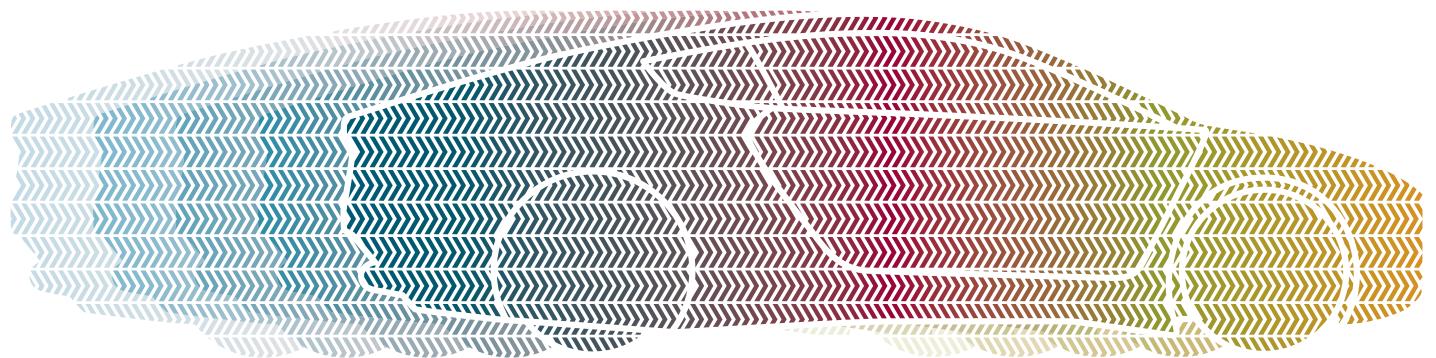


# VOLKSWAGEN

AKTIENGESELLSCHAFT



SUSTAINABILITY REPORT 2014

## THE VOLKSWAGEN VALUE CHAIN

The production of automobiles is based on a complex value chain. Sustainability must therefore be demonstrated throughout the entire process, including the upstream and downstream stages. This holistic principle applies throughout this report.



### RESEARCH & DEVELOPMENT

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

**45,742**

employees  
in Technical Development (2014)

### 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 solutions form an indispensable part of demonstrating comprehensive responsibility for human rights, as well as a commitment to the environment and to the battle against corruption.

**€145.5 billion**

annual procurement  
volume (2014)



## PRODUCTION

Every working day the Volkswagen Group manufactures an average of 41,000 vehicles. As we do so, efficient production ranks alongside employee health and safety as our core goal. New concepts help prepare employees for the future, covering every step from vocational education and training onwards.

**118**

production locations on  
four continents (2014)

## MARKETING & SALES

The Volkswagen Group markets its vehicles in 31 countries. Around the world, comfort and safety are considered the key customer requirements. We continuously reduce the fuel consumption of our models and offer alternative mobility services.

**10.14 million**

vehicles sold  
worldwide (2014)

## AFTER-SALES & FINANCIAL SERVICES

Service provision includes supporting dealerships to ensure they can provide quality advice and maintenance; managing the original parts business; and providing innovative vehicle-related financial services. Fuel-economy driver training courses play an effective part in cutting fuel consumption and thus CO<sub>2</sub> emissions.

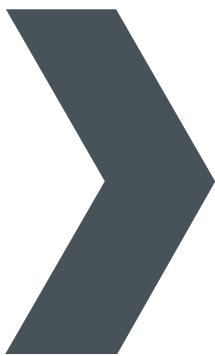
**978**

people attended Driving Experience  
eco-driving courses (2014)

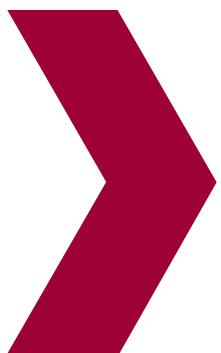
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A dedicated microsite at [sustainability-report2014.volkswagenag.com](http://sustainability-report2014.volkswagenag.com) hosts all the articles and graphics from this report as well as providing additional information. Items in the report on which further details are available on the Internet are marked with this symbol: ⓘ Content can be accessed directly online using the number indicated.

Consumption and emissions data for all models mentioned in this report are set out on page 144. Cross-references are marked with this symbol: \*

Items in the report which are covered by the sustainability audit in line with ISAE3000 to qualify for limited assurance (see pages 145–147) are marked with the following symbol: ⓘ

# A GROUP OF STRONG BRANDS

**The Volkswagen Group, based in Wolfsburg, is one of the world's leading automobile manufacturers and the largest in Europe. In 2014 the Group increased the number of cars and commercial vehicles delivered to customers to more than 10 million, which equates to 12.9% of the global passenger car market. The Group's sales revenue totaled €202,458 million in 2014, while profit after tax came to €11,068 million.**

## STRUCTURE

The Volkswagen Group is a publicly quoted stock corporation under German law and owns twelve brands from seven European countries: Volkswagen Passenger Cars, Audi, SEAT, ŠKODA, Bentley, Bugatti, Lamborghini, Porsche, Ducati, Volkswagen Commercial Vehicles, Scania and MAN. All brands in the Automotive Division – with the exception of Volkswagen Passenger Cars and Volkswagen Commercial Vehicles – are legally independent, separate companies.

Volkswagen AG is the parent company of the Volkswagen Group. It develops vehicles and components for the Group's brands, but also produces and sells vehicles, in particular passenger cars and light commercial vehicles from the Volkswagen Passenger Cars and Volkswagen Commercial Vehicles brands. In its function as parent company, Volkswagen AG holds indirect or direct interests in AUDI AG, SEAT S.A., ŠKODA AUTO a.s., Dr. Ing. h.c. F. Porsche AG, Scania AB, MAN SE, Volkswagen Financial Services AG and a large number of other companies in Germany and abroad. More detailed disclosures are contained in the list of shareholdings in accordance with sections 285 and 313 of the Handelsgesetzbuch (HGB – German Commercial Code), which can be accessed at [www.volkswagenag.com/ir](http://www.volkswagenag.com/ir) and forms part of the annual financial statements.

## PRODUCTS

The Volkswagen Group is one of the leading multibrand groups in the automotive industry. The Company's business activities comprise the Automotive and Financial Services divisions. The business activities of the various companies in the Volkswagen Group focus on developing, producing and selling passenger cars, light commercial vehicles, trucks and buses. The product portfolio ranges from motorcycles to fuel-efficient small cars and luxury vehicles. In the commercial vehicles segment, the offering begins with small pickups and extends to buses and heavy

trucks. Other business fields include the manufacture of large-bore diesel engines and special gear units, for example. A broad range of financial services completes the offering.

## LOCATIONS AND EMPLOYEES

The Volkswagen Group's production network comprised 118 production locations at the end of the reporting year (see pages 6 – 7). Europe remains the heart of our production activities with 72 vehicle and component production locations, 29 of them in Germany alone. The significance of the Asia-Pacific region is continuously increasing, with a total of 29 production locations. In North America (four) and South America (nine) the number of locations remained unchanged in the reporting year. In Africa the Group maintains four production locations. Almost 600,000 employees produce an average of 41,000 vehicles per working day or provide mobility-related services, or work in other business fields.

## MARKETS

With its brands, the Volkswagen Group has a presence in all relevant automotive markets around the world. Western Europe, China, Brazil, the USA, Russia and Mexico are currently the key sales markets for the Group. The Group maintained its strong competitive position in the reporting period thanks to its wide range of attractive and environmentally friendly models. We recorded an encouraging increase in demand in many of our key markets. Worldwide, for the manufacture of its products, the Group purchased goods and services to the value of €145.5 billion, an increase of 7.7% compared to the previous year. This includes the purchasing volume for the Chinese joint venture companies. Suppliers in Germany accounted for a share of 36.1%.

Further details on the development of the Group, its holdings, and changes with regard to production locations or activities can be found at: ① 2, 3



**THE BOARD OF MANAGEMENT OF THE VOLKSWAGEN GROUP**  
(from left to right)

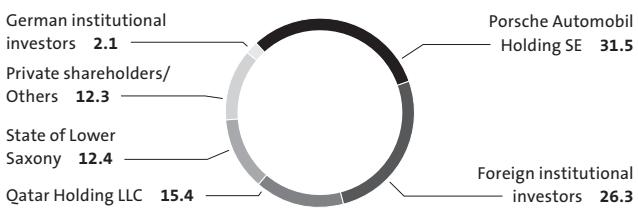
**Prof. Rupert Stadler** – Chairman of the Board of Management of AUDI, **Christian Klingsler** – Sales and Marketing, **Prof. Dr. rer. pol. Horst Neumann** – Personnel Management and Organization, **Prof. Dr. rer. pol. Dr.-Ing. E.h. Jochem Heizmann** – China, **Dr. rer. pol. h.c. Francisco Javier Garcia Sanz** – Procurement, **Prof. Dr. Dr. h.c. mult. Martin Winterkorn** – Chairman of the Board of Management of Volkswagen Aktiengesellschaft, Research and Development, **Hans Dieter Pötsch** – Finance and Controlling, **Dr. h.c. Leif Östling** – Commercial Vehicles (until February 2015)

**Andreas Renschler** – Commercial Vehicles (since February 1, 2015)

**Matthias Müller** – Chairman of Dr. Ing. h.c. F. Porsche AG (since March 1, 2015)

**> SHAREHOLDER STRUCTURE AT DECEMBER 31, 2014**

*in % of voting capital*



**> GROUP KEY FIGURES**

	2014	2013
Volume data		
Vehicle sales (thousand units)	10,217	9,728
Vehicle production (thousand units)	10,213	9,728
Employees at Dec. 31 (thousands)	593	573
Proportion of female employees in %	15.7	15.5
Proportion of apprentices in % <sup>1</sup>	4.8	4.8
CO <sub>2</sub> emissions European new car fleet in g/km <sup>2</sup>	126	129
CO <sub>2</sub> emissions in kg/veh. <sup>2</sup>	842	885
Energy consumption in kWh/veh. <sup>3</sup>	2,054	2,204

**> EMPLOYEES BY REGION 2014**



	2014	2013
Financial data (IFRSs), € million		
Sales revenue	202,458	197,007
Operating profit	12,697	11,671
Profit before tax	14,794	12,428
Profit after tax	11,068	9,145

<sup>1</sup> At the Group in Germany.

<sup>2</sup> Subject to official publication by the European Commission.

<sup>3</sup> Production of cars and light commercial vehicles, prior-year figures adjusted.

# OUR BRANDS



Audi



SEAT

ŠKODA



BENTLEY



PORSCHE



Commercial  
Vehicles



SCANIA



## VOLKSWAGEN FINANCIAL SERVICES

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On the Sustainability Report microsite you will find portraits of all the Group brands with a brief description of their commitment to sustainability and links to the brand websites: [sustainability-report2014.volkswagenag.com](http://sustainability-report2014.volkswagenag.com)



VOLKSWAGEN XL1\*



AUDI A3 SPORTBACK E-TRON\*



SEAT LEON ST ECOMOTIVE



ŠKODA FABIA\*



BENTLEY CONTINENTAL GT V8\*



BUGATTI VEYRON\*



LAMBORGHINI AVENTADOR\*



PORSCHE PANAMERA S E-HYBRID\*



DUCATI HYPERMOTARD



VOLKSWAGEN COMMERCIAL VEHICLES  
CADDY ECOFUEL\*



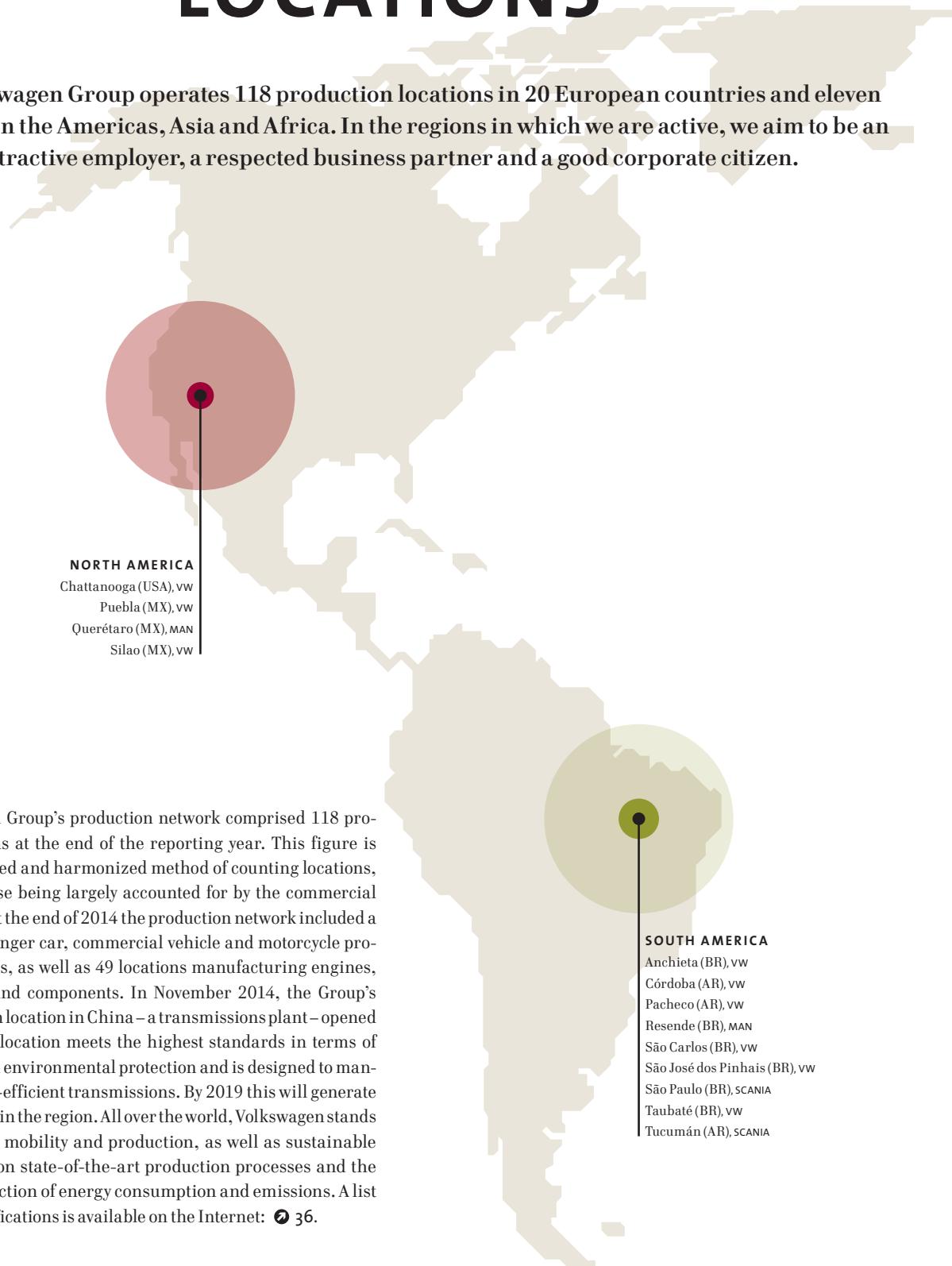
SCANIA R580



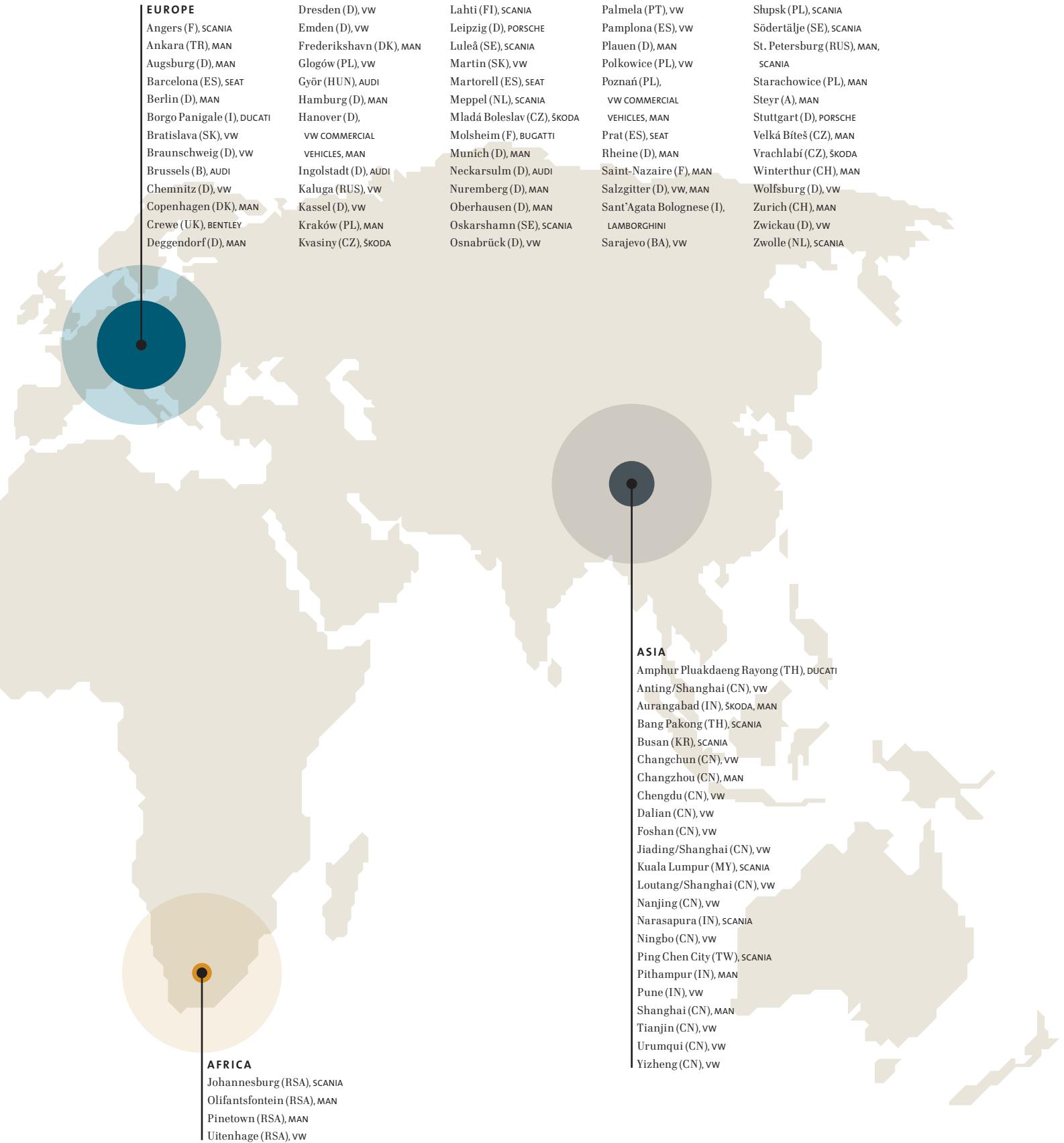
MAN LION'S CITY GL CNG

# GROUP PRODUCTION LOCATIONS

The Volkswagen Group operates 118 production locations in 20 European countries and eleven countries in the Americas, Asia and Africa. In the regions in which we are active, we aim to be an attractive employer, a respected business partner and a good corporate citizen.



The Volkswagen Group's production network comprised 118 production locations at the end of the reporting year. This figure is based on a revised and harmonized method of counting locations, with the increase being largely accounted for by the commercial vehicle sector. At the end of 2014 the production network included a total of 69 passenger car, commercial vehicle and motorcycle production locations, as well as 49 locations manufacturing engines, transmissions and components. In November 2014, the Group's latest production location in China – a transmissions plant – opened in Tianjin. The location meets the highest standards in terms of both quality and environmental protection and is designed to manufacture energy-efficient transmissions. By 2019 this will generate some 5,500 jobs in the region. All over the world, Volkswagen stands for eco-friendly mobility and production, as well as sustainable growth, based on state-of-the-art production processes and the systematic reduction of energy consumption and emissions. A list of location certifications is available on the Internet: [❸ 36](#).





# › STRATEGY

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- 23**      Stakeholder Management

## VOLKSWAGEN GROUP VEHICLE SALES BY REGION

2014, in thousand units



GROUP SALES  
REVENUE GROWTH  
2014, in %

+2.8

(2013: +2.2%)

INCREASE IN  
GROUP WORKFORCE  
2014, in %

+3.5

(2013: +4.2%)

REDUCTION IN  
ENVIRONMENTAL IMPACT  
FROM GROUP  
PRODUCTION ACTIVITIES  
2014, in %

19.3

(2013: 12.5%)



GTE Mode

CROSS COUPÉ GTE  
Roadtrip



322

0.0 / SET



# HOW CAN WE SHAPE A CHANGING WORLD?

Our world is changing at a breathtaking pace. Globalization, new technologies and the Internet are the driving forces behind this change. Digitization is revolutionizing our lives in the same radical way as the Industrial Revolution did 200 years ago. Computers, smartphones and robots are redefining how we communicate, shop and spend our free time, and what our day-to-day life at the office and in the factory looks like. Digitization is, of course, also changing the way we shape our mobility.

*“Urbanization means a need for intelligent new transportation concepts.”*

The car has entered a new era: the shift in society's values and strict CO<sub>2</sub> laws around the world are the forces behind a trend towards increasingly economical drive systems, electric mobility, lightweight design and energy-efficient factories. Urbanization means a need for intelligent new transportation concepts. Constant growth in computing power, fast data networks and cheap memory are helping to keep people “always on”. Cars are becoming computers on wheels: engine and chassis management, driver assistance systems, navigation, communications, infotainment systems and automated driving are all developing at high speed.

But it's not just the business environment that has undergone far-reaching transformation over the past few years: Volkswagen itself has changed fundamentally as well. Just compare the Group today with what it was in 2007: the number of brands has increased from eight to twelve and our workforce too has shown rapid growth. We now employ a quarter of a million more people than we did in 2007. Our sales revenue has

almost doubled, to over €200 billion. Our operating profit has more than doubled. The number of production locations has risen from 48 to 118. And since 2007 we have added more than 180 models to our range. In sum, the Volkswagen Group has moved into new dimensions.

As I see it, our success is also founded in our ongoing willingness to regularly call our own approaches into question and then break new ground. In this way we have learned that our business is no longer just about technical aspects like horsepower and torque. We have learned that sustainability, environmental protection and social responsibility can be powerful value drivers. And we have learned to love electric drive – not just because it is so efficient, but also because it makes driving so much fun.

For current proof that today's business models won't automatically meet the needs of tomorrow's world, consider digitization. Digital networking is radically changing not only our vehicles, our plants and our employees' jobs but also our relationships with our customers. But we are ready for this change. In fact, our ambition is to be the engine that drives this change, and now we are stepping up the pace again. We are bringing the digital world to our vehicles and connecting in-vehicle sensors with our data centers. This way our vehicle fleet will become an intelligent swarm, providing us with a springboard from which to launch new mobility services. Real-time data is also needed for partially automated driving and intelligent traffic management in city centers or on motorways. Our factories too are in line for the next major automation step change. Fully networked manufacturing in line with Industry 4.0 is beginning to take shape. Machines are relieving our employees of monotonous, non-ergonomic tasks and boosting productivity. Robots are moving out of their protective cages and will work side by side or even hand in hand with people in the future. And in the sales sector the Internet has become the most important showroom. Now the focus is on seamlessly connecting the



*“We can and must bring the digital and the mobile worlds together.”*

virtual, digital world with the real one. Using big data intelligently also allows us to develop new software solutions and service offerings for cars that give our customers genuine added value and open up additional business opportunities for our Company.

*“Our ambition is to be the engine that’s driving change.”*

So is this a brave new digital automotive world? There are, of course, fundamental questions that still need to be answered: will the factories of tomorrow be empty of people? Is the traffic infrastructure prepared for the opportunities the digital world has to offer? And how can we protect customer data from misuse? We are aware of our responsibilities and are addressing all of these issues carefully. At the same time, I urge you to look not just at the risks, but more particularly at the opportunities that digitization presents. Not only will driving become more comfortable and safer for people; at the same time, we will also reduce the impact on the environment through optimum utilization of our resources. Exciting opportunities for new technologies and business ideas are emerging for industry, and these can lead to growth and prosperity.

Above all, new trends and new technologies ultimately mean one thing: new business opportunities. But competition for future mobility is ruthless and success is never guaranteed, not least because the business environment in which we operate is tougher than ever. Consequently, politicians too need to be more fully aware of the scale of the challenges we face. Because the political framework is always a key factor in determining success or failure.

Despite all the challenges, I am convinced that we can and must bring the digital and the mobile worlds together. That is why digitization is one of the major components of our Group-wide “Future Tracks” program, which we launched in spring 2014.

On our road to the new digital world of mobility, there is one thing we cannot afford to neglect, and that is to ensure that people – our customers, partners and employees – can travel with us. Focus, safety and security, and trust – these values are and will remain the foundation for technological progress.

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**Prof. Dr. Martin Winterkorn**  
Chairman of the Board of Management of Volkswagen AG

# FOCUSING ON THE ESSENTIALS.

We aim to be the world's most successful, fascinating and sustainable automobile manufacturer.

This is the target we set ourselves for 2018, and we have already achieved some of our aims.

In a world that is undergoing ever more radical changes, however, targets can never be more than milestones: reach them and they are already out of date. With the advent of digitization, the industry and the Group are on the cusp of a new era – one we aim to play a major role in shaping.

## OUR APPROACH

For the Volkswagen Group, sustainability means that we conduct our business activities on a responsible and long-term basis and do not seek short-term success at the expense of others. Our intention is that everyone should profit from our growth – our customers and investors, society and, of course, our employees. In this way, good jobs and careful treatment of resources and the environment form the basis for generating lasting values. This applies on all continents and in all regions and throughout the entire value chain. In future, revisiting and implementing this approach in the light of digitization – and responsibly handling the digitization process itself – will be a key factor shaping the strategic issues of our sustainability management.

To ensure consistent and focused pursuit of our objectives, we aim to concentrate on essentials (see pages 16 – 18). The challenges are immense. They range from climate change, resource availability and demographic developments, through far-reaching changes in society's values, to digitization, rapid urbanization and increasing social imbalances.

As one of the world's largest industrial corporations, our Group with its twelve strong brands bears a special social responsibility and we intend to put our creative powers to good use for the benefit of people and the environment. Every year the Volkswagen Group produces more than 10 million vehicles. This gives rise to positive effects such as new jobs, regional prosperity and individual opportunities for participation, but also to emissions and resource consumption. Our most important tasks, as we see it, are therefore to ensure responsible and efficient production, and to make mobility not only as safe, convenient and environmentally compatible as possible, but at the same time affordable for large numbers of people. After all, individual mobility remains a basic human need, and fulfilling this need is the central corporate objective of our Group.

Through pioneering technologies and social competence we are making our contribution to a sustainable form of development that will give future generations the same opportunities as the present

generation has. In view of digitization, we will in future be faced with new issues in the field of sustainability and responsibility – for example, what we do with our customers' data, how we ensure that they are secure and protected at all times, and what legal and ethical problems are raised by automated driving. This also means that to some extent we need to reconsider and redefine the key aspects of our activities.

*› Twelve brands, each with its own unique character, sharing a common goal: mobility – for everyone, everywhere.*

## Our Sustainability Strategy

We know that growth can only take place hand in hand with responsibility and environmental protection – more than that, in fact: in recent years these factors have become genuine value drivers. That is why everything we do in the interests of sustainability also serves to achieve our corporate objectives – in an accompanying, promoting and supporting capacity. The key aspects of our sustainability objectives and activities, which are subject to Group-wide control, are structured under the three headings used in this report – Economy, People and Environment. This reflects not only our Group-wide interpretation of sustainability that can be applied in all regions around the world, but also our conviction that stable, long-term business activity based on ethical criteria is a precondition for acting in an environment-friendly way and playing a responsible part in shaping the future of people within the Group and in society at large.

With almost 600,000 employees and 118 production locations on four continents, we are especially concerned to do this consistently worldwide. Our approach: to transfer tried-and-tested ideas – from brand to brand, from region to region. There are already numerous examples of how this works – from the modular

transverse matrix, via the dual vocational education and training system and in-service training opportunities that we bring to the various regions, to mobility services, concepts for road safety and social responsibility, and biodiversity projects. In this way we turn our size and growth to good advantage and exercise our responsibility for our employees, the environment and society.

### **Managing Challenges and Trends**

Even if the major challenges are known and can be assessed, the resulting demands on the Volkswagen Group are nevertheless subject to increasingly rapid change and have to be reassessed at regular intervals and readjusted in our strategic planning. Within the Volkswagen Group we therefore have several specialized functions engaged in observing megatrends in society, analyzing the overall economic backdrop, tracking emerging customer trends and continuous benchmarking against the competition. The results are brought together in a process known as the planning

round. This ensures that the important decisions for production, purchasing and sales structures are taken with a ten-year timeline. Another instrument for identifying challenges and expectations and for dealing with changing background conditions is the stakeholder dialogue, which we cultivate at both Group and market level (see pages 23–27).

### **› Growth with responsibility for employees, environment and society**

In summer 2014, based on these observations and derived from the major challenges, we identified for the Volkswagen Group 16 areas in which we can and must make a special contribution – because these are fields where we have a significant impact or where we are particularly well placed to exert influence, and where consequently a great deal is also expected of us. 

#### **› ORIGIN OF THE ACTION AREAS FOR OUR SUSTAINABILITY STRATEGY**

ORIGIN OF THE ACTION AREAS FOR OUR SUSTAINABILITY STRATEGY				
Climate change	Environmental impacts	Demographic change	Globalization	Digitization
Resource availability	Water availability	Market shifts	Increasing regulation	Economic uncertainty
Mobility	Energy systems	Road safety	Urbanization	Sustainability
Noise	Health	Social uncertainty	Biodiversity	Human rights

VOLKSWAGEN GROUP'S KEY ACTION AREAS			
Customer satisfaction	Quality	Stability and profitability	Compliance, risk management, corporate governance
Supplier relationships	Attractiveness as an employer	Participation	Training
Corporate responsibility	Intelligent mobility and networking	Health	Environmentally friendly products/ electrification
Climate and environmental protection	Diversity and equality	Resource conservation across the lifecycle	Vehicle safety



The Volkswagen Group is one of the leading suppliers of alternative drive systems. With 1,354 units sold by the end of 2014, the best-selling electric car to date is the e-up!®.

### **Materiality Analysis** GRI G4-18, G4-25, G4-26

In 2014, two mutually independent developments played a role in a detailed analysis of the topics of material importance to the Volkswagen Group. One particular issue was the question of the Group's strategy for the period after 2018, which has sparked lively discussions. Important sustainability topics that impact on the Company's performance are covered by risk management (see page 22). The findings of the discussions were also taken into account when defining the key action areas. In addition, there were the GRI's new requirements (GRI-G4), which pay greater attention to the process of materiality analysis. In practice, our approach to the analysis and identification of significant issues was as follows:

1. From global challenges we derived a list of 16 central action areas in which we need to provide answers. We did this on the basis of the following sources: external studies, industry analyses and our brands' stakeholder surveys, and also internal guidelines such as the Strategy 2018, the Group Environmental Strategy, or key factors identified by the Corporate Strategy Group.

2. To obtain an additional assessment of the importance of these action areas for the Company, we conducted an online analysis of international media for the period September 2013 to August 2014. This revealed that eco-friendly products in the context of the automotive industry, and especially in connection with the Volkswagen Group, were by far the most widely discussed issues, followed by intelligent mobility, customer satisfaction, quality and employment.
3. On the basis of the assessments obtained in the first two steps, the action areas were then discussed and defined in two further steps. The following served as our central criteria: stakeholder expectations, the potential contribution to the Group's strategic objectives, and the difference between these two criteria. This analysis was first performed in the Group CSR Meeting with representatives of the brands and regions, and finally in the Corporate CSR & Sustainability Steering Group.
4. Detailed discussions in each case led to the realization that in view of the Group's size, its potential influence and the associated responsibility, all the issues in the GRI list of sustainability aspects can and must be regarded as "significant" for the Volkswagen Group.

➤ MATERIALITY ANALYSIS: PROCEDURE IN THE VOLKSWAGEN GROUP  GRI G4-18, G4-20



➤ VOLKSWAGEN GROUP'S KEY ACTION AREAS 



This representation of the 16 central action areas, broken down into the three dimensions Economy, People and Environment, is intended to illustrate the aspects that we focus on in order to become the world's most sustainable automaker. In view of our broad international standing, we have deliberately avoided any prioritization of our action areas. On the one hand, the relevance of the individual areas may vary depending on the region; on the other hand, we do not want to judge, for example, whether the health of nearly 600,000 employees worldwide is more important

than resource conservation throughout the vehicle life cycle – or vice versa. As we understand it, sustainable development means taking equal account of economic, environmental and social interests and maintaining an appropriate balance between them. In other words, the 16 action areas that apply across the Group stand side by side, even if current developments place a greater short- or medium-term focus on individual topics. In the interests of the future success of our business, taking a long-term view is of decisive importance for us.

› VOLKSWAGEN GROUP'S KEY ACTION AREAS  GRI G4-19, G4-20, G4-21

Action Areas 	Corresponding GRI aspects	page
<b>Economy</b>		
Stability and profitability	Economic Performance	34, 135
Quality	Customer Health and Safety	35, 134
Vehicle safety	Customer Health and Safety	38–39, 135
Customer satisfaction	Product and Service Labeling, Customer Privacy	39, 134
Supplier relationships	Procurement Practices, Supplier Environmental Assessment, Supplier Assessment for Labor Practices, Freedom of Association and Collective Bargaining, Child Labor, Forced or Compulsory Labor, Supplier Human Rights Assessment, Supplier Assessment for Impacts on Society	42–46, 135
Compliance, risk management, corporate governance	Supplier Assessment for Labor Practices, Grievance Mechanisms (Labor Practices, Environmental, Human Rights and Impacts on Society), Investment, Non-discrimination, Freedom of Association and Collective Bargaining, Child Labor, Forced or Compulsory Labor, Assessment, Anti-corruption, Anti-competitive Behavior, Compliance (Product Responsibility, Society, Environment), Marketing Communications, Public Policy, Security Practices	22–23, 46–49, 135
<b>People</b>		
Attractiveness as an employer	Employment, Market Presence	56–57, 136
Training	Training and Education	57–62, 136
Participation	Employment, Equal Remuneration for Women and Men, Market Presence, Labor/Management Relations	62–66, 136
Health	Occupational Health and Safety	66–69, 136
Diversity and equality	Diversity and Equal Opportunity, Non-discrimination	69–72, 136
Corporate responsibility	Indirect Economic Impacts, Local Communities, Indigenous Rights	73–75, 136
<b>Environment</b>		
Resource conservation across the lifecycle	Materials, Energy, Water, Emissions, Effluents and Waste, Products and Services, Overall	86, 100–107, 137
Environmentally friendly products/electrification	Energy, Emissions, Products and Services, Overall	86, 94–100, 137
Climate and environmental protection	Energy, Water, Biodiversity, Emissions, Effluents and Waste, Transport, Overall	90–93, 106–107, 137
Intelligent mobility and networking	Products and Services, Customer Privacy	86, 110, 137

01



02



03



04



05



06



The extended range of alternative drives is an integral component of the CO<sub>2</sub> prevention strategy of the Volkswagen Group.  
01: Golf GTE\* (Volkswagen), 02: Panamera S E-Hybrid\* (Porsche), 03: Mii Ecofuel\* (SEAT), 04: A3 Sportback e-tron\* (Audi), 05: Lion's City GL CNG (MAN), 06: Caddy EcoFuel\* (Volkswagen Commercial Vehicles).

