes and practical advice in the Group-wide, risk-oriented compliance management system (CMS).

#### COMPLIANCE ORGANIZATION: ESTABLISHED ACROSS THE GROUP

Group Compliance supports the Group and brand companies in carrying out their business activities in compliance with the rules and complying with the relevant laws and internal regulations. Focuses of the work include anti-corruption and preventing embezzlement, fraud and money laundering. In addition, the Compliance department and Group Legal must be included in M&A transactions, which includes joint ventures, industrialization projects and cooperation projects with external partners. Group Legal also conducts risk assessments on antitrust and anti-competitive risks in relevant Group departments and companies.

The Group Chief Compliance Officer heads the global compliance organization. They report directly to the member of the Board of Management for Integrity and Legal Affairs and to the Audit Committee of the Supervisory Board of Volkswagen AG. The compliance organization is structured by division, which is intended to strengthen communication and enable harmonized processes across all relevant Group companies.

The divisional compliance officers are generally responsible for several brands and implement compliance measures in their area of responsibility. Porsche AG and Traton SE are exceptions from this. They have their own, independent compliance structure. One regional compliance officer is responsible for the activities of the Volkswagen-controlled entities in China. The controlled companies in Australia, Korea, Japan, Malaysia and Taiwan are overseen by a single regional compliance officer for the Asia region. In the reporting year, Group Compliance also created the new Group Technology divisional compliance office (DCO). It oversees the Board of Management's Group Technology business area and the Volkswagen Group Components brand together with affiliated companies. The DCO deals with compliance matters relating to the traditional component business and also with new fields of business such as the topics of batteries, charging and energy, or the sale of our individual components, modular toolkits and platforms to third parties.

Internal and external auditors regularly scrutinize the compliance management system. Particularly in the context of the monitoring and improvement process, auditors regularly audit the effectiveness of compliance measures. In addition, continuous improvement processes support the development of the CMS. Hot-topic reporting is an important aspect here. This process is used to quickly pass on information on compliance-relevant systemic incidents and for immediate escalation in the whole organization.

**Risks at a Glance**

From a compliance perspective, our business activities entail risks, including in relation to corruption, money laundering and violations of human and environmental rights. The ramp-up of our battery business means we need to purchase significantly more raw materials whose mining must be strictly monitored for human rights compliance. There is generally a high risk of corruption in the countries concerned. Breaches of environmental protection requirements may also harm the environment and lead to reputational damage and financial losses. We use our responsible supply chain system to proactively prevent or minimize social or environmental risks and corruption along the supply chain. The system builds on a systemic risk analysis. More information can be found in the Supply Chain and Human Rights chapter.

☰ > Supply Chain and Human Rights

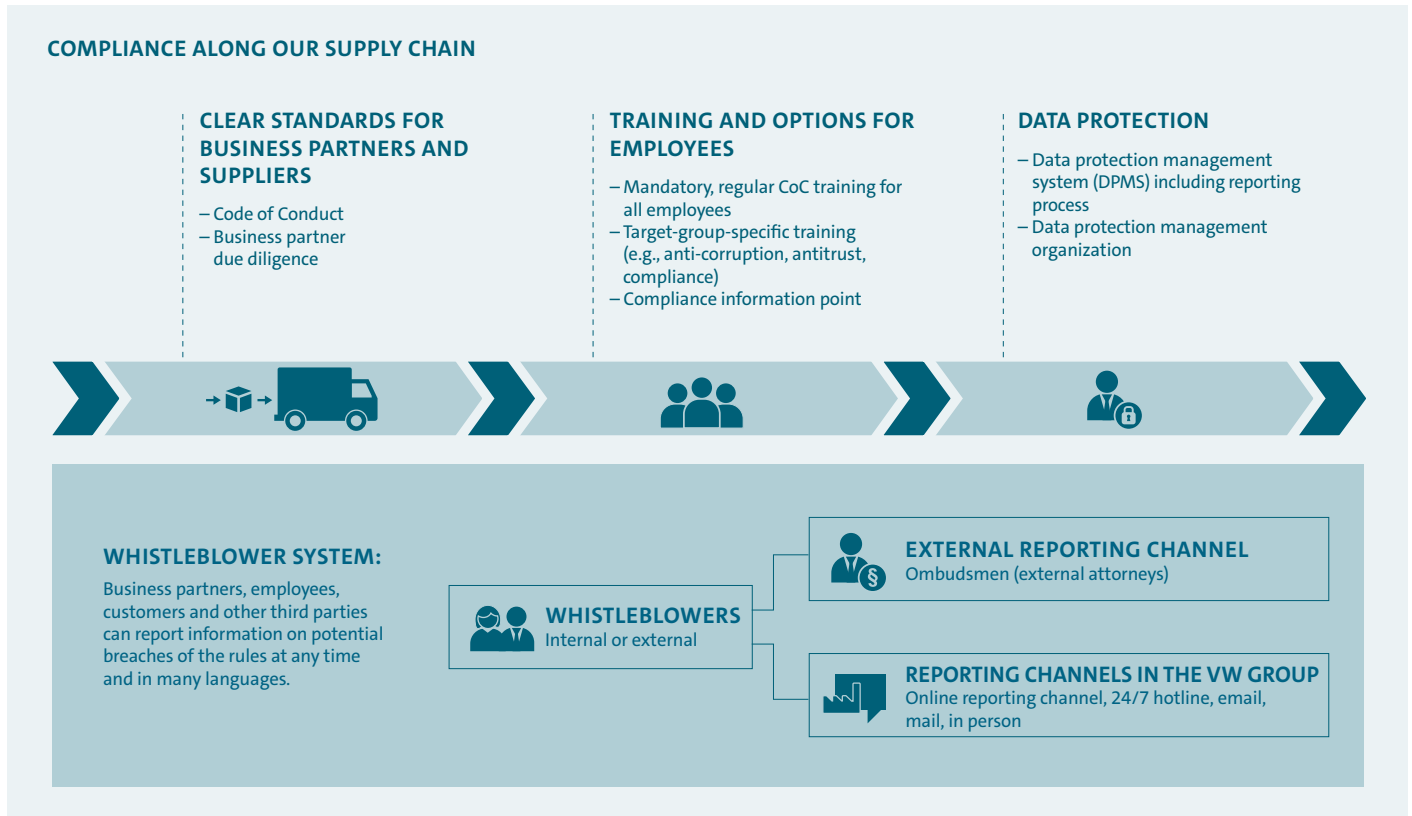
**CLEAR STANDARDS AND COMPREHENSIVE OPTIONS**

**Clear Standards for Business Partners**

Group Compliance supports the entities with operational responsibility in conducting business partner due diligence (BPDD). BPDD includes regular screenings, risk assessments, sanctions list checks and the identification of warning signs. We also check whether business partners (suppliers and sales partners) have a compliance management system or have implemented any compliance measures.

The aim is to identify risks for breaches of the law and disregard of ethical standards at an early stage, avoid high-risk business partners and define measures to minimize risk and implement these with business partners. In individual cases, selected business partners are contacted directly to resolve potential violations. If this is not possible, the business relationship will be terminated or not commenced in the first place. The business partner in question may be blacklisted from doing business with the Volkswagen Group and blocked from all its brands and companies.

The BPDD process is conducted together with the commissioning department – for example, Procurement or Sales. More than 4,300 BPDD reviews were carried out in 2022. As of December 31, 2022, we had identified around 400 cases that led to terminating or not commencing business relationships.