## SUSTAINABLE MANAGEMENT

The Volkswagen Group has made a commitment to sustainability-oriented, transparent and responsible management. The greatest challenge to putting this into practice at all levels and in all stages of the value chain is our complexity, with twelve brands, nearly 600,000 employees and 118 production locations. In line with the recommendations of the German Corporate Governance Code, we practice Group-wide sustainability coordination and forward-looking risk management and ensure a clear framework for the future-oriented handling of environmental issues, responsibility towards our employees and social engagement by our brands and in the various regions. The remuneration of the Group Board of Management is geared to the Company's long-term results.

### Guidelines and Principles

Voluntary undertakings and principles that apply across the Group form the basis and backbone of our strategic sustainability objectives. These include the following:

- **Volkswagen Group values:** Our position is defined by seven values. These are customer focus, top performance, creating value, ability to renew, respect, responsibility and sustainability (2002). ② 7
- **Volkswagen Model of Sustainable Development:** Adopted in 2002 to mark the UN World Summit in Johannesburg (South Africa), this provides a Group-wide framework for sustainable and responsible action. ② 8

➤ **Volkswagen Group Code of Conduct:** Introduced in 2010, this applies throughout the Group and provides managers and employees with a guide to meeting legal and ethical challenges in their everyday work. ② 9

➤ **Commitment to United Nations Global Compact:** In 2002 the Volkswagen Group committed itself to promoting human rights, upholding labor standards, protecting the environment and combatting corruption. In 2013 this commitment was extended to include the CEO Water Mandate, which aims to ensure careful use of water resources.

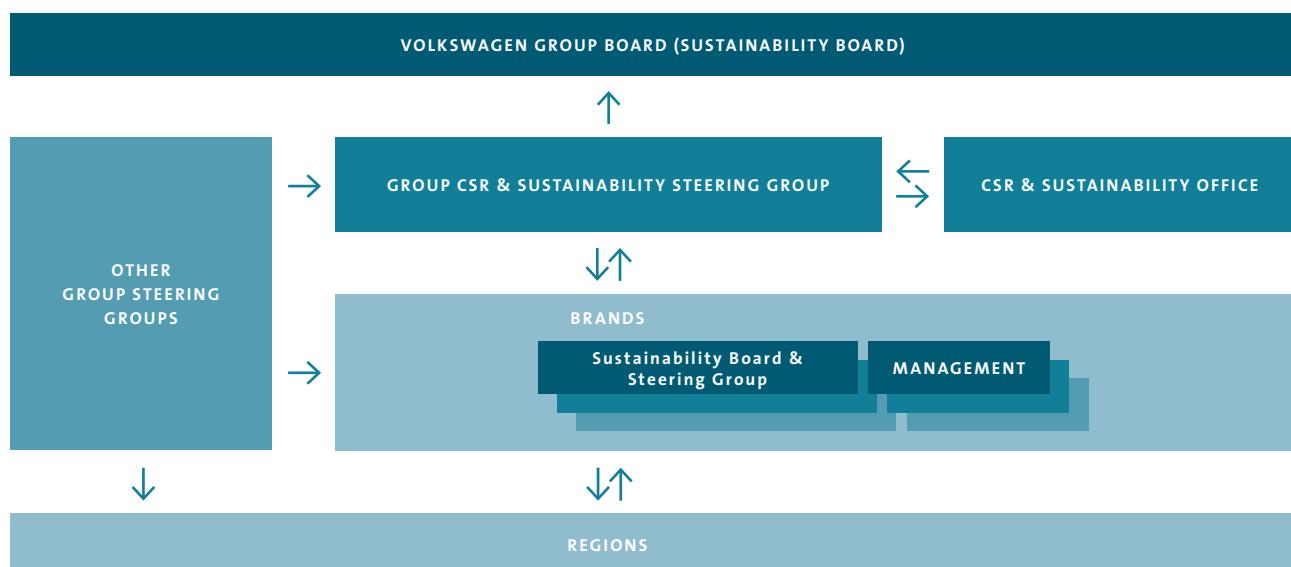
We also make sure that our activities are in line with

- the declarations of the International Labour Organization (ILO),
- the guidelines and conventions of the Organisation for Economic Cooperation and Development (OECD) and
- the international UN pacts on fundamental human rights and freedoms.

We have created our own framework for this purpose in the Volkswagen Social Charter, the Charter on Labour Relations and the Charter on Temporary Work, all of which apply throughout the Group (see pages 62–65). Group-wide environmental protection is governed by the Group Environmental Policy and the Group-wide environmental principles governing products and production (see page 87).

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### ➤ VOLKSWAGEN SUSTAINABILITY ORGANIZATION





The CSR & Sustainability Coordinators of the brands and regions met in Brussels in September 2014.

#### › GROUP CSR MEETING

To promote dialogue across the Group, set up uniform structures and learn from one another, the CSR & Sustainability Coordinators of all brands and regions have met once a year since 2009. The Group CSR Meeting has thus become an important element in the Group-wide coordination structure. In 2014 the two-day meeting was held in Brussels. The agenda included a joint assessment of important sustainability issues in preparation for the Materiality Analysis to be signed off by the Corporate CSR and Sustainability Steering Group (see pages 16–18).

at least three seats on the Supervisory Board are to be held by women, at least two of whom should be representatives of the shareholders.

#### **Coordination of Sustainability**

The Volkswagen Group has established a clear structure for coordinating CSR and sustainability. The top sustainability body is the Group Board of Management, referred to here as the Sustainability Board. At least twice a year the Sustainability Board is informed by the Corporate CSR & Sustainability Steering Group about topics relating to corporate responsibility and sustainability. The Corporate CSR & Sustainability Steering Group includes top managers from central Group business areas, members of the Group Works Council and representatives of the brands and regions. It meets four times a year, decides on the strategic sustainability goals and signs off the Sustainability Report.

The Corporate CSR & Sustainability Steering Group is supported by the CSR & Sustainability Office, which has coordinated all sustainability-relevant activities within the Group and the brands since 2006. Its remit also includes the stakeholder dialogue conducted at Group level, including relations with sustainability-oriented analysts and investors. There are also several dedicated project teams, each working at crossfunctional level on tasks such as sustainability reporting or sustainability in supplier relations. These coordination and working structures have, with a few exceptions, also been established within the Volkswagen Group's brands and are constantly being expanded. Group-wide sustainability reporting underwent further structuring and extension in 2014, once the data for the 2013 Group Sustainability Report had been captured for the first time in an IT-based information system.

#### **Functions and Composition of the Management Bodies**

The Group Board of Management has nine members. Every member is responsible for one or more functions, and some members also have responsibility for a region. The Group Board of Management is supported in its work by the boards and management teams of the brands and regions, and of the other Group companies and affiliated companies. In accordance with the German Co-determination Act the Supervisory Board, which appoints, oversees and advises the Board of Management, is made up of equal numbers of representatives of the shareholders and representatives of the employees. The Supervisory Board of the Volkswagen Group has a total of 20 members, three of whom are women. Clear ideas, including diversity targets, have been formulated for the composition of the Supervisory Board. For example, at least three seats should be held by individuals of a particularly international character. In addition,

#### › REMUNERATION OF THE BOARD OF MANAGEMENT

The remuneration of the Group Board of Management consists of a fixed and a variable component. The variable component is made up of a bonus based on the performance of the business in the preceding two years, and (since 2010) a long-term incentive (LTI) which is based on a consideration of the preceding four financial years. Thus both elements of the variable component are based on multi-year assessment criteria and take account of both favorable and unfavorable developments.  10

#### Coordination of Environmental, Personnel and Social Engagement Issues

In 2011 the Volkswagen Group took an important decision for the ecological restructuring of the Group by appointing a Group Chief Officer for the Environment, Energy and New Business Areas. The Environmental Strategy was approved by the Group Board of Management at the end of 2013 (see pages 86–87). Since then, work has been in progress on implementing it within the Group and the individual brands. The Group Environmental Conference, at which the environmental officers of the brands and regions meet regularly, has been in place since as long ago as 1998. The last meeting was held in 2012, and the next will be in 2015. Through the Corporate Environment and Energy Steering Group, which also reports to the Sustainability Board, the coordination of environmental issues follows the structure described above for CSR & Sustainability.

The framework for coordination of employee responsibility is defined by the Corporate Personnel Management department and implemented locally. In 2013 a personnel management strategy to support the Group goals for 2018 was adopted (see page 56). Social engagement falls largely within the responsibility of the brands, companies and locations. To ensure a certain standardization worldwide, the Group has defined central principles (see pages 73–75).

#### RISK MANAGEMENT

The Volkswagen Group's responsible and forward-looking approach to risks is supported by a comprehensive risk management and internal control system (RMS/ICS). This is based on the internationally recognized COSO Enterprise Risk Management Framework (Committee of Sponsoring Organizations of the Treadway Commission). We pursue a holistic, integrating approach that combines the risk management system, internal control system and compliance management system in a single Governance, Risk & Compliance strategy. As a result, the RMS/ICS ensures full coverage of all potential risk areas. The central body responsible is the Group Board of Management, which is informed about risks and opportunities in connection with a wide variety of processes. The Supervisory Board's Audit

Committee receives regular reports on the effectiveness of the RMS/ICS.

As an integral part of our structures and procedures, our RMS is embedded in the day-to-day business processes of the Volkswagen Group. It pursues the "Three Lines of Defense" approach:

- › The first line is the essential task of the divisions, companies and brands. Thanks to reports during the year via the paths documented above, the Board has an overall picture of the current risk situation at all times. The minimum requirements for the RMS/ICS are laid down in a single guidance document for the entire Group. This also includes a process for timely notification of significant risks.
- › The second line is the Group Governance, Risk & Compliance (GRC) department. This sets standards for the RMS/ICS and coordinates the annual GRC standard process. In this process, the brands, major companies and individual functions identify risks and verify the effectiveness of the RMS/ICS. This serves as a basis for updating the overall picture of the potential risk situation and assessing the effectiveness of the system. The Group Board of Management receives a report on significant risks, which are also defined in terms of quantitative and qualitative assessment criteria and a probability rating.
- › The third line is Group Internal Audit, which makes regular checks on the structure and implementation of the RMS as part of its independent audit activities.

#### › Being aware of our stakeholders' expectations is an important precondition for business success.

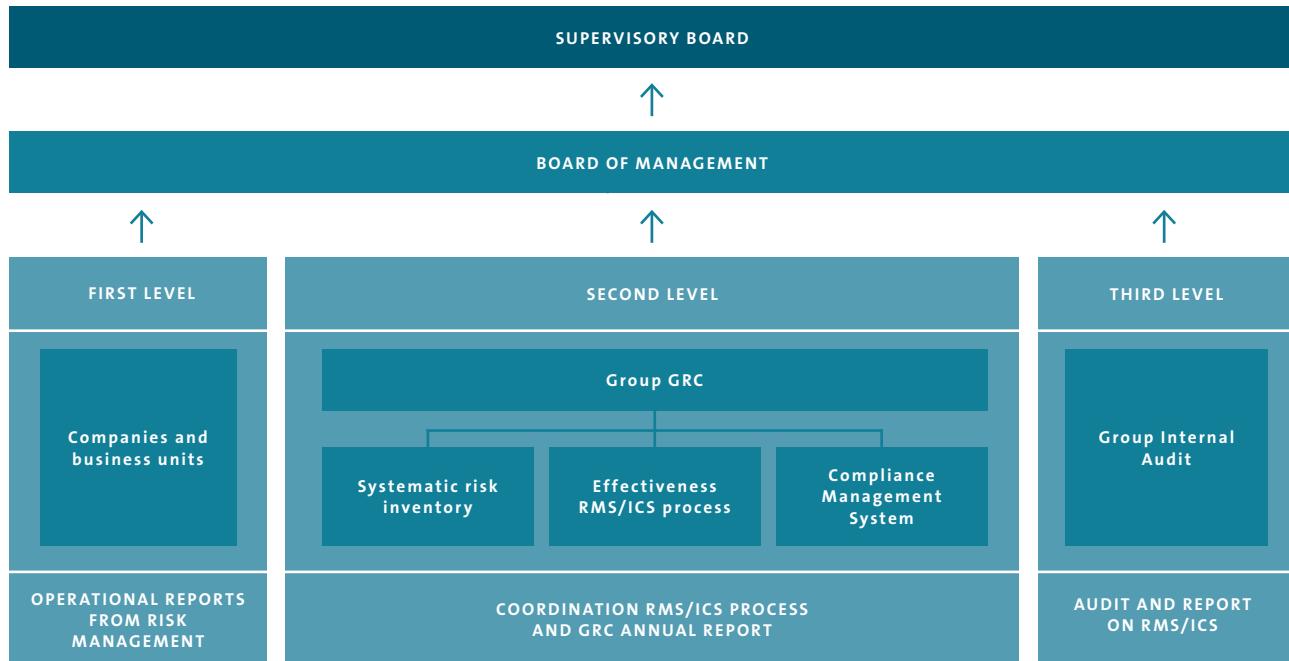
#### Significant Risks

The biggest risks – i.e. risks with a high probability of occurrence and involving a large financial loss – may arise from adverse sales and market trends for vehicles and genuine parts, development and creation of products not suited to demand, and potential quality problems.

Risks that could impact on the financial result of the Volkswagen Group also include general environmental risks and climate change risks. Under the RMS these are identified, assessed and controlled by the Group's divisions and companies. Examples of such risks include the following:

- › Extreme weather situations, storms or floods leading to failure of information and communication technology, supplier failure with production standstill or general production downtime at one of our more than 100 production locations worldwide.
- › The differences in CO<sub>2</sub> regulations between the major volume markets, which involve a variety of sanction mechanisms. Emission requirements for vehicle taxation also play an important role here.

» “THREE LINES OF DEFENSE” APPROACH



» Alongside the risks described, the development of new drive technologies (hybrid and electric) may result in advantages compared with our competitors. In view of a broad change in public awareness based on the depletion of fossil resources and a growing desire to protect the environment, these technologies promote the Group's sales opportunities.

For more information on economic, political, financial and operational risks, see the Risks and Opportunities section of the Management Report. ↗ 11

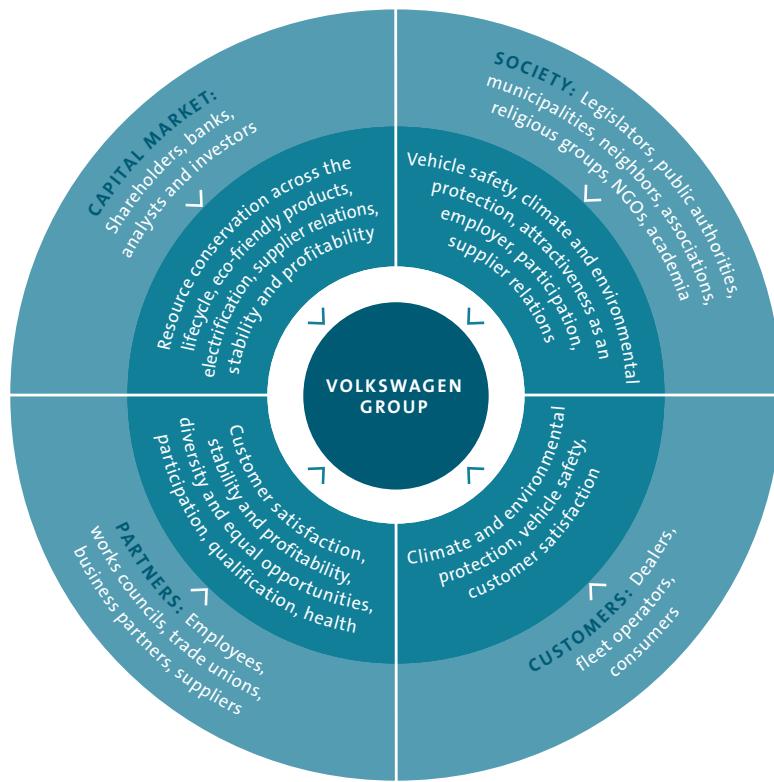
#### STAKEHOLDER MANAGEMENT ○ GRI G4-25

Being aware of our stakeholders' needs and expectations is an important precondition for business success. They determine the development of our sales markets, the various regulatory frameworks and our reputation as a Group. That is why we seek and maintain a dialogue with our stakeholders, both at Group level and locally in the regions where we operate. Our stakeholders include analysts and investors, employees, customers, neighbors, suppliers, partners, politicians, public authorities, scientists and non-governmental organizations – a network of relationships that grows with our market presence.

#### Stakeholder Relations at Group Level

Direct contact with stakeholders, especially employees, partners and customers, is cultivated above all by the brands. At Group level we seek to bundle these processes and take an overarching approach to discussing Group-wide topics. This includes our dialogue with politicians, academia and non-governmental organizations. Our aim is to understand and respond to stakeholders' expectations and promote appreciation of our positions and actions. In order to achieve this, we strive to continuously intensify the process of dialogue with our stakeholders. Reflecting these efforts, a broad spectrum of stakeholder groups showed great appreciation of the Volkswagen Group's early commitment to the European politicians' target of reducing average passenger car fleet CO<sub>2</sub> emissions to 95 grams per kilometer by 2020.

› THE VOLKSWAGEN GROUP'S STAKEHOLDERS AND THEIR EXPECTATIONS  GRI G4-21, G4-24, G4-26, G4-27



See the Internet for a list of stakeholder dialogues in 2014.  13

› DIALOGUE WITH POLITICIANS

We maintain an ongoing dialogue with politicians to provide information and advice. In this process we not only react, but also take a proactive stance, offering our own solutions for discussion and stimulating innovations in the field of social policy. In view of global warming, regulation of CO<sub>2</sub> emissions in the transportation sector was again the main topic of political stakeholder groups in numerous countries and regions in 2014. Volkswagen committed itself at an early stage to the emission limit of 95 g CO<sub>2</sub>/km in the EU which was set in 2014. In the second half of the reporting year, we successfully promoted the idea that a post-2020 target should not be set until it became clear how quickly the market for electric mobility would take off. In fact the new EU Commission declared its intention of using 2015 first of all for stakeholder dialogues and impact assessments. On the trade policy front the free-trade agreements with the USA (TTIP) and Canada (CETA) occupied our attention.  12

At Group level we particularly cultivate membership of organizations that involve an intensive dialogue on sustainable development issues and contribute to networking with sustainability-oriented businesses and our stakeholders. At international level these primarily include our engagement with the prestigious World Business Council for Sustainable Development (WBCSD), our participation in CSR Europe, a leading European network for social responsibility, and our work within the network of the UN Global Compact. We are also an active member of econsense, the sustainable development forum of German industry, and the international initiative "Biodiversity in Good Company". The information we gain from these sources is passed on to the brands and regions. Details of Group membership of other organizations can be found on the Internet.  14

Our dialogue with stakeholders naturally includes taking a critical look at aspects of our own activities. One example in 2014 came at the Annual General Meeting, when the question of the company's role during the military dictatorship in Brazil was raised. We

## › FOCUS TOPIC

## LOBBYING: PART OF THE DEMOCRATIC PROCESS OF HANDLING DIFFERENCES OF OPINION

**Lobbying does not enjoy a good reputation, especially in Germany. It is said that lobbyists are used by associations and businesses to exert influence on political decisions by obscure means, and that they frequently resort to dubious methods. The automotive industry in particular is accused of exploiting its economic power and thereby undermining the democratic process of formulating objectives.**

Nobody would deny that lobbyists can stray from the straight and narrow. Rule-breaking, and corruption in particular, must be punished. On the other hand this general rejection of lobbying, and the widespread aversion in Germany to the supposed egoism of the stakeholder groups, are exaggerated and unacceptable – after all, they are based on pre-democratic ideals.

In a pluralist society it is necessary – and perfectly legitimate – to represent particular interests vis-à-vis politicians. It is not only large corporate groups that engage in lobbying – trade unions, religious groups and environmental associations do so as well (and sometimes exhibit greater skill in equating their concerns with the public interest). Ultimately what matters is that all stakeholder interests are heard and weighed up in the political process. That is the essence of democracy.

The Volkswagen Group has 118 production locations and nearly 600,000 employees worldwide. A company with such a great responsibility for vocational education and training, employment and regional development, prosperity and quality of life has to have a fundamental interest in ensuring that political decisions are taken on the basis of objective considerations and do not place obstacles in the way of future business success. Politicians have to rely on the expertise of the social and busi-

**Dr. Thomas Steg,**  
Volkswagen Group General  
Representative for External Relations  
and Government Relations



ness players, on the knowledge and experience of those in the front line. We at Volkswagen assure politicians of full and open information and reliable and competent advice. We believe in the kind of lobbying that aims to convince people with better arguments and is prepared to expose itself to public criticism.

During 2014 we again engaged in a thorough discussion of the guiding principles of our work as a political stakeholder group, and signed them off at the beginning of 2015. They are available to everyone on the Internet, and you are welcome to comment on them. [15, 16](#)

pursued a policy of open communication and are working to come to terms with this chapter of the company's history. At the opening of the São Paulo International Motor Show, Greenpeace do Brasil called upon Volkswagen and other major manufacturers to offer more efficient vehicles. In response, we gave Greenpeace a detailed explanation of our product strategy. As a basic principle, our answers to inquiries are prompt and open. In 2014, for example, we provided LobbyControl with a statement on our activities and answered a question from Greenpeace about the German energy revolution or "Energiewende".

To ensure a systematic approach to stakeholder management within the Group, in 2014 we introduced an IT-based issue and stakeholder module. This will help to assess the importance of individual stakeholder groups and link this evaluation with the assessment of issues. It thus forms the basis for a stakeholder-

oriented issues management system which supports the Group's reputation and ensures closer coordination of the brands' stakeholder activities.

### Stakeholder Panel and Evaluation

In cooperation with the Institute for Market, Environment and Society (imug) we established a stakeholder panel which has followed our activities, especially our environmental and sustainability activities, for the past 18 years and produces a critical commentary every year. During the past year this procedure, which had involved detailed interviews with 33 representatives of various stakeholder groups, was extended to take in a further 18 international stakeholder representatives. This paved the way for interesting comparisons and improved our understanding of expectations outside the European region. The purpose of this



At the second Audi Stakeholder Forum in Berlin in 2014 the focus was on future mobility.

evaluation is to constantly reassess and improve the sustainability report, its impact and its benefits for the target groups. Furthermore, stakeholders' assessments often provide an indication of weaknesses in our Group-wide sustainability coordination. The 2013 Group Sustainability Report was generally very well received, though the international stakeholder representatives rated it better than the German ones.

#### ➤ ASSESSMENT OF THE 2013 GROUP SUSTAINABILITY REPORT

The assessment of the 2013 Group Sustainability Report by the extended stakeholder panel proved positive. The main suggestions for improvement included: providing more opportunities for dialogue, taking a more open approach to critical issues, describing conflicts of objectives, and formulating clearer and more far-reaching objectives. At a meeting on November 20, 2014, representatives of the stakeholder panel stressed the need to focus on important topics, identify dilemmas and outline a perspective running beyond the year 2018. The present report takes up these suggestions with the comprehensive materiality analysis (pages 16–18), the statement on special focus topics (pages 25, 41, 90) and a full account of future challenges and strategic guidelines (pages 12–13, 32–33, 54–55 and 84–85). A summary of the extended stakeholder panel's assessment of the 2013 Group Sustainability Report is available on the Internet. [217](#)

#### **Stakeholder Dialogue at Brand and Company Level**

Once a year we use the "Stimmungsbarometer", our standardized Group-wide employee opinion survey, to measure employee satisfaction. In recent years the Audi, MAN, Porsche, SEAT, Volkswagen

and Volkswagen Financial Services brands have also conducted extensive and detailed stakeholder surveys, usually online, which have yielded valuable findings for identifying issues of importance for the Group as a whole. All in all, the surveys covered some 126,000 stakeholder respondents, though it should be noted that 120,000 of these were due to the Volkswagen brand's customer survey. In the meantime the brands have largely moved on to more individual and differentiated forms of stakeholder dialogue, with the aim of acquiring more detailed information about individual issues or about the expectations of specific stakeholder groups.

#### ➤ BRAND DIALOGUES AND FORUMS

In October 2014 Audi held its second stakeholder forum: some 120 participants met in Berlin to discuss future mobility and the role that digital data will play in this context. The focus was on issues arising from networking of vehicles with each other, with the infrastructure and with the driver. Core findings from the forum are fed into the development of Audi's technologies of the future. Audi also offers its employees the opportunity to discuss corporate responsibility and sustainability with representatives of business, academia, politics and NGOs: the series of lectures on "Responsibility Perspectives" looks into future issues, business and social developments and the associated challenges.

Early in 2014, MAN invited students of the master's course in "Sustainable Marketing & Leadership" at the Fresenius University in Munich to take part in a joint discussion to assess MAN's Corporate Responsibility Strategy and goals, and its performance from the point of view of future managers. The findings resulted in a statement which contained both praise and criticism and was published as the Challenger Statement in the 2014 MAN CR Report.

For the past 16 years Volkswagen Commercial Vehicles has been engaged in a dialogue with its neighbors at the Hanover location in Germany, because the factory is situated close to residential areas. For some years now, similar discussions have also been taking place at our Poznań location in Poland. Meetings are held every six months to discuss stakeholders' concerns and misgivings with a view to finding joint solutions. These are attended not only by local residents, but also by representatives of local authorities, official bodies and religious groups.

### **Cooperation for Sustainability**

Both the Volkswagen Group and the individual brands have long been engaged in close cooperation with official bodies, local authorities, and organizations representing environmental and social concerns. This is prompted by a desire not only to play a supportive role in society, but also to find out more about external perspectives of the Group's activities. In 2014, in addition to its long-standing partnership with Naturschutzbund Deutschland (NABU), the Volkswagen Group entered into cooperation with the German Red Cross. This was preceded by a phase of building mutual trust and comparing expectations. This cooperation began on a project-specific basis in the field of rescue services in Germany and innovations in first aid training. The Group's established cooperation partners also include GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH), SOS Kinderdorf (MAN), and "My Finance Coach" to promote general financial education (Volkswagen Financial Services).

#### › COOPERATION WITH NABU

Naturschutzbund Deutschland e.V. (NABU) is accompanying us in a process of "critical dialogue" on our way to becoming the most sustainable automaker. In 2014 the issues at the heart of this ongoing technical exchange of views were once again climate protection, resource efficiency and biodiversity. In October 2014 Martin Winterkorn, Chairman of the Group Board of Management, held a summit meeting with NABU President Olaf Tschimpke. As well as communication, environment, sales and financial services, the dialogue covered the service field and – for the first time ever – the logistics sector. A "Mobile Dialogue" forum in Berlin with experts from politics and public authorities engaged in close scrutiny of Volkswagen's environmental protection as a whole. A major moorland protection conference in June 2014 generated further political momentum. On a smaller scale we also had a number of meetings with representatives of other environmental NGOs to discuss issues such as refrigerants in air-conditioning systems. The partners again mobilized a broad public for joint objectives in the field of environmental protection and nature conservation (e.g. "Smart driving saves fuel" training courses, the "Welcome Wolf!" cross-media campaign, marketing relating to moorland conservation, and promotion of renaturing program for the River Havel). With its broad spectrum of issues and fields and types of action, the

dialogue and project partnership with NABU, which in its fifteenth year can itself claim to be sustainable, has become a model of cross-sectoral cooperation between companies and NGOs. We use a bundle of indicators to measure its success, for example the willingness of politicians and the public to participate, the market response to the eco-leasing program, the satisfaction expressed by NABU, and their readiness to put in a good word for us vis-à-vis third parties. We provide extensive information – not least online – on the progress of the projects. A blog invites committed members of the public to engage in dialogue.

For more information in German, see:

<http://www.mobil-fuer-mensch-und-natur.de>

### **Reporting und Issues Management**

The greater the significance of sustainability aspects for the alignment of the Group's strategy, the more important assessment, management and reporting of the topics becomes. Internal and external sustainability reporting plays an important part in the Group's strategic development – because it facilitates coordination by creating internal transparency and bundling issues. In relations with the various external stakeholder groups, sustainability reports create the basis for dialogue, communication and trust. They also comply with politicians' growing demands for transparency. The Audi, MAN, Porsche, Scania and ŠKODA brands prepare their own sustainability reports following the guidelines of the Global Reporting Initiative (GRI). The other companies provide target group-oriented information on the topic. In 2014 a Group guideline was drawn up to regulate the form and standard of reporting for the Group Sustainability Report, the brands' sustainability reports and other forms of sustainability reporting, and also the organizational structure and the supply of data and responsibilities for the Group, brands, companies and locations.



Prof. Dr. Martin Winterkorn (left) and Bernd Osterloh (right) presenting the Group Sustainability Report 2013 in May 2014.

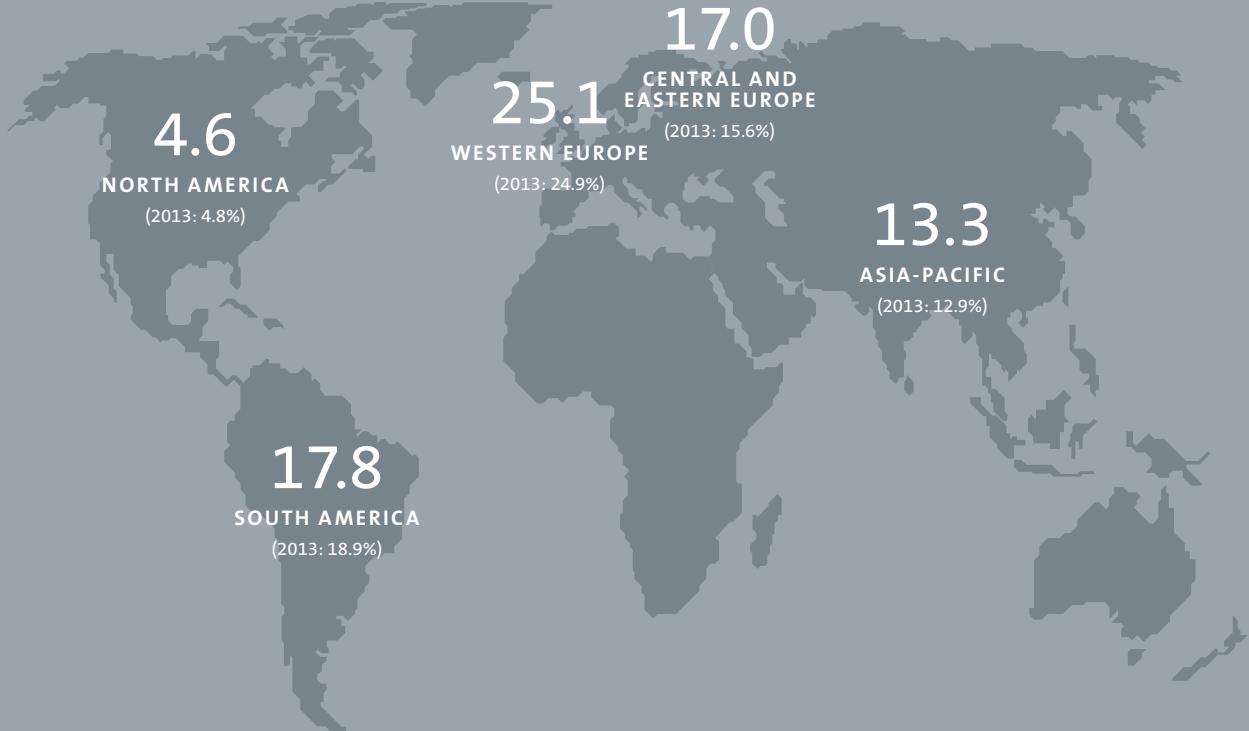


# › ECONOMY

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**VOLKSWAGEN GROUP PASSENGER CAR MARKET SHARES BY REGION**  
2014, in %



**GROUP SALES  
REVENUE**  
2014, in € million

**202,458**

(2013: €197,007 million)

**GROUP PROFIT  
BEFORE TAX**  
2014, in %

**7.3**

(2013: 6.3%)

**GROUP INVESTING  
ACTIVITIES ATTRIBUTABLE  
TO OPERATING ACTIVITIES**  
2014, in € million

**16,452**

(2013: €14,936 million)



# UNCERTAINTY IS THE NEW NORMALITY – AND BUSINESS NEEDS TO DEAL WITH IT

Geopolitical uncertainties, growth imbalances and economic power shifts: these developments represent the “new normality” in which we operate today. One-time certainties are being consigned to the past; uncertainty is becoming our constant companion. We are experiencing a volatility in economic affairs such as we have not witnessed for many years. Who would have thought, for example, that the price of oil could fall so dramatically in the wake of the fracking boom and a global slowdown in demand?

*“One-time certainties are being consigned to the past; uncertainty is becoming our constant companion.”*

At the same time globalization has entered a new evolutionary phase; the days when this process was one-way traffic are long gone. Asia, in particular, is amassing capital on a gigantic scale. New competitors – global competitors to be seriously reckoned with – are appearing in many sectors, including ours. The power relationships in the global economy are shifting, so it is important that trade barriers between the industrial nations continue to be dismantled – even if the popularity of the concept of free trade has sadly diminished in recent times. The current negotiations on the Transatlantic Trade and Investment Partnership provide a clear illustration of how important a free trade agreement is when it comes to establishing common standards and regulations to facilitate trade.