### Extensive Compliance and Anti-Corruption Training

Group Compliance has implemented structures and measures to establish Group-wide, uniform standards for compliance training through the compliance management system – for example, on the Code of Conduct, on anti-corruption, the prohibition of money laundering and the whistleblower system. Implementation packages for the rollout of mandatory training describe the key aspects of the training in terms of content and process. These will enable brands and companies to train employees in a risk-based, target-group-specific manner with defined core content and hold training courses of equal quality. Members of senior management and above are certified on the CoC each year. They confirm that they comply with the requirements of knowing their own role of setting an example of compliance, raising the awareness of employees in their area of responsibility accordingly and giving them access to the CoC. Knowledge of the obligation to report serious breaches of regulations and the disclosure of any conflicts of interest are also part of the certification. Business partners and contractors from sales and procurement also receive training based on risk. The basis for this is the CoC for Business Partners. This has been a component of agreements with suppliers and service providers since 2020.

Across the Group, all employees are required to complete regular CoC training in accordance with uniform standards. It ensures basic awareness of integrity and compliance. The content of the training – including business and human rights, environmental compliance, product conformity, product safety, and occupational safety – is updated every two years. The next update will follow in 2023. The brands and companies regularly provide changing supplementary focus content from the Code of Conduct.

Here, employees have to complete the training and final test in the form of a web-based training (WBT) and repeat it every two years. Passing is documented in their training history. Interns, student workers and doctoral candidates are excluded from the training for technical and process reasons. Production employees receive mandatory CoC training every four years.

Volkswagen AG systemically records the number of permanent staff (employees and management, including full-time and part-time staff) who are required to take mandatory training and have a valid qualification from the web-based training on the CoC. In Volkswagen AG, 48,311 employees in the relevant target group had a valid CoC qualification as of the end of December 2022. This is equivalent to 98.4% of the permanent staff at Volkswagen AG who must be trained using the web-based training on the CoC.

In addition, Group Compliance develops and implements target-group-specific training for employees in areas or companies with high risk exposure. Anti-corruption training with an in-depth module on dealing with officeholders and mandate holders is mandatory for employees. Companies with high risk exposure must implement this training on a mandatory basis. Managers from senior management upwards also have their awareness raised regarding the parts of the CoC containing the prohibition on corruption as part of the annual certification on the CoC.

The number of permanent staff who are required to take mandatory training and have a valid qualification is systematically recorded for the mandatory web-based training on the topic of anti-corruption – for example, in Volkswagen AG. In Volkswagen AG, 45,808 employees in the relevant target group had the relevant valid qualification as of December 31, 2022. This equates to 93.0% of the permanent workforce (employees and management) to be trained, including full-time and part-time employees. The practical “Anti-corruption” guidelines can also be accessed at any time.

Group Legal introduced new web-based antitrust training in 2022. Depending on risk exposure, its completion may be mandatory. Group Legal also continuously provides antitrust training on a risk-based basis. The Group Board of Management is also trained on its content. In addition, employees who are employed in key positions with high risk exposure receive additional compliance training. This concerns, for example, managing directors or financial officers. This training is held across the Group by the respective companies' compliance and personnel managers.

In addition to the training, Volkswagen AG's compliance departments offer target-group-specific training formats and communication formats, including management discussions and training courses for disseminators of information. Moreover, compliance content is a component of all career development paths, from the trainee induction program through programs for leadership and management development to the senior management program. The measures are supplemented by information and communication activities such as awareness campaigns, film and dialog formats, newsletters and interactive games.

### Communication and Advice: Options for Employees

The compliance information point has established itself as a central advisory office. It can be contacted in person, in the Volkswagen 360° app or by email. The team is responsible for specific compliance questions – for example, on sponsorships, memberships and collaborations and on questions relating to HR and labor law – interprets internal company guidelines and policies, and advises on process standards. If no direct recommendation is possible, the query will be passed on to a competent body. Dialog events in the departments supplement the services offered. Tasks and example cases from the practice of the advisory work are regularly included in compliance communication. The aim is to provide employees with concrete recommendations for future, similar questions and improve the internal control system.

In the reporting year, the information point handled 1,517 inquiries (previous year: 1,335, in each case Volkswagen AG). Around 18% relate to the acceptance or giving of gifts and invitations. Where gifts have been received that, for example, exceed value limits, and these cannot be given back – for instance, for cultural reasons – it is possible to hand these in to Compliance. The gifts collected in the past few years were sold at auction in the reporting year. The proceeds of around €10,200 Euro were donated to a non-profit climate and environmental protection association.

### Data protection

To meet the requirements of the EU-wide General Data Protection Regulation (GDPR), Volkswagen AG has created a data protection management system (DPMS) and a data protection management organization. The DPMS ensures that the data protection processes set up are regularly analyzed, are up to date and are further developed. One component of the DPMS is the process for reporting data protection violations (reporting process). It is connected with Volkswagen AG's whistleblower system and IT Security. In fiscal year 2022, there were no reportable data protection breaches pursuant to Art. 33 EU GDPR in the processing of personal customer data. In addition, reportable data protection breaches outside of the processing of personal customer data were also reported to the competent supervisory authority in due time. In accordance with Group policy, Group companies are responsible for their own compliance with the applicable data protection requirements.

### Risk Prevention through the Whistleblower System

The whistleblower system is intended to avert damage to the Group, the workforce and other stakeholders with binding principles and regulated procedures. Employees, business partners and their employees, customers and other third parties can report information on potential breaches of the rules at any time – including anonymously if they so choose. The whistleblower system offers six different reporting channels for this. These include an online channel, which accepts reports in many languages; an international 24-hour telephone hot-

line; and external attorneys, who act as ombudsmen. The processing of the reports and any follow-up questions can also be confidential and anonymous, if this is requested. Special IT infrastructure prevents the source of the information from being identified.

Strict confidentiality and secrecy apply throughout the investigation process. An investigation is only initiated after a thorough review and in the event of concrete indications of rule-breaking. There is a presumption of innocence. Those involved are heard as soon as possible, and their names are cleared if they have been wrongly accused. Sanctions are applied where misconduct is proven. This can comprise a warning, a reprimand or termination. Following serious breaches of rules, structured root cause analyses are conducted in order to prevent similar incidents in the future.

The Central Investigation Office in Wolfsburg coordinates the Group-wide whistleblower system. The employees there process whistleblower information concerning Volkswagen AG and those of its subsidiaries that do not have their own investigation office and also process reports with relevance for the Volkswagen Group.

Group Internal Audit, Group Security and Group Legal assist with operational case investigation. In individual cases, the investigation office also commissions investigations by independent and external third parties, such as law firms or auditors. This may occur especially when the information concerns members of the Board of Management or cases are exceptionally complex – particularly with imminent legal consequences for Volkswagen AG (e.g., in the event of particularly serious corruption or possible breaches of antitrust and anti-competitive law).

AUDI AG, Porsche AG and TRATON SE each have separate investigation offices for themselves and their subsidiaries. There is also a regional investigation office at Volkswagen (China) Investment Company Ltd. It processes whistleblower information concerning Volkswagen AG's Chinese subsidiaries. Cooperation between the investigation offices and uniform processing of whistleblower information are centrally monitored and coordinated in Wolfsburg.

An IT system, internal controls and multiple-party verification support employees with the processing of suspicious activity reports. Figures on the whistleblower system are reported to the Board of Management and the Supervisory Board at regular intervals. The workforce is also regularly informed about the whistleblower system. In addition, numerous compliance training courses address the task of the whistleblower system and how it works. Employees who might frequently come into contact with serious breaches of rules due to their work receive in-depth training. This includes, for example, employees in the fields of audit, security, human resources, legal or compliance.

The Volkswagen Group assures all whistleblowers and people who support the whistleblowers or the investigations of protection from any reprisals they could experience due to their reports and their efforts to investigate breaches. This is anchored in Group policy 3, which applies worldwide, and is described in the Code of Conduct. The terms stated in the Group policy show that the Volkswagen Group complies with the provisions of international whistleblower protection laws – for example, the EU directive on whistleblower protection, its implementation acts and the German Supply Chain Due Diligence Act (LkSG). To prepare for the entry into force of these new legal regulations, the Central Investigation Office has carried out an information campaign to raise awareness in the relevant Group companies. Breaches of the ban on discrimination are treated as serious breaches of the rules.

Within the digital ComplianceXChange workshop format, the whistleblower system team communicates with experts from other DAX companies twice a year to share experiences and discuss current issues.

#### **Suspected Cases and Compliance Breaches in the Reporting Year**

In 2022, the investigation offices registered 3,073 whistleblower reports (2021: 3,219). Around 24% of these were anonymous but with the option to contact the whistleblower, and around 9% were anonymous without the option to make contact. In 754 cases, the Central Investigation Office accepted an initial suspicion of breaches of the Code of Conduct, in several cases also of laws and/or specific internal regulations at the same time, with the result that an internal investigation was initiated. Of these, 187 cases involved potentially serious breaches of rules.

In the reporting year, the investigation offices investigated individual cases of suspected serious infringements of rules to prevent corruption. In six cases this resulted in significant sanctions such as warnings or dismissals. In five cases this was due to violations of rules to avoid conflicts of interest and in one case to a violation of procurement guidelines. Five investigations into suspicions of serious infringements of antitrust or competition law were closed. In none of these cases was a serious violation of antitrust or competition law established.

An independent external auditor regularly audits the effectiveness and functionality of the whistleblower system. The audit is currently conducted annually. The Audit Committee of the Supervisory Board, the Group Board of Management and the boards of management of companies concerned are informed of the result and possible suggestions for improvement. The past audit showed that the Group whistleblower system's processes are suitable for efficiently and effectively processing whistleblower information. In the reporting year, the investigation offices of AUDI AG, Traton SE, Porsche AG and Volkswagen AG were audited.

**INTEGRITY KPIS**

KPI	Unit	2022	2021	Notes and comments
<b>T4I</b>				
T4I rollout in controlled companies	number	784	707	Since the start of the program
Approval rate from T4I perception workshops	in %	87.8	82.7	Definition, see p. 96
<b>Information point</b>				
Inquiries processed to the compliance information point	number	1,517	1,335	Volkswagen AG
Change in inquiries processed to the compliance information point	in %	14	-10	
<b>Code of Conduct</b>				
Employees of Volkswagen AG who have a valid qualification on the Code of Conduct	number	48,311	48,017	Web-based training; scope definition, see p. 100
Proportion of the workforce of Volkswagen AG to be qualified	in %	98.4	98.2	Web-based training; scope definition, see p. 100
<b>Anti-corruption</b>				
Employees of Volkswagen AG who have a valid qualification on the topic of anti-corruption	number	45,808	36,565	Web-based training; scope definition, see p. 100
Proportion of the workforce of Volkswagen AG to be qualified on the topic of anti-corruption	in %	93.0	74.8	Web-based training; scope definition, see p. 100
<b>Pieces of whistleblower information</b>				
Pieces of whistleblower information	number	3,073	3,219	In all investigation offices
of which anonymous and without any possibility of contact	in %	9	10	
BPDD reviews	number	> 4,300	> 8,600	Business partners in sales and procurement (suppliers)
<b>Culture of rules</b>				
Compliance, a culture of dealing openly with mistakes and acting with integrity		86.6	86.3	

# SUPPLY CHAIN AND HUMAN RIGHTS





**PROTECTING HUMAN RIGHTS EFFECTIVELY**

The Volkswagen Group pursues the vision of enabling sustainable mobility for generations to come. This includes living up to our legal, social and environmental responsibility not just in our own Group but also in our supply chains. In 2022, the Volkswagen Group once again anchored the focus topic of "Supply chains and human rights" in the key Group initiatives.

**RESPONSIBILITY IN OUR GROUP**

As of August 1, 2022, the Group Board of Management created the position of an officer for human rights-related issues within the Group. This officer reports to the member of the Group's Board of Management responsible for Integrity and Legal Affairs and will independently monitor whether human rights due diligence requirements are being complied within the Group. This includes the supervision of risk management regarding risks relating to human rights and the environment, prevention measures, grievance management and remedial action in the departments and in Compliance. The officer also prepares the Group Board of Management's declaration of principles prescribed by the German Supply Chain Due Diligence Act (*Lieferkettensorgfaltspflichtengesetz – LkSG*). In addition, the officer for human rights-related issues has responsibility for the external and internal reporting obligations, the dialog with stakeholders, and stakeholder management. The officer for human rights-related issues is the first point of contact for all human rights-related concerns on the part of authorities, policymakers and society.

**Acting on the Basis of Firm Values and Principles**

The work in the Group's factories and sales companies around the world is based on firm principles, such as respect for minorities and compliance with labor standards. We continuously assess social and labor standards and the human rights risk in the countries where we operate. The basis for this is the publicly available reports of the United Nations and specific analyses and indices. The Volkswagen Group respects international guidelines and conventions, including in particular:

- The UN 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
- The principles of the UN Global Compact

The above international human rights frameworks are also defined as focal points. These "salient business & human rights issues" refer to:

*Labor rights*

- Freedom of association and the right to collective bargaining
- No forced labor
- No child labor
- Good working conditions

*Safety*

- No involvement in any unlawful activities
- Guarantee of people's safety

*Tolerance*

- Tolerance towards different ideological and religious opinions and respectful expression of them
- No discrimination
- Diversity and protection of disadvantaged, especially indigenous groups


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. The Volkswagen Group supports a binding legal framework that requires companies and their suppliers to respect human rights. We also welcome the EU's legislative initiatives such as the Corporate Sustainability Due Diligence Directive (CSDDD), particularly the associated level playing field for equal and fair competition conditions at international level.


**Code of Conduct and Group Policies as a Framework for Action**

The Volkswagen Group has enshrined the topic of business and human rights and its significance for the supply chain in processes and policies that apply to all the Group's employees worldwide. Expectations of employees and the Group-wide understanding of the observance of universal human rights are set out in our Code of Conduct: We respect, protect and promote the regulations on protecting human rights worldwide as fundamental and universally valid requirements. We reject all use of child, forced or compulsory labor and any form of modern slavery or human trafficking.

Our Group policies embed the topic of business and human rights both in our governance functions and in the implementation of site projects. Furthermore, the topic is also procedurally anchored in site decisions and M&A projects.


The Group and employee representatives have also signed the "Declaration by the Volkswagen Group on social rights, industrial relations and business & human rights" – the Social Charter.

 > People in the Transformation

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Sustainability > Strategy, Policy & Engagement > Policy > Declaration on Social Rights

This declaration provides a binding basis for social and industrial relations within the Volkswagen Group. It also serves as a benchmark for shaping relationships with suppliers and other business partners. The specific expectations regarding suppliers arising from this declaration are defined in the Code of Conduct for Business Partners. This Code of Conduct must be recognized by all suppliers prior to the commencement of the business relationship.