When talking about the “new normality” we cannot overlook the radical social changes taking place around us, changes with impacts on our business that we are only beginning to glimpse. The so-called “shareconomy” has already changed many aspects of modern life – from finding somewhere to stay in foreign cities all the way to taxi rides. We share our data with co-workers in the cloud – and the automobile as a shared asset has also become a central component of various business models.

The disruptive impact of digitization is transforming operational paradigms across many sectors: Who decides what the markets of the future will look like? Will our future competitors be the same as those we face today? With digitization our industry is facing a further shift toward automation – yet above all we will be seeing the emergence of new business models, relating not just to infotainment but also to areas such as mobility services and after-sales. At the same time a more general increase in environmental awareness combined with more stringent environmental legislation is also generating new business models and new competitors.

The continuing development of low-emission drive systems is the second major technological revolution directly impacting our industry. Electric mobility is a key pillar when it comes to reaching the EU’s CO<sub>2</sub>-targets for 2020. And yet we still cannot tell which technology will come to the fore. So the current challenge is to configure a phased transition to the new energy-efficient technologies. Given the uncertainties mentioned above, however, this also means higher levels of risk and major expenditure for both R&D and production.

Above all, the challenge now is to re-align the way we think and operate in order to confront effectively and successfully the technological and economic change to which our business is exposed. This requires solid

finances, creativity, flexibility and speed of response, robust business models outside our established markets, a further diversification and regionalization of our product portfolio, and a sustained drive to localize production and procurement. Because in the volume segment we can only remain competitive if we significantly increase local value creation. Given an annual procurement volume of €145.5 billion and the fact that a large proportion of our sales revenue is generated in foreign currencies, ensuring the highest possible level of localization is an important factor in hedging against currency fluctuations.

We will also need to make considerable investments in our products in order to deliver shorter product cycles and meet regulatory requirements. To generate the funds we need to fuel this journey into our automotive future, we need to generate an ongoing increase in our efficiency. With our modular matrixes we are ideally equipped to achieve this: they provide the perfect basis for delivering economic efficiency in production and a rapid response to changes in our operating environment – be they shifts in customer preferences or new CO<sub>2</sub> legislation – across the whole of our portfolio.

*“The disruptive impact of digitization is transforming operational paradigms across many sectors.”*

As yet we don't know exactly what the automobile of the future will look like. But as a robust company that is well positioned in terms of both finance and strategy, we will come up with innovative answers. With respect to the key issues for the future, however, we are to some extent dependent on regulatory, fiscal and social factors – and thus also reliant on politicians setting wise parameters, as well as creating and preserving room for entrepreneurial initiative. Since the economic and financial crisis, however, the regulatory environment has become increasingly dense. Conversely, trust

*“Who decides what the markets of the future will look like? Will our future competitors be the same as those we face today?”*

in companies, indeed in the entire market economy system, is diminishing. Politics and business must therefore work together to seek a healthy balance between necessary regulation and entrepreneurial freedom, in order to maintain an attractive economic system founded on personal responsibility and individual initiative.

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Hans Dieter Pötsch  
Member of the Group Board of Management  
responsible for Finance and Controlling



# IT'S NOT ABOUT GROWTH AT ALL COSTS.

The Volkswagen Group keeps on growing, year after year. In 2014, for the first time ever we sold more than 10 million vehicles. That brought us closer to our corporate goal of being the world's leading automaker by 2018. But unit sales are not the only measure of success; it's also about profitability, customer satisfaction and sustainability.

## MANAGEMENT APPROACH

Faced with challenges such as globalization, digitization or increasing regulation, it is more essential than ever for us to optimize processes across all of our brands, develop new and innovative products, and invest in our locations and in our employees. In fact, to further expand our market presence and access new markets we must first redefine mobility, and that new definition extends from electric mobility and automated driving all the way to networked mobility systems. Playing a pioneering role here is going to call for major investments.

As we strive to maintain and reinforce our economic stability against the backdrop of shifting markets and economic uncertainty, we continue to put our trust in the enormous diversification of our product portfolio and in broadbased positioning in the global markets. Our policy of adding maximum value at local level not only brings us many economic advantages but also reduces our risk exposure (see page 40). At the same time, this approach plays an important part in supporting local development and helps us meet the different customer needs more effectively.

Ensuring stability and profitability therefore constitutes a core action area of the Volkswagen Group – providing a basis for sustainable growth and investment in the future. With this in mind we have put in place a future-oriented efficiency program called Future Tracks. We are targeting further profitable growth so as to be continuously in a position to invest in the future of the Volkswagen

Group. By applying intelligent innovations and technologies, we are aiming for global leadership in customer satisfaction and quality. However, the Group's sustainable success also depends on how promptly we identify risks and opportunities and how consistently we comply with legislation, ethical principles and self-imposed obligations. Consequently, far-sighted risk management and a stringent compliance organization are of decisive importance for us. We not only apply high standards to our own activities but also demand compliance with these standards from our suppliers.

## Market Developments

In view of the worldwide patterns of demand for cars and commercial vehicles, the growth markets of Asia, South America and Central and Eastern Europe are particularly important to the Volkswagen Group. These markets offer great potential, although in some countries in these regions the background conditions present obstacles to growing our local unit sales. In Russia, for example, the political crisis and its economic consequences have put a brake on market growth. Nevertheless, Russia has the potential to become one of the world's largest automobile markets. The US vehicle market again showed tangible growth in 2014, thanks to the positive development of the economy and attractive financing conditions. However, given that the crisis-led backlog in replacement demand has largely been met, market growth now looks set to slow down. In Brazil the economic situation worsened following a promising start to the reporting period, with a negative impact on the vehicle market. Rising inflation and interest rates meant that vehicles became more expensive. To strengthen our competitive position here, we offer models that have been developed specifically for the Brazilian market and are manufactured locally, including the Gol and the Fox. China, the largest market in the Asia-Pacific region, continued to grow in the reporting period. Here, demand for motor vehicles will continue to rise in the coming years, driven by the growing need for personal mobility. Growth rates look set to slow down, however, and will likely shift from the major cities on the coast to the inland regions.

### » ACTION AREAS COVERED BY THIS CHAPTER

- Stability and profitability
- Quality
- Vehicle safety
- Customer satisfaction
- Supplier relationships
- Compliance, risk management, corporate governance

## Policies and Guidelines

Our business activities are governed by our policies and the strategic goals of the Group:

- › **The Volkswagen Group corporate values:** Defined in 2002, these lay the foundations for our activities (see page 20).
- › **The Volkswagen Group Code of Conduct:** Introduced in 2010, the Group-wide Code of Conduct (see page 46) must also be respected by our business partners.
- › **The Volkswagen Group requirements regarding sustainability in its relationships with business partners (Code of Conduct for business partners):** Originally defined in 2006, the requirements were revised in 2013. They set out the Group's expectations concerning its business partners' conduct with regard to central environmental and social standards. [① 18](#)
- › **Policy on Taxes and Duties:** Drawn up in 2014, this describes our Group-wide approach to the topic of tax and duties. [② 19](#)
- › **Quality Policy:** In 2008 the Volkswagen brand issued a Quality Policy which covers product quality, process quality, customer satisfaction and on-time delivery. Similar policies are in force at the other Group brands.

## Modular Strategy

One key instrument in the pursuit of our economic goals is the Modular Transverse Matrix, also known by its German abbreviation MQB. The MQB offers a uniform technical framework for virtually all future Volkswagen Group vehicles with a transverse engine. It enables us to use identical components in different models, reducing both development costs and production times. By enabling the replacement of individual components, the MQB helps us respond rapidly to changing customer wishes. In the long

term it can be used by multiple Group brands to build different categories of vehicle on one and the same production line. In the event of radical changes in the marketplace, the MQB can thus help avoid excess capacities and misallocation of resources. In addition to conventional gasoline and diesel engines, the MQB also gives us the opportunity to integrate alternative powertrains, such as gas, hybrid, or electric drives. In view of the varied and changing CO<sub>2</sub> regulation scenario worldwide, this represents an invaluable added measure of flexibility. New driver assistance systems such as road sign or pedestrian recognition, the traffic jam assistant or Emergency Assist can also be installed with the MQB. The MQB was introduced at the Volkswagen, Audi, SEAT and ŠKODA brands in 2012 and by 2014 more than 2.5 million vehicles had been built on this basis. Additional models based on the MQB in 2014 included the Audi A3 e-tron\*, the Volkswagen Passat\* and Passat Estate\*, and the Golf models Golf Estate CNG\*, Golf GTE\*, e-Golf\* and the Golf Sportsvan\*. The MQB's counterpart on the production side is the Modular Production Matrix (MPB), which mandates equipment-related standards for the entire production process.

## Quality Assurance

The Volkswagen Group pursues a uniform quality strategy worldwide. The growing number of production locations and market-specific model variants leaves quality assurance – from product development to customer service – facing major challenges. In order to live up to our high quality standards worldwide, quality assurance activities are governed by a central body at crossbrand level. This ensures a high degree of organizational and thematic standardization. The Group networks the brands and regions and controls the overarching processes in this context. Responsibility for product quality lies with the respective markets and regions. Across all locations and over the entire product life cycle, some 16,000 employees are involved in quality processes, helping to safeguard our growth by avoiding and eliminating errors.

## › KEY FIGURES BY MARKET<sup>1</sup>

Thousand vehicles/€ million	Vehicle sales		Sales revenue	
	2014	2013	2014	2013
Europe/Other markets	4,430	4,209	122,858	117,062
North America	879	901	27,619	27,434
South America	794	987	13,868	17,495
Asia-Pacific <sup>2</sup>	4,114	3,632	38,113	35,016
<b>Volkswagen Group<sup>2</sup></b>	<b>10,217</b>	<b>9,728</b>	<b>202,458</b>	<b>197,007</b>

<sup>1</sup> All figures shown are rounded, so minor discrepancies may arise from addition of these amounts.  
<sup>2</sup> The sales revenue of the joint venture companies in China is not included in the figures for the Group and the Asia-Pacific market.

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 › AUTOMATED DRIVING CONCEPTS FROM AUDI AND SCANIA
 

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### Automated Driving

For the past 25 years, the Volkswagen Group has been developing a variety of automated driving concepts, starting with driver assistance systems that enhance road safety by providing optimal driver support, while also reducing driver errors. In the future however, the main focus of development work will be on communication-based vehicle speed control, designed to improve overall traffic flow – which at the same time means reduced energy consumption.

Audi is performing pioneering work in the field of automated driving. From Audi Adaptive Cruise Control with Stop & Go function to traffic sign recognition, driver assistance systems designed to ease the load on the driver are already available across the entire Audi model line-up. Later this decade, the brand will also introduce newly developed “piloted driving” technologies. In certain situations, such as driving in heavy, stop-go traffic or parking, these systems can take complete control of the vehicle – if the driver wishes. Audi, which became the world’s first carmaker to receive a license to test autonomous vehicles on public roads in the US state of Nevada in 2013, will open a new chapter in driver assistance systems in 2015 with the launch of the new Audi Q7\*, featuring solutions such as the Predictive Efficiency Assistant, the Trailer Assistant and Adaptive Cruise Control including the Congestion Assistant. Other Group brands are developing similar concepts. For example, in 2012 the Volkswagen brand presented its Temporary Auto Pilot system, for autonomous driving on motorways at speeds of up to 130 km/h. A production version of this system could be ready in the near future.

In the commercial vehicle sector too, intelligent electronic assistance systems are an important development focus. Scania already offers driver assistance systems that support truck drivers in their day-to-day work, strengthen safety and reduce fuel consumption.

Recent examples include the autonomous emergency braking system, which was launched in 2013 and became a mandatory requirement in 2014. This system automatically brakes the vehicle combination if an obstruction on the road is detected and the driver fails to react. The next generation of intelligent electronic assistance systems, now being developed at Scania, offers various autonomous driving capabilities to enhance efficiency and safety, using a range of sensor technologies such as cameras, radar and ultrasound to help guide the vehicle. These systems are now being implemented for the mining industry. In parallel, Scania is developing systems for autonomous high-speed vehicle platooning on motorways, a technology that offers promising potential, in particular for reducing fuel consumption. Scania is currently leading the European Union’s COMPANION research project, which is exploring the potential of vehicle platooning and assessing what legislative changes would be required to implement it.

### › Intelligent vehicles will mean fewer accidents, fewer traffic jams and less congestion.

According to the UN Convention on Road Traffic, as amended in 2014, automated systems are now permissible as long as they can be overridden or switched off by the driver at any time. Even here, though, change could be on the way. Computers are now capable of driving more safely than distracted or tired drivers, and their reactions are quicker and more precise. As well as reducing accidents, the benefits of intelligent vehicles also include less congestion and reduced driving stress. The Volkswagen Group’s work on these highly complex technologies is closely focused on meeting the evolving needs of modern society.

## PRODUCT RESPONSIBILITY

Volkswagen takes a comprehensive view of product responsibility. Along with core aspects of quality and both active and passive vehicle safety, the strategic framework for our product development work is provided by three action areas from the Volkswagen Group's environmental management system – resource conservation, climate protection and healthcare. We aim to help our customers experience comprehensive road safety and offer them a wide range of efficient, affordable and practical powertrain technologies.

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### » "MOST INNOVATIVE CARMAKER" AWARD

In 2014, Volkswagen's technical innovations again impressed the German Center of Automotive Management (CAM). For the fourth time in succession, CAM awarded the Volkswagen Group its AutomotiveINNOVATIONS Award in the category "Most innovative carmaker" as well as in the categories "Conventional Powertrains", "Alternative Powertrains" and "Networked Vehicle" as the world's best manufacturer. The jury explained its choice by stating that with 229 innovations and an innovation rating of 186 points, Volkswagen had charted "the highest score ever recorded by a single Group" as well as demonstrating "a very high level of technological competence and a broad portfolio of innovative brands". The highlights given special mention were the e-up!® and the e-Golf®, highly economical electric cars that went into series production in the period covered by the award. The most impressive innovations singled out were the Porsche Panamera S E-Hybrid3\* as the first luxury class plug-in hybrid and the 918 Spyder Plug-in-Hybrid\* as the world's most powerful plug-in hybrid model.

## Innovation Management

Between now and 2019, Volkswagen is set to invest the enormous sum of €85.6 billion in new models, environmentally compatible drive technologies and optimized production processes. These investments are essential to prepare us for global challenges, regulatory requirements and new customer wishes, and to extend our innovation and technology leadership. At the same time we are aiming to step up the efficiency of our crossbrand innovation management as well as networking the development processes at our brands. By creating overarching technology networks we avoid parallel developments, generate efficient technology transfer and can simultaneously reduce our development costs. In order to offer each customer a product that is not only tailored to their needs but also environmentally compatible, we are driving forward the development of solutions that range from highly efficient, eco-friendly diesel, gasoline and natural gas engines to innovative hybrid drive systems and all-electric vehicles. The decisive factor for the attainment of our corporate goals is our technological and

commercial performance, which is reflected not least in our Fuel & Powertrain Strategy (see pages 91–92).

Our innovations are not restricted to efficient powertrains and lightweight design. We see mobility as a holistic concept and bundle our activities here under the heading of "Intelligent Mobility". By this we mean greater efficiency, more networking and greater flexibility, or in other words an increase in safe, comfortable and environmentally compatible mobility (see page 86). With the Volkswagen Data Lab, founded in Munich in 2014, we are laying the foundations for new digital offerings involving the processing and analysis of large volumes of data. Here, fledgling start-ups and leading scientific institutes join forces with experts from our specialist departments to come up with new ideas and develop software prototypes for the Group.

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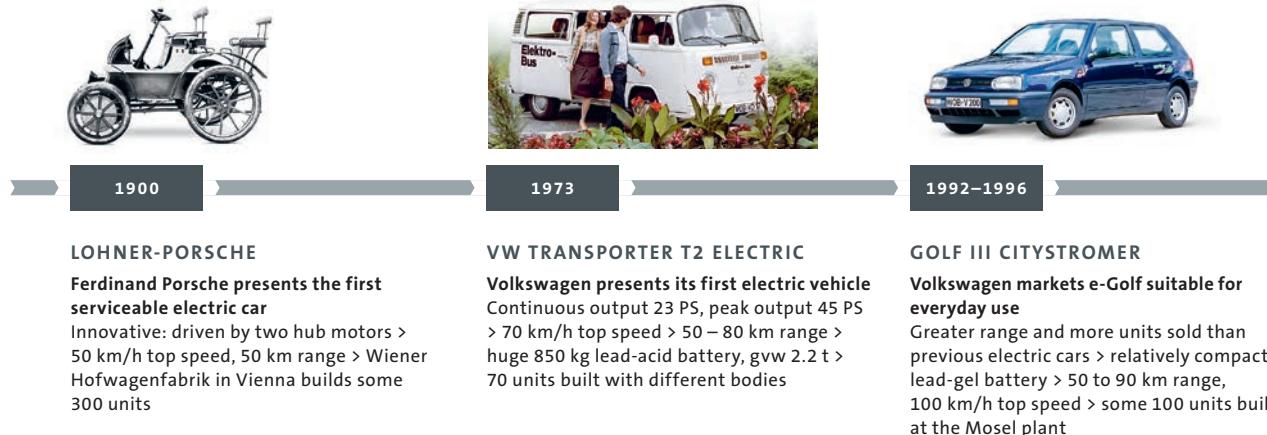
### » COMPREHENSIVE ROAD SAFETY – ŠKODA STYLE

On their market launch, all seven of the ŠKODA brand's model series scored the top 5-star rating in the respected Euro NCAP crash test. The latest member of the product line-up to receive 5 stars was the new ŠKODA Fabia\* in November 2014. This top rating across the board documents the high level of safety that ŠKODA vehicles represent and is the result of comprehensive efforts aimed at maximum active and passive safety. To this end, the specialists in the Technical Development department design innovative assistance systems as well as perfectly coordinated occupant retention systems, leading-edge chassis technology, high-performance lighting systems and optimized bodywork structures. In addition, in the context of its social responsibility, the company commits to a variety of initiatives designed to enhance road safety. ☰ 21



Award-winning level of safety: the ŠKODA Fabia\*.

## › CONTINUOUS INNOVATION

**Safe Vehicles and Road Safety**

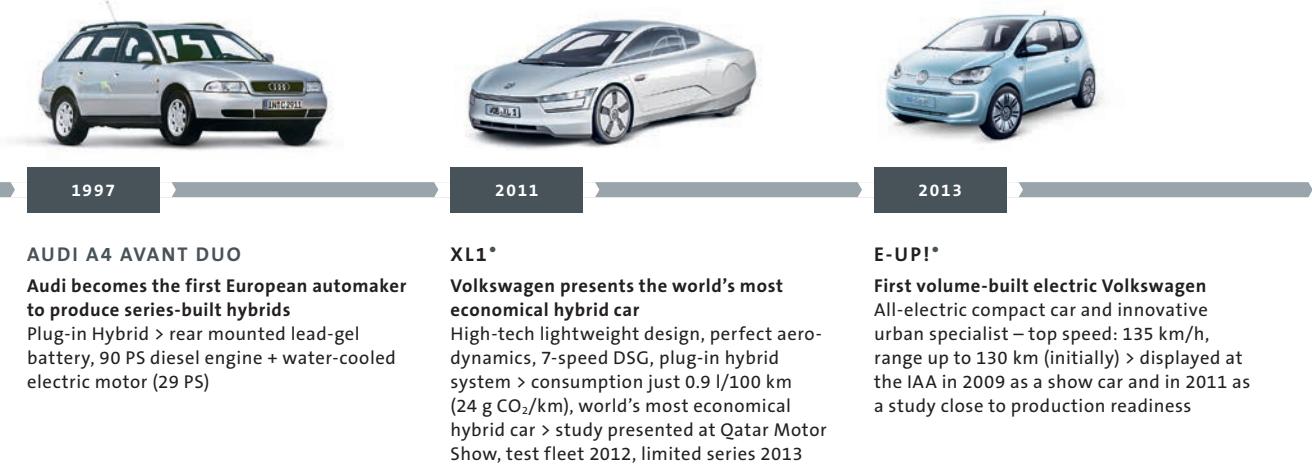
As an automaker we believe we have a responsibility to protect all road users to the best of our ability. All of our activities in this respect are geared to Vision Zero, which is to say zero fatalities or severe injuries in and due to vehicles manufactured by the Volkswagen Group. We are working to prevent accidents happening in the first place. The Group's accident research departments play a pivotal role in this work, reconstructing and evaluating accidents in order to obtain information that will help boost future vehicle safety – findings that feed directly into our vehicle development activities, leading to new and user-oriented innovations. Today, a whole raft of assistance systems help drivers defuse hazardous situations well in advance. Intelligent driver assistance systems help them identify risks faster or avoid dangerous situations from the outset. These include ACC cruise control with Automatic Distance Control, the lane-keeping assistant Lane Assist, or the lane-changing assistant Side Assist, as well as the Emergency Assist system (introduced in the Passat in November 2014), along with many other driver assistance and safety systems. The aim in the future is to provide support when braking and taking evasive action to avoid collisions and provide an even higher level of safety. These active safety systems are backed up by optimally designed passive safety technology, for example in the shape of highly deformation-resistant passenger cells, defined front and rear crumple zones and crash-optimized interior design.

**› We will only retain satisfied customers if our products exceed their expectations.**

The activities of Group Research include drawing up feasibility studies for future automated driving and safety functions. For instance, the Autopilot function uses sensors to scan the vehicle's environment, identifies and interprets the dynamic situation and computes the appropriate maneuvers. Equipped with this technology, the vehicle can drive itself autonomously and safely in parking garages and car parks, and can subsequently drive to a predefined pick-up point to await the driver's return. In urban environments the system supports the driver in choosing an appropriate speed and can assist with lateral guidance in narrow spaces. On major roads and motorways the system is capable of driving autonomously, taking full control of longitudinal and lateral guidance, so that drivers can even take their hands off the wheel. If the system then encounters a safety-critical situation, it helps with the braking and evasive action, thereby reducing the severity of an accident or, in the best-case scenario, preventing it entirely. Despite all of these sophisticated assistance systems, however, the driver remains responsible for control of the vehicle. Assuring his or her safety – and the safety of all other road users – is the primary goal of all assistance systems.

**Product Safety**

Maintaining the highest standards of product safety is of fundamental importance to the Group and its brands. That is why we attach such importance to painstaking quality assurance along the entire value chain, from purchasing right through to sales. Standardized processes, which are continuously optimized, provide a benchmark in all parts of the value chain. As part of our risk management activities we also enforce the highest possible quality standards throughout the value chain. Because we will only retain satisfied customers if our products exceed their expectations.



## Customer Satisfaction

Customer satisfaction is of paramount importance for all Volkswagen Group brands. We monitor customer satisfaction using standardized performance indicators which are the same for all brands and include brand image, desirability, future purchase consideration, product quality and brand communication awareness. To ensure the targeted management of value-creating measures for the brands, we have established a “Group KPI” platform that can be accessed by all of the brands. Along with core indicators such as unit sales growth or customer loyalty, here the brands can also generate their own specific indicators to enable them to track customer satisfaction on an ongoing basis.

Around the world and across all Group brands satisfaction studies are carried out through which we ensure that due attention is paid to customer wishes and that we constantly improve our product and process quality. These studies focus on three areas: product, service and dealerships. Over the years we have been able to achieve a constant improvement in the Group’s average rating. Consequently, we believe we are on track to reach our corporate goal of leading the field in terms of customer satisfaction.

In 2014 the individual brands also turned in a very good performance in terms of customer satisfaction: in the European market all of the Group’s brands topped the rankings ahead of their respective competitors and were also able to improve their customer satisfaction ratings compared to the previous year. Porsche in particular merits special mention in this respect. In China too there were very positive developments to report, with all Group brands improving on their performance of the previous year. Volkswagen, ŠKODA and Audi led the field in terms of customer satisfaction, ahead of their respective competitors.

In the USA, meanwhile, Volkswagen ranked among the top three while Audi topped the rankings with a better customer satisfaction rating than its rivals. In Brazil the Group’s brands finished in mid-table but were able to improve on their score from the previous year.

## Information and Labeling

As product manufacturers, all companies in the Volkswagen Group are obliged to suitably inform the users of their products about dangers that can ensue even during correct operation or foreseeable misuse of the product and warn them accordingly. The Group companies meet these requirements through instruction manuals and in individual cases through warning stickers in the vehicle. Since December 1, 2011, it has been mandatory for all new cars in Germany to be labeled with a weight-based efficiency label similar to the energy labeling system used for household appliances. Efficiency classes range from A+ (very efficient) to G (inefficient). The label also provides information on fuel consumption, annual fuel costs, CO<sub>2</sub> emissions and the amount of tax payable under Germany’s CO<sub>2</sub>-based vehicle tax. For electric vehicles, the label provides information on electricity consumption. All Group brands use their websites to provide information on the fuel consumption and CO<sub>2</sub> emissions of their models. The fuel consumption and emission figures for all models referred to in this report can be found on page 144. The Volkswagen and Audi brands also publish Environmental Commendations (see pages 94–95), which describe improvements in the environmental performance of new vehicles and technologies over their predecessors or reference models.

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**> SELECTED PRODUCT AWARDS IN GERMANY 2014**

Award	Model	Awarding Body
<b>Bus of the Year 2015</b>	MAN Lion's City GL CNG	Bus Euro Test
<b>Golden Steering Wheel</b>	Golf Sportsvan* (Volkswagen), Passat* (Volkswagen), Macan* (Porsche), Cayman GTS (Porsche)	Bild am Sonntag/Auto Bild
<b>Green Truck 2014</b>	Scania G 410*	Verkehrsrundschau and Trucker
<b>Green Steering Wheel</b>	Golf GTE* (Volkswagen)	Bild am Sonntag/Auto Bild
<b>Most eco-friendly cars in all classes</b>	eco up!* (Volkswagen), Passat 1.4 TSI EcoFuel* (Volkswagen)	AUTOTEST
<b>VCD Top 10 ranking list of environment-friendly cars</b>	eco up!* (Volkswagen), Citigo CNC Green tec* (ŠKODA), Mii Ecofuel* (SEAT)	Verkehrsclub Deutschland e.V.

### LOCAL VALUE ADDED

Local production in important sales markets is a core element of our growth strategy. Lower logistics costs, procurement prices in line with local market conditions, elimination of import duties and immunity from volatile exchange rates contribute to the competitiveness of our brands. And people in the regions profit as well. Not only do we create skilled jobs, but our production locations attract supplier firms to locate in the area, contributing to local economic development.

### Economic Benefits of Localization

The concept of localization helps us to open up new markets. We observe the different markets and specific customer needs and bring our products into line with the local requirements. Thanks to the MQB we have a uniform global platform on which to efficiently make specific regional adaptations to our models. In China, for example, specially modified vehicles and models designed for that market form the cornerstone of our growth strategy. Today our product portfolio in China spans all segments, from compact cars to luxury sports cars. And new vehicle categories such as SUVs were incorporated into local production activities at an early date.

### Contributing to Regional Development

Through our focus on the localization of value added, we create jobs in our production locations and generate significant upstream and downstream employment effects at supplier companies, service operations and other local contractors. In Pune (India) for example, since the Volkswagen location was set up 69 new supplier companies have been founded, creating some 13,500 direct and indirect jobs. The decision in 2014 to produce a new SUV at the Chattanooga location (USA) also created 2,000 additional

jobs at the Volkswagen plant and added jobs at local suppliers. And thanks to our sustainable supplier development efforts in Kaluga (Russia), at the end of 2014 our plant there was working with a total of 60 suppliers on the locally produced models. Together with our joint venture partners, we are set to invest a total of €18.2 billion in new locations and products in China from 2014 to 2018 – the largest investment program in the history of the Chinese automobile industry. Here the Group's investments take account of the Chinese government's efforts to continue growing and developing the economy in the western part of the country.

At our locations we also support a large number of projects which foster social development, the arts, education and nature conservation and promote regional economic development (see pages 76–77).



The Volkswagen Polo\* is built at the Pune plant in India.

› FOCUS TOPIC

## SUVS: WHERE EMOTION MEETS REASON?

In no other segment has demand risen so steeply in recent years as in the category of sport-utility vehicles or SUVs. The ideal view of the road and a high degree of comfort and safety make these off-rovers the ideal everyday companion for customers. But on account of their size and the associated higher level of fuel consumption, these models often come in for criticism from the media or environmental organizations as gas guzzlers and climate killers.

Above all, the expansion of the worldwide SUV market as the segment with the fastest relative growth reveals the scale of the challenges that every automaker faces in respect of compliance with CO<sub>2</sub> emissions regulations. Innovations, above all in the fields of lightweight design, aerodynamics and – in particular – electrification are in greater demand now than ever before.

Electrification, however, needs to become more widespread if this type of drive is to become accepted as “normal”. This will also call for reduced cost structures, leading to marked reductions in the surcharges for electric drive and thus to the kind of attractive prices that are necessary. On the way to this goal we have already launched models including the Golf GTE\*, e-up!\*, eGolf\*, A3 e-tron\* and Cayenne S E-Hybrid\*. Electrified concept vehicles such as the Cross Coupé GTE or the Sport Coupé Concept GTE signpost the way forward here. The Volkswagen Group already has the highest proportion of electrified models in its product portfolio, offering a combination of fun at the wheel and environmentally compatible consumption, driving the more widespread acceptance of electric mobility, and helping sustainable mobility concepts to make a breakthrough.

Innovations in the fields of lightweight design and aerodynamics will enable us to achieve further increases in efficien-

Dr. Axel Kalthoff,  
Head of Sales Coordination,  
Volkswagen Group



cy. Compared to their predecessors, the latest versions of the Volkswagen Touareg\* and the Audi Q7\* are far lighter. Further savings are achieved through the ongoing enhancement of our energy-efficient engines, so that the Touareg\* consumes less than 10 liters per 100 kilometers and the Tiguan\* just 5.3 liters.

In this way, the Volkswagen Group manages to resolve apparently contradictory aspirations such as compliance with climate protection goals on the one hand and responding to the simultaneous rise in individual customer requirements on the other, while making an express commitment to fulfilling its ecological responsibilities, today and in the future.

› **The concept of localization helps us open up new markets and at the same time contributes to regional development.**

### › CONTRIBUTING TO THE CLEAN ENERGY REVOLUTION

Around the world, the shift toward cleaner energy generation systems is associated with high investment costs. However, society and local regions can expect to reap an enormous dividend. With our products, we are aiming to play a part in integrating all the necessary technologies into an efficient, comprehensive system. For example, the natural gas engines developed by MAN Diesel & Turbo for combined heat and power (CHP) plants are a key component in decentralized energy generation. And the Audi e-gas project maps out ways to efficiently store large quantities of wind or solar energy regardless of location (see page 92). For further information, see our brochure on cleaner energy. ☐ 20

## **Subsidies and Taxes**

In 2014, for the expansion of its activities in the field of research and development and in the creation of new production locations the Volkswagen Group received €883 million in government grants related to income.

At the same time, thanks to its localization strategy, through taxes and duties the Volkswagen Group helps ensure that state and municipal investments in infrastructure and public welfare are possible in many parts of the world. It is our policy to pay taxes wherever we add value. In 2014 we paid the worldwide tax authorities a total of around €4 billion in income tax. This represents a tax rate of 25.2% for the Volkswagen Group worldwide. Well over half of these payments were accounted for by Germany.

## **SUPPLIER MANAGEMENT**

Volkswagen Group procurement mainly purchases production materials, services and capex centrally. In the reporting period, the purchasing volume – including the Chinese joint venture companies – increased by 7.7% to €145.5 billion. Suppliers in Germany accounted for a share of 36.1%.

### **Concept and Organization**

To ensure that flows of goods and services remain stable and efficient, in 2006 the Volkswagen Group formulated its Sustainability in Supplier Relations concept and has continued to refine it ever since. Together with traditional priorities such as quality, price and delivery times, the concept had been thoroughly integrated in our procurement process. To us, applying and monitoring sustainability standards in the supply chain is above all a matter of minimizing risk – preventing potential supply shortages and damage to our reputation and ensuring that the quality of the procured supplies and services remains consistent. Both the Group and its suppliers profit from the long-term supplier relationships which result.

The concept, which is based on three main pillars, aims to minimize or prevent negative social, environmental and financial impacts along our supply chain:

- An early warning system that identifies and minimizes risks along the supply chain.
- Contractually mandated integration of the sustainability standards in the procurement process. These must be acknowledged by all suppliers before submitting a quotation on the Group Business Platform. Otherwise it is not possible to submit a quotation.
- Supplier monitoring and development.

We regularly benchmark the effectiveness of our concept against other companies and intensively analyze the results of sustainability ratings. This allows us to gain valuable insights for continuing optimization and development.

In recent years we have systematically extended the Sustainability in Supplier Relations concept to all of the Group's brands. In 2014

specific elements were still being rolled out at the Porsche, MAN and Scania brands.