Permanent employees of the Volkswagen Group's controlled companies have their awareness raised as part of the mandatory Code of Conduct training. Further information on the implementation rates for the Code of Conduct training can be found in the Integrity chapter.

 > Integrity


**Engaged Dialog with Our Stakeholders**

We provide our workforce with information on the supply chain and human rights via a number of channels. This includes articles in internal media and newsletters and internal dialog and Q&A events. This is because it is important to us that our employees obtain information directly at first hand. We communicate our positioning to the public and external stakeholders through interviews with top managers, in media reports and through our digital channels.


In our view, continuous dialog between those involved about principles and implementation issues is needed in differentiating between the state's duty to protect human rights and corporate human rights responsibility. For businesses, it is often challenging to obtain concrete and objective information enabling a comprehensive assessment of human rights situations. In order to achieve further progress, we also seek cooperation with international organizations. For example, we are continuously in written and personal dialog with NGOs and human rights institutions.

 > Stakeholder Management

Institutional investors and investment banks also seek dialog with us on the topic of business and human rights. One of the places we publish our standpoint, including on controversial aspects, is the Volkswagen Group's investor relations website.

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Investor Relations > Corporate Governance > ESG Controversies

Volkswagen completely rejects all forms of forced labor in the Group's businesses all over the world. We have no indications that forced labor is being used in the supply chain or in any of our production sites.

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Volkswagen Group Statement on MSCI ESG Controversies Report

**Compliance Management System for Human Rights**

We have sustainably integrated the topic of business and human rights into the Group's established compliance management system. All active controlled Group companies with their own employees take part in the standardized internal compliance risk management process. In the case of noncontrolled companies (with Chinese joint ventures), an individual analysis is made with regard to the overall compliance management system (including human rights, where applicable) in cooperation with our respective companies via our internal contacts. We rely on the cooperation of these companies here.

Group Compliance made risk assessments for the field of human rights for 805 companies around the world. This means that 100% of our controlled companies within the scope of compliance in a total of 82 countries were audited. This risk analysis incorporates the results and risk assessments of the previous year. In the reporting year itself, 51 risk assessments were made of companies that were added to the scope of compliance from a total of 18 countries.

This analysis assessed our business units' human-rights risk situation and, as a result, we can allocate these to the low, medium and high categories. These companies were then given risk-specific measures. The measures must be implemented for all companies in the scope on the basis of their risk profile. The status of implementation of the respective measures is continuously monitored by the Group.

In the reporting year, adjustments to the compliance risk management process were prepared in order to fully comply with the requirements of the German Supply Chain Due Diligence Act (LkSG), which entered into force on January 1, 2023. These adjustments will be applied in 2023.

**RESPONSIBILITY IN OUR SUPPLY CHAIN**

Due to the complexity of its products, the Volkswagen Group's supply chain is highly complex, globally distributed and subject to constant change. It comprises more than 59,000 supplier sites<sup>1</sup> around the world in more than 90 countries. Our activities may have negative effects on our environment and on people in our supply chain. At the same time, our size and position in the market also mean there are opportunities to achieve environmental and social improvements in our suppliers' countries.

<sup>1</sup> Change in methodology: All supplier-based KPIs reported in this chapter only take account of direct suppliers with revenue in 2022.

Our aim is to design supply chains responsibly. The Group Procurement Sustainability department conducts the operational management of sustainability topics in our supply chains. In order to identify current developments and long-term challenges in the individual countries, we also encourage dialog between our brands and regions through the Sustainability Procurement Network, in which more than 70 experts from five continents work together.

**Sustainability As Part of the Procurement Strategy**

With our new procurement strategy, which gradually replaced "Strategy 2025+" in the reporting year, we have launched a comprehensive interdisciplinary strategy program. The program has five pillars: Alongside the short-term cost target, we aim to improve our supply situation, increase quality and boost innovative power and sustainability.

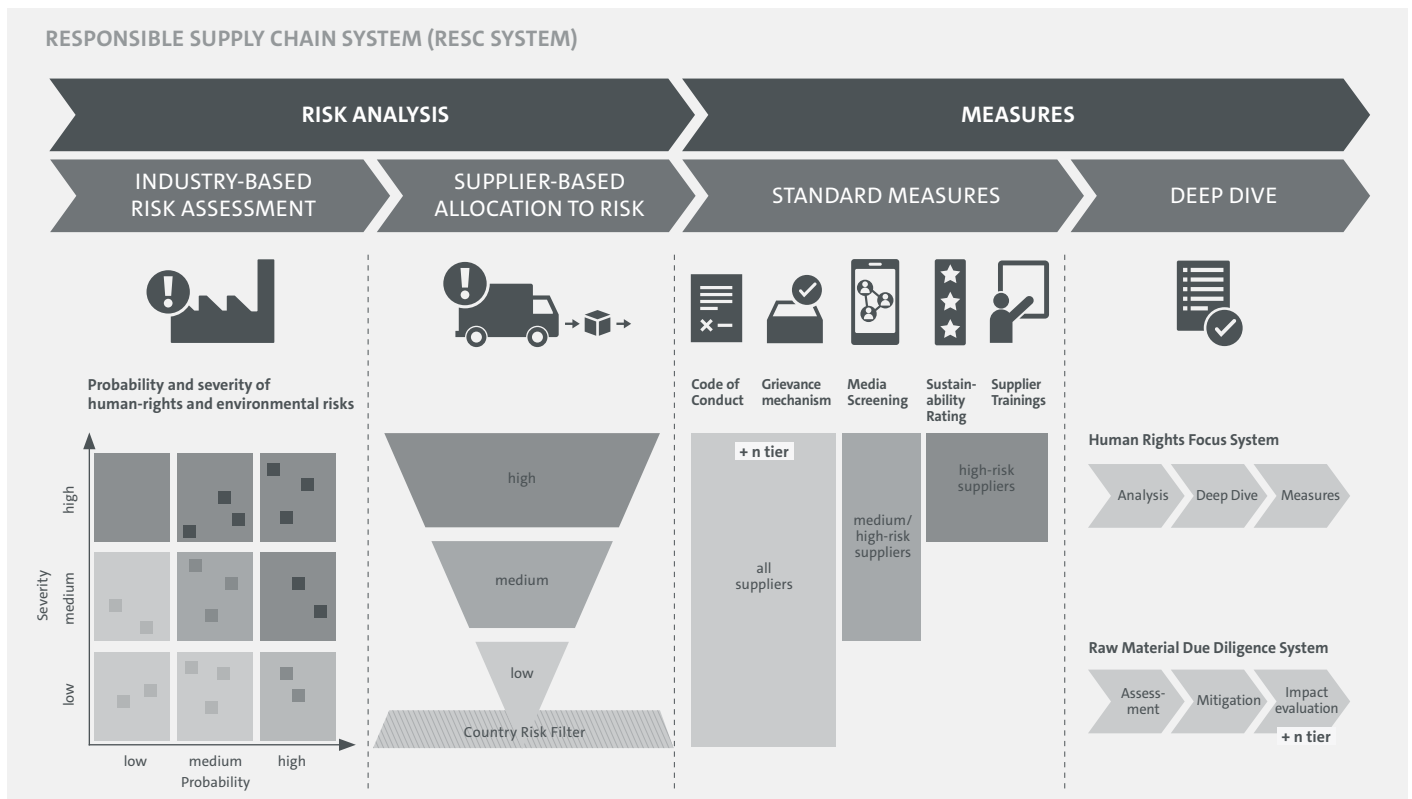
The sustainability pillar of the program focuses on the topics of "circular economy & climate neutrality," "fairness & equality" and "global management." The first focus topic covers initiatives and projects relating to the topics of decarbonization, the circular economy, resource efficiency, and biodiversity. In the "fairness & equality" topic, we address, among other things, human rights due diligence, responsible procurement of raw materials, and diversity and inclusion in our supply chains. In the "global management" focus topic, the focus is on transparency, risk monitoring, performance and impact, process integration, management, and collaboration and reporting.

**Redefined Management Approach**

In the reporting year, we also adjusted our management approach in procurement to meet the requirements of the new German Supply Chain Due Diligence Act (LkSG), which entered into force on January 1, 2023. The previous approach of "prevent, detect, react" was replaced by the responsible supply chain system (ReSC system).

The new approach has the aim of avoiding and minimizing human-rights, social or environmental risks along the Volkswagen Group's supply chain based on a systemic risk analysis. It should also help to mitigate breaches and continuously improve suppliers' sustainability performance. The ReSC system includes the following elements, which build on each other:

- **Risk Analysis:** A regular risk analysis serves to identify risks in the Volkswagen Group's supply chain in advance. The analysis is made on the basis of the suppliers' business models and takes account of internal and external data on human-rights and environmental risks. Based on the assessment of the risks, each supplier is allocated a low, medium or high sustainability risk. For suppliers with a low sustainability risk, a country risk score is additionally used. If the supplier has an increased country risk, it is upgraded to the medium risk category. The risk analysis is updated once a year and/or as required by Group Procurement Sustainability in consultation with relevant parent companies of the Volkswagen Group.



- **Standard measures:** These proactive and reactive measures include the Code of Conduct for Business Partners, the supply chain grievance mechanism, media screenings, the sustainability rating and training suppliers and employees.
- **Deep Dive measures:** These encompass the human rights focus system in the supply chain, the raw material due diligence management system and collaboration with external partners to develop the concept of sustainability in the supply chain.

Implementation of the management approach is mandatory and is enshrined in corresponding policies for the Group's brands and controlled companies. The Volkswagen Group identifies the sustainability risks that may arise as a result of its business relationships. The processes for analyzing risk represent the first step of our ReSC system. Based on the risks identified, a package of measures for preventing and mitigating risks is assigned to the suppliers in the respective business models and countries.

**STANDARD MEASURES: FOUNDATION OF OUR RESC SYSTEM**

**Code of Conduct for Business Partners**

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. It sets out our expectations of our business partners' conduct with respect to key human-rights, environmental, social and compliance standards. 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.

Before submitting a quote, our suppliers must confirm that they accept our sustainability requirements in the Code of Conduct for Business Partners. They must consent to this again after 12 months if they wish to submit new quotes. We also call on our tier 1 suppliers to pass our requirements set out in the Code of Conduct for Business Partners down along the supply chain. In 2022, the Code of Conduct was revised and the requirements of the German Supply Chain Due Diligence Act (LkSG) were added. In addition to the Code of Conduct for Business Partners, there are additional product-specific requirements for suppliers. These are set out in the specifications and stipulate the way in which certain products must be manufactured. The requirements include, for example, achieving full disclosure of the cobalt supply chain for battery cells. These requirements are also binding for the suppliers in question.

**Supply Chain Grievance Mechanism**

The supply chain grievance mechanism is used to process information on human-rights and environmental risks and on breaches of human-rights or environmental obligations by the Volkswagen Group's direct or indirect suppliers.

The mechanism is accessible via the channels of the Volkswagen Group's whistleblower system and is open to all potentially affected stakeholders – e.g., employees of suppliers, civil society players or representatives of communities in the immediate vicinity of our production locations. The processing of cases is uniformly described in a binding manual and is managed by the Group. Cases are processed together with the brands and regions of the Volkswagen Group. Breaches identified are categorized by their severity to ensure adequate processing. Depending on the categorization of the breach, appropriate measures are then introduced. If there are serious breaches, it is possible to temporarily block suppliers from eligibility for the award of new contracts or to terminate the business relationship with them.

**Media Screening**

Group Procurement Sustainability carries out continuous and risk-based media screening of relevant suppliers<sup>2</sup> using a software tool. If the tool identifies indications of possible breaches of our Code of Conduct for Business Partners, these are reviewed and, if necessary, processed in the supply chain grievance mechanism.

**Sustainability Rating**

A sustainability rating (S rating) was introduced in 2019 as a key measure for all relevant companies and suppliers with a high sustainability risk. The S rating is used to audit the sustainability performance of relevant suppliers<sup>3</sup> and reveal 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.

**SUSTAINABILITY RATING**

The S rating is a Group-wide tool used to assess the sustainability performance of relevant suppliers<sup>3</sup> in the fields of the environment, social and integrity and to mitigate risks. It is directly relevant to awarding contracts.

<sup>2</sup> The relevance of a supplier for media screening results from factors including the procurement volume or the risk exposure derived from the type of product or service.

<sup>3</sup> The relevance of a supplier for the S rating results from factors including the size of the company or the risk exposure derived from the type of product or service.

The check for the S rating takes place via a multistage process. In an initial step, the risk exposure is identified from a combination of country risk and the supplier's corporate processes and policies. In addition, the companies' sustainability performance is checked in on-site spot checks.

A specialist service provider is used for the identification of the country risk. We check whether suppliers' corporate processes and guidelines meet our requirements by means of a standardized questionnaire for self-assessment. We developed the self-assessment questionnaire (SAQ) in a joint project with other automotive corporations involved in the DRIVE Sustainability Working Group organized by CSR Europe. Relevant topics were added to the SAQ to prepare for the German Supply Chain Due Diligence Act (LkSG). The information and documents in the SAQ are checked and validated by a service provider via a central platform: If a supplier states that it has appropriate processes and guidelines, it must prove this with documents. Every supplier that the S rating applies to must meet the requirements enshrined in the questionnaire in the areas of corporate governance, the environment, social issues, human rights, compliance and supplier management. Since this reporting year, selected questions in the SAQ have been considered mandatory as minimum requirements for all suppliers from a site size of ten employees. As of this year, proof of a certified and/or validated environmental management system is also mandatory for all suppliers with a production site and a site size of 100 employees or more. Suppliers in the scope who do not have an existing environmental management certificate may submit a letter of commitment pledging the completion of certification in the near future during a transition phase. A supplier is not eligible for the award of contracts unless it meets the minimum requirements.

In addition, suppliers who we have identified as having an increased corruption risk due to their business and region are also subjected to a more in-depth corruption risk audit. This process is called the business partner due diligence (BPDD) process and is carried out before any decision to award a contract. In addition, all relevant business partners will then also be continuously checked for any change in general conditions through risk and news screening. There were a total of 487 business partner due diligence reviews in the reporting year.

We are also working continuously on avoiding duplication when auditing and, to achieve broader coverage of the supply chain, are partnering with original equipment manufacturers (OEM) and suppliers in a German Association of the Automotive Industry (VDA) task force to create a common standard for on-site audits. To this end, major Volkswagen Group companies founded the Responsible Supply Chain Initiative e.V. in 2021 together with 11 additional partners, and this initiative continued to grow in the reporting year. First pilot projects of the on-site-check standard were run in connection with this in 2022.

### Sustainability Training for Employees and Suppliers

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, the topic of sustainability is an established part of the skills profile. The training course on sustainability for procurement was taken more than 2,000 times in total worldwide in 2022. Our training measures continue to also be 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.