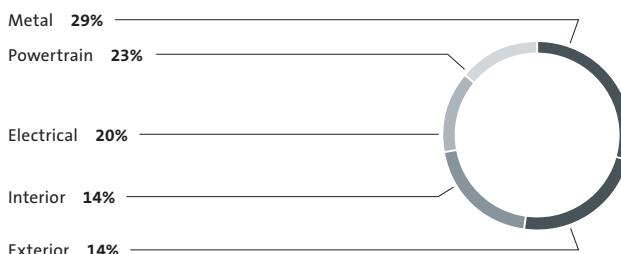
We continuously train employees and raise their awareness to ensure that the concept is further anchored within the Company. Consequently, the concept is an established part of the qualification program at the procurement academies run by the individual locations. In addition, cross-functional training courses were again held in 2014. In the reporting year, more than 900 purchasing staff received training in Sustainability in Supplier Relations. To reinforce the communication of our concept internally and externally, in 2014 we also published a brochure and made it available on the Group Business Platform.  22

### **Risk Analysis**

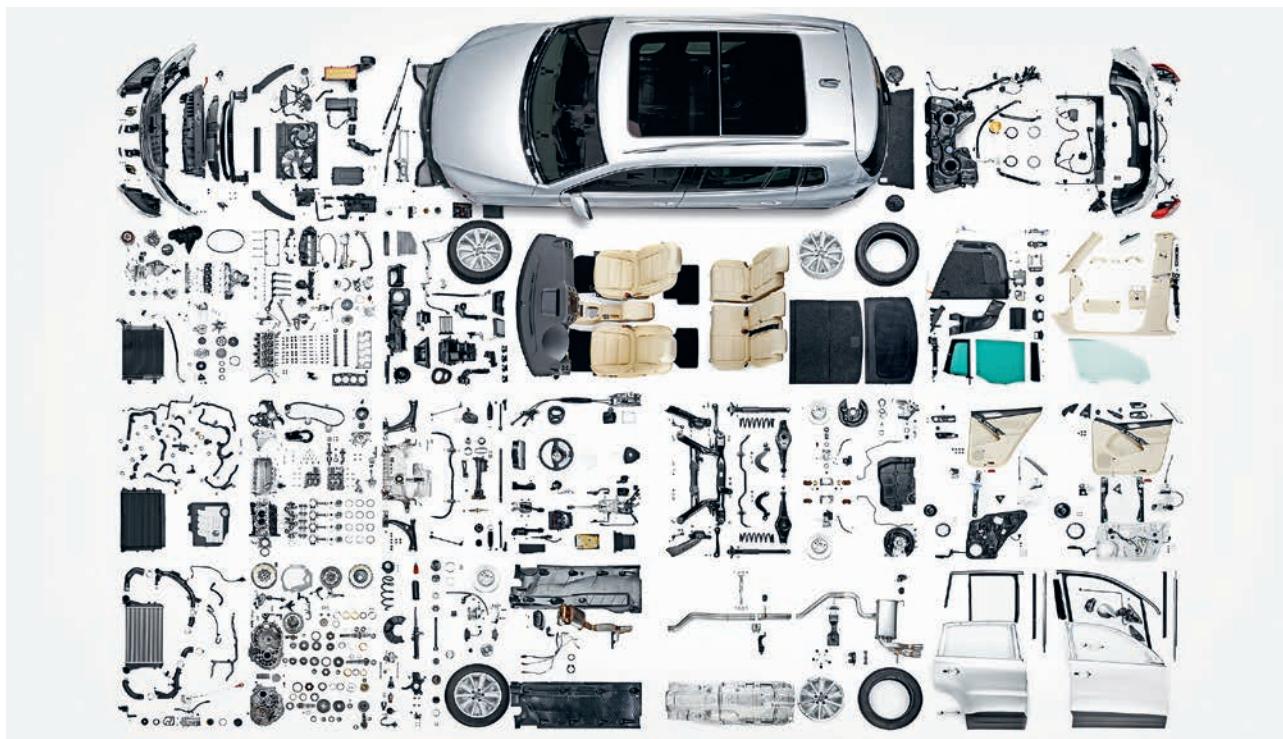
The Volkswagen Group subjects all potential new business partners and suppliers to an integrity check (Business Partner Check). Our aim is to reduce the risk of a relationship that could adversely affect the Group and its business by carefully examining the social integrity of the potential supplier. So suppliers who register on the Group Business Platform for the first time are subjected to the Business Partner Check before onboarding.

The Volkswagen Group uses a country risk analysis to obtain a clearer picture of social, environmental and human-rights risks in the region where potential suppliers operate before entering into negotiations with them. This takes both third-party information and in-house empirical data into account. The analysis has shown that there is an increased risk of non-compliance with our sustainability requirements in Brazil, India, China, Mexico and Russia. For this reason, in our supplier development activities we place a particular focus on these countries. To identify current developments as well as long-term structural challenges in each country, we rely on the ongoing exchange of information between the brands and the regions at the regular meetings and video conferences held by the Sustainability Procurement Network.

### **➤ 2014 PROCUREMENT VOLUMES BY COMMODITY\***



\* The survey of procurement volumes does not include goods from suppliers to the Bugatti, Scania and ŠKODA India brands and the Chinese joint ventures.



Thousands of parts from all over the world must comply with the requirements of sustainable supplier management.

#### » 2014 PROCUREMENT VOLUMES

*in € billion*

##### By brand

Volkswagen Passenger Cars	85.5
Audi <sup>1</sup>	25.7
MAN <sup>2</sup>	7.8
ŠKODA	7.1
Scania	6.5
SEAT	4.4
Volkswagen Commercial Vehicles	2.6
Porsche	5.0
Bentley	0.8
<b>Volkswagen Group</b>	<b>145.5</b>

##### By region

Europe/Other markets	93.5
Asia-Pacific	39.1
South America	6.7
North America	6.2
<b>Total</b>	<b>145.5</b>

#### » PROCUREMENT RISK MANAGEMENT

The risk management system in the procurement sector constantly monitors and analyzes the financial stability of our suppliers. A suite of different measures help to largely eliminate supply risks due to the failure of suppliers. In addition, suitable measures are applied to minimize the financial effects of crises and insolvencies in the supply chain.

In 2013 we signed up to the Extractive Industries Transparency Initiative (EITI), which is supported by governments, NGOs, investors and businesses. The EITI aims to combat corruption by making payment flows related to raw materials transparent. We also demonstrate our commitment to more transparency in the supply chain as a standing member of the UN Global Compact Advisory Group on Supply Chain Sustainability. The Volkswagen Group supports the efforts of the European Commission to suppress the funding of armed conflicts through the raw materials trade. We play an active part in defining the position of the German and European industry associations, advocating the application of voluntary self-certification in the upstream segment of the supply chain.

<sup>1</sup>Audi including Lamborghini and Ducati.

<sup>2</sup>MAN incl. MAN Truck & Bus, MAN Diesel & Turbo and MAN Latin America.

## Sustainability Requirements and Integration

Our supplier relations are based on the “Volkswagen Group requirements regarding sustainability in its relationships with business partners (Code of Conduct for Business Partners)”, which apply across the Group (see page 46). They formulate our expectations for our business partners’ conduct with regard to central environmental and social standards. Among other things, they are based on the principles of the UN Global Compact, the International Chamber of Commerce’s Business Charter for Sustainable Development and the relevant conventions of the International Labour Organization. These principles are supplemented by Volkswagen’s Environmental Policy, the environment targets and regulations derived from it, the Group’s Quality Policy and the Volkswagen Declaration on Social Rights.

Before submitting a quotation, the supplier must acknowledge the sustainability requirements; this acknowledgement must be repeated every 12 months. The requirements have been contractually integrated since November 2013 for all suppliers to General Procurement, and since January 2014 for all suppliers of production materials as well. The requirements apply to all outsourced goods and services worldwide. We also expect our tier 1 suppliers to pass these requirements on to their own suppliers.

In addition, Volkswagen requires its main suppliers to put in place a certified environmental management system in accordance with ISO 14001 and/or EMAS. Such systems have been verified and documented at 87% of our main suppliers. As part of the EMAS and ISO 14001 environmental certification and auditing at the Volkswagen AG locations, the contractors and suppliers who work on the plant grounds and have an environmental impact are also subject to regular monitoring.

In the course of the business process, all suppliers are required to complete our sustainability questionnaire and to document their activities in the areas of environmental protection and social standards. By December 31, 2014, 15,405 Group suppliers had returned the questionnaire. In terms of procurement volume that equates to 87%.

## Supplier Development and Qualification

In the interests of continuing supplier development, in the course of our business relations we make an electronic learning (E-Learning) module on sustainability available to all suppliers in all of the languages of the defined risk markets. After completing this task, the supplier has to perform a final test. By the end of 2014, 14,457 suppliers had completed the E-Learning module, which equates to 71% of procurement expenditures. The tool is made available to the supplier’s workforce as well as to employees of Volkswagen AG Procurement for qualification purposes.

In addition to this E-Learning format, we also conduct region- and topic-specific sustainability training courses and workshops with our suppliers. In the reporting period, courses were held in countries including Brazil, Argentina, Germany and Poland.

In addition, as part of the European Automotive Working Group on Supply Chain Sustainability, a supply chain forum took place in Istanbul in November 2014. In an intensive dialogue, suppliers and manufacturers discussed important challenges and solutions with the aim of improving sustainability along the supply chain. The event spotlighted social rights. Through these diverse measures, in 2014 we were able to qualify more than 900 suppliers.

## Supplier Monitoring and Audits

The Volkswagen Group uses an internal system for sustainable supply chain management. It provides supplier-specific sustainability information, enabling the comprehensive analysis of suppliers. If there is reason to suspect that tier 1 suppliers or their suppliers are failing to comply with our sustainability requirements, we ask the party concerned for a written statement using a standardized report (6D Report). Based on the six points in the report, they can describe the status quo and any remedial measures. If the answers prove unsatisfactory, we take further appropriate steps, such as the examination of documents, visits to the supplier’s premises or other customized supplier development activities. These measures are coordinated by an ad-hoc expert team in Wolfsburg together with the expert teams from the relevant brands and regions. Depending on the

### » PROCUREMENT VOLUME-BASED PROPORTION OF ENVIRONMENTAL AND SOCIAL CERTIFICATION AT MAIN SUPPLIERS

	2014	2013	2012
<b>Environmental certification (EMAS, ISO 14001)</b>			
Verified <sup>1</sup>	48%	44%	30%
Self-assessed	39%	40%	not taken into account
<b>Total</b>	<b>87%</b>	<b>84%</b>	<b>not taken into account</b>
<b>Social certification (OHSAS 18001, SA8000, AA1000)</b>			
<b>Verified<sup>1</sup> (total)</b>	<b>8%</b>	<b>6%</b>	<b>not taken into account</b>

<sup>1</sup> Taking all suppliers into account, 77% have EMAS/ISO 14001 and 7% social certification.

› STATUS QUO: SUSTAINABILITY QUESTIONNAIRE AND E-LEARNING

	Number completed in 2012	Number additionally completed in 2013	Number additionally completed in 2014 <input checked="" type="checkbox"/>	Total in 2014 + 2013 + 2012	Status 2014, based on procurement expenditures <input checked="" type="checkbox"/>	Procurement volume-based target for 2015
Sustainability questionnaire	7,812	3,937	3,656	15,405	87%	89%
Average score	90/100	89/100	90/100	92/100		
E-Learning	2,420	6,232	5,805	14,457	71%	73%

situation, experts from specialist areas such as Occupational Health and Safety or Personnel Management may also be called in. Specific improvement measures were agreed with all such suppliers.

In 2014, for example, an unannounced visit to a supplier uncovered non-compliance with occupational safety requirements. Remedial measures were defined with the supplier on the spot, including the correct installation of emergency exit signs and fire-extinguishing equipment. The successful implementation of these measures by the supplier represented a sustainable improvement in working conditions for the supplier's employees.

› **Through fair dialogue in a spirit of partnership and through supplier development we create sustainability in supplier relations.**

The focus throughout all process steps and measures is on fair dialogue in a spirit of partnership and on development of the supplier in the interests of sustainable collaboration. At the same time, the Volkswagen Group reserves the right to have compliance with the sustainability requirements verified by inhouse experts or by an external audit at the supplier's premises during regular business hours. In the event of non-compliance with our sustainability requirements we will terminate business relations, particularly if the supplier shows no interest in improvement. No such case occurred during the reporting period.

The internal and external point of contact for suspected cases of non-compliance with our sustainability requirements, particularly where violations of human rights in the supply chain are concerned, is the email address: [sustainability@vwgroupsupply.com](mailto:sustainability@vwgroupsupply.com). In addition, employees and external parties can address possible cases of non-compliance via the Volkswagen Group's national and



Sustainability training for Volkswagen Group suppliers in Argentina.

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 ➤ AD-HOC CASES IN 2014 

Geographical distribution <sup>1</sup>	Context	Type of supplier
Europe	15 cases	<b>Environmental protection</b>
		2 cases
<b>Direct supplier</b>		23 cases <sup>2</sup>
Asia	6 cases	<b>Social standards</b>
		20 cases
<b>Sub-supplier</b>		2 cases
North and South America	4 cases	<b>Environmental protection &amp; social standards</b>
		2 cases
Africa	no cases	<b>Compliance</b>
		1 case

<sup>1</sup> In the case of sub-suppliers the geographical location of the sub-supplier was used for the geographical distribution.  
In the geographical distribution, Russia and Turkey are allocated to Asia.

<sup>2</sup> Includes one case involving both a direct supplier and a sub-supplier.

international employee representation bodies as well as national and international trade union federations.

## COMPLIANCE

In the long term, a company can only be successful if it acts with integrity, complies with statutory provisions worldwide and stands by its voluntary undertakings and ethical principles even when this is the harder choice. Our Compliance organization supports this approach.

We adopt a preventive compliance approach and foster a corporate culture that stops potential breaches before they occur. The Internal Audit, Security, Personnel Management and Legal departments at Group level are responsible for the necessary investigative measures and responses. The guidelines laid down in the Volkswagen Group's Code of Conduct are of essential importance here. These have been communicated and can be accessed by all Group employees via the Volkswagen portal and on the Internet pages of the Volkswagen Group. 

The Group Chief Compliance Officer reports directly to the Chairman of the Group Board of Management. He is supported in his work by 14 Chief Compliance Officers who are responsible for the brands, the Financial Services Division and Porsche Holding GmbH, Salzburg (Austria), and are in turn assisted by Compliance Officers in the Group companies. Employees in a total of 66 countries work for the Governance, Risk & Compliance (GRC) organization. Networking of the organization is promoted by measures including regional workshops.

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## ➤ SETTING THE TONE

"Compliance with regulations on anti-corruption and competition law is essential for all employees worldwide, irrespective of the

brand or company. A clear understanding of Compliance-related requirements provides security for all concerned. The sustained success of our company can only be guaranteed if we comply with the applicable laws and rules." Christian Klingler, Member of the Board of Management of Volkswagen AG responsible for Sales and Marketing, May 2014.

## Integrated Governance, Risk & Compliance Approach

Compliance is a key element of the Volkswagen Group's Governance, Risk & Compliance (GRC) organization. Potential compliance risks are identified and assessed by the standard GRC process that is in place across the Group. As a result, in the reporting year more than 2,500 assessments of potential compliance risks and the relevant remedial measures were reported by over 90 companies; more than 550 tests were staged within the companies to evaluate the effectiveness of these measures. Risk assessments are drawn up in particular on the topics of active and passive corruption, conflicts of interest, competition law and antitrust law. Based on the findings, preventive measures are drawn up and the appropriate compliance programs defined. During the selection process for new production locations, Group Production assesses the locations not least with a view to potential corruption risks.

## Expansion of Compliance in 2014

In 2014 the compliance agenda focused on the continuing expansion of the GRC organization, tightening compliance standards for the sales organization, international money-laundering prevention, and the handling of contracts for work or services. In addition, based on the "Volkswagen Group requirements regarding sustainability in its relationships with business partners" (Code of Conduct for Business Partners), supplier awareness of topics including human rights was increased. Business partners of the

Volkswagen Group are subject to a Business Partner Check, a risk-oriented assessment of their integrity, also based on the “Volkswagen Group requirements regarding sustainability in its relationships with business partners” (Code of Conduct for Business Partners). To raise awareness of the importance of compliance, since 2010 all new employment contracts entered into between Volkswagen AG on the one part and both management staff and employees covered by collective agreements on the other have included a reference to the Code of Conduct and the obligation to comply with it. Completion of the online training module on the Code of Conduct is mandatory for all new employees. As of 2014, compliance with the Code of Conduct is one factor in calculating the variable, performance-based pay component.

### **Prevention through Information**

By means of appropriate preventive measures integrated in our existing management system, we foster compliance with the rules within our organization and sharpen our employees' awareness. However, we are also aware that the risk of individual misconduct can never be completely eliminated. To raise employee awareness of compliance-related issues we use both traditional communication channels such as employee magazines and information stands, and electronic media such as intranet portals, apps, blogs, audio-podcasts and online newsletters and guidelines. For example, our Anti-Corruption Guidelines are available to all employees, business partners and members of our governance bodies on the Volkswagen portal as well as the Internet. ↗ 23

On United Nations International Anti-Corruption Day, many Volkswagen locations held a variety of multi-channel activities related to corruption prevention. A film was also made for the event and shown internationally. In 2014 over 185,000 employees across the Group took part in 4,444 classroom and online courses on the topics of compliance in general, money laundering, the Code of Conduct, competition and antitrust legislation, human rights and combatting corruption. Online E-Learning programs and classroom training are firmly anchored in existing corporate processes. Employees of all brand companies and a large number of Group companies are able to obtain personal advice about compliance issues, usually by contacting the compliance organization via a dedicated e-mail address. In the fall of 2014, a letter specifically addressed to all employees of Group Security and Plant Security at Volkswagen AG once again called attention to the Group Code of Conduct, including its human rights requirements.

**› In 2014 over 185,000 participants attended courses on compliance-related topics.**

### **Checks, Audits, Sanctions and Data Protection**

Group Internal Audit regularly and systematically reviews processes within the Company, using approaches such as the internationally recognized COSO Enterprise Risk Management framework. It also carries out random checks irrespective of any suspicion of non-compliance and investigates whenever breaches are actually suspected.

The worldwide ombudsman system in place since 2006 can be used to confidentially report corruption, fraudulent activities, or other serious irregularities (such as human rights violations or ethical misconduct) in ten different languages to two external lawyers appointed by the Group. Naturally, the people providing the information need not fear being punished by the Company for doing so. As of December 2014, there is also the option of using an additional online channel to communicate with the ombudsmen. A technically secure digital mailbox allows suspected breaches to be reported – anonymously, if so desired. In 2014, the ombudsmen passed on 51 reports by people – whose details remained confidential if requested – to the Volkswagen Group's Anti-Corruption Officer, the Head of Group Internal Audit. In addition, the Anti-Corruption Officer received information on a further 89 cases directly. One case was identified by the person reporting it as a possible human rights violation. During local internal audits of the brands and Group companies, 365 reports of suspected fraud were submitted. All information is followed up. All breaches of the law or internal regulations are appropriately punished. In 2014 action was taken against a total of 132 employees across the Volkswagen Group as a result of findings of investigations based on information received. In 72 of these cases worldwide, the employee's contract was terminated. Moreover, during the reporting year, 16 contracts with business partners were terminated or not renewed because of infringements related to corruption.

#### **› COMPLIANCE TRAINING COURSES**

Participants from the Group	2014	2013
Classroom training		
Code of Conduct	30,412	28,420
Anti-corruption	20,607	13,494
Competition and antitrust law	11,279	4,202
Money-laundering prevention	6,852	2,585
Human rights	6,011	881
Other compliance topics	31,529	69,426
<b>Total participants</b>	<b>106,690</b>	<b>119,008</b>
E-Learning programs		
Code of Conduct / human rights	43,766	43,039
Anti-corruption	27,596	31,608
Competition and antitrust law	3,248	1,224
Money-laundering prevention	4,574	2,678
Other compliance topics	n/a	4,917
<b>Total participants</b>	<b>79,184</b>	<b>83,466</b>

Across all regions, 5,728 managers participated in classroom training and E-Learning programs on the topic of anti-corruption.

On the topic of human rights, more than 6,000 employees worldwide received in 128 hours of training distributed across 329 classroom training courses. In addition, employees can learn more about this topic using our online E-Learning programs.

The basis for the auditing program of Group Internal Audit and of 19 other local audit functions at the brands and affiliated companies is provided by a risk-oriented assessment of the Group's core business processes. The business processes of all Volkswagen Group companies are systematically classified in terms of risks which, from the point of view of the auditors, are relevant to the audit. The topics with the highest risk levels are integrated into the auditing programs. In 2014 a total of 1,723 audits were conducted at 304 companies. Among other things, the audits also examine internal control mechanisms for the prevention of corruption (four-eye principle, segregation of functions), the existence of compliance guidelines and preventive measures.

Another aspect of the audit function is advising the specialist areas of the Volkswagen Group. In particular, this helps define processes and ensures they are designed in compliance with internal standards and can be applied worldwide.

In addition, Group Internal Audit has set up a Continuous Monitoring unit. It is tasked not least with supporting the effectiveness of the internal control system, based on structured data analysis of the financial systems. This allows potential weak spots to be discovered quickly, preventing major damage from occurring.

Data protection, i.e. ensuring the privacy of personal data, is an important corporate principle. With this in mind, the data protection organization in the Volkswagen Group is continuously being enhanced and progressively networked. It is active on three levels: Group (Group data protection office), brand (brand spokesperson for data protection), and Group companies (data protection officers or contacts).

The aim of the Group-wide data protection organization is to provide a uniformly high level of protection for personal data within the Volkswagen Group. In addition, the organization provides a basis for the standardization and regular adaptation of data protection requirements in the Group, for example in the cases of networked vehicles and Group-wide IT systems.

Further information on compliance at the Volkswagen Group can be found in the 2014 Annual Report. [24](#)

## RATINGS AND INDEXES

The Volkswagen Group can point to a growing number of investors who take sustainability criteria into account. These include some 100 European mutual funds that apply social and ecological criteria. One of the largest institutional investors in Europe, the state Norwegian pension fund, invested more than €5.5 million in the Volkswagen Group. These investment decisions are influenced by positive sustainability assessments from ratings agencies and analysts.

### Top Scores for Group and Brands

In 2014 the Volkswagen Group earned very good scores in the most important international ratings and relevant indexes, holding a leading position in its sector. In the sustainability ratings published by RobecoSAM, the Group was listed in both the Dow Jones Sustainability Index World and the Dow Jones Sustainability Index Europe, receiving 88 points out of 100. However, we no longer held the position of sector leader.

In the Carbon Disclosure Project (CDP), the Group was again listed in both Leadership Indexes, receiving the top A rating in the CDP Global 500 Climate Performance Leadership Index and 99 points out of 100 in the CDP Global 500 Climate Disclosure Leadership Index.

As in the previous year, MAN was the only German company from the mechanical engineering sector listed in the Dow Jones Sustainability Index World and the Dow Jones Sustainability Index Europe. The CDP awarded MAN its highest ratings in the "Industrials" sector: 97 out of a possible 100 points in the Climate Disclosure Leadership Index and an A rating in the Climate Performance Leadership Index.

oekom research, a rating agency which analyzes sustainable investments, rated the Volkswagen Group B- on a twelve-step scale from A+ to D-. Both the Group and Scania were awarded Prime status, meaning they are recommended as sustainable investments. oekom research rates the environmental and social responsibility performance of companies using more than 100 criteria selected specifically for each sector.



In a new approach to training, participants team up to resolve compliance issues in a GRC board game.



Volkswagen Compliance provides information at the 2014 International Suppliers' Fair (IZB) in Wolfsburg.

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» RANKINGS IN RATINGS AND INDEXES

Index/rating	Ranking 2014	Ranking 2013
CDP Global 500 Climate Performance Leadership Index	listed (A)	listed (A)
CDP Global 500 Climate Disclosure Leadership Index	listed, 99 points out of 100	listed, 99 points out of 100
CDP Supplier Climate Performance Leadership Index	Listed (A)	Listed (A)
Dow Jones Sustainability Index World	listed, 88 points out of 100	listed, 89 points out of 100
Dow Jones Sustainability Index Europe	listed, 88 points out of 100	listed, 89 points out of 100
ECPI Ethical Indices (Europe, EMU, Global)	listed	listed
Ethibel Sustainability Index Excellence Europe	listed	listed
Euronext Vigeo Eurozone 120 Index	listed	listed
Global Compact 100	listed	listed
oekom research	prime status (B-)	prime status (B-)
STOXX Global ESG Leaders Indices (Environmental, Social, Governance)	listed	listed



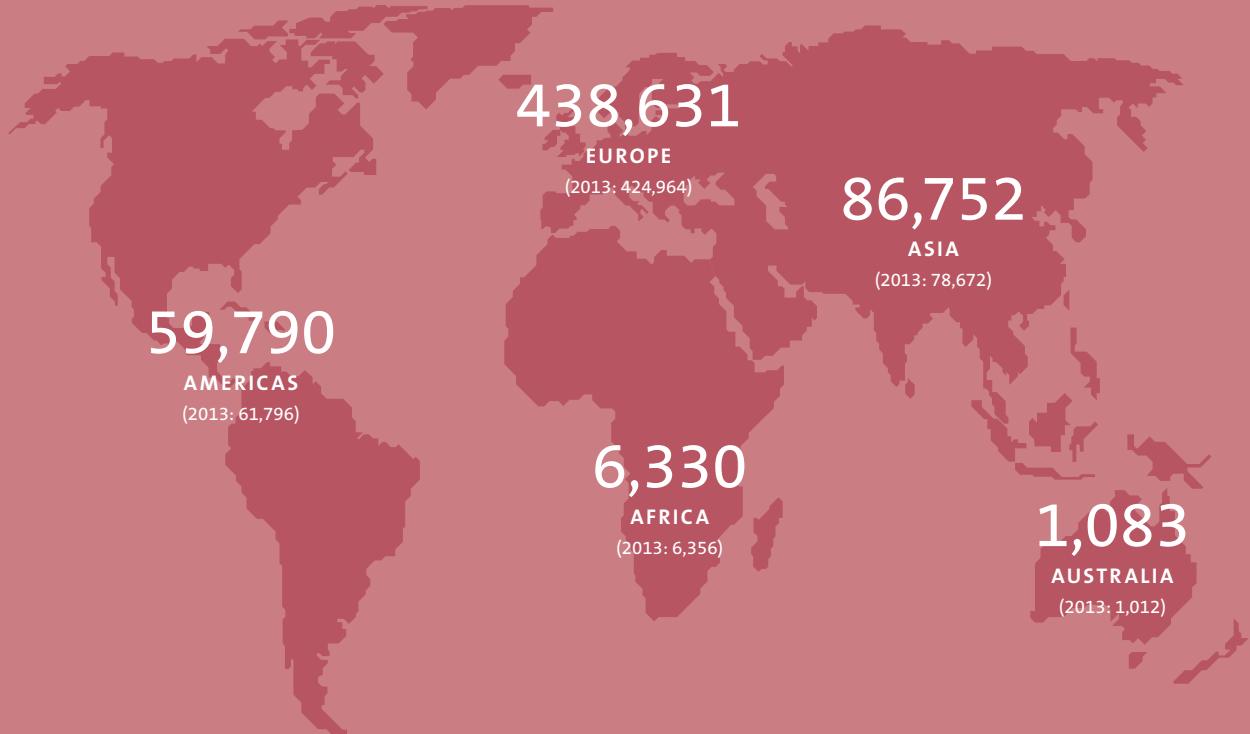
# › PEOPLE

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## VOLKSWAGEN GROUP EMPLOYEES BY REGION

2014



## EMPLOYEE SATISFACTION INDEX ACROSS THE GROUP

2014

79

(2013: 79)

## FEMALE EMPLOYEES ACROSS THE GROUP

2014, in %

15.7

(2013: 15.5%)

## APPRENTICES WITH THE GROUP IN GERMANY

2014, in %

4.8

(2013: 4.8%)



# “INDUSTRY 4.0” – A MAJOR EMPLOYMENT OPPORTUNITY

Digitization is increasingly shaping the world of work. Future analysts at the Massachusetts Institute of Technology are tracking the breathtaking pace at which computer technology is developing and have dubbed this “the Second Machine Age”. At the same time, “Industry 4.0” – the way in which machines, products and humans will interact in future – is a major focus of attention for engineers, management and IT experts, production specialists, trade union officials and politicians alike. They are modelling scenarios in which man and machine work “fist-in-glove” or in which the factories of tomorrow are run entirely by machines. But how realistic are these scenarios? And will they be a blessing or a curse? It is neither realistic nor desirable to envisage factories without human beings. However, anyone who visits trade fairs, research labs, top-ranking universities or pilot plants at industrial companies can see that we are on the threshold of a further paradigm shift in automation. The astonishing pace at

which digitization and networking are developing has triggered a surge of innovation in robotics, and over the next few years, robots will become significantly more efficient and safer.

*“We have the opportunity to do away with unergonomic work, increase the proportion of skilled jobs we offer and drive down our production costs, while also safeguarding employment.”*



More than five million people in Germany currently work in industry; Volkswagen alone employs 120,000 people in the production sector. So will further automation mean a renewed rise in unemployment? The answer is no. Demographic trends over the next 20 years will actually help us safeguard jobs. Between 1955 and 1975, a combination of Germany’s “economic miracle” and the baby boom produced two decades of above-average population and employment growth. And the impact was particularly marked at Volkswagen: when demand for the Golf soared in the 1970s, we recruited above-average numbers of new employees. Consequently, between 2015 and 2030, we will be seeing a disproportionate number of older employees moving into retirement: some 32,000 more than the long-term average across the Volkswagen Group. This gives us the opportunity to replace some human employees with

robots while at the same time maintaining our existing recruitment levels. We could not, in any case, have replaced all these retirees with young people. So in terms of employment policy we can afford another surge in automation. But why should we welcome that or even encourage it? There are two reasons. First, we want to offer good, skilled work to all our employees. To date we have done our utmost to make assembly-line jobs as ergonomic as possible, but some jobs are onerous and will stay that way. It takes concentration and precision to feed eight drops of oil into six points on one camshaft after another for seven hours a day. It's also monotonous and tiring – or in other words: hard work. Assembly work in the vehicle interior, the positioning of components and working overhead are further jobs that will not be missed when there are better ways of doing them. And there are. If we have an opportunity to eliminate unergonomic work and to leave it to robots, we should do so.

*“Digitization and networking will transform our training professions. We are already upgrading our vocational education and training accordingly.”*

In future, there will be more skilled work available in our factories than there is now. Robots and networked production equipment need to be programmed and maintained, supervised and reconfigured. The qualifications of our skilled workers, Meister and engineers will increase; alongside mechanical and electronic engineering skills, IT skills will be increasingly important. So the advances in automation will need to be matched by a surge in initial and in-service training. And we have already begun that process. New apprentices starting their training with Volkswagen from 2015 will be acquiring new, job-specific skills, such as controlling digital systems. Partnering with Germany's Federal Institute for Vocational Education and Training (Bundesinstitut für Berufsbildung, or BIBB), we have launched an initiative to develop new training professions for the digital world of work. And 2015 will also see the rollout of a wide-ranging qualification

offensive at Volkswagen. We are equipping our employees with the fundamental digital skills they will need as well as with the specific technical skills for their particular “Berufsfamilie” or professional family. These new skills are in areas such as programming and the use of networked applications, online diagnostics and real-time analysis, networked collaboration, and the use of learning platforms.

*“In Germany, we have the opportunity to use our strengths to drive forward the next wave of automation.”*

The second reason for driving forward automation is our labor cost structure. Labor costs in Germany's automotive industry are more than €40 per hour, compared with €11 in Eastern Europe and less than €10 in China. No one seriously believes that we can significantly reduce the competitive disadvantage that such high wage costs imply. But we would not want to do so either: after all, we want our skilled workers to be able to afford a decent car, to give just one example. So what does a robot cost by comparison? The robots already in use at Volkswagen cost between €3 and €6 per hour, a figure that includes maintenance and energy costs. And future generations of robots will probably cost even less. We have to make use of that cost advantage. And that is why at Volkswagen we are driving forward automation with moderation, using it to benefit our employees and reduce onerous work. Other sectors, too, can follow this path. “Industry 4.0” has the ability both to modernize the economy and to improve the quality of employment. The good news is that Germany's demographic situation is making these changes sustainable in employment terms as well.

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**Dr. Horst Neumann**

Member of the Group Board of Management responsible for Personnel Management and Organization

# COMMITTED TO EXCELLENCE.

Our aim is to become the most attractive employer in the automotive sector and to achieve long-term success through our high-quality ‘top team’ of almost 600,000 employees. Our personnel management policy is underpinned by the principles of fair treatment for our employees and a balance between performance, pay and participation. To secure our long-term future, we want to play a part in shaping tomorrow’s world of work, but our commitment to the principles of fairness and responsibility remains central. And that means giving our employees a share in the Company’s success and meeting our own corporate social responsibility.

## MANAGEMENT APPROACH

Securing excellent performance, generating success and enabling employees to share in the profits are central to the Volkswagen Group’s personnel management (PM) strategy. The key aims of the Group’s PM work are, therefore, qualifying our employees, promoting their health and fitness, and ensuring that they are involved. Over recent years our employees’ hard work has made Volkswagen one of the world’s largest automakers, and that success has gone hand in hand with rapid growth in the number of employees. Within just five years, the Group’s workforce has grown from over 399,000 to almost 593,000. The challenge is to integrate these new employees in the Group, qualify them and enable them to add value to the business – a challenge we are meeting with a comprehensive management approach.

Alongside the ongoing internationalization of our Group structure, our response to the changes prompted by growth on this scale has focused on substantially expanding, upgrading and standardizing training right across the Group. Our approach is to embed learning and teaching within “Berufsfamilien” (professional families) in line with Germany’s dual model of vocational education and training, which ensures close long-term coordination between theory and practice. Systematic

knowledge transfer – the passing on of knowledge and experience by our own experts – is another key factor underpinning our success.

## The Guidelines behind the Way We Do Business

As a global undertaking with 118 production locations across Europe, the Americas, Asia and Africa, we have wide-ranging experience of cultural differences, approaches and worldviews. Volkswagen is committed to respect, tolerance and cosmopolitanism and guarantees equal opportunities and equal treatment at all its locations. We are also committed to sustainable development in the towns, cities and regions in which we operate, a commitment that takes many different forms.

A range of voluntary undertakings and bilateral agreements with our employees and their representatives codify the fundamental standards, employee rights and arrangements for cooperation that apply across the Group:

- **The Volkswagen Code of Conduct.** The Code of Conduct came into operation in 2010 and creates the framework for lawful and ethical behavior.  9
- **The Declaration on Social Rights and Industrial Relations at Volkswagen (the Volkswagen Social Charter).** In 2002, Volkswagen used this Declaration to document the basic social rights and principles that underpin its corporate identity. These social rights and principles are based on relevant International Labour Organization Conventions. A revised version of the Social Charter was signed in 2012.  25
- **The Volkswagen Global Labour Charter.** The Charter came into force in autumn 2009 and combines greater rights to consultation with shared responsibilities. It provides for rights to information, consultation and codetermination for employee

### ➤ ACTION AREAS COVERED BY THIS CHAPTER:

-  Attractiveness as an employer
-  Training
-  Participation
-  Health
-  Diversity and equality
-  Corporate responsibility

representatives within the brands, companies and locations represented on the Group Global Works Council. [②6](#)

› **The Charter on Temporary Work.** In November 2012, Group management, the European Works Council and the Group Global Works Council agreed a Charter on Temporary work, which sets out the principles for managing temporary work. [②7](#)

### Employment Trends

These systems for formally implementing employment rights and guidelines are particularly important as Volkswagen continues to grow. In 2014, the workforce of the Volkswagen Group, including the Chinese joint ventures, increased by 3.5% to 592,586 as at December 31, 2014. Significant factors in this increase were workforce expansion in growth markets, particularly in China, and the recruitment of skilled workers and experts in Germany and elsewhere. Also in 2014, Volkswagen AG, Volkswagen Sachsen GmbH, Volkswagen Financial Services AG, AUDIAG and MAN and Porsche in Germany took a total of 8,131 temporary employees into the core workforce in Germany.

The internationalization of the Volkswagen Group is also reflected in a significantly higher number of international postings. Over the past ten years, the number of foreign service employees (those who are working outside their home country) within the Volkswagen Group has more than doubled. If the new brands and companies – Scania, MAN, Ducati, Porsche and Porsche Holding – are also included, the increase was even higher, at 141%.

### Group and Brands Ranked Top Employers

Our continuing success and our systematic approach to personnel management are also making us increasingly attractive as an employer. Once again, 2014 saw the Group securing leading positions in a number of employer rankings. A survey among future management experts by the consultancy company trendence, for example, saw the Volkswagen Group move from fifth to second most attractive European employer. A total of more than 300,000 engineering, IT and business studies graduates from 24 European countries took part in the trendence surveys, voting us most attractive employer in the automotive sector.

In other countries, Volkswagen Group brands and companies achieved excellent rankings in a wide range of employer attractiveness surveys. In Germany, according to trendence, Audi was voted the most popular employer by engineering graduates for the fifth consecutive year, for example, while the Volkswagen Passenger Cars brand achieved third place among business studies graduates and fourth place among engineering graduates. Elsewhere in Europe, Volkswagen-Audi España was named top employer in a national survey, while automotive and mechanical engineering students once again voted ŠKODA the most attractive employer in the Czech Republic. In the UK, the Top Employers Institute awarded Bentley Motors Ltd. "Top Employer United Kingdom" status for the third consecutive year. In China, the Top Employers Institute voted Shanghai Volkswagen and FAW-Volkswagen "Top Employers China" in 2014. FAW-Volkswagen also won the "Best Enterprise to

Work for Chinese Graduates in 2014" award presented by the Chinese Ministry of Education and the country's Center for Information, Advice, Higher Education, Careers and Employment. In South Africa, the Top Employers Institute ranked Volkswagen of South Africa the country's top employer for the fourth consecutive year in 2014. In the USA, Volkswagen Chattanooga received the "Best Place to Work" award for the second year running, while in Mexico, Volkswagen de México was the only automotive company to be recognized in a national student survey, "Empresa de los sueños de los jóvenes" ("Young people's dream company").

### › The Volkswagen Group Academy *groups together 13 individual Berufs-familien Academies.*

### QUALIFICATION WITHIN THE BERUFSFAMILIEN

The provision of initial and in-service training to the highest standards across the Volkswagen Group is immensely important for our enduring success as a top technology company. Qualification and personnel development for Volkswagen Group employees is based on the concept of professional families ("Berufs-familien"). A "Berufsfamilie" includes all employees with shared expertise whose jobs require related skills. The Berufsfamilie is, therefore, the specialist "home" of every individual employee within the Group, from apprentices right up to senior experts, and the skills requirements of each Berufsfamilie determine individual employees' needs for qualification. At almost all brands and companies these needs are identified at least once a year in the individual employee appraisal or qualification appraisal. Learning and teaching in Berufsfamilien follow the dual model of vocational education and training, in which theory and practice are closely linked. This form of qualification requires a high level of organization. Training "Academies" are in place for a growing number of Berufsfamilien and organize cooperative learning across brands and locations. Qualification within the 36 Berufsfamilien currently takes place at 13 Berufsfamilien Academies. These are grouped under the umbrella of the Volkswagen Group Academy, whose aim is to leverage synergies and ensure an outstanding level of qualification across the Group.

### Vocational Education and Training in Line with the Dual Model

Vocational education and training at Volkswagen is based on the dual model, and from the very first day, our apprentices are trained within a Berufsfamilie. The apprentices alternate regularly between blocks of classroom learning in a vocational school, periods in a training center and a range of assignments within a plant. This ensures that they have the best possible preparation for their future employment as young specialists or skilled workers within the relevant Berufsfamilie.



Hands-on experience days provide young people with an insight into various professions as well as vocational education and training opportunities with the Group.

Each year, Volkswagen AG invites school students to hands-on experience days. Current apprentices and trainers brief them on what is involved in the various technical and commercial training professions and dual apprenticeships offered by Volkswagen. In 2014, hands-on experience days were held in Wolfsburg, Hanover, Braunschweig, Kassel, Emden and Salzgitter. Similar information events were also staged by the Audi, Porsche and MAN brands.

### **Dual Vocational Education and Training Goes Global**

Just how seriously we take our responsibility for the next generation is demonstrated by the importance that Volkswagen assigns to vocational education and training. In December 2014, the Volkswagen Group was training 18,459 apprentices and students around the world in some 60 professions and 50 dual apprenticeships. Volkswagen AG, Volkswagen Osnabrück GmbH and Volkswagen Sachsen GmbH alone trained 5,418 apprentices in more than 30 professions and some 20 dual apprenticeships, once again more than in the previous year. In recent years the Group has rolled out the dual model of vocational education and training in many locations outside Germany. Over three-quarters of all apprentices within the Group are currently being trained in line with this system, not only in Germany but also in Spain, Hungary, Russia, the USA, Mexico, India and China. A ceremony held in October 2014 saw the 43 best former apprentices from a total of 18 countries and 38 locations receive "Best Apprentice" awards. For the first time, former apprentices from Volkswagen India, Volkswagen Group of America and Volkswagen Group Retail Deutschland were among those receiving awards.

In 2012, SEAT became the first Spanish company to instigate dual vocational education and training, and in 2014, the company's

qualification program won it the Business Prize of the Chamber of Foreign Trade for Spain and the Francesc Macià award, the Catalan government's top award for outstanding performance in the area of employment. Since 2012, we have also been building on existing close cooperation with China's Ministry of Education in the area of vocational education and training. As part of this cooperation, China's Minister of Education, Prof. Guiren Yuan, visited Volkswagen's Wolfsburg plant in October 2014. Volkswagen AG will be supporting the construction of further competence centers for teacher training in China.

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### **► SPECIAL VOCATIONAL EDUCATION AND TRAINING PROJECTS**

**Competition:** The ProMechaniker competition gives apprentice motor vehicle mechatronic technicians with Volkswagen AG an opportunity to display and develop their technical skills. Requirements for taking part are a high level of commitment and motivation, excellent performance as an apprentice, and an interest in motor racing. The competition was held for the fifth time in 2014. The two winners have a chance to work with the service team for the Scirocco R Cup series.

**Vehicle development:** Projects including the design of the Golf GTI Wolfsburg Edition and the ŠKODA CitiJet are further examples of the practical vocational education and training acquired by Volkswagen Group apprentices. Twelve apprentices were involved throughout the process from initial brainstorming to the launch of the Golf GTI Wolfsburg Edition, contributing their know-how and creativity and developing not only their specialist knowledge but also their teamworking skills. The ŠKODA CitiJet is the brainchild of

the “Azubi Car” (“Apprentice Car”) project, a training project launched in 2014. This sporty convertible was built by 16 young apprentices from the ŠKODA AUTO vocational school.

**“A year’s support”:** Since 2012, Porsche has been running a program entitled “Förderjahr” (“A year’s support”), governed by collective agreement and offering disadvantaged young people the opportunity to undergo formal skills training. Over a period of ten months, participants take part in a skills development program that prepares them for an apprenticeship. In the first two years, 2012 and 2013, eleven young people began the program. In the meantime, nine participants from the first intake and all eleven from the second year have successfully completed the course and begun an apprenticeship. Ten more young people kicked off their “year’s support” in November 2014.

**Commitment:** The Volkswagen Group’s commitment to the Auschwitz Memorial and Museum is recognized around the world. Six times a year, groups of Volkswagen AG apprentices travel to Auschwitz to spend two weeks working with young Poles at the Memorial and Museum; since 2012, apprentices from subsidiaries and affiliated companies have also been involved in the scheme. Some 2,600 young Germans and Poles have so far taken part in this program in the 26 years it has been running. This involvement fosters responsibility and develops apprentices’ powers of judgment, tolerance and openness to different cultures. Since 2008, separate groups of managers, management talents and “Meister” (group leaders) have also been involved.

#### › TOMORROW’S WORLD OF WORK

The Volkswagen Group in Germany is taking the lead in modernizing the training professions and spearheading the digitization of the world of work. Experts from the Volkswagen Group Academy joined forces with their counterparts in Germany’s Federal Institute for Vocational Education and Training (BIBB) at the end of 2014 to assess where the profiles of the different professions need amending and formulate proposals for the future orientation of vocational education and training – initially in Germany and subsequently in other countries too.

#### In-Service Training for Young Skilled Workers

As part of the consistent roll-out of the dual model of vocational education and training, young skilled workers are being qualified through training that closely links theory with on-the-job learning. Here the young people are supported by more experienced colleagues. This model for learning in tandem is vital: the best way of passing on knowledge and experience is face to face. Particularly talented apprentices are supported through “Talent Groups” at each location. This two-year development and skills training program recruits the best ten percent of apprentices from each year’s intake, with an emphasis on the individual development of technical excellence.



In October 2014, the Group Board of Management and the Group Global Works Council presented the 14th “Best Apprentice Awards” to the Group’s top apprentices. Awards were presented to 11 women and 32 men from a total of 18 countries and 38 locations.

**› In 2014, Volkswagen AG recruited a total of 330 graduates in Germany, of whom around 30% were female.**

### Fostering Graduates

Volkswagen AG recruits and fosters young graduates through the Student Talent Bank and the Academic Talent Pool. Volkswagen has been using the Student Talent Bank since 1998 to bring on particularly able students in workplace-related and cross-functional areas. The aim is to boost these former interns' commitment to the Company and to give them the best possible preparation for embarking on a career with Volkswagen, for example through talks and presentations, seminars, and trips. Shortly before they graduate or complete their doctorate, these talented students are then moved into the Academic Talent Pool, a recruitment tool that provides the Company with a way to identify individuals with potential for graduate-level entry into a specialized area within Volkswagen.

### StartUp Trainee Programs

Trainees starting their careers with Volkswagen benefit from systematic structures such as the StartUp Direct program for graduates, designed to enable trainees to acquire an in-depth familiarization with the area in which they will be working in future. StartUp Direct trainees also spend two years undertaking a range of qualification measures, giving them an opportunity to get to know Volkswagen in detail and to build their own network. The StartUp Cross program is aimed at graduates with an international focus. The aim of the 18-month program is to familiarize trainees with the Company as a whole and to help them build an extensive national and international network. Trainees therefore complete project placements of a few weeks in different parts of

the company and in various locations both in Germany and abroad. Both StartUp programs also include a placement in the production sector lasting several weeks. Since 2008, over 3,100 trainees have gained their first experience of Volkswagen in this way.

### › ENTRY OPTIONS FOR YOUNG ENGINEERS FROM SOUTHERN EUROPE

Many young engineering graduates in southern Europe are having difficulty finding employment despite good qualifications. Since 2012, our StartUp Europe program has been offering them an opportunity to start a career. In 2014 the program was extended to Italy. Participants complete a placement with the Volkswagen Group in their home country and then move to Germany for up to 21 months to work in a Group company there. In 2014, 30 participants were already offered permanent employment in the Volkswagen Group on completing the two-year program. Since the initiative was launched in 2012, no fewer than 6,700 young people have applied for a total of 73 places.

### Promoting Intercultural Understanding

The Volkswagen Group promotes intercultural understanding between young employees through a program enabling them to work abroad, known as the "Wanderjahre" (years abroad – the singular is "Wanderjahr") program. The name alludes to the tradition among newly-qualified craftsmen of travelling the world and gaining experience. Since 2006, young people at the start of their career have had the opportunity, on completion of their training, to spend 12 months working for a Group company outside their home country. A total of 37 Volkswagen Group locations in 19 countries are now involved in this development program. And for the very first time, one employee started her Wanderjahr at the plant in Tianjin (China). So far, 456 young employees from across the Volkswagen Group have taken up this opportunity. In 2014, 51 participants from Germany and eleven from a further six countries embarked on their Wanderjahre at one of the Group's locations.

### Numerous Qualification Measures Available

The Volkswagen Group Academy offers employees a wide range of qualification measures. Along with general in-service training courses and qualification within the Berufsfamilien, these also include personnel management development programs. During 2014, a total of 86,193 participants benefited from 10,196 qualification measures organized by the Volkswagen Group Academy, representing 214,621 participant-days. In the product technology and product quality areas, 16,495 participants attended 2,267 in-service training and qualification measures over 36,125 participant-days, while in the field of cross-functional qualification, 35,515 participants attended 2,844 courses over 103,462 participant-days. A total of 334 new programs and training measures



The StartUp Cross program is aimed at graduates with an international focus.



Vocational training is crucial to the development of an outstanding team.

were introduced during the reporting year, ensuring that in-service training provision continues to reflect the Company's current needs.

### **Standards for Personnel Development in Leadership and Management**

In early 2014, the Volkswagen, Audi, MAN, SEAT, ŠKODA and Porsche brands agreed uniform standards for the personnel development of future leaders and managers within the Volkswagen Group. Within Volkswagen Deutschland alone, more than 190 leadership, Meister (group leader) and management qualification measures were held in 2014, including assessment centers for aspiring managers. Outside Germany, the Volkswagen Group Academy ran a total of some 60 courses for leaders, Meister and managers and assessment centers for aspiring managers in the Czech Republic, Poland, Portugal, Spain and the United Kingdom and in Argentina, Brazil, China, India, Russia, South Africa and the USA. 2014 saw the ongoing roll-out of personnel development programs at the Bentley, SEAT and ŠKODA brands. Group locations outside Germany also staged some 400 qualification and selection events of their own for future leaders and managers. MAN, too, places great emphasis on training its employees and raising their awareness: MAN Truck & Bus continued its

successful "Manage Responsibly" leadership training program, first launched in 2012, with trainee managers implementing MAN's Corporate Responsibility and Climate Strategy in their own areas of responsibility.

### **Training the Trainers**

In 2014, we placed particular emphasis on the cross-locational and cross-brand qualification of the trainers who deliver our programs for leaders, Meister and managers, as well as of the assessment center facilitators. This will enable us to ensure comparable quality across the Group. The "Volkswagen Group Academy Campus" initiative, which has been running since 2012, continues to be rolled out and provides a series of events designed to develop a global pool of trainers and facilitators. In 2014, around 70 participants from around the world took part in two such events. For the first time, face-to-face training ran alongside online learning programs and virtual networks for this target group.

### **Academic In-Service Training at the AutoUni**

Under the auspices of the Volkswagen Group Academy, the AutoUni provides a source of specialist academic knowledge. It has nine institutes and works with the Berufsfamilien Academies and partner universities to provide training for the Group's

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› PROMOTING THE NEXT GENERATION AND DEVELOPING TALENT – AT A GLANCE

Program	Target group	Focus	Area
Talent groups for young skilled workers	Talented young people who have completed their vocational education and training	Individual development of specialized and cross-disciplinary skills	Volkswagen AG, Volkswagen Financial Services AG, Volkswagen Sachsen GmbH
“Wanderjahre” program	Qualified apprentices	Promoting intercultural mobility and experience	Volkswagen Group
Student Talent Bank	High-performing current students	Developing and engaging potential recruits	Volkswagen AG
Academic Talent Pool	High-performing students and doctoral candidates close to completing their studies	Recruitment tool	Volkswagen AG: Wolfsburg and Hanover locations
StartUp programs/trainee programs	University graduates	Company familiarization, promotion and development, building national and international networks through project work	Volkswagen Group
StartUp Europe	Young engineers from Spain, Portugal and Italy	Recruitment of international talent, social commitment	Volkswagen Group

experts and top specialists. Its wide range of training formats ensures that the wealth of knowledge held within the Group, at universities and by private sector experts is passed on and new knowledge generated. The areas the AutoUni focuses on include electric traction, innovative drivetrains, lightweight design and the sustainability of transport systems. The Institute of Computer Science, set up in 2013, was expanded in 2014 to focus on two key areas, the digital workplace of the future and IT security. A further new institute, the Institute for Quality, was also set up during the reporting year. The AutoUni is closely involved in a range of research projects and collaborates with leading international universities, research institutes and research centers on graduate and postgraduate research. In 2014, the Group supervised over 500 doctoral students working on areas relevant to the Group in the various Volkswagen Group companies within Germany. The AutoUni, which is based in Wolfsburg, has also made its courses available outside Germany for some years now. In 2014, for example, its work was extended to locations in Bratislava (Slovakia), Mladá Boleslav (Czech Republic) and the Chinese locations of Changchun, Shanghai and Beijing. In 2014, around 8,600 people took part in over 180 AutoUni courses. The AutoUni also supplies more than 750 speakers each year, almost half of them from the automotive engineering sector.

### Networking Academic Knowledge

The AutoUni supports doctoral students by providing seminars on academic writing, while its doctoral colloquium offers them the opportunity to present their work-in-progress to a Group-wide audience and discuss their theses. AutoUni also advises and supports the Volkswagen Group in identifying appropriate academic partners from within research and teaching. It networks the individuals responsible for university contacts within the Group to create synergies between brands and companies and to

ensure that the processes are consistent. To provide impetus for basic research in the area of storage technology, in 2014 the international “Science Award Electrochemistry” was again presented by Volkswagen and BASF. The award went to Dr. Vanessa Wood from the ETH in Zurich, Switzerland, in recognition of outstanding research findings related to lithium-ion batteries.

### PERFORMANCE AND PARTICIPATION

Fair pay and an appropriate share in the Company’s success underpin the motivation and performance of our employees but also help to protect jobs and keep us competitive. Employee participation and co-determination rights for employee representatives are further key factors in the Volkswagen Group’s success, so we engage in dialogue with our employees to set standards for good work.

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› FAIR PAY ANCHORED IN SOCIAL CHARTER

In line with our Social Charter, all remuneration and benefits for a normal working week should be at least in line with the enforceable statutory minimum and should ensure that our employees and their families have an appropriate standard of living. When setting collectively agreed pay, the employer and the trade unions ensure that starting pay is in line with local minimum rates of pay. We make no distinction between female and male employees. Our first overseas plant to implement this, the Volkswagen do Brasil facility in Anchieta, is a beacon in this respect: the parties to the collective agreement agreed that starting pay for shop floor workers should be equivalent to 2.21 times Brazil’s statutory minimum wage.

### **Recognizing Performance and Sharing Profits**

The systematic fostering and recognition of good performance is a vital element in our personnel management strategy, along with redesigning our pay system to ensure that employees have a sustainable share in the success and profits of the Company. Since 2010, Volkswagen AG has had detailed standard criteria for skills development and performance assessment. These criteria cover the entire workforce, from apprentices to top managers, and are underpinned by concrete incentive systems within a three-tier pay system:

- › basic pay in the form of a competitive monthly salary
- › a performance-related component, which rewards individual performance
- › an entitlement to profit-sharing, which is laid down by collective agreement

This three-tier remuneration system is increasingly being rolled out across the Group. It gives us transparent criteria for recognizing good performance on the part of our employees and enables them to participate appropriately in the Company's success. In 2014, employees at more than 30 Group locations benefited from profit-sharing, including those in China, Mexico, Poland, Russia and Spain.

### **Annual Appraisal**

As part of the introduction of a performance-related pay component, it was agreed that each employee of Volkswagen AG, Volkswagen Financial Services AG and Volkswagen Immobilien Service GmbH should have an annual appraisal with his or her line manager. This appraisal has two components, performance assessment and development planning. Recognizing and valuing good performance is just as important in this context as identifying individual potential or specific further training needs. Since 2013, all temporary external personnel employed at Volkswagen AG have also benefited from a performance-related pay component from their second year with Volkswagen. The process by which this component is determined is similar to the individual annual employee appraisal process for Volkswagen employees. The system of appraisals, which is linked in part to a performance-related pay component, is gradually being rolled out across Group brands and companies. It was introduced for all employees covered by collective bargaining at Volkswagen Group Rus in Kaluga (Russia) in 2013 and at Bentley Motors Ltd. in Crewe (United Kingdom) in 2014.

### **Long-Term Incentive for Management**

The pay for management employees across the Group includes three variable components:

- › the personal performance bonus,
- › the Company bonus and
- › the Long Term Incentive (LTI), introduced in 2010.



As part of the introduction of a performance-related pay component, it was agreed that each employee of Volkswagen AG, Volkswagen Financial Services AG and Volkswagen Immobilien Service GmbH should have an annual appraisal with his or her line manager.

The LTI is calculated over a four-year period, making it the component that reflects sustainable development by the Company. Components of this kind were required by the 2009 legislation on remuneration of Board of Management members, but the LTI is applied more widely at the Volkswagen Group to the whole of its management. The Long Term Incentive is linked directly to the goals set out in the Group's Strategy 2018: top employer status and top ratings for customer satisfaction, sales and profitability.

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### **› COLLECTIVE AGREEMENTS IN 2014**

There was no collective bargaining within the Volkswagen Group in Germany in 2014, but 12 collective agreements were concluded at locations outside Germany. In some cases, there was a move towards long-term agreements that protect employment and boost competitiveness. For example, Volkswagen Slovakia, Sitech Polska and Volkswagen India all signed agreements running for more than 30 months.

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### **Flexibility and Employment Security**

Within the Volkswagen Group we use a wide range of flexibility tools to help maintain competitiveness and protect jobs. In 2014, we again responded rapidly to changes in the business environment. Some 200 Portuguese production staff from Volkswagen Autoeuropa continued to work at Volkswagen AG in Wolfsburg. Under the collective agreement on sustainable site retention and employment security, all Volkswagen AG employees enjoy employment security.

## Employing Former Apprentices

Volkswagen AG is bound by an agreement that provides for apprentices to be given permanent employment on completion of their training, subject to specific performance criteria. Former apprentices who do not meet these criteria are initially offered a two-year fixed-term contract. After two years, the performance assessment that forms part of their individual annual appraisal and regular feedback are used to decide whether to take them on permanently.

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### ➤ RECRUITING LOCAL PERSONNEL

Volkswagen supports the recruitment and qualification of local personnel as a way of developing the local communities and regions in which we operate. This applies for example at the new Audi México plant and at the new plant in Urumqi (China), where we plan to employ the groups that make up the region's population on a pro rata basis.

## Participation and Co-Determination

Within the Volkswagen Group there are many different forms of employee representation, but in most cases, employees are represented in two ways: by their trade union, and by a company representative body. Most of these company bodies are elected by all local employees and so represent the interests of the employees within the Company. Trade unions primarily represent the interests of their members. This principle of twin representation of employees has proved successful across the Volkswagen Group. When substantial changes are being planned in the Company, employee representatives are involved in the process from an early stage, a provision that is written into the global agreement on cooperation between Group management, the Group European Works Council and the Group Global Works Council.

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### ➤ TRADE UNION ORGANIZATION

The shop floor employees in 98% of all fully consolidated Volkswagen Group companies are represented by a trade union or covered by collective agreement. At the Audi México plant in San José Chiapa, which is still under construction, the newly created trade union SITAUDI was officially registered in December 2013.

## Charter on Labour Relations

The Group-wide International Charter on Labour Relations first came into force in 2009. It sets out the practical implementation of the right to participation and links increased participation rights with shared responsibility. The Charter applies internationally and provides for phased rights to information, consultation and co-determination for employee representatives of the

brands and companies represented on the Group Global Works Council. The rights it guarantees employee representatives relate, among other areas, to personnel management and industrial relations provisions, work organization, remuneration systems, information and communications, initial and in-service training, occupational health and safety, process controlling, and social and environmental sustainability. The Group Global Works Council and Company management regularly monitor implementation of the Charter on Labour Relations in individual Group companies.

## Local Implementation of Co-Determination

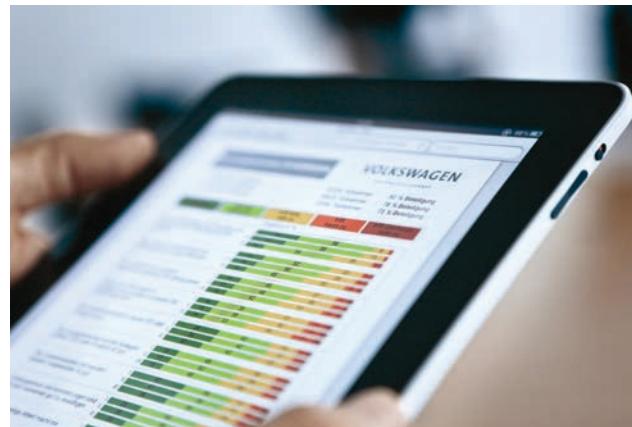
Since the Charter on Labour Relations was introduced in 2009, management and employee representatives at many locations outside Germany have negotiated declarations of intent and outlined implementation arrangements. 2014 also saw new plant-level agreements being concluded at ŠKODA India and Volkswagen Sarajevo. Other Group locations, such as the ŠKODA plant in Kvasiny in the Czech Republic, held inaugural works meetings. Employees at the Volkswagen plant in Kaluga (Russia) elected social partners to represent their concerns. And in many locations, including Volkswagen Group Italia and MAN in Steyr (Austria), the work of local employee representatives is now being organized within special committees and was stepped up in 2014. Many locations also held training workshops in 2014 to help employee representatives to implement the Charter on Labour Relations locally: these included MAN Steyr, Volkswagen Navarra, Volkswagen Sarajevo and Volkswagen India Pune alongside workshops for the sales and financial services companies Volkswagen Group Italia and Volkswagen Group Polska.

## Developing Employee Representation Structures

An agreement was signed at Group Global Works Council level in 2014 providing for a Mechanical Engineering Committee to be convened, comprising employee representatives from Volkswagen AG, MAN Diesel & Turbo SE, and Renk AG. This joins the Commercial Vehicles Committee, which was set up in 2012 to bring together employee representatives from the Scania, MAN and Volkswagen Commercial Vehicles brands, and the Sales and Financial Services Committee, set up in 2008. To improve the situation of workers, working conditions, participation rights and employment security in the Group's Chinese joint ventures, a Liaison and Coordinating Committee was set up back in 2008, which meets twice a year and discusses industrial relations within the Group in China. It also discusses a wide range of specialist issues, such as the Global Charter on Labour Relations, occupational safety, and vocational education and training.

## Charter on Temporary Work

The Charter on Temporary Work, signed in November 2012, represents agreement between Group management, the Group European Works Council and the Group Global Works Council on the key principles governing the use of temporary work across the Group. The main provisions of the Charter relate to:



**Employee Satisfaction Index** – Alongside the employee response rate, the key indicator generated by the Employee Opinion Survey is the Employee Satisfaction Index, which is compiled from the responses to 11 questions. During the reporting year, the score on this indicator was 79 out of 100, the same as in 2013.

- › The reasonable use of temporary work as a key flexibility tool
- › Implementation of equal pay with reference to the standard basic salary
- › Implementation of equal treatment: temporary external personnel should enjoy parity of employment conditions and training provision with the core workforce

This Charter offers all temporary external personnel the chance to be moved on to a permanent contract provided they have the necessary skills and the Company has a need for those skills.

#### The Employee Opinion Survey

The Group-wide Employee Opinion Survey, or “Stimmungsbarometer”, regularly measures employee satisfaction. Once the survey is complete, the findings are jointly discussed by supervisors and employees, focusing on complaints and problems as well as on suggestions for improving work organization. Together, supervisors and employees define the necessary measures required to trigger and implement change. The employee opinion survey was conducted for the seventh time in 2014. The survey covered 150 locations and companies in 44 countries. Out of the more than 490,000 employees at the brands and companies that have already implemented the employee opinion survey, over 440,000 employees took part. This equates to a response rate of 89 percent, which was the same as in 2013. Companies taking part for the first time in 2014 included Porsche Leipzig GmbH, subsidiaries of Porsche AG, Ducati Motor Holding spa, MAN Diesel & Turbo, MAN Latin America, Volkswagen Automatic Transmission (Tianjin), Volkswagen R & Accessory China, and ŠKODA Auto Deutschland.  28

#### Ideas Management

Under the Ideas Management program our employees use their creativity, knowledge and initiative to improve both processes and products. Ideas management is a vital management and

motivational tool and has been an integral part of Volkswagen's culture of improvement for the past 65 years. The ideas management process also helps to make working at Volkswagen both safer and healthier.

#### › IDEAS MANAGEMENT IN THE VOLKSWAGEN GROUP\*

	2014	2013
Ideas suggested	463,042	532,053
Suggestions implemented	306,432	412,795
Savings (€ million)	324.4	312.5
Bonuses (€ million)	35.2	34.9

\* 31 participating production locations (2013: 31) as per December 31, 2014.

#### The “Volkswagen Way”

The “Volkswagen Way” is a central and successful tool for securing continuous improvement. At its core is a process of continuous improvement that aims permanently to develop productivity and quality as well as ergonomics, leadership and teamwork. In 2014, the focus was on optimizing overarching workflows. In July 2014, the first “Volkswagen Way” symposium was held for the Technical Development department at the Wolfsburg plant.

#### Company Benefits

We want to offer many of our employees the opportunity to drive a vehicle from at least one Group brand and are continually improving the framework for doing this. The terms of this benefit must be affordable for the employee and commercially viable for the brands.

Employees of Group companies around the world also enjoy further company benefits: these may include subsidized transport and meals, low-cost accommodation, monthly childcare allowances, and discounts on selected leisure activities. Additional

health care benefits round off the range of company benefits. Since 2014, employees at Volkswagen AG, AUDI AG and a further nine Group companies in Germany have benefited from reduced-price rail travel under the “Job-Ticket” scheme. Volkswagen AG also contributes to the benefits provided by social insurance schemes, such as sick pay, and supports dependents when an employee dies. The Company also has a collective accident insurance policy that covers all employees against accidents resulting in death or invalidity. In exceptional cases of economic hardship, Volkswagen AG grants employees a short-term loan.

### The Company Pension Plan

Volkswagen AG, all its brands and all its subsidiaries in Germany run company pension plans to ensure that former employees have a source of income in retirement. At Volkswagen AG, the arrangements comprise a basic pension and contributory pensions I and II. The basic pension and contributory pension I are employer-funded, while contributory pension II offers employees an opportunity to convert part of their pre-tax salary into pension contributions. Since 2001, payments to Volkswagen AG’s Company pension plan have been invested in the capital markets by the scheme, which is administered in trust by the Volkswagen Pension Trust e. V. By the end of 2014, 22 other Group companies in Germany were also using these arrangements. Employees can also make direct contributions to their own pension provision by converting a proportion of their salary into pension contributions.

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### › THE TIME ASSET BOND

Volkswagen AG’s Time Asset Bond is a scheme to reduce the length of an employee’s working life. Since 1998, the Bond has offered employees the chance to contribute to it out of their gross salary or their working time credits. Their contributions are invested in the capital markets by the Time Asset Fund, which is administered in trust by the Volkswagen Pension Trust. The time assets accumulated can then be used to enable employees to take paid time off in the run-up to retirement.

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### HEALTH AND FITNESS

The Volkswagen Group’s integrated approach to health management goes well beyond traditional preventive health care and occupational safety and also includes aspects such as work organization, ergonomics, health promotion, integration and rehabilitation, leadership styles and prospects for each individual. To ensure a common standard of health provision across the Group, a multi-level audit system was introduced in 2010.

### Ergonomic Strategies

The Group continues to place a high priority on improving production ergonomics. The aim is to keep our employees fit and healthy

throughout their working lives. In consultation with the Volkswagen Passenger Cars, Audi and Volkswagen Commercial Vehicles brands, we have produced a handbook to underpin a standardized approach to ergonomics in the product development process, known by its German acronym as “PEP”. The handbook is due to be rolled out across further brands in 2015.

The online system “Massnahmen@web” (“measures@web”, the Group’s system for documenting, following-up and assessing optimization measures) enables an interdisciplinary team of editors to disseminate examples of good practice throughout the Group. At “Ergonomics Days”, experts present ergonomic innovations from the locations. AUDI AG staged an ergonomics fair at its Neckarsulm plant as part of the “Wir für uns. Aktiv in die Zukunft” (“Helping ourselves. Preparing for an active future”) strategy. At Volkswagen’s Wolfsburg plant, meanwhile, an inaugural “Ergonomics Day” showcased sector-specific logistics solutions. Along with ergonomics in the production and logistics sectors, activities were also staged to foster office ergonomics. Examples include new lighting concepts and a teaching film on healthy postures for people with sedentary jobs.

### Free Health Checkups

The Checkup is a free, comprehensive preventive medical examination available at all locations in Germany and around the world. It helps maintain and improve the health, fitness and performance of the workforce. Employees value the high diagnostic quality of the checkups.

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### › CHECKUPS WITHIN THE VOLKSWAGEN GROUP 2014

Company/country	Number of checkups in 2014
Volkswagen AG/Germany	16,879
Volkswagen do Brasil/Brazil	8,385
Volkswagen de México S.A. de C.V./Mexico	4,050
Volkswagen Poznań Sp. z.o.o./Poland	1,103
Volkswagen Autoeuropa, Lda./Portugal	1,534
Volkswagen Navarra, S.A./Spain	2,652
Volkswagen Slovakia, a.s./Slovakia	1,529
Volkswagen Group South Africa/South Africa	1,570
Volkswagen Group of America Chattanooga Operations/USA	978
Volkswagen Argentina S.A./Argentina	170
Shanghai Volkswagen Automotive/China	10,408*
AUDI AG/Germany	9,498
AUDI BRUSSELS SA/NV/Belgium	502
AUDI HUNGARIA MOTOR Kft./Hungary	171
Porsche AG (Zuffenhausen, Weissach)/Germany	465
SEAT, S.A./Spain	11,117
ŠKODA AUTO a.s./Czech Republic	18,389

\*The Checkup was adapted to local circumstances.

### Prevention Measures

In 2014, we expanded the prevention and training provision linked with the Checkup, improved its quality and systematized it. In particular, we created and modernized medical training centers and fitness suites, introduced rehabilitation measures and health coaching, set up training on behavioral ergonomics, and launched new fitness and wellness programs. The “Fit im Büro” (“Fit in the Office”) program is a behavioral ergonomics program for employees working in an office environment, while its sister program, “Fit im Werk” (“Fit in the Factory”), aims to reduce physical stresses and strains on those working on the shop floor. Between May 2013 and June 2014, some 15,700 employees completed one of these programs at Volkswagen in Wolfsburg. Across the Group, a holistic approach to health management also includes healthcare schemes, a wide range of sport and leisure provision, and measures such as the weight-loss and healthy eating campaign run by Volkswagen South Africa or the company run organized by MAN Truck & Bus in Munich.