In 2022,  
more than **2,900**  
suppliers were trained  
on sustainability globally.

In order to facilitate continuous supplier development, we usually conduct issue-specific sustainability training courses and workshops with our suppliers at selected locations or online and offer web-based training. More than 2,900 suppliers were trained accordingly in the reporting period. This includes 245 suppliers who use the Drive Sustainability initiative's online training and e-learning options.<sup>4</sup> Voluntary, in-depth human rights training for suppliers has been available since 2020 and was run again in 2022.

In addition to the trainings, we make an e-learning module on sustainability available to current suppliers in nine languages.

### DEEP DIVE MEASURES: FURTHER ELEMENTS OF OUR RESC SYSTEM

#### Human Rights Focus System

In our sustainable supply management, we are also involved in protecting groups of people who may be subject to a high risk of potential human rights violations at any point in our supply chain. We implemented a human rights focus system (HRFS) in 2022 to comply with international frameworks and requirements and specifically the German Supply Chain Due Diligence Act (LkSG). The system aims to identify particularly high risks in our supply chain in connection with human rights violations and the environment and to manage these appropriately. To this end, we evaluated aggregated data from our supply chain grievance mechanism, the on-site checks and information from studies, NGO reports and stakeholder conversations in the reporting year in order to draw up a long list of relevant topics. For 2023, we plan to use this to

<sup>4</sup> Change in methodology: scope expansion for training in 2022.


decide on focus activities, which will then be addressed during the year. A toolbox of measures will be developed to address these focus topics. This will be used from 2023 for mitigating the risks identified.

**Raw Material Due Diligence Management System**

With regard to the responsible sourcing of raw materials, the Volkswagen Group implements the five steps of the OECD Due Diligence Guidance for Responsible Business Conduct and the requirements of the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. In 2020, we implemented an OECD-oriented raw material due diligence management system. It serves to identify, assess and avoid actual and potential human rights risks in our upstream raw material supply chains and currently encompasses 16 particularly risky raw materials. These include the battery raw materials cobalt, lithium, nickel and graphite, the conflict minerals tin, tungsten, tantalum and gold (3TG), and aluminum, copper, leather, mica, steel, natural rubber, platinum group metals and rare earths.<sup>5</sup>

With this risk-based approach, we prioritize our activities on the basis of the severity and probability of breaches of the law and on the basis of the Group's influence. We also systematically use our Group structure for developing and implementing specific prevention and mitigation measures, whose effectiveness we audit. New report structures and toolkits have been developed and existing tools, such as the supply chain grievance mechanism, have been integrated in the management system. Depending on the results of the due diligence process, the measures are adapted and improved on an ongoing basis.

Since 2021, the Volkswagen Group has also reported on the observation of its human rights due diligence obligations in the raw material supply chain – including reporting on the status, progress and goals of the raw material due diligence management system – in an annual Responsible Raw Materials Report. The Group's specific activities and measures regarding the 16 particularly risky raw materials are also set out there.

 > [www.volkswagenag.com](http://www.volkswagenag.com) > Sustainability > Reporting & ESG Performance > Sustainability Report

Increasing transparency is an important prerequisite for identifying, avoiding and mitigating human rights risks in the upstream supply chain. To this end, the Volkswagen Group works closely with its direct suppliers and business partners in the context of the raw material due diligence management system.

We cooperate with, among others, service providers who enable suppliers to be comprehensively audited using artificial intelligence. Here, permanent real-time monitoring of freely available internet sources, including social media, provides us with indications of possible breaches by suppliers.

Because the human-rights-related risks are often highest at the start of the supply chain and these can be countered most effectively here, direct collaboration with mine operators on the certification of mines is an additional part of our strategy. In this way, we intend to audit, assess and improve the sustainability performance of the mines in our supply chain in the medium term.


**Collaboration with External Partners and Involvement in International Initiatives**

In addition to close collaboration with our direct and indirect suppliers, we get involved in initiatives and local projects to address human rights risks in the upstream supply chain and beyond our contractual relationships. These cross-industry and, in some cases, raw-material-specific initiatives are listed in our Responsible Raw Materials Report. The aims of collaboration with partners in the automotive industry and along the value chain include knowledge transfer, the development of standardized tools for risk assessment and the introduction of standards for responsible raw material supply chains with respect to human rights, the environment and compliance.

In the reporting year, the Volkswagen Group and its brands joined additional important initiatives. For example, Volkswagen AG has been a member of the Initiative for Responsible Mining Assurance (IRMA) since February 2022. IRMA is a multi-stakeholder alliance that advocates for high standards in mining. The IRMA standards encompass the protection of human rights and the rights of local communities, the exclusion of corruption, health protection measures, occupational safety, and environmental protection. In the reporting year, the Volkswagen Group also became a member of the Leather Working Group. Porsche joined the Responsible Mica Initiative in 2022.

<sup>5</sup> The risk scope of the management system goes beyond Annex 2 of the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

For battery raw materials, especially cobalt, we pursue the objective of creating supply chain transparency from mining the raw materials to manufacturing the finished product. We have been passing the requirement for full transparency on to our direct battery suppliers in our contracts since 2020. Volkswagen has the data received audited and verified by partner companies through second-party supply chain mapping audits. In the Cobalt for Development project in the Democratic Republic of the Congo, we work together with partners for improved working and living conditions for small-scale cobalt miners and their communities. The pilot project aims to strengthen compliance with laws and improve health and safety conditions and social well-being for people locally. Additional information is available on the project website.

 > Cobalt for Development (C4D)

For the battery raw material lithium, the Volkswagen Group, together with other partners, has created the Responsible Lithium Partnership initiative, which works towards responsible use of resources and sustainable lithium production in Salar de Atacama in Chile. This is to be achieved through a multi-stakeholder platform comprising all the relevant players in the Salar watershed – from civil society groups, including indigenous communities, through government institutions to local mining companies.

Beyond raw material activities, our involvement in the industry-led initiative DRIVE Sustainability under the umbrella of CSR Europe remains key. 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.

PROGRESS AND DEVELOPMENTS AMONG OUR SUPPLIERS

A total of more than 16,029 active suppliers<sup>6</sup> completed an SAQ in connection with the S rating. In the reporting period, 6,748 suppliers improved their sustainability performance through taking appropriate steps. Based on sales revenue, more than 85% of our suppliers with a production site and a site size of 100 employees or more have documented that they have a certified environmental management system in accordance with ISO 14001 or validation in accordance with EMAS or a letter of commitment.<sup>7</sup>

Following an initial analysis of the supplier data, in-depth audits are carried out on-site, based on risk. 252 on-site audits were carried out worldwide in 2022. On average, six breaches of our sustainability requirements were identified.<sup>8</sup> Differences can be seen depending on the region.

By the end of the reporting year, we had 12,660 S ratings for suppliers, accounting for around 75% of total procurement expenditure. Of these suppliers, 6,618 have an A rating. 65 suppliers were rated C and are thus not currently eligible for the award of contracts. Suppliers who do not meet our requirements for compliance with our sustainability standards are also not eligible for the award of contracts.

**6,618**  
suppliers have  
an A rating.

In the reporting period, 145 reports of breaches from the supply chain grievance mechanism were dealt with. In total, four suppliers were blocked from eligibility for the award of new contracts due to serious breaches.

<sup>6</sup> Change in methodology: in 2021, active SAQs from suppliers without revenue were also taken into account.