As a matter of course, Volkswagen health services are available to the entire workforce, but for specific occupations, the current legislative framework makes such provision mandatory. In 2014, 20,924 Volkswagen AG employees were covered by such requirements.

### ► HEALTH PROGRAMS AROUND THE GROUP

**BeFit at Bentley:** With the aim of encouraging employees to adopt a healthy lifestyle, Bentley launched its “BeFit” health campaign in 2014. The program focuses on four areas: Weight and Nutrition; Stress and Depression; the Corporate Step Challenge; and Exercise and Back Care.



The Chairless Chair makes many assembly activities easier. This high-tech carbon-fiber construction allows employees to sit without a chair. At the same time, it improves their posture and reduces the strain on their legs.

**Combating HIV and AIDS in South Africa:** Volkswagen continued its international commitment to combating infectious diseases in 2014, for example through continuing measures against HIV/AIDS at Volkswagen in South Africa. This program received a subsidy of ZAR 500,000, and by 2014, 93% of the workforce had taken the opportunity to be tested for HIV/AIDS.

**Home Care and Baby Care at Volkswagen do Brasil:** The Home Care program is geared to those of all ages with chronic conditions and offers both medical care and supportive outpatient care. The Baby Care program focuses on the welfare of the next generation and provides expert support for parents and their newborn babies in the first few weeks and months.

### Occupational Safety and Health Protection Policy

In 2004, the Volkswagen Group documented its underlying principles and obligations in relation to occupational health and safety in an agreement with the Group Global Works Council.

In 2014, the Group issued the corporate policy entitled “Occupational Safety and Health Protection in the Volkswagen Group”. This applies to all brands and companies and sets out underlying goals, responsibilities and standards in relation to occupational safety and health protection. At the same time, another document, the “Guidelines on Health Protection and Health Promotion in the Volkswagen Group” – a supplement to the corporate policy including concrete examples – was brought up to date. Both of these documents, the corporate policy and the guidelines, are due to be signed off in 2015.

The Volkswagen Group sets the same standards for work organization, occupational safety and health care for its employees no matter where in the world it operates, taking account of the local medical infrastructure and the local legislative framework in each case. Compliance with these globally applicable standards is monitored through audits conducted across the Group.

### Raising Awareness and Training

In the course of personnel development activities, supervisors in the Company are being made aware of the need to take greater account of the links between leadership and employees’ health. Seminars foster a health-promoting and family-oriented style of leadership.

Since 2009, occupational safety officers at all German locations have been receiving occupational safety qualification. In addition, since early 2012, Volkswagen in Germany has been organizing compulsory qualification modules on occupational safety for all future supervisors. On the basis of these modules, the qualification building blocks for future Meister were standardized in 2013 and made a compulsory part of the group leader qualification.

## Group Occupational Safety Management System ✓

On the basis of the Group's occupational safety management system (KAMS), which was introduced in 2010, the companies in the Volkswagen Passenger Cars Division and the Volkswagen Commercial Vehicles Division analyzed their existing occupational safety structures and processes. The findings are available across the Group via a central database. A health and safety committee has been set up at each included site to represent the entire local workforce. Moreover, all those involved agreed to conduct a brand-specific audit at all Volkswagen locations around the world from 2012. During the reporting year, the Group's occupational safety management system was successfully audited at São Carlos and Curitiba (Brazil), Pamplona (Spain) and Pacheco (Argentina).

### › AWARD-WINNING OCCUPATIONAL SAFETY

2014 saw the 29th annual Occupational Safety Cup competition for Volkswagen brand and Volkswagen Commercial Vehicles locations in Europe: the cup for the safest location went to the Braunschweig plant in Germany. Volkswagen Slovakia won a prize for its contribution to ergonomics at the country's 17th productivity and ergonomics forum in October 2014. And Volkswagen Commercial Vehicles won the safety award presented by the timber and metalworking trade association in Germany for its "GeSA" project, which focuses on health and safety for apprentices.

### › OCCUPATIONAL SAFETY AND HEALTH PROTECTION IN FOCUS FROM THE OUTSET AT AUDI MÉXICO

Audi aims to consider high-quality health protection for all employees from the planning stage onwards when it builds new factories and is taking health protection considerations into account in the construction of its new plant in San José Chiapa in Mexico. Under the relevant Development Agreement, the government has built a hospital near the plant, which will also improve healthcare in the region as a whole. To ensure that sick or injured employees are treated promptly, a medical unit has been integrated into the new training center.

## Company Medical Services and Emergency Situation Management

Medical services and health care for Volkswagen Group employees are in line with national legislation and internal regulations as well as with Group guidelines on protecting and promoting health. All Group locations have at least emergency health provision, while most locations offer medical services under the oversight of a doctor.



Volkswagen AG's Work2Work program creates new job opportunities for performance-impaired employees with the Company. In the Automotive Learnware department at the Wolfsburg plant, 39 employees develop and produce teaching and learning materials for the automotive sector for Chambers of Trade and vocational schools.

## Rehabilitation Measures

In many locations we offer a tailored rehabilitation program to reintegrate employees after serious and/or long-term illness, providing early intervention and job-related support. The aim is to stabilize or restore the employees' capacity and performance ability within three to six months. Depending on the particular needs in each case, the program can also include preventive provision. Examples here could be "JobReha" (one to three weeks of outpatient, day-care or in-patient measures focused on the problem zones in the locomotor system), the RehaFit program (orthopedic, psychological rehabilitation) and physiotherapy provision, as well as individual or general rehabilitation training at in-house training centers. Support and mentoring opportunities for employees with mental health or psychosomatic problems are also being expanded on an ongoing basis.

Volkswagen AG's Work2Work program has been creating new job opportunities for performance-impaired employees since 2001. It focuses on achieving an optimal fit between the requirements of the workplace and employees' existing potential, enabling them to make a major contribution to creating value despite their performance impairment. Over recent years, some 1,850 employees have benefited from the program, and over 810 people are now employed in Work2Work jobs in Wolfsburg in some 95 different fields of activity.

Based on the three principles of responsibility, autonomy and solidarity, the success story of Work2Work is being continuously rolled out and taken forward. Here, though, the Company is not merely proving itself a socially responsible employer, because according to a remarkable study entitled "Social Return on Investment", conducted in 2014 in collaboration with the Catholic University of

Eichstätt-Ingolstadt, Volkswagen's Work2Work program is also an economically viable concept for integrating employees with impaired capacity. It saves operational costs of around €29,000 per employee per year and savings on social and employment costs of up to €65,000 per employee per year once elements like potential disability pensions or transitional payments are also taken into account. Furthermore, the Work2Work program has been shown to bring qualitative benefits in terms of health and to have a positive impact on employees' satisfaction with their work and lives.

The Automotive Learnware department at the Wolfsburg plant is a fine example of how performance-impaired employees can be integrated. Here, 39 employees develop and produce teaching and learning materials for the automotive sector for Chambers of Trade and vocational schools. No fewer than 25 performance-impaired employees under the Work2Work program form an integral part of the department, which generated sales revenue of €1.92 million in 2014. The product portfolio extends from fault simulators and test equipment to complete or cut-away training vehicles. Learnware is distributed in 57 countries across all five continents.

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#### › PROVISION FOR OLDER EMPLOYEES

On the initiative of the German automotive industry's representatives of people with disabilities, in 2014 Volkswagen AG, AUDI AG and Porsche AG continued their involvement in a research project entitled "Ageing Healthily and Appropriately in the Automotive Industry: Career-Long Participation and Inclusion" and known by its German acronym, PINA. This cooperation project, which is funded by Germany's Federal Ministry of Labour, develops tools and initiatives to maintain employees' health and capacity throughout their working lives. The term of the project has been extended until the end of April 2015, with the additional time being used in particular to trial products developed as part of the project.

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#### › SUCCESSFUL REINTEGRATION AT AUDI

Audi has developed a systematic and transparent process to provide targeted support for the reintegration of performance-impaired employees and those with disabilities. A study conducted at the Ingolstadt plant by the University of St. Gallen surveyed around 15,000 shop floor workers and found high levels of satisfaction with the integration process.

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## ADVANCING WOMEN AND DIVERSITY

There is enormous potential within the diversity of the Volkswagen Group workforce. As we move towards becoming top employer in the automotive sector, we want to make use of this potential by explicitly advancing women, improving the scope for combining work and family, and making full use of the cultural diversity that exists within the Group.

### Voluntary Undertaking

The Volkswagen Group is aiming to have 30% women at all levels of the management hierarchy in Germany in the long term. In 1989, Volkswagen AG became the first major German company to formulate guidelines on advancing women. As early as 2007, Volkswagen AG set specific targets for increasing the proportion of women in the Company, and in spring 2011, the Group set differentiated targets within the framework of a voluntary undertaking to achieve sustainable growth in the proportion of women working for the Company in Germany. These include:

- › Increasing the proportion of female apprentices
- › Increasing the proportion of female Meister and skilled workers
- › Increasing the proportion of female graduate and professional recruits
- › Increasing the proportion of female executives

We have a range of programs to help us achieve these targets.

### Recruiting Talented Women

In 2014, women accounted for around 21.8% of all Volkswagen Group apprentices in industrial or technical areas. To increase this to 30%, we specifically target the recruitment of talented women, for example through the nationwide "Girls' Day", which offers young women an opportunity to experience what a career with Volkswagen can offer them. The "Lower Saxony Technikum" is a scheme in which the Volkswagen brand offers female students with the Abitur – Germany's school-leaving examination – a six-month internship designed to stimulate their interest in studying a technical subject. In 2014, 26 young women completed the "Lower Saxony Technikum". We also forge links with female undergraduates at an early stage in their studies. For example, Volkswagen AG runs a "Woman Experience Day". Since 2004, Volkswagen AG has also been running the Germany-wide "Woman DrivING Award", a competition aimed at top female engineers.

### Systematically Recruiting Female Graduates

In recruiting graduates, we take as our starting point the proportion of female graduates in each discipline, so that, for example, around 10% of all the mechanical or electrical engineers we recruit should be women. This rises to 50% in business administration. When all the disciplines relevant to Volkswagen's work are averaged out, these differentiated quotas produce a recruitment target of at least 30% female graduates. In the reporting year, around 30% of graduate recruits at Volkswagen AG were female.

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 ➤ PROGRAMS FOR THE ADVANCEMENT OF WOMEN

Program	Target group and focus	Company
<b>Programs for recruiting talented women</b>		
Girls' Day	Female school students in Germany. Program offers a practical insight into automotive sector careers.	Volkswagen AG, Volkswagen Financial Services AG, Volkswagen Sachsen, Volkswagen Osnabrück, AUDI AG, MAN SE, Porsche AG
Lower Saxony Technikum	Female students in Germany with the school-leaving qualification (Abitur). Program offers placements with a focus on technology.	Volkswagen AG locations in Wolfsburg, Braunschweig, Salzgitter, Hanover and Emden; Volkswagen Osnabrück GmbH
Woman Experience Day	Female undergraduates and graduates in engineering and IT areas. Program helps women into careers.	Volkswagen AG
Woman DrIVING Award	Competition for female engineers in Germany.	Volkswagen AG
Femtec.Network	Recruitment tool for female engineers.	Porsche AG
Girls engineering the future	10th grade female school students interested in science, technology, engineering and mathematics	Bentley
<b>Programs for developing talented women</b>		
Mentoring program for female Meister	Female skilled workers and Meister. Program offers advancement and qualification.	Volkswagen AG, Volkswagen Sachsen GmbH
Management mentoring program	Female managers. Program offers advancement and qualification.	Volkswagen AG, AUDI AG, MAN and other subsidiaries
Sie und Audi	Female skilled workers and managers. Program offers advancement and qualification.	AUDI AG

**Mentoring Programs for Women**

Having been through 21 cycles with almost 400 female participants, Volkswagen AG's mentoring scheme for female skilled workers and managers is a recognized development program within the Group for bringing on talented women. In 2014, we also instigated a new management mentoring program, which is launching its first 42 women from the Volkswagen, Audi and MAN brands and further subsidiaries on their management careers. And the program to mentor female Meister run by Volkswagen AG aims to increase the proportion of female skilled workers and Meister in Germany to 10%. In 2014, 25 female Meister received support through this program.

**Combining Work and Family**

As well as recruiting and promoting talented women, the Volkswagen Group is working continually to improve employees' ability to combine work and family responsibilities. The support we offer includes:

- Substantial flexibility in relation to hours of work
- An extensive range of part-time and shift-working arrangements

- A return to work at the same level after parental leave
- Childcare either within or near the company premises

To maintain contact with employees on parental leave and to ensure a smooth return to work at the same level, Volkswagen offers work options during parental leave, get-togethers for employees on parental leave and information events, such as the "Family Management and Career" seminars, run at the Wolfsburg plant. Audi, Porsche and MAN offer similar provision.

**A Range of Childcare Provision**

A further step on the way to becoming a family-friendly employer is the ongoing expansion of tailored childcare provision. The Volkswagen Group has found it beneficial to establish childcare facilities within or near the Company. At the Volkswagen locations in Wolfsburg, Hanover and Emden, additional nurseries have been set up near the plants in cooperation with the local authorities, while MAN runs company kindergartens at its plants in Munich and Augsburg. Volkswagen Financial Services AG's "Frech Daxe" nursery in Braunschweig, meanwhile, is one of Germany's largest company nurseries.

#### ► EXAMPLES OF COMBINING WORK AND FAMILY

**Volkswagen Group of America:** Childcare provision has been offered at the Chattanooga plant since January 2012, working with an established regional provider to care for around 200 children.

**Volkswagen Slovakia:** An initial get-together for employees on parental leave was organized in 2014. The idea is to keep employees involved with the company and to make it easier for them to return to work, for example by providing childcare, e-learning and flexible working.

**Volkswagen Rus:** 80 children of employees at the Kaluga location once again enjoyed a company-funded holiday camp in 2014.

**Volkswagen Motor Polska and Volkswagen Poznań:** The "Future Mother" programme allows women to work flexible hours or to reduce their hours without loss of pay during pregnancy.

#### Caring for Family Members

Volkswagen AG has a wide range of provision for time off to help its employees care for close family members. Employees have a right to take up to ten working days' leave at short notice to organize appropriate care. They may also take up to six months' part-time or

full-time leave to fulfil their caring responsibilities. Another option is to work part-time for up to 24 months so as to be able to meet caring obligations. Volkswagen is particularly flexible in its commitment to re-employing workers who take extended leave; for the past 20 years or so, employees have been able to request up to eight years' leave of absence without having to give reasons and have a guaranteed right to re-employment on their former terms and conditions. At Porsche, employees have been able to apply for time off to care for family members since March 1, 2014. In the event of care being urgently required within the family, they can take up to three months' leave at 75% of their gross monthly pay. In this respect, Porsche goes well beyond the legal requirements, which do not envision any remuneration for this period.

#### High Proportion of Employees with Disabilities

Volkswagen is particularly committed to helping employees with performance impairment or disabilities. People with disabilities made up 7.39% of the total workforce of Volkswagen AG in 2014 – once again, well above the statutory quota of 5%. 55% of employees with disabilities worked in the production sector and 45% in support functions. Volkswagen is also helping to boost employment for people with disabilities outside the Company: during the reporting year, it placed orders worth more than €20.9 million with workshops employing people with disabilities. Volkswagen mobility aids have also helped to give people with disabilities greater independence and autonomy.



Employees at many Volkswagen AG, Volkswagen Sachsen GmbH, Volkswagen Osnabrück GmbH, Volkswagen Financial Services AG, Audi and Porsche locations enjoy childcare provision during school holidays.

The Company is also particularly committed to its performance-impaired employees outside Germany. An example here is the six sheltered workshops that employ more than 200 people with disabilities at the ŠKODA production locations in the Czech Republic.

### Inclusion Agreement Signed

In July 2014, the Board of Management, the Works Council and the representatives of people with disabilities signed an inclusion agreement that applies across all Group brands and companies in Germany. This agreement makes inclusion an integral part of the corporate culture and focuses not on individuals' supposed deficits but on their strengths and potential. The aims of the agreement are as follows:

- People with disabilities are assigned meaningful roles and responsibilities in which they can make optimal use of, and develop, their strengths and potential and obtain recognition for their performance.
- Young people with disabilities can pursue vocational education and training within the Volkswagen Group. Barriers to the application process are progressively dismantled.
- The topic of inclusion forms part of the corporate mind-set and is taken for granted in employees' daily dealings with each other. Managers have an important part to play in promoting changes in attitudes: the necessary changes will come about only when people are well informed.
- If the strategy is to be implemented sustainably, inclusion must be embedded in the agenda of all relevant committees.
- Progress should be made in joint projects between the Company and the representatives of people with disabilities on boosting inclusion. Those involved will receive support from the Board of Management and employee representatives.

A working group is charged with implementing this agreement through various action areas and measures.

### Equal Opportunities as a Matter of Principle

Volkswagen is committed to respect, tolerance and cosmopolitanism. We guarantee equal opportunities and equal treatment irrespective of ethnicity, skin color, gender, disability, ideology, faith, nationality, sexual orientation, social background or political conviction, provided this is based on democratic principles and tolerance towards those who hold different views. The Volkswagen Group's Code of Conduct underpins this aspiration across the Group, and every employee and member of an executive body has responsibility under the Code for ensuring that individuals work together in partnership and for notifying any breach of the Code without delay. If there is a breach of the Code, the Company may take appropriate action against an individual who is acting in a discriminatory way; sanctions range from a formal warning or relocation to dismissal.

If an employee feels he or she is being discriminated against, the Company meets the statutory provisions for whistle-blowing but



Dr. Horst Neumann, Member of the Group Board of Management responsible for Personnel Management and Organization, Bernd Osterloh, Chairman of the Group Works Council, and Klaus Wenzel, Chairman of the representatives of people with disabilities, sign a joint declaration on inclusion.

also provides access to trained personnel to support and advise the individual concerned. At the initiative of the Works Council, these rights and obligations were laid down in 1996 in the "Cooperative Conduct at the Workplace" works agreement for all Volkswagen AG employees and locations. This agreement was revised in 2007, and every new employee receives a copy when he or she is appointed. It is also covered in management training activities.

### SOCIAL RESPONSIBILITY

For the Volkswagen Group, corporate social responsibility (CSR) has long since come to mean a commitment to local well-being beyond the factory gates. As well as promoting social, cultural and societal projects, we see ourselves as a source of economic impetus for local structural development and equal opportunities. We support some 200 projects worldwide designed to enhance economic and social structures, placing special emphasis on continuity and sustainability. Our aim is that employees, shareholders, the local population and customers should all benefit from what we do.

### Our Priorities

Our CSR priorities include support for future-oriented, education and social projects, primarily in the locations where the Group operates. But we also offer rapid support to the victims of natural disasters and promote volunteering by our employees. The following fundamental principles underpin our choice of CSR projects:

- The projects are in line with the Group's Basic Principles and address a specific local or regional issue.
- They reflect diversity within the Group and in the social environment in which the projects are sited.
- They involve a close stakeholder dialogue with actors on the ground, who are involved in carrying out the projects.
- Project management is based locally and overseen by local units.

## Commitment to the Regions

We are committed to the regions in which our locations are based: a sustainable environment that is pleasant to live in gives a region the edge in competition for business, boosts local employees' quality of life, and makes us more attractive as an employer. This is why, for example, Volkswagen AG supports regional growth initiatives in areas including education, health, leisure, energy and transport, alongside a broad range of measures to promote business.

Wolfsburg AG, based within the Group headquarters in Wolfsburg (Germany), is a beacon in this respect. This public-private partnership with the City of Wolfsburg, launched in 1999, is involved in future-oriented projects focusing on the important topics of employment and quality of life. And this joint undertaking is proving very successful: in November 2013, Wolfsburg topped the table for economic growth in a survey of German towns and cities by the business magazine *Wirtschaftswoche* and scored very highly for tax revenue, productivity and women's employment. And the entire region now benefits from the work done to develop structures and local amenities: Wolfsburg AG works closely with the "Allianz für die Region GmbH", or Regional Alliance, which takes in the towns of Wolfsburg, Braunschweig and Salzgitter and the surrounding rural areas as well as regional businesses.

### › XINJIANG DOCTORS GO WEST

Partnering with the Xinjiang Medical University and the Xinjiang Medical University Hospital, Volkswagen China is supporting an exchange program called "Xinjiang doctors go West". As part of China's support for infrastructure in the west of the country, this program both provides a platform for participating doctors to share experience and offers bursaries to young medical students.

## Educational Initiatives

In addition to regional infrastructure projects, Volkswagen AG is also actively involved in education in the region. The "Neue Schule Wolfsburg" project, an initiative to set up a new school in Wolfsburg in partnership with the city and local businesses, opened its doors in August 2009. This primary and secondary school, which is open to all children from the City of Wolfsburg and the surrounding region, designs its curriculum around five key themes: a strong international focus, science and technology, business, the arts, and the promotion of talent. The school has a total of 688 students enrolled in the 2014/2015 academic year. In Ingolstadt, meanwhile, Germany's first integrated school (Profilschule) opened its doors in September 2014 with support from Audi. Its motto is "Kein Talent verlieren" ("Fostering every talent"), and this unique beacon project offers children and young people with difficult backgrounds educational support at primary and secondary levels. The project resulted from collaboration between the Bavarian Ministry of Education, the City of Ingolstadt, the Roland-Berg Foundation and Audi. Education is also a key area of involve-

ment in the regions in which Volkswagen operates around the world. Volkswagen South Africa, for example, supports the nationwide Nal'ibali reading campaign, which has so far set up 272 reading clubs. Volkswagen Group China, meanwhile, runs a bursary scheme that enables students at Xinjiang University to participate in academic exchanges in Germany.

### › PLANT-FOR-THE-PLANET

The "Plant-for-the-Planet" initiative launched by school student Felix Finkbeiner aims to reduce levels of carbon dioxide in the atmosphere by planting trees. The aim is to plant some 1,000 billion trees by 2020. On the initiative of the Works Council, Volkswagen is supporting this project which has also been recognized by the German UNESCO Commission. The program includes academies for children and young people at which they learn key facts about climate change and global fairness and have the chance to take part in a tree-planting event. Almost all Volkswagen locations in Germany have already hosted such academies and plant-a-tree events and these activities will be continued over the long term.

We also use our expertise in mobility and road safety in school education projects. Just one of many examples from companies within the Group is the "Parque Polo", an area providing road safety training through play for children and sited in the grounds of the Volkswagen Navarra plant (Pamplona, Spain) which was opened more than ten years ago. In 2014, 8,522 children aged between 5 and 15 visited the Parque, taking the total number of visitors to 114,268.

### › HELP FOR FLOOD VICTIMS IN THE BALKANS

After the disastrous floods that hit large parts of Bosnia-Herzegovina, Serbia and Croatia in May 2014, the Volkswagen Group sent €100,000 in emergency aid to the German Red Cross to support its work in the region. The money was used to provide victims with emergency supplies and to help with reconstruction.

## Volunteering Welcome

Responsibility, respect and a long-term commitment are pillars of our personnel management work within the Volkswagen Group and benefit our employees, not least by boosting their social and crossfunctional skills. That is why we actively support our employees in volunteering through our "Volkswagen pro Ehrenamt" ("Volkswagen Supports Volunteering") initiative, which is embedded in the personnel management function. The initiative focuses on sport, culture, education and society, but we also offer rapid support to the victims of natural disasters. For example, we can quickly release employees from their regular duties to assist in



The Volkswagen pro Ehrenamt in-house “Senior Experts” initiative offers an opportunity to serve the community regionally or globally by passing on know-how within the Company or as a volunteer adviser to external organizations.

the aftermath of a natural disaster. The “Volkswagen pro Ehrenamt” function also supports all Group companies in implementing this framework concept. Our volunteering database enables the function to match volunteers with demand and to provide relevant information. By the end of 2014, the initiative had placed some 2,034 employees in volunteer roles, and similar programs have now been introduced at other Group companies, including Audi, MAN, Porsche and ŠKODA.

**› Employees with an interest in volunteering have access to 2,041 opportunities with more than 570 organizations through the Volkswagen volunteering database.**

#### **Senior Experts Benefit the Community**

All employees looking for a new challenge once they have retired can volunteer with the “Volkswagen pro Ehrenamt” in-house “Senior Experts” scheme. This initiative offers them an opportunity to serve

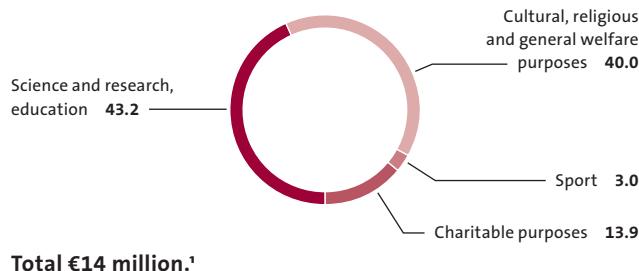
the community regionally or globally, for example, by passing on their know-how within the Company or as an adviser to external organizations. In 2014, 219 Senior Experts were able to choose whether, where and on which projects they wanted to put their specialist knowledge and skills to good use. Among other benefits, this valuable exchange of experience between older and younger people means that former employees maintain their links with the Volkswagen Group while both sides boost their knowledge and skills.

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**› CIVIC ENGAGEMENT WEEK OF ACTION**

Volkswagen supports the voluntary activities of its employees and aims to foster a wider awareness in society of the importance of voluntary commitments that advance social causes. As a cooperation partner to the German National Network for Civil Society (BBE), in 2014 Volkswagen pro Ehrenamt for the first time opened the 10th nationwide Civic Engagement Week of Action. During panel discussions on the topic of “Corporate Social Responsibility and Engagement” insight was provided into the voluntary activities of the Group and its employees.

» VOLKSWAGEN AG: WORKFORCE DONATIONS IN 2014 IN %



The total value of giving does not include the "Volkswagen Belegschaftsstiftung" (Volkswagen Employees' Foundation), set up in 2011. Volkswagen made no donations to political parties, party-affiliated foundations or representatives of the political arena.

<sup>1</sup> This figure does not include cause-related marketing, sponsorship or projects and activities conducted by Volkswagen as part of its social and cultural commitment. Nor does it include donations by other Volkswagen Group brands.

### Company Donations

The Volkswagen Group's commitment to donations and sponsorship is a key part of our corporate identity and reflects our desire to fulfil our corporate social responsibility. We support a wide range of organizations and events around the world. The principles underpinning donations and sponsorship are governed by our Group-wide Code of Conduct, which stipulates that we give donations in cash and in kind for activities and projects primarily devoted to research and education, culture and sport, and social causes. Donations are granted only to organizations recognized to be non-profit or that are authorized by special provisions to accept donations. Volkswagen does not donate to political parties, party-affiliated foundations or representatives of the political arena. Over the reporting year, Volkswagen AG donated a total of €14 million. Along with social organizations, in 2014 the main beneficiaries of donations were the victims of major natural disasters.

### Employee Donations

In 2014, employees of Volkswagen AG alone donated more than €4 million to good causes. Employee donations represent a major contribution by Volkswagen AG companies and their employees to those in need in locations where the Company operates. Employee donations support specific projects, such as those that improve the lives of people whose quality of life is reduced by illness, disability or other circumstances. Our goal is to offer support to those who are disadvantaged and to boost social cohesion: for example, we support the "Starthilfe" (Getting Started) project, which helps socially disadvantaged children and young people and improves the lives and prospects of young people in the Wolfsburg region. In the "One Hour for the Future" campaign, Volkswagen and Audi employees donate an hour's pay to help street children. Since the summer of 2003, this initiative has also included the collection of

"spare cents": employees donate the odd cents included in their monthly pay slip.

To coincide with the 2014 World Cup in Brazil, Volkswagen donated over €2 million for a special project, "A chance to play – o direito de brincar". The money helped children living in favelas in the vicinity of Volkswagen's Brazilian locations.

» VOLKSWAGEN AG: EMPLOYEE DONATIONS IN 2014

Employee giving	€634,773
One Hour for the Future	€1,125,350
"A chance to play – o direito de brincar"	€2,245,600

### The Volkswagen Employees' Foundation

The Volkswagen Employees' Foundation was set up in 2011 as a charitable foundation by Volkswagen AG with the aim of promoting initial, continuing and vocational training, education, and support for young people, with a particular focus on improving the living conditions of children and young people regardless of their origin, background or religion. To achieve this effectively, the Volkswagen Employees' Foundation restricts its activities to areas surrounding the Group's locations worldwide.

Since 2011, the Volkswagen Employees' Foundation has launched or supported ten projects in Germany and elsewhere. In Portugal, for example, it supports the "Tu importas" ("You count") project, a three-year training program for socially disadvantaged young people.

### Fairtrade

At the suggestion of the General Works Council, Volkswagen AG has been supporting the sale of TransFair-branded products in its catering facilities via its catering provider, Service Factory Gastronomie und Hotellerie, since 1999. This helps producers in developing countries to earn a decent living. In 2014, total consumption of fairly traded coffee rose 23.7%, to 60 t. And since 2012, Volkswagen has also been selling fairly traded craft items: producers in Madagascar use recycled cans to produce models based on iconic Volkswagen vehicles.

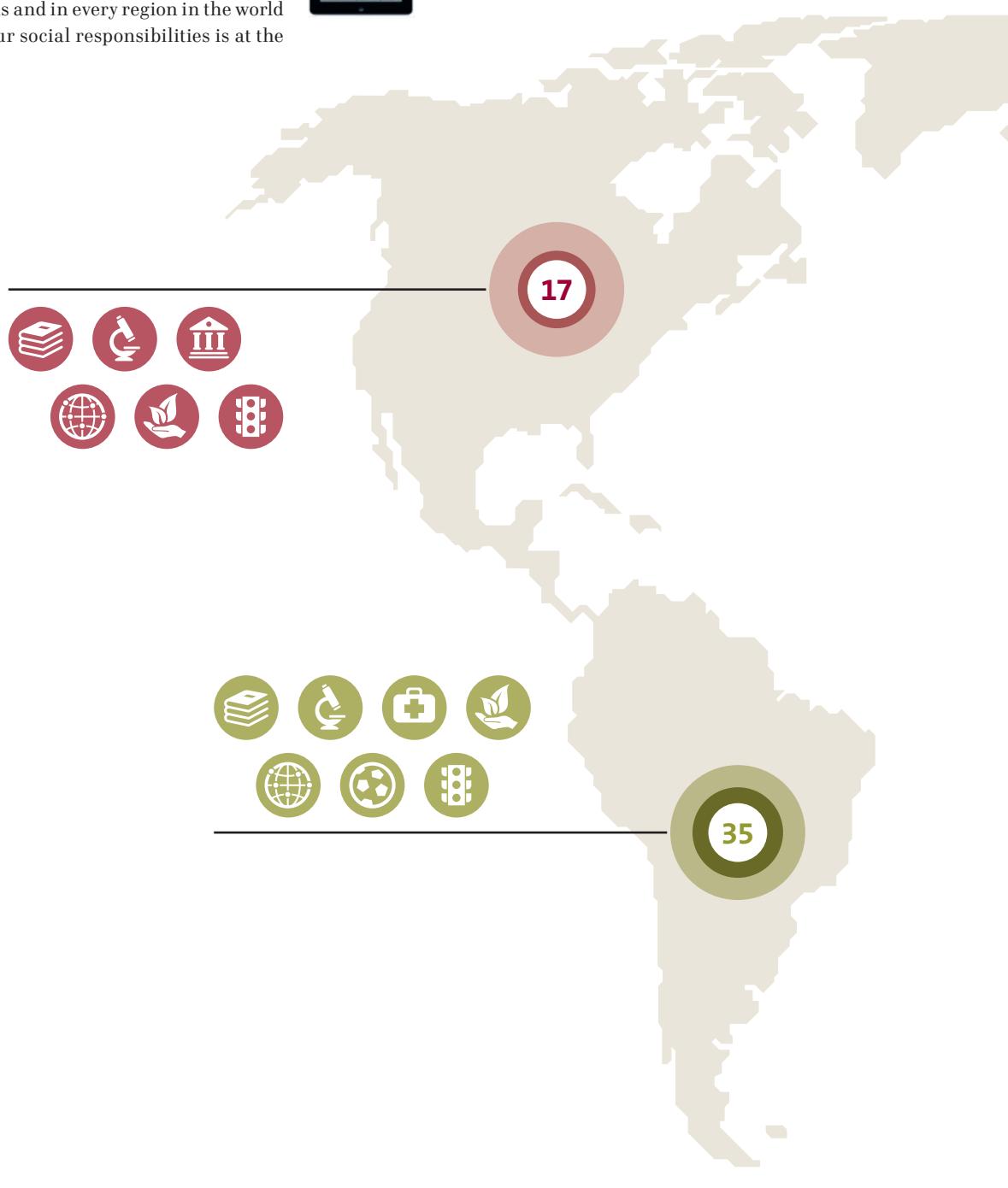


To coincide with the 2014 World Cup in Brazil, Volkswagen donated over €2 million for a special project, "A chance to play – o direito de brincar".

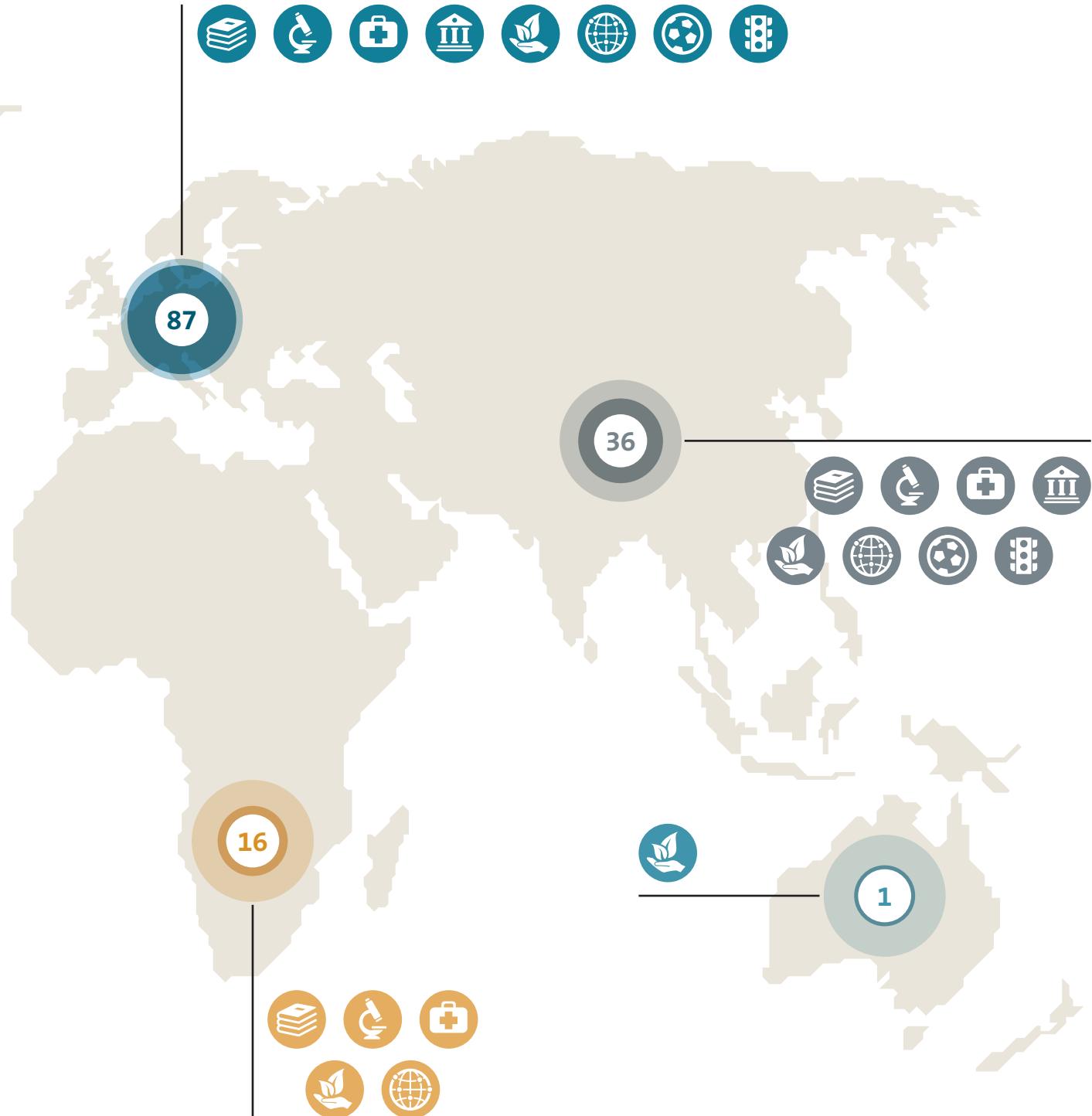
## Our Global Engagement

The Volkswagen Group supports some 200 projects promoting social development, the arts and culture, education, regional structural development, health and sport, as well as nature conservation. When deciding which social projects to support and partnerships to enter into, we don't take a scattershot approach but consider whether they make a good match for our corporate focus on mobility or are located in the vicinity of our production locations and benefit the people who work there or live locally. At all of our brands and in every region in the world of Volkswagen, living up to our social responsibilities is at the

core of our corporate culture. On the Internet you will find a map of the world that you can click on for more details about all and any of our projects. ↗ 29



- VOCATIONAL TRAINING
- EDUCATION AND SCIENCE
- HEALTH CARE
- CULTURE AND THE ARTS
- NATURE CONSERVATION
- REGIONAL DEVELOPMENT
- SPORT
- ROAD SAFETY EDUCATION



## › INTERVIEW

## WHEN IT COMES TO SUSTAINABILITY, YOU CAN NEVER DO ENOUGH

An interview with Bernd Osterloh,  
Chairman of the General and Group Works Council

**The Volkswagen Works Council fosters, even initiates, its own corporate social responsibility (CSR) projects. Why is that? Isn't CSR usually a management function?**

Osterloh: Social responsibility isn't something you can leave to others. We believe that everyone has a responsibility to get involved. And you can't just talk the talk – you have to walk the walk. Sixteen years ago, for example, the Group Works Council launched the "One hour for the future" campaign. We partner with the children's and adolescents' charity "terre des hommes" to help street children worldwide. Over the years, we have sponsored more than 130 projects in six countries. And since 2010 we've also had a special project called "A chance to play". At the two FIFA World Cup tournaments in South Africa and Brazil, we made sure that more than 100,000 socially disadvantaged children could participate in games, sports and educational activities. But we are also aware that child poverty is an issue right on our own doorstep. To address this problem, we launched the "Starthilfe" (Getting Started) initiative. It sponsors projects targeting nutrition, education, physical fitness and social development in nursery and elementary schools.

**The "Volkswagen Belegschaftsstiftung" (Volkswagen Employees' Foundation) provides a special example of how employees live out their commitment to social responsibility. Are there projects here that are especially close to your heart?**

Osterloh: The Volkswagen Employees' Foundation was established in 2011. The foundation has taken up the work of our former children's relief projects. The focus has always been on socially disadvantaged children and young people in the Volkswagen Group's locations around the globe. We are aiming to give them the chance to shape a successful future for themselves. You can well imagine that every single one of these projects is important to me, because every project has a worthy goal. One hundred apprenticeships in Portugal, establishing a vocational training center in India, vocational

training projects in Brazil and Argentina, aid for recent graduates in Italy – the list goes on and on. Each project is a priority; each project is close to my heart.

**Why does the Works Council consider sustainability and social responsibility so important for a global corporation like Volkswagen? Do you think the Company is already doing enough to reach its ambitious objective of being the most sustainable company in the industry?**

Osterloh: It is important to fight poverty, protect nature and promote the arts. These are obligations to our society that no one, including companies, can ignore. Volkswagen internalized these priorities years ago and can justly be called a pioneer in many areas. But my honest answer to your question is that when it comes to sustainability, you can never do enough – and I am certain that our management understands this as well.

*› It is important to fight poverty, protect nature and promote the arts.*

**Employee co-determination plays an important role in the Volkswagen Group. The Group Works Council is pursuing the goal of establishing employee representation bodies at its locations outside Germany as well. What benefits can be gained by this approach? Where do things currently stand?**

Osterloh: Strong employee co-determination is one of the reasons that Volkswagen is such a successful company today. Today nobody disputes this fact. We have a model of co-determination that works very well in Germany, and what we are trying to do is identify the elements that can be applied in our locations elsewhere. Be it in India, Brazil or Portugal – the local background conditions are very different, and of course we have to take them into account. In any case, our top priority remains representing the interests of our



colleagues vis-à-vis management. To accomplish this, we need well-defined structures and binding rules – which of course can be different depending on the situation. The most important thing is making certain that the employees' wishes and needs don't disappear from the radar. Volkswagen understands this, which is why our Company is working to become the best employer. And I consider this a very worthwhile goal.

**› Strong employee co-determination is one of the reasons that Volkswagen is such a successful company today.**

The automobile industry is going through a sea change. Digitization won't just leave its mark on the cars of the future, but on the world of work as well. What are the biggest challenges facing the Volkswagen Group? What can the employees expect to happen?

Osterloh: Digitization is hardly a new phenomenon. And this is not the first major change that the automotive world has experienced. Whenever there is change, there are both opportunities and risks. Of course digitization means that workflows and processes will change. As the Works Council, it is our job to shape these changes

to the advantage of the workforce. It's not about stopping progress or acting as a roadblock. It's about leveraging the full potential of digitization. For example, digitization goes hand in hand with questions of ergonomics and autonomy. The way we work tomorrow has to be better than today. If we succeed in making it so, then we will have accomplished something worthwhile.

**› *The way we work tomorrow has to be better than today.***

**With the aim of meeting new challenges, the Volkswagen Group has committed itself to a strict efficiency program. Do you believe this endangers the corporate objectives of job security and social responsibility?**

Osterloh: No, what makes you think that? The efficiency program will have precisely the opposite effect. It will safeguard long-term employment. Our Chairman of the Board of Management, Professor Dr. Martin Winterkorn, hasn't simply prescribed a program of cost cutting. We're aiming to make processes throughout the Company more efficient, which also means more cost-effective. The employees have understood this from the outset, which is why they have set a good example. We presented Dr. Winterkorn with a folder containing more than 500 specific proposals which come directly from the workforce. And more proposals are still coming in. After all, our colleagues are the ones who know best where Volkswagen has unexploited reserves and opportunities waiting to be leveraged. In fact, I can think of some managers who I wish were tackling the efficiency program with the same energy that we are. We're talking about a responsibility that must be shouldered – responsibility for cost-effectiveness and job security within the Volkswagen Group.

**› *We're talking about a responsibility that must be shouldered.***



# › ENVIRONMENT

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**AVERAGE NEW VEHICLE FLEET CO<sub>2</sub> EMISSIONS FOR THE VOLKSWAGEN GROUP BY REGION**  
2014, in g/km



**REDUCTION IN CO<sub>2</sub>  
EMISSIONS FROM GROUP  
PRODUCTION OPERATIONS<sup>3</sup>**  
2014, in %

**- 23.2**

(2013: -19.5%)

**REDUCTION IN ENERGY  
CONSUMPTION BY GROUP  
PRODUCTION OPERATION<sup>3</sup>**  
2014, in %

**- 18.5**

(2013: -12.5%)

**REDUCTION IN WASTE FOR  
DISPOSAL FROM GROUP  
PRODUCTION OPERATIONS<sup>3</sup>**  
2014, in %

**- 21.7**

(2013: -13.8%)

<sup>1</sup> Preliminary internal figure.

<sup>2</sup> Subject to official publication by the European Commission.

<sup>3</sup> Reduction per vehicle manufactured compared to 2010.



# ELECTRIFYING CHINA WITH A TAILOR-MADE EFFICIENCY STRATEGY

“When the wind of change blows, some build walls and others build windmills,” says an old Chinese proverb. This makes the perfect match for our Volkswagen Efficiency Strategy. The world is changing fast, and in China the clocks run even a little bit faster than elsewhere. China is facing big new challenges. More prosperity, coupled with a careful management of resources. More innovation, also triggered by the digital revolution. And – of course – a sound environment for everybody: these are cornerstones of China’s path to reform. And they precisely reflect our ambition for the future, too.

The Chinese government sets the course for new eco-friendly technologies and sustainable behavior. The guideline to reduce CO<sub>2</sub> emissions in China to a fleet fuel consumption of 5l, is even more challenging than the 95g/km target for 2020 set by the European Union. The explanation is very simple: in China only 1 % of cars have a diesel engine and there is a preference for more spacious vehicles which naturally are heavier. The answer to this challenge can only be a holistic approach. We have to think in terms of all possible technical solutions, including sophisticated vehicle and powertrain measures as well as alternative drive systems.

First of all, we need to better protect the environment and further reduce carbon dioxide emissions in the future. In this context, the development of electric vehicles plays a key role. At the same time, other issues also need to be considered. For example, the Chinese government has stated that carbon dioxide emissions should peak in 2030 before beginning to fall, which means that all sources of emissions need to get involved in the process of reducing the carbon footprint, including energy suppliers, households and various industries such as the auto industry. More Chinese cities are expected to restrict vehicle registrations in the future, as has already happened for example in Beijing, Shanghai or Guangzhou. This will drive up demand for new-energy vehicles especially in these megacities.



*“More prosperity in combination with a careful management of resources.”*

On the subject of plug-in hybrid as a focus of the Volkswagen Group for developing new-energy vehicles in China, I think we should be aware that plug-in hybrid power is the best solution in the short and medium term. Perhaps the development of all-electric vehicles can be realized in the long run. Discussions are ongoing in this respect also with Chinese experts. We need to find solutions to facilitate the development of highly effi-

*“The development of electric vehicles plays a key role.”*

cient batteries. And at component level we need to consider how to further improve energy conservation in both conventionally powered and electric models.

From the perspective of standards it is also very important to establish an electric vehicle charging standard. Our plug-in hybrids do not require special charging facilities and they can easily be charged over night at ordinary household sockets. However, when we consider all-electric vehicles, a fast-charging infrastructure should first be put in place. So for the future of electric mobility it is essential that common standards for fast charging should be defined immediately. China has not established any unified standard in this regard so far. Currently, for example, you cannot drive an all-electric vehicle from Beijing to Shanghai and rely on charging along the way. This is because the infrastructure has not been completed yet – and even once it is, the standard may not be universal. To this end, we need dependable, stable technologies. This way, in the future we can channel our development investments in the right direction and contribute towards advancing plug-in hybrid technologies.

There is no doubt that the research and development of new electric vehicles is a key pillar to address CO<sub>2</sub> reduction from the perspective of the automotive industry. So it is to be welcomed that the Chinese government gives strong support to the market development of new electric vehicles by specific regulations and subsidies. And we are pleased to see that the recent policy initiatives start showing impact looking at the growth of the new energy vehicles production volume in 2014. I am

convinced that with joint efforts we go step by step in the right direction – to reach the big goal of sustainable mobility in China.

The biggest challenge confronting Volkswagen is cost. For the time being, electric vehicle technologies are very costly, so customers need to obtain a government subsidy in order to purchase an electric vehicle. For one thing, battery technology costs need to be further reduced; for another, costs can also be reduced by increasing quantities or through volume production. We expect future electric vehicles to achieve the same price levels as conventional models. Thanks to our modular toolkit strategy we are able to electrify nearly every model in our range – to meet the local consumers' needs in all segments and classes.

*“We cannot allow the electric car to be a compromise on wheels.”*

Volkswagen is “electrifying” China with a tailor-made new electric vehicle strategy. In the near future, we will be offering Chinese customers an impressive choice of over twenty electric vehicles – from small cars to large sedans and SUVs, from plug-in hybrids to all-electric drives. We cannot allow the electric car to be a compromise on wheels. It has to be perfect in every way – technically mature, practical, safe and affordable.

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**Prof. Dr. Jochem Heizmann**  
Member of the Group Board of Management,  
with responsibility for ‘China’

# SETTING GLOBAL STANDARDS.

By 2018, the Volkswagen Group is aiming to be the world's most environmentally compatible automaker. In order to achieve this goal, we have set ourselves some ambitious targets, particularly with regard to environmental protection. In 2014 we continued our consistent pursuit of these goals. Our Environmental Strategy embraces all of our brands and regions, and extends throughout every stage of the value chain.

## MANAGEMENT APPROACH

Climate change, resource availability and urbanization are just some of the major global challenges facing the Volkswagen Group from an environmental perspective. These challenges are reflected in growing demands from all sides, be it politicians who enforce ambitious worldwide environmental regulations, investors who expect us to anticipate and manage the risks, or customers with their growing interest in fuel-efficient vehicles.

### The Volkswagen Group has a long tradition of resolute commitment to environmental protection.

The Volkswagen Group has a long tradition of resolute commitment to environmental protection. The new Environmental Strategy adopted by the Group Board of Management in 2013 provides the framework for addressing these challenges with specific targets and measures, and improving environmental protection within the Group. Implementation of the Group-wide Environmental Strategy is binding and measurable across the brands and business units at every stage of the value chain, from product planning and development, to supplier management, logistics and production, through to sales, marketing and recycling.

The Volkswagen Group has defined four overarching target areas:

- **Leader in environmentally friendly products:** We firmly believe that eco-friendly products should never compromise on world-class technology, comfort and safety. One of our key goals is to cut CO<sub>2</sub> emissions from our European new car fleet to 95 g/km by 2020, to reduce fuel consumption by between 10 and 15% in each new model compared with its predecessor, to have the lowest fuel consumption levels in every vehicle class (for the Volkswagen brand), to expand our range of alternative powertrains, to achieve top rankings, ratings and awards for selected products, and to become the market leaders in electric mobility by 2018.
- **No. 1 for lifecycle-wide resource conservation:** We consider the environmental impacts of our products, particularly their CO<sub>2</sub> emissions, at every stage of their life cycle. Along with climate protection, the main objective of this approach is to conserve finite resources. Our measures center on efficient product and process design, the use of innovative environmental technologies, and sustainable energy supplies. For this reason, we not only aim for every vehicle to better the environmental performance of its predecessor over its entire life cycle, but also target the significant reduction of our environmental footprint by 2018. Specifically, we are aiming for 25% reductions in energy and water consumption, CO<sub>2</sub> and solvent emissions and waste for disposal per manufactured unit compared with 2010.
- **No. 1 for intelligent mobility:** Intelligent mobility brings together our pursuit of mobility and comfort, environmental protection and efficient transport. We aim for high levels of customer satisfaction and want to be perceived as the most eco-friendly automaker. Our principal strategies for achieving these aims include intelligent, networked vehicles, new, supplementary business models and services, accompanied by initiatives for transport, urban planning and social change.

## ACTION FIELDS COVERED BY THIS CHAPTER

- Resource conservation across the life cycle
- Environmentally friendly products/electrification
- Climate and environmental protection
- Intelligent mobility and networking

› VOLKSWAGEN GROUP ENVIRONMENTAL STRATEGY



› **Anchored throughout the Company:** We want every individual in our well-informed, qualified workforce to be actively involved. Our strength lies in combining the expertise and competence of our brands and regions. Environmental considerations are factored into every decision we make. We will motivate and qualify our employees even more intensively to meet our environmental targets.

To firmly anchor this philosophy throughout the Group, we need the involvement of every business unit at every stage of the value chain. This holistic, modular approach entails defining our own measurable goals for each module, which will help us to achieve our corporate objective of becoming the world's most sustainable automaker. We have set up Group-wide committee and reporting structures to manage these topics, and systematically share best practice examples in a global network.

#### **Environmental Policy**

Environmental protection in the Volkswagen Group rests on the following global principles, which are binding for all Group brands:

- › Group Environmental Policy (1995). [30](#)
- › Group Environmental Principles Production (2007). [31](#)
- › Group Environmental Principles Product (2008). [32](#)
- › Mission Statement on Biodiversity (2008). [33](#)

All those responsible at Group headquarters, within the brands and at the locations observe these environmental principles in every decision they take. The environmental policies and targets of the brands are derived from these principles.

(See "Environmental Programs and Initiatives of the Brands", page 89.)

#### **Organization of Environmental Protection within the Group**

The Group Board of Management is the highest decision-making authority on environmental matters. Since 2012, it has simultaneously acted as the Group's Sustainability Board. The Group Chief Officer for the Environment, Energy and New Business Areas, a post established in 2011, heads up the Corporate Environmental and Energy Steering Group and reports to the Sustainability Board. The Steering Group is made up of representatives from all Group divisions as well as from the Group Works Council, brands and companies, and meets four times a year. Other Group-wide committees, such as the CO<sub>2</sub> Steering Group, the Vehicle Recycling Steering Group and the Corporate Working Group "Life Cycle Engineering", address a range of specialist issues. The brands and companies are responsible for environmental organization at their headquarters and locations.

› **We want every individual in our well-informed, qualified workforce to be actively involved.**

Environmental Officers at our European locations have convened regularly since 1976 to share their knowledge and experience. Regular Group Environmental Conferences were introduced in 1998 as a forum for the Group's Environmental Officers and experts to discuss strategies, measures and projects, and draw up joint action plans.

### › ENVIRONMENTAL ORGANIZATION AT AUDI

The Board of Management has overall responsibility for operational environmental protection at Audi, while the Production Board is responsible for implementing environmental policy. The Environmental Protection unit, responsible for defining environmental protection activities in the Audi Group, reports to the Production Board. The Environmental Management Officers at AUDI AG and its locations and subsidiaries (including Lamborghini and Ducati) make up the “Coordinating Committee for Environmental Protection”, which issues recommendations on strategic environmental issues. The cross-functional Ecology Steering Committee is tasked with implementing the mandates of the Coordinating Committee, among other things.

Operational environmental protection at the locations is the responsibility of the local Environmental Protection Officers. Their brief is to maintain and continuously improve the environmental compatibility of all activities at the respective Audi locations. Consequently, the Operational Environmental Protection unit is actively involved in all environmentally relevant decisions and activities at the locations.

Building on the Group Environmental Policy and Environmental Principles, all brands organize their own environmental management systems autonomously in line with international standards, be it the European Union's Eco-Management and Audit Scheme (EMAS) or the International Standards for Environmental Management (ISO 14001) and Energy Management (ISO 50001). As per the end of 2014, out of a total of 106 Group production sites, 90 held a valid ISO 14001 certificate (see table). Alongside the Volkswagen brand's production locations, Audi, Lamborghini and

Porsche have also had their factories' energy management systems certified to the relatively new standard ISO 50001, and others will be following suit in the near future. Volkswagen brand production locations in Germany (passenger cars and commercial vehicles) have participated in EMAS since as long ago as 1995, and publish annual environmental statements which are validated by an environmental auditor. [② 34](#) In 1996, the Volkswagen brand became the first automaker in the world to introduce an environmental management system certified to ISO 14001, for the “development of motor vehicles with continuously improved environmental properties” in its Technical Development department. In 2009, the “integration of environmental aspects into product development for the Volkswagen brand” was likewise certified to ISO TR 14062 – another first for the industry. Both were recently recertified in 2013, and now have valid certificates until the end of 2016. [② 35](#)

### › SITES WITH ENVIRONMENTAL CERTIFICATION, 2014

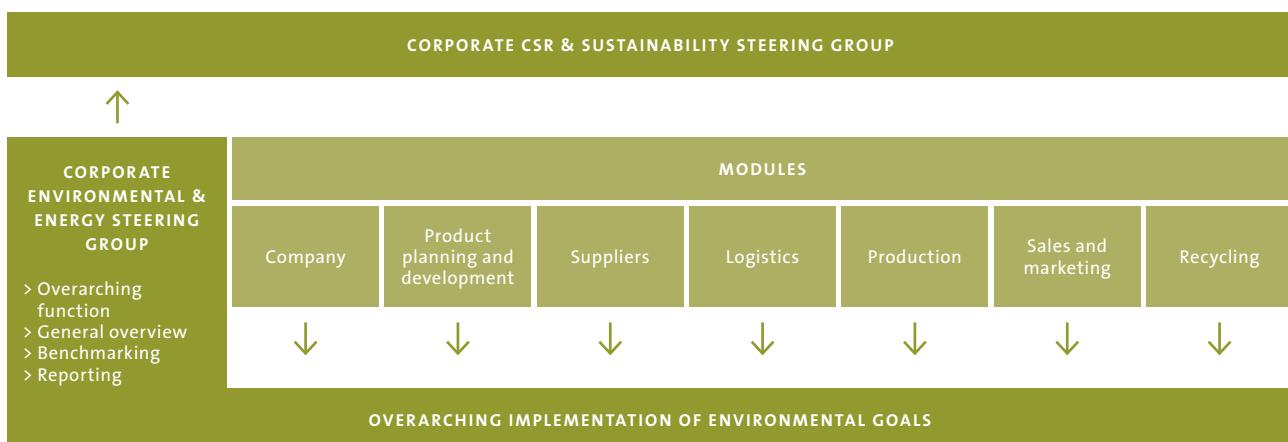
(previous year in brackets)

EMAS	ISO 14001	ISO 50001
22 (22)	90 (89)	26 (22)

Some locations apply both EMAS and ISO 14001.  
A list of all certified locations can be found on the Internet. [② 36](#)

### › Environmental management in line with international standards.

### › CORPORATE ENVIRONMENTAL & ENERGY STEERING GROUP



## Engaging the Workforce, Living our Principles, Inspiring Others

Informing and engaging our employees is particularly important to us as a Group. We have created an intranet portal to showcase best practice examples and facilitate direct contact with the relevant colleagues. The portal also outlines basic guidelines and energy-saving tips, including some generated by the central ideas management system. A “Works Agreement on Environmental Protection” has been in place at the Volkswagen AG factories since 1995, and was most recently updated in 2013.

## › Environmental programs anchored within the Group brands.

Since 2010, the international umbrella brand “Think Blue.” has encapsulated the sustainability philosophy of the Volkswagen and Volkswagen Commercial Vehicle brands, which aims to balance the need for personal mobility with environmental awareness. “Think Blue.” is much more than just products and technologies. It is designed to inspire and motivate employees, customers and the general public, and cooperates with environmental organizations around the world. Since 2010, “Think Blue.” has continuously evolved throughout every stage of the value chain in all Volkswagen brand-related business units, and in 2014 was extended to car dealerships in Germany. The central components of the “Think Blue.” philosophy are:

- › **Think Blue. Engineering.** Since late 2012, this strategy has brought together all programs and measures aimed at continuously improving the environmental performance of new models, based on the Environmental Goals of the Technical Development department (see page 94).
- › **Think Blue. Factory.** is a program launched by the Volkswagen brand in 2011, which aims to reduce consumption of energy and water, the volume of waste for disposal, solvent emissions and CO<sub>2</sub> emissions per unit produced by 25% at all our factories worldwide by 2018 compared with 2010 levels (see page 100).
- › **Think Blue. Dealer.** is an initiative to address energy efficiency in areas other than production. By 2018, the aim is to advise up to 60% of dealers worldwide on energy efficiency-related matters (see page 107).
- › **Think Blue. Mobility.** provides information on efficient powertrains and technologies, Volkswagen-brand electric vehicles, and our wide range of electric mobility services. With well thought-through service packages such as our green electricity product “BluePower” or wallbox installation (see pages 108, 109), the Volkswagen brand rigorously pursues a 360° approach to electric mobility.

Further information on “Think Blue.”: ② 37

## › ENVIRONMENTAL PROGRAMS AND INITIATIVES OF THE BRANDS

**Audi:** In 2014 the Board of Management of AUDI AG chose “ultra” as the brand’s leitmotiv for pioneering sustainability topics. As a result, “ultra” now stands for the aim of forging a close link between our core brand message “Vorsprung durch Technik” and sustainability, and is the banner under which the concrete sustainability activities are bundled. ② 38

**Bentley:** The “Bentley Environmental Factory” program has a five-year plan to reduce the environmental footprint of each vehicle by 25% by 2018. ② 39

**Lamborghini:** The Environmental Strategy aims to make the brand’s only location in Sant’Agata Bolognese (Italy) climate-neutral by the end of 2015. ② 40

**MAN:** The MAN Climate Strategy sets the target of reducing absolute CO<sub>2</sub> emissions at its production locations by 25% by 2020 compared to a 2008 baseline. Because MAN joined the Volkswagen Group in 2012, its Climate Strategy, adopted in 2011, differs from the Volkswagen Group’s Environmental and Sustainability Strategy, which has a target date of 2018. ② 41

**Porsche:** Porsche’s environmental efforts center around efficiency, including the continuous improvement of environmental and energy management systems at its locations, as well as a commitment to making each new generation of vehicles around 20% more efficient. ② 42

**Scania:** At Scania, the concept for reducing energy consumption and CO<sub>2</sub> emissions is called “Ecolution by Scania”. ② 43

**SEAT:** “ECOMOTIVE” is the name of SEAT’s comprehensive environmental program. ECOMOTIVE FACTORY is an umbrella term for all environmental measures associated with manufacturing processes. Among other things, the program aims to become a pioneering force for environmental protection in vehicle manufacturing by 2018, in line with the corporate objectives. ② 44

**ŠKODA:** The brand combines its environmental activities under the strategy umbrella “GreenFuture”. Its three pillars – GreenProduct, GreenFactory and GreenRetail – center on the sustainable manufacturing and marketing of increasingly eco-friendly cars. ② 45

## » REBOUND

**REBOUND EFFECT****ARE THE BENEFITS OF GREATER EFFICIENCY BEING EATEN UP BY GROWTH?**

Cars are becoming increasingly fuel-efficient. Producing them is becoming more energy-efficient. As a rule, however, this progress doesn't lead to an absolute drop in consumption if the companies concerned and their markets are simultaneously growing. The benefits of greater efficiency, so the argument runs, are entirely or at least partially eaten up. So how can a growth strategy be compatible with responsible management?

Volkswagen is growing fast – unit sales are up 40 percent over 2010, sales revenue has moved ahead 60 percent, while the workforce has expanded from under 400,000 to almost 600,000 employees. Over the same period we have managed to cut CO<sub>2</sub> emissions per vehicle built by 23 percent, while in absolute terms they have increased by roughly 6 percent.

A glance at the use phase shows that, thanks to innovative engineering, our vehicles are becoming increasingly efficient, witness the drop in our EU corporate average fleet emissions to around 126 g CO<sub>2</sub>/km. Making each new model significantly more fuel-efficient than its predecessor is one of our corporate goals. Apart from which we also encourage our customers to adopt as economical a style of driving as possible – and offer free courses to help them do so, not least in conjunction with NABU.

Volkswagen's strategy is not about growth at all costs. It's about sustainable growth. Restricting corporate growth is alien to any competitive system. In fact it's inherent to competition to conquer new markets by offering superior solutions, by offering innovations. We leverage innovations to make not



**Wolfram Thomas,**  
Group Chief Officer for the Environment,  
Energy and New Business Areas

only our products but also our production processes even more efficient.

Volkswagen aims to develop and sell the world's most efficient cars. In this we square up to the global competition. As economic history has shown many times over, there are no innovations without growth and competition. Dispensing with growth is irreconcilable with a responsible corporate strategy that targets a balance between ecological, economic and social sustainability.

**GROUP-WIDE PROGRAMS**

The high pressure to innovate and the growing demands placed on the automotive industry by CO<sub>2</sub> legislation necessitate high levels of expenditure on research and development. In 2014, the Volkswagen Group invested €11.5 billion in research and development. This expenditure is set to increase over the next few years: between 2015 and 2019, the Volkswagen Group Automotive Division is planning to invest around €85.6 billion in new models, innovative technologies and its global presence. Around two-thirds of all investments are dedicated to more efficient vehicles, alternative powertrains and more environmentally compatible production. The investment program has earmarked €21.9 billion for development work alone. The total investment sum of €85.6 billion does not include our joint ventures in China, which will be investing a further €22.0 billion in new factories and products between 2015 and 2019, financed from their own funds.

**Climate Protection Strategy**

Climate protection is at the heart of the Group's environmental management philosophy, spanning every stage of the value creation process. We report regularly on our climate protection strategy to the CDP (formerly known as the Carbon Disclosure Project), a consortium of institutional investors. In 2014, the Volkswagen Group was again awarded 99 out of a possible 100 points for its transparency, and a top grade of A for its performance (see page 49), as well as being listed in both Leadership Indices. Absolute CO<sub>2</sub> emissions from our in-house energy generation at production locations (Scope 1) and from purchased energy (Scope 2) increased slightly in recent years, whilst specific emissions (in kg per vehicle) have fallen. This can be explained by the increase in production volume, coupled with an increase in the volume of purchased energy (see Indicators). One of the Group's key environmental targets is to reduce specific energy consumption per vehicle during production by 25% by 2018 (compared with the



Volkswagen delivered the first XL1\* in May 2014. With test cycle fuel consumption of 0.9 l/100 km, this is the world's first "1-liter" car.

base year 2010), and to cut specific CO<sub>2</sub> emissions by the same amount.

For our German locations, which currently account for around 45% of our Group-wide CO<sub>2</sub> emissions from production, the Volkswagen Group has set itself an even more ambitious target: CO<sub>2</sub> emissions from energy supplies in Germany are to be reduced by 40% by 2020 compared with 2010. We aim to achieve this by improving energy efficiency, partially replacing coal with gas in our in-house energy production, and purchasing electricity from renewable sources. We are urgently awaiting a clear political framework for the energy industry in order to make further investments in power station conversion measures.

#### ➤ GREENHOUSE GAS INVENTORY TOOL (SCOPE 3)

Alongside production-related energy consumption, the fuel consumption of our fleet is another key consideration. Since 2012, the Volkswagen Group has published a so-called Scope 3 Inventory for CO<sub>2</sub> Emissions (see page 128), corresponding to the Scope 3 Standard of the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI). The Inventory analyzes CO<sub>2</sub> emissions generated outside the factory gates, for example in the supply chain, and in the use and disposal of vehicles. Other examples of emission sources covered by the Scope 3 Inventory include logistics processes and business trips. The wider scope

of this analysis poses a number of major challenges for companies in terms of both data collation and interpretation. The Volkswagen Group is one of the forerunners here and collates data in 12 out of the 15 Scope 3 categories.

Our data indicates that the emission category "Purchased goods and services" accounts for around 17% of the total Scope 3 Inventory, and the "Use phase" 75%. The data from both these categories is validated by external auditors. The Inventory reveals that our most effective lever for cutting CO<sub>2</sub> emissions is the development of more fuel-efficient vehicles.

#### Powertrain and Fuel Strategy

Continuous fuel efficiency improvements for our gasoline and diesel engines, a range of CNG vehicles and further electrification of the model portfolio – these are the cornerstones of the Volkswagen Group's Powertrain and Fuel Strategy (for further details see Product Development, pages 94–99). According to the Center of Automotive Management, the Volkswagen Group is now the world's leading powertrain innovator (see page 37). Our Powertrain and Fuel Strategy also aims to replace fossil fuels with renewables, as part of our long-term goal of achieving carbon-neutral mobility.

Today, most of our customers across the world still opt for conventionally powered vehicles. So for a long time to come, electrified

powertrains and conventional internal combustion engines will continue to coexist as parallel technologies. However, this technological diversity will be accompanied by a steady increase in the use of carbon-neutral fuels, for example in the form of renewable electricity for electric vehicles, or next-generation biofuels – most notably biomethane from organic waste, and synthetic natural gas.

## › The Volkswagen Group is the world's leading powertrain innovator.

“Power-to-gas” storage of renewable electricity in the form of synthetic hydrocarbons is a sustainable energy technology whose importance extends far beyond the automotive industry. The Audi e-gas plant in Werlte (Germany) – the world’s first industrial power-to-gas plant – was connected to the grid in 2013. This plant produces methane from a chemical process involving wind power, CO<sub>2</sub> and water. As far as possible, the electricity is used at times when the grid has surplus supply, and when wind turbines, for example, would normally have to be shut down. This surplus green power is first used to split water molecules into oxygen and hydrogen. At some point in the future it may be possible to use this hydrogen in fuel cell vehicles. However, the large-scale hydrogen storage, distribution and refueling infrastructure this will require has yet to be developed. At the present time therefore, the second step in the process is methanation, whereby the hydrogen reacts with CO<sub>2</sub> to produce synthetic methane. The resulting Audi “e-gas” meets the same quality standards as fossil-based natural gas. The Werlte plant has been feeding this gas to the German grid since autumn 2013. E-gas can be purchased at CNG filling stations throughout Germany, using a special Audi e-gas fuel card. Werlte is currently expected to be able to produce enough e-gas to power up to 1,500 Audi A3 Sportback g-tron® models for 15,000 km of carbon-neutral driving per year (see page 109).

The Audi e-gas project has implications that go far beyond the automotive industry. E-gas has potential not only as a carbon-neutral, renewable fuel, but also as a means of storing large amounts of renewable wind or solar power efficiently and independently of where the power is actually generated – by converting it into methane gas and storing it in the natural gas grid. Power-to-gas technology has now also been embraced by a number of major German energy providers, who are following Audi’s lead with initial projects of their own.