<sup>7</sup> Change in methodology: Scope in the previous year took account of production sites of suppliers of production material (direct material). In this reporting year, the production sites of suppliers of general material (indirect material) were also taken into account.

<sup>8</sup> Scope: excluding on-site checks at logistics service providers.

SUPPLY CHAIN AND HUMAN RIGHTS KPIS<sup>1</sup>

KPI	Unit	2022	2021	Notes and comments
Direct suppliers	number	> 59,000	> 60,000	
Countries in which Volkswagen has direct suppliers	number	> 90	almost 100	
Experts in the Sustainability Procurement Network	number	> 70	> 50	
<b>Human rights checks</b>				Gap analysis of companies that were added to the scope of compliance
Companies for which a risk assessment in the area of human rights is available	number	805	782	In the reporting year, a risk assessment was repeated or carried out for the first time for 51 companies.
For sites, associated number of countries for which a risk assessment in the area of human rights is available	number	82	82	In the reporting year, a risk assessment of 18 countries associated with sites was conducted again or for the first time.
<b>Training and certification</b>				
Revenue-based direct suppliers in scope with certified environmental management system pursuant to ISO 14001 or EMAS validation or letter of commitment	in %	85	78	Change in methodology: scope in the previous year took account of production sites of suppliers of production material (direct material). In this reporting year, the production sites of suppliers of general material (indirect material) were also taken into account.
Procurement staff who have participated in training measures on the topic of sustainability	number	> 2,000	1,900	
Direct suppliers who have received training on the topic of sustainability	number	> 2,900	> 1,000	Change in methodology: scope expansion for training in 2022; previous year's figure not adjusted
<b>Self-Assessment Questionnaire (SAQ)<sup>2</sup></b>				
Direct suppliers with completed SAQ	number	16,029	15,532	
Proportion of new suppliers who have been assessed using social and environmental criteria	in %	12	–	Direct suppliers who were assessed for the first time in the reporting year
Improvements in direct suppliers based on the SAQ	number	6,748	6,353	
<b>S rating</b>				
Existing S ratings for direct suppliers	number	12,660	12,483	
of which direct suppliers with an A rating	number	6,618	3,524	
of which direct suppliers with a C rating	number	65	91	
Revenue percentage of direct suppliers with S rating in total purchasing volume	in %	75	around 85	
Business partner due diligence reviews	number	487	1,513	Of suppliers

<sup>1</sup> Change in methodology: All supplier-based KPIs reported in this chapter only take account of direct suppliers with revenue in 2022. Previous year's figure not adjusted.

<sup>2</sup> Change in methodology: In 2021, active SAQs from suppliers without revenue were also taken into account.



KPI	Unit	2022	2021	Notes and comments
<b>On-site audits (checks)</b>				
Number of on-site checks carried out as part of the S Rating	number	252	654	
Average breaches of sustainability requirements by region				Excluding on-site checks at logistics service providers
Africa	number	4	4	The region's top 3 risks: fire extinguishers, emergency lighting, emergency exits & evacuation routes, evacuation drills, fire detection, organization, exposure & response to chemicals and hazardous materials (5 risks with an identical rating)
Asia <sup>3</sup> -Pacific	number	10	7	The region's top 3 risks: working hour violations, payment violations, supply chain management
Europe	number	4	5	The region's top 3 risks: supply chain management, license to operate and Code of Conduct, evacuation drills
North America	number	6	6	The region's top 3 risks: organization occupational health & safety, organization fire safety & emergency evacuation, license to operate and Code of Conduct
South America	number	9	5	The region's top 3 risks: supply chain management, license to operate and Code of Conduct, evacuation drills
<b>Supply chain grievance mechanism</b>				
Reports from supply chain grievance mechanism	number	145	111	
Temporary blocking of suppliers	number	4	4	
<b>Reports from supply chain grievance mechanism: number by region</b>				Because a report may include several suppliers, the sum of this KPI may be higher than the number of reports.
Europe	number	100	74	
Asia <sup>3</sup> -Pacific	number	28	9	
Africa	number	5	2	
North America	number	18	17	
South America	number	4	3	
No classification possible	number	11	6	
<b>Reports from supply chain grievance mechanism: number by context</b>				
Social	number	36	26	
Compliance	number	34	66	
Environment	number	10	12	
Cross-topic	number	14	7	
Other	number	51	–	Plausibility of reports not yet checked
<b>Reports from supply chain grievance mechanism: direct supplier</b>				
Yes	number	98	70	
No	number	47	41	

<sup>3</sup> Scope: In terms of geographical distribution, Russia and Türkiye are allocated to Asia.



The assurance engagement performed by Ernst & Young (EY) relates exclusively to the German version of the combined non-financial report 2022 of Volkswagen AG. The following text is a translation of the original German independent assurance report.

## INDEPENDENT AUDITOR'S REPORT ON A LIMITED ASSURANCE ENGAGEMENT

### TO VOLKSWAGEN AG, WOLFSBURG

We have performed a limited assurance engagement on the separate non-financial report of Volkswagen AG, Wolfsburg, (hereinafter the "Company"), which is combined with the separate non-financial report of the Group (hereinafter the "combined non-financial report"), for the period from 1 January to 31 December 2022. The combined non-financial report is included in the Sustainability Report 2022.

Not included in the combined non-financial report are the paragraphs listed in chapter "About this Report" in section "Basis for Report" of the Sustainability Report (Foreword, The German Corporate Governance Code – A Blueprint for Successful Corporate Governance, Further Information and The Volkswagen Value Chain, Making the Social and Environmental Impact of Our Actions Measurable), references to disclosures made outside the combined non-financial report (e.g., references to disclosures in the Annual Report or to additional sustainability disclosures of the Company in the internet), disclosures below the page headers that reference the Standards of the Global Reporting Initiative (GRI) as well as the Company's disclosure that the Sustainability Report systematically uses the GRI Standards (with reference to) as the underlying structure for reporting on management approaches and the specific standard disclosures. The aforementioned disclosures were therefore not subject to our assurance engagement.

### RESPONSIBILITIES OF THE EXECUTIVE DIRECTORS

The executive directors of the Company are responsible for the preparation of the combined non-financial report in accordance with §§ 315c in conjunction with 289c to 289e HGB ("Handelsgesetzbuch": German Commercial Code) and Art. 8 of Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2088 (hereinafter the "EU Taxonomy Regulation") and the Delegated Acts adopted thereunder as well as in accordance with their own interpretation of the wording and terms contained in the EU Taxonomy Regulation and the Delegated Acts adopted thereunder as set out in the chapter "EU Taxonomy" of the combined non-financial report.

These responsibilities of the Company's executive directors include the selection and application of appropriate non-financial reporting methods and making assumptions and estimates about individual non-financial disclosures that are reasonable in the circumstances. Furthermore, the executive directors are responsible for such internal control as the executive directors consider necessary to enable the preparation of a combined non-financial report that is free from material misstatement, whether due to fraud (manipulation of the combined non-financial report) or error.

The EU Taxonomy Regulation and the Delegated Acts adopted thereunder contain wording and terms that are still subject to considerable interpretation uncertainties and for which clarifications have not yet been published in every case. Therefore, the executive directors have disclosed their interpretation of the EU Taxonomy Regulation and the Delegated Acts adopted thereunder in the chapter "EU Taxonomy" of the combined non-financial report. They are responsible for the defensibility of this interpretation. Due to the immanent risk that undefined legal terms may be interpreted differently, the legal conformity of the interpretation is subject to uncertainties.

### INDEPENDENCE AND QUALITY ASSURANCE OF THE AUDITOR'S FIRM

We have complied with the German professional requirements on independence as well as other professional conduct requirements.

Our audit firm applies the national legal requirements and professional pronouncements – in particular the BS WP/vBP ("Berufssatzung für Wirtschaftsprüfer/vereidigte Buchprüfer": Professional Charter for German Public Accountants/German Sworn Auditors in the exercise of their Profession) and the IDW Standard on Quality Management issued by the Institute of Public Auditors in Germany (IDW): Requirements for Quality Management in the Audit Firm (IDW QS 1) and accordingly maintains a comprehensive quality management system that includes documented policies and procedures with regard to compliance with professional ethical requirements, professional standards as well as relevant statutory and other legal requirements.

### RESPONSIBILITIES OF THE AUDITOR

Our responsibility is to express a conclusion with limited assurance on the combined non-financial report based on our assurance engagement.

We conducted our assurance engagement in accordance with 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 obtain limited assurance about whether any matters have come to our attention that cause us to believe that the Company’s combined non-financial report is not prepared, in all material respects, in accordance with §§ 315c in conjunction with 289c to 289e HGB and the EU Taxonomy Regulation and the Delegated Acts adopted thereunder as well as the interpretation by the executive directors disclosed in chapter “EU Taxonomy” of the combined non-financial report.

Not included in the combined non-financial report are the paragraphs listed in chapter “About this Report” in section “Basis for Report” of the Sustainability Report (Foreword, The German Corporate Governance Code – A Blueprint for Successful Corporate Governance, Further Information and The Volkswagen Value Chain, Making the Social and Environmental Impact of Our Actions Measurable), references to disclosures made outside the combined non-financial report (e.g., references to disclosures in the Annual Report or to additional sustainability disclosures of the Company in the internet), disclosures below the page headers that reference the Standards of the Global Reporting Initiative (GRI) as well as the Company’s disclosure that the Sustainability Report systematically uses the GRI Standards (with reference to) as the underlying structure for reporting on management approaches and the specific standard disclosures. The aforementioned disclosures were therefore not subject to our assurance engagement.

In a limited assurance engagement, the procedures performed are less extensive than in a reasonable assurance engagement, and accordingly, a substantially lower level of assurance is obtained. The selection of the assurance procedures is subject to the professional judgment of the auditor.

In the course of our assurance engagement we have, among other things, performed the following assurance procedures and other activities:

- Gain an understanding of the structure of the sustainability organization and stakeholder engagement,
- Inquiries of relevant employees involved in the preparation of the combined non-financial report about the preparation process, about the internal control system related to this process, and about disclosures in the combined non-financial report,

- Inquiries of the employees regarding the selection of topics for the combined non-financial report, the risk assessment and the concepts of the Company and Group for the topics identified as material,
- Inquiries of employees of the Company and the Group responsible for data capture and consolidation, about the data capture and compilation methods as well as internal controls to the extent relevant for the assurance of the disclosures in the combined non-financial report,
- Identification of likely risks of material misstatement in the combined non-financial report,
- Analytical procedures on selected disclosures in the combined non-financial report at the level of the Company and the Group,
- Inquiries and inspection of documents relating to the collection and reporting of selected qualitative disclosures and data,
- Reconciliation of selected disclosures with the corresponding data in the annual financial statements and management report,
- Evaluation of the implementation of group management requirements, processes and specifications regarding data capture through onsite visits at selected sites of the Volkswagen Group
  - Volkswagen AG (Wolfsburg, Germany)
  - Volkswagen AG (Salzgitter, Germany)
  - AUDI AG (Neckarsulm, Germany)
  - SCANIA CV AB (Oskarshamn, Sweden)
  - Volkswagen Group South Africa (Kariega, RSA)
  - FAW-Volkswagen Automotive Co. Ltd. (Foshan, China)
  - SAIC Volkswagen Automotive Co. Ltd. Shanghai (Ningbo, China)
  - ŠKODA AUTO a.s. (Kvasiny, Czech Republic)
  - Volkswagen BR (Anchieta, Brazil),
- Evaluation of the process to identify the taxonomy-eligible and taxonomy-compliant economic activities as well as the corresponding disclosures in the combined non-financial report,
- Evaluation of the presentation of the combined non-financial report.

In determining the disclosures in accordance with Art. 8 of the EU Taxonomy Regulation, the executive directors are required to interpret undefined legal terms. Due to the immanent risk that undefined legal terms may be interpreted differently, the legal conformity of their interpretation and, accordingly, our assurance engagement thereon are subject to uncertainties.

## ASSURANCE CONCLUSION

Based on the assurance procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the combined non-financial report of the Company for the period from 1 January to 31 December 2022 is not prepared, in all material respects, in accordance with §§ 315c in conjunction with 289c to 289e HGB and the EU Taxonomy Regulation and the Delegated Acts adopted thereunder as well as the interpretation by the executive directors as disclosed in the chapter “EU Taxonomy” of the combined non-financial report.

We do not express an assurance conclusion on the disclosures that are not part of the combined non-financial report and that were therefore not subject to our assurance engagement. These are the paragraphs listed in chapter “About This Report” in section “Basis for Report” of the Sustainability Report (Foreword, The German Corporate Governance Code – A Blueprint for Successful Corporate Governance, Further Information and The Volkswagen Value Chain, Making the Social and Environmental Impact of Our Actions Measurable), references to disclosures made outside the combined non-financial report (e.g., references to disclosures in the Annual Report or to additional sustainability disclosures of the Company in the internet), disclosures below the page headers that reference the Standards of the Global Reporting Initiative (GRI) as well as the Company’s disclosure that the Sustainability Report systematically uses the GRI Standards (with reference to) as the underlying structure for reporting on management approaches and the specific standard disclosures.

## RESTRICTION OF USE

We draw attention to the fact that the assurance engagement was conducted for the Company’s purposes and that the report is intended solely to inform the Company about the result of the assurance engagement. As a result, it may not be suitable for another

purpose than the aforementioned. Accordingly, the report is not intended to be used by third parties for making (financial) decisions based on it. Our responsibility is to the Company alone. We do not accept any responsibility to third parties. Our assurance conclusion is not modified in this respect.

## GENERAL ENGAGEMENT TERMS AND LIABILITY

The “General Engagement Terms for Wirtschaftsprüfer and Wirtschaftsprüfungsgesellschaften (German Public Auditors and Public Audit Firms)” dated 1 January 2017 are applicable to this engagement and also govern our relations with third parties in the context of this engagement ([www.de.ey.com/general-engagement-terms](http://www.de.ey.com/general-engagement-terms)). In addition, please refer to the liability provisions contained there in no. 9 and to the exclusion of liability towards third parties. We accept no responsibility, liability or other obligations towards third parties unless we have concluded a written agreement to the contrary with the respective third party or liability cannot effectively be precluded.

We make express reference to the fact that we will not update the report to reflect events or circumstances arising after it was issued, unless required to do so by law. It is the sole responsibility of anyone taking note of the summarized result of our work contained in this report to decide whether and in what way this information is useful or suitable for their purposes and to supplement, verify or update it by means of their own review procedures.

Hanover, 3 March 2023  
Ernst & Young GmbH  
Wirtschaftsprüfungsgesellschaft

Nicole Richter  
Wirtschaftsprüferin  
(German Public Auditor)

Hans-Georg Welz  
Wirtschaftsprüfer  
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### DISCLAIMER

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.

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 directly online using the email address on the left.