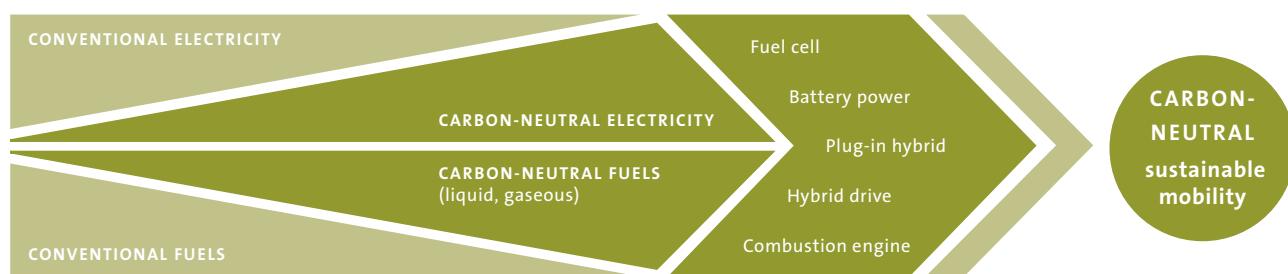
### Our Commitment to Emissions Targets

In the context of our commitment to the World Business Council for Sustainable Development (WBCSD) we are supporting the “WBCSD Road to Paris”, which is aimed at ensuring successful discussions on the realization of the “2 degrees” target at the United Nations COP 21 climate conference in Paris at the end of 2015. Back in March 2013, the Volkswagen Group set a benchmark when it became the first and only automaker to commit to the ambitious goal of reducing its European new-car fleet-average emissions to 95 g CO<sub>2</sub>/km by 2020.

Emissions of 95 g CO<sub>2</sub>/km correspond to average fuel consumption across all vehicle classes and segments of less than 4 l/100 km (gasoline: 4.1 l, diesel: 3.6 l). Greenpeace Germany hailed Volkswagen’s decision as an “important symbol of commitment to environmental protection and society, and to the mass production of climate-friendly technical solutions.” Today, 57 models from the Group’s portfolio already emit meet the target of 95 g CO<sub>2</sub>/km.

For 2015, the Volkswagen Group’s individual target for its average new-car emissions under EU law is 132 g CO<sub>2</sub>/km. In fact, we were able to comply with this target ahead of schedule. This was confirmed in figures published by the European Commission in the Official Journal of the European Union, L315, in November 2014, which showed that the average new-car CO<sub>2</sub> emissions of the Volkswagen Group in 2013 already stood at 129 g CO<sub>2</sub>/km (at the time of going to press, the latest data indicates that the figure for 2014 was 126 g).

## › THE ROAD TO CARBON-NEUTRAL MOBILITY





With the TGX Hybrid, at the IAA Commercial Vehicles show in September 2014 MAN showcased a concept hybrid model for long-distance haulage.



The Audi A3 g-tron\* presents a level of fuel efficiency previously confined to sub-compact models.

For light commercial vehicles (vans), the EU has set CO<sub>2</sub> emissions targets of 175 g/km for 2017 and 147 g/km for 2020. Here too we are making excellent headway: in 2014, the average new-vehicle CO<sub>2</sub> emissions of the Volkswagen Commercial Vehicles brand's models stood at 171 g/km.

In the meantime, other major markets too have adopted caps on new-car CO<sub>2</sub> emissions. In China, Volkswagen Passenger Cars models comply with the corporate average fuel consumption limits in force in that market since 2012. And measures are in the pipeline for further ambitious improvements, including improvements to the efficiency of our internal combustion engines and the introduction of alternative drive technologies. For 2015, China has set a new-car fleet-average fuel consumption target of 6.9 l/100 km. In the USA and Canada, a cap of 103 g CO<sub>2</sub>/km will apply from 2025.

**› By using resources efficiently, we can reduce not only environmental impacts but also manufacturing costs.**

#### NEDC TEST CYCLE COMES IN FOR CRITICISM

The New European Driving Cycle (NEDC), the procedure used by the EU to measure passenger car fuel consumption, has repeatedly come in for criticism from environmental organizations. The critics claim that the CO<sub>2</sub> emissions measured under the NEDC's 20-minute laboratory-based test cycle are much lower than the figures generated under realistic modern driving conditions. Like all other

vehicle manufacturers, however, we must comply with this legally mandated test cycle. NEDC figures are the only figures we are allowed to quote. Now, the European Union is considering the introduction of a new test cycle, the "World Light Vehicle Test Procedure" (WLTP), which is designed to more closely represent modern driving conditions. Like the NEDC, the WLTP aims to provide an objective measurement standard for comparing technical products. The run-up to the WLTP's scheduled introduction should be used to define a transparent and sustainably robust conversion procedure, because the existing EU target of 95 g CO<sub>2</sub>/km for 2020 was also defined on the basis of the values generated in the NEDC test cycle.

#### Resource Efficiency

Resource efficiency is a topic of exceptional strategic importance for Volkswagen. Across their life cycle, we must ensure that our products' consumption of natural resources is kept to a minimum. By using resources efficiently, we can reduce not only environmental impacts but also manufacturing costs. In line with the recommendations of the EU's European Resource Efficiency Platform, we focus particularly on our consumption of raw materials, energy, water, air and land.

Improving resource efficiency at Volkswagen is a matter for the entire Group. All business areas make their own specific contribution to this challenge, and use their own specific indicators to measure and manage their performance. Systematic planning and implementation is coordinated by the Corporate Resource Efficiency Steering Group, which comprises members from a

variety of business areas and brands. Currently the Steering Group is developing a methodology for measuring resource efficiency based on a defined set of indicators. For the general public, the term “resource efficiency” tends to be interpreted very broadly, covering many different environmental aspects, and meaning different things to different people. The challenge therefore is to develop a set of indicators that on the one hand are meaningful to the public, while at the same time providing a fit-for-purpose controlling tool for in-house decision-makers. In parallel, a pool of best practices on resource efficiency is being developed, which will be made available to other business areas and brands. ☐ 46

## › Environmental considerations from the very earliest stages of the product development process.

### PRODUCT PLANNING AND DEVELOPMENT

Our product planning and development processes are geared to developing vehicles that offer best possible fuel economy and resource efficiency. Our corporate goals demand that all new vehicles and technologies improve on the environmental performance of their predecessors, across the entire life cycle. Every new vehicle generation must be between 10 and 15% more efficient than its predecessor. To achieve this, we take environmental considerations into account from the very earliest stages of the product development process. The Group Environmental Principles Product have defined the key goals of the continuous improvement process as climate, resources and health.

For products of the Volkswagen brand, the development process is guided by the “Think Blue. Engineering.” Environmental Goals of the Technical Development department. These goals were revised in October 2014, and now include a commitment to “best-in-class fuel consumption in the driving cycle and over the vehicle’s service life”. To protect the health of vehicle occupants and road users, the brand has also once again adopted more rigorous requirements on interior emissions and noise levels. The Technical Development departments of the other Group brands have adopted similar environmental objectives. ☐ 47

### › EU NEW VEHICLE REGISTRATIONS 2014

Emissions category	Proportion of total deliveries of Volkswagen Passenger Cars and Commercial Vehicles, Audi, SEAT and ŠKODA
≤ 95 g CO <sub>2</sub> /km	3.42%
≤ 100 g CO <sub>2</sub> /km	10.42%
≤ 120 g CO <sub>2</sub> /km	55.15%
≤ 130 g CO <sub>2</sub> /km	67.61%

### › “THINK BLUE. ENGINEERING.” AWARDS

In 2014, the Volkswagen brand presented its internal “Think Blue. Engineering.” awards for the second year in a row. Organized by Volkswagen Research and Development, the awards – in the categories “Product” and “Research and Development” – were presented to five environmentally outstanding projects in the fields of climate, resources and health. An award was also presented for personal dedication. Like the Internal Environmental Award, which they replace, the purpose of the “Think Blue. Engineering.” awards – and the “Think Blue. Factory.” awards on the production side – is to reward employees for outstanding environmental commitment.

### Life Cycle Engineering

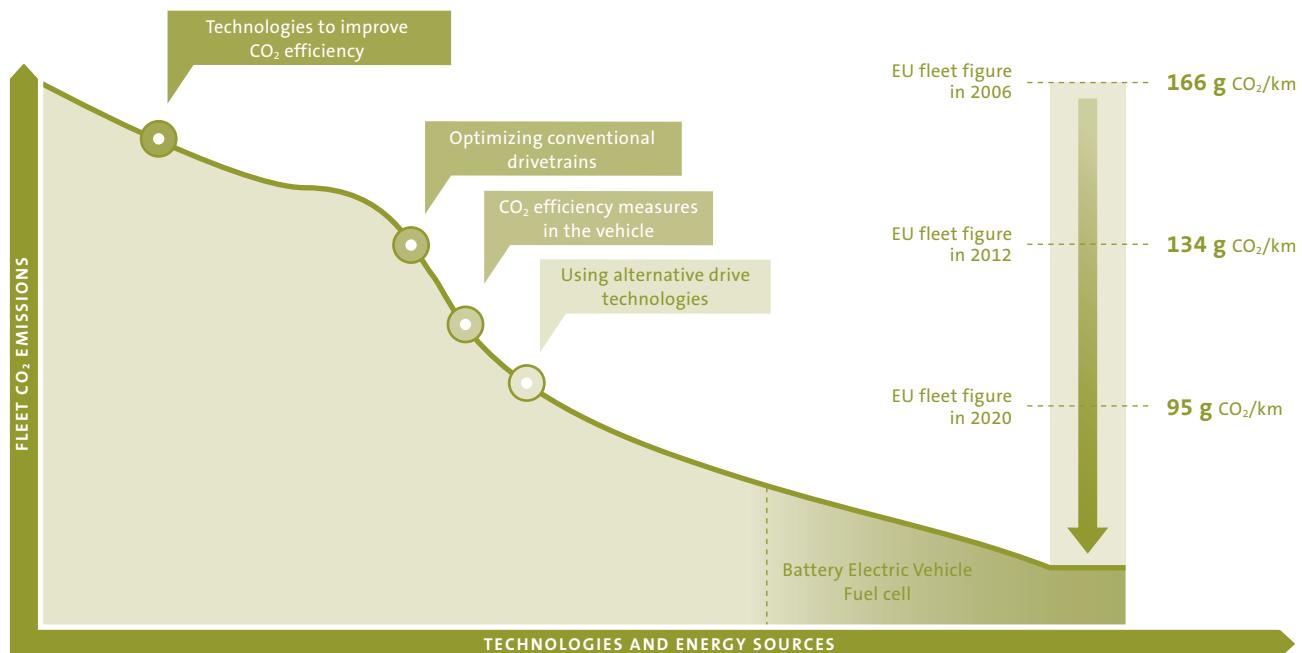
“Life Cycle Engineering” aims to improve the environmental footprint of a vehicle from cradle to grave. This process begins with a Life Cycle Assessment (LCA), in which the environmental impacts of the vehicle under development are assessed across the full life cycle – from resource extraction, through production and operation to eventual recycling. The LCA analysis makes it possible to identify those areas where improvements will have the biggest effect. These are the areas we then prioritize in our innovation activities. In 2013 the Corporate Steering Group “Life Cycle Engineering” was set up, comprising experts from the brands. Their goal is to harmonize the guidelines and methodology for Life Cycle Assessments across the entire Group and to support best practice-sharing between successful Life Cycle Engineering projects.

### Life Cycle Assessments and Environmental Commendations

In its Environmental Commendations, the Volkswagen brand sums up the improvements in life cycle environmental performance between new and previous models. Volkswagen Passenger Cars and Volkswagen Commercial Vehicles have been publishing Environmental Commendations for new models and technologies ever since 2007. These detailed analyses are certified by independent auditor TÜV NORD to confirm that they are based on reliable data and were drawn up in accordance with the requirements of the LCA standards ISO 14040 and 14044. An Environmental Commendation has also been published for the e-Golf\*, which went on sale in 2014. It testifies to the excellent environmental footprint of the e-Golf\*, even when powered by conventional electricity. When charged with green electricity, the e-Golf’s life cycle CO<sub>2</sub> emissions are reduced by a further 50%.

Audi has been producing Life Cycle Assessments for new model series since 2010. LCAs have been performed – and validated by TÜV NORD – for the Audi A3\*, the Audi A6\*, the Audi TT\* and the Audi e-gas project (see page 92). Most recently, a Life Cycle Assessment was published in August 2014 for the new Audi TT

### ► REDUCTION IN VEHICLE EMISSIONS



Coupé\*. It shows that the model-year-2015 Audi TT Coupé\* generates total life cycle CO<sub>2</sub> emissions of 44.5 t – an 11% improvement over its predecessor. This good environmental footprint is partly down to lightweight engineering based on intelligent multi-material design, which shaves 50 kg off the unladen weight of the previous model. This means reduced fuel consumption during the use phase, which not only reduces driving emissions but also means that less fuel needs to be produced in the first place, which again cuts CO<sub>2</sub> emissions. ② 48

#### New Models from the Brands

The Volkswagen Group's commitment to offering a broad array of technologies differentiates the company from many of its competitors. Alongside further improved gasoline (TSI) and diesel (TDI) engines, the Group's technology portfolio and development activities also span natural-gas vehicles, all-electric vehicles and hybrid vehicles featuring battery and fuel-cell drive. This broad-based approach dovetails with the Group's goal of developing attractive and affordable vehicles to cater to the widest possible spectrum of requirements. Our vehicles must use scarce resources as efficiently as possible, while at the same time offering highest standards of comfort and convenience.

Volkswagen's aim is to explore and exploit the potential of all types of powertrain. Our Modular Transverse Matrix (MQB), which we

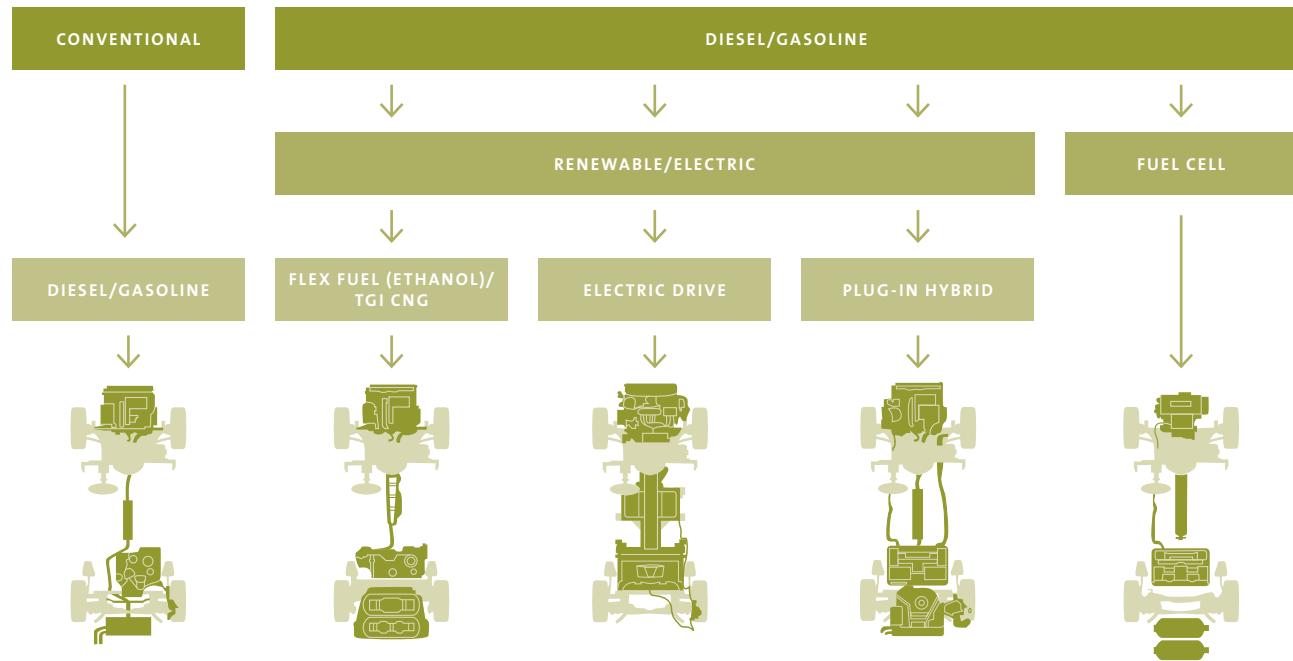
introduced in 2012, marks a revolution in automaking in two ways: firstly in terms of efficiency and secondly in terms of our ability to integrate technologies of the future. What our engineers have done, basically, is to create a system that allows any volume-production model to be equipped with any type of powertrain, with no additional engineering effort. In this way the MQB will allow us to electrify more than 40 different models over the coming years.

#### Efficiency Models (TSI and TDI) 2014

**Volkswagen:** In the Polo TSI BlueMotion\* – the first ever Polo BlueMotion model to be fitted with a TSI engine – in 2014 engine management improvements reduced fuel consumption by a further 0.2 liters to 4.1 l/100 km, with CO<sub>2</sub> emissions of just 94 g/km. As a result, the TSI BlueMotion\* is also the first ever gasoline-engined Polo to receive a class A label for energy efficiency and to achieve best-in-class ratings for fuel consumption and CO<sub>2</sub> emissions. Like all Polo models, it also complies with the strict Euro 6 emissions standards.

Meanwhile the new Polo TDI BlueMotion\*, like its predecessors, is setting a benchmark in the five-seater diesel market. Its newly developed three-cylinder TDI engine returns fuel consumption of just 3.1 l/100 km (corresponding to CO<sub>2</sub> emissions of 82 g/km). This is an improvement of 0.2 l/100 km over the already highly

### › DRIVE DIVERSITY IN THE MQB



efficient predecessor model, and gives the Polo TDI BlueMotion<sup>•</sup> a maximum range of 1,400 km – enough to drive all the way from Flensburg in Germany to Venice in Italy on one tank of fuel. This benchmark fuel economy was achieved with the aid of underbody modifications, a polished radiator grille insert and aerodynamically perfected front and rear spoilers. These drag-reduction measures are complemented by low-rolling-resistance tires.

**Audi:** In June 2014, the German Bundestag added 66 extra-fuel-efficient 140-kW Audi A6 2.0 TDI ultra<sup>•</sup> limousines to its fleet. With CO<sub>2</sub> emissions of just 114 g/km, this model is one of the most fuel-efficient premium automobiles in its segment.

**SEAT:** Active cylinder management in the new Leon<sup>•</sup> and Ibiza<sup>•</sup> models combines fuel economy with performance. In the low to medium rpm range, two of the engine's four cylinders are shut down to save fuel. At higher rpm they are reactivated, to harness full power.

#### Natural Gas Models in 2014

**Volkswagen:** The newly released Golf Estate TGI BlueMotion<sup>•</sup> is powered by a natural gas engine that combines fuel efficiency with dynamic performance. On models with a dual-clutch gearbox, this four-cylinder bi-fuel natural gas/gasoline unit returns fuel consumption of just 3.5 kg CNG/100 km in natural gas mode, with CO<sub>2</sub> emissions of just 95 g/km. The CNG-only range is approximately

430 km, while the standard-fitted gasoline tank extends the total range to almost 1,400 km.

**Audi:** The A3 Sportback g-tron<sup>•</sup>, the first volume-production CNG model from Audi, sets a benchmark in carbon-neutral long-range mobility. When powered by Audi e-gas (see page 109), which customers can purchase using the optional Audi e-gas fuel card, the A3 Sportback g-tron's<sup>•</sup> tailpipe CO<sub>2</sub> emissions are fully offset by the amount of CO<sub>2</sub> absorbed when manufacturing this fuel in the first place. On fuel efficiency too this model breaks new ground, with test cycle CNG consumption of between 3.2 and 3.3 kg/100 km (depending on transmission), which corresponds to CO<sub>2</sub> emissions of between 88 and 92 g/km – the sort of figures which in the past were confined to sub-compact models.

**SEAT:** Since September 2014, SEAT has been offering a natural gas version of its Leon ST<sup>•</sup> model (the 1.4 TGI). With fuel consumption in CNG mode of 3.5 kg/100 km and CO<sub>2</sub> emissions of 96 g/km, this is one of the most eco-friendly and fuel-efficient combustion-engined vehicles on the market. The SEAT portfolio also includes the Mii Ecofuel<sup>•</sup> and the CNG-powered Leon TGI<sup>•</sup>.

#### Plug-in Hybrid Models in 2014

**Volkswagen:** In 2014, Volkswagen launched the Golf GTE<sup>•</sup>, its first volume-production plug-in hybrid model. Combining a 75-kW electric motor with a 110-kW TSI internal combustion

engine, the Golf GTE<sup>\*</sup> returns average NEDC fuel consumption of just 1.5 l of gasoline and 11.4 kWh of electricity per 100 km, which corresponds to CO<sub>2</sub> emissions of just 35 g/km. The GTE has a maximum all-electric driving range of 50 km and a total range of 940 km. Elsewhere in the portfolio, May 2014 saw the first deliveries of the Volkswagen XL1. This limited-production model built in Osnabrück (Germany) is a technological game-changer. With test cycle fuel consumption of 0.9 l/100 km, the XL1<sup>\*</sup> is the first “one-liter” car (capable of 100 km on one liter of fuel) in the world. Its plug-in hybrid system gives this two-seater an electric-only range (with zero local emissions) of up to 50 km. In 2014, the XL1<sup>\*</sup> received the “Design of the Year” award – in the category “Transport Design” – from the Design Museum in London.

The Paris Motor Show in September 2014 saw the world premiere of the Passat GTE<sup>\*</sup>, the first plug-in hybrid Volkswagen available in both sedan and estate versions. The Passat GTE<sup>\*</sup> has a zero-emission all-electric range of 50 km, and a total range on one tank of fuel and a fully charged battery of more than 1,000 km. NEDC fuel consumption is less than 2.0 l/100 km (less than 45 g CO<sub>2</sub>/km), while top speed is 220 km/h in hybrid mode, and 130 km/h in all-electric “e-mode”. The Passat GTE<sup>\*</sup> will arrive on the market in the second half of 2015.

**Audi:** The second half of 2014 saw the European launch of the A3 Sportback e-tron<sup>\*</sup>, Audi's first plug-in hybrid model. Fuel consumption as per the NEDC test cycle for plug-in hybrid vehicles is 1.5 l/100 km, with CO<sub>2</sub> emissions of 35 g/km. This model has a maximum all-electric range of 50 km, and a combined range of more than 900 km.

**Porsche:** In 2014, Porsche presented the Cayenne S E-Hybrid<sup>\*</sup>, the first plug-in hybrid premium SUV. The combined output of the two drive systems is 416 hp (306 kW) while combined-cycle fuel consumption is 3.4 l/100 km, with CO<sub>2</sub> emissions of just 79 g/km.

The Cayenne S E-Hybrid<sup>\*</sup> has a maximum all-electric range of between 18 and 36 km, depending on driving style and topography.

#### ► ELECTRIC MOBILITY INITIATIVE IN CHINA

With total investment of more than €18 billion in new vehicles and technologies, new factory capacity and new, eco-friendly models, the Volkswagen Group has launched the biggest electric mobility initiative in Chinese automotive history. In 2015, the Group's existing fleet of highly efficient and innovative models, which already includes the Porsche Panamera S E-Hybrid<sup>\*</sup>, will be joined by the Audi A3 e-tron and the Golf GTE. From 2016, two models developed specifically for the Chinese market will follow: the Audi A6 and a new mid-size sedan from the Volkswagen brand. Both these plug-in hybrid models are being co-developed with joint venture partners FAW Volkswagen and Shanghai Volkswagen, and will be built in China. The modular platform, which is being implemented at the Chinese factories too, will in future allow the Group to electrify every model in the range, right across the spectrum from compact cars to large limousines, and from all-electric to plug-in hybrid models.

#### Electric Vehicles in 2014

**Volkswagen:** In 2014, the Volkswagen e-Golf<sup>\*</sup> went on sale in Europe, Asia and North America. The e-Golf<sup>\*</sup> delivers average energy consumption of 12.7 kWh/100 km, and a driving range of up to 190 km on a single battery charge. When powered by green electricity (for example “BluePower”, see page 109), the e-Golf is carbon-neutral.

A TÜV NORD-certified Environmental Commendation has already been issued for the e-Golf<sup>\*</sup>. Three intuitively selectable driving modes (“Normal”, “Eco” and “Eco+”) and four equally



The SEAT Leon ST<sup>\*</sup> is one of the most eco-friendly and fuel-efficient combustion-engined vehicles on the market.



The Cayenne S E-Hybrid<sup>\*</sup> is the first plug-in hybrid in the premium SUV segment.



The fuel cell drive in the Golf Estate HyMotion concept vehicle runs on hydrogen and oxygen.

easily engageable recuperation levels help drivers achieve maximum driving range per charge. Other functions include the “Volkswagen Car-Net-e-Remote” app, which allows a smartphone to be used to remotely launch battery charging, activate cabin pre-heating or cooling whenever the vehicle is on charge, or access vehicle data.

In spring 2014, the e-Golf took part in the world's leading electric vehicle rally “World Advanced Vehicle Expedition” (WAVE), which this time took the drivers from Stuttgart to Lucerne. Over the rally stages, some of which were over 200 km in length, the e-Golf took first place in the main “Popular Wave” category. In the Silvretta electric car rally in July 2014, the e-Golf demonstrated its everyday versatility in particularly challenging terrain. Here too, it was crowned overall event winner. Finally, in October 2014, the e-Golf won the “eCarTec Award 2014”, the Bavarian State Award for Electric and Hybrid Mobility.

### **› The modular transverse matrix enables us to integrate all the relevant drive systems – from conventional to fuel cell.**

With the e-Golf Volkswagen has completed the circle, becoming the first carmaker in the world to offer all currently relevant drive systems within one model series. For an automaker, this represents a very high level of manufacturing flexibility, and it was the modular transverse matrix that made it possible. Moreover, in the wake of models like the all-electric e-Golf and the plug-in hybrid Golf GTE\*, our strategy will also allow us at a future date, and subject to market demand, to integrate a further technology – fuel cells – into an attractively priced production vehicle with great everyday driveability.

### **Fuel-Cell Models**

As a further important step in our agenda for zero-carbon mobility, the Volkswagen brand is also developing the Golf Estate HyMotion concept vehicle. The press and public got their first chance to see – and drive – this vehicle in November 2014, at the Los Angeles Auto Show. The Golf Estate HyMotion is fueled by hydrogen ( $H_2$ ) and oxygen. A reaction takes place in the fuel cell between the hydrogen and oxygen, which combine to produce water. A byproduct of this reaction is electricity, which is used to power a zero-emission electric motor. The hydrogen is stored safely under the vehicle in four carbon-fiber tanks. The Golf Estate HyMotion has a maximum range of 500 km. Refueling takes just three minutes.

With this concept model, the Volkswagen brand is demonstrating for the first time that hydrogen fuel cells are yet another drive technology that could be implemented using the MQB platform, as soon as research and development work is completed and a solution can be offered at a price acceptable to new-car buyers. Before any future market rollout however, a comprehensive hydrogen production and refueling infrastructure first needs to be put in place. At the same time, hydrogen propulsion only makes environmental sense if the primary energy used to produce this fuel is renewable.

### **Commercial Vehicles in 2014**

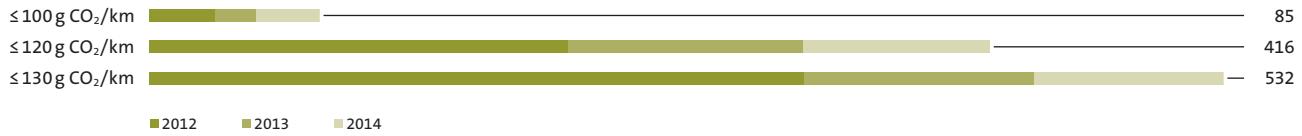
**Volkswagen Commercial Vehicles:** In October 2014, Leibniz University Hanover launched a twelve-month field trial with six electrically powered Volkswagen Caddy small urban delivery vans. Volkswagen expects that data from this trial, on aspects such as daily mileage, energy consumption and battery life and capacity, will provide valuable input for its ongoing development work on electric commercial vehicles. The e-Caddy has a maximum range of 136 km – more than sufficient to cover the average daily runs of an urban delivery van. At the end of 2014, a total of 40 e-Caddies from Volkswagen Commercial Vehicles were involved in field trials.

**MAN:** MAN is the European market leader in natural gas-powered buses. In 2014, the MAN Lion's City GL CNG articulated bus was named “Bus of the Year 2015” in the Bus Euro Test. With its CNG-powered Euro 6 engine, this model offers an extremely low-pollutant, climate-friendly answer to the challenges of urban transport. When operated on biogas, its carbon footprint is virtually zero.

Meanwhile, as part of MAN's drive technology program, hybrid drives are set to be rolled out in the near future across all commercial vehicle applications. However, different bus and truck applications – urban operation, long-distance operation or special-purpose vehicles – present very different requirements, which demand different hybrid concepts to match. At the 2014 IAA Commercial Vehicles show in September, MAN presented a concept vehicle with parallel diesel/electric hybrid drive system for long-haul applications. The diesel engine provides the main source of drive power, but the hybrid drive system also allows braking

### CO<sub>2</sub> EMISSIONS – STATUS QUO

Number of vehicles



### MARKET PENETRATION OF EFFICIENCY MODELS OF THE VOLKSWAGEN GROUP IN 2014

Brand	Model	Unit sales of eco-/efficiency models 2014, EU-28 <sup>1</sup>	Total unit sales in 2014, EU-28 <sup>1</sup>
<b>Volkswagen Passenger Cars</b>	VWP BlueMotion	23,361	
	+ BlueMotion Technology	902,419	
	Blue TDI models	6,479	
	Ecofuel models (CNG)	22,336	
	MultiFuel models (E85)	1,893	
	BiFuel models (LPG)	–	
	BEV	3,902	
	Hybrid	1,821	
	<b>Total eco-/efficiency models</b>	<b>962,211</b>	<b>1,479,944</b>
<b>Volkswagen Commercial Vehicles</b>	VWN BlueMotion	2,364	
	+ BlueMotion Technology	76,846	
	CNG	3,507	
	LPG	359	
	<b>Total eco-/efficiency models</b>	<b>83,076</b>	<b>293,079</b>
<b>Audi</b>	e-models	9,647	
	ultra-models	67,401	
	Clean Diesel (EU6)	159,600	
	including ultra	19,183	
	FlexFuel (E85)	304	
	CNG models	5,926	
	Hybrid	1,765	
	Start-Stop	687,343	
	including e-, ultra-, CD, E85, CNG	223,695	
	<b>Total eco-/efficiency models</b>	<b>689,108</b>	<b>698,240</b>
<b>ŠKODA</b>	ŠKODA Greenline	20,221	
	+ Green tec packages	40,551	
	CNG models	4,449	
	<b>Total eco-/efficiency models</b>	<b>65,221</b>	<b>551,906</b>
<b>SEAT</b>	SEAT e-ecomotive	17,141	
	+ ecomotive packages	166,843	
	LPG models	148	
	CNG models	3,926	
	<b>Total eco-/efficiency models</b>	<b>188,058</b>	<b>317,953</b>
<b>Volkswagen Group</b>	<b>Sum total</b>		<b>3,341,122</b>

<sup>1</sup> Austria, Baltic States, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom, W. Europe (rest).

energy to be recuperated, stored and reused. Since long-haul transport accounts for the lion's share of road transportation mileage, this is where use of hybrid technology stands to bring the biggest benefits in terms of CO<sub>2</sub> emissions.

**Scania:** The Scania G 410\* Euro 6 was presented with a "Green Truck 2014" award by trade magazines VerkehrsRundschau and TRUCKER, which named it the greenest truck in its class. With average fuel consumption of 23.3 l/100 km and CO<sub>2</sub> emissions of 734 g/km, Scania's semitrailer tractor came first by a wide margin in these magazines' environmental rankings.

#### › CO<sub>2</sub> LIMITS FOR TRUCKS AND BUSES

Having already implemented legislation to reduce the CO<sub>2</sub> emissions of passenger cars and light commercial vehicles, in May 2014 the European Commission presented its strategy for reducing the CO<sub>2</sub> emissions of trucks and buses. The aim is to evaluate the carbon emissions of the entire EU heavy-duty vehicle fleet as realistically as possible, for defined vehicle categories and driving cycles. Before the EU takes any final decision however, an impact assessment first needs to be carried out to identify the most cost-effective solution. In view of the huge diversity of commercial vehicle versions, and the typical multi-stage production processes, the one-size-fits-all approach to emissions limits that has been used for cars and vans is not appropriate. Along with our competitors, we advocate a certification approach that takes into account the complete vehicle – including different trailers and bodies. This would make tackling CO<sub>2</sub> emissions the joint responsibility of manufacturers, haulage companies and the state. The state would be responsible for infrastructure development and the haulage companies for intelligent management of the logistics processes. Our own responsibilities, as manufacturers, would include investing in the development of improved emissions control systems and new engines.



The Scania G 410\* Euro 6 semitrailer tractor is the greenest truck in its class.

## PRODUCTION AND LOGISTICS

By 2018, the Volkswagen Group is aiming to have cut its specific energy and water consumption, CO<sub>2</sub> emissions, solvent emissions (VOC) and volume of waste per vehicle manufactured by 25%, compared with the 2010 baseline. This goal applies across all the Group's production locations, and builds on the general production process requirements defined in the Group Environmental Principles.

In terms of environmental impact reduction per unit of production, by the end of 2014 we were already more than half-way to our goal for 2018, having cut production-related environmental impacts by 19.3% (2013: 12.5%) compared with 2010 levels. This breaks down as follows (2013 figures in brackets):

> Specific energy consumption:	-18.5% (-12.5%)
> Specific CO <sub>2</sub> emissions:	-23.2% (-19.5%)
> Specific water consumption:	-6.9% (-4.6%)
> Specific VOC emissions:	-26.1% (-12.3%)
> Specific waste for disposal:	-21.7% (-13.8%)

#### Green Production

To meet the Group targets for 2018, each brand has developed its own sustainable manufacturing program (see page 89). Volkswagen's program, which is known as "Think Blue. Factory.", was launched in 2012. [④ 49](#)

Worldwide, 27 production locations belonging to the Volkswagen brand are taking part in "Think Blue. Factory.". Between the program's launch and the end of 2014, more than 2,700 out of a total of more than 5,000 planned projects had already been successfully implemented. Bearing in mind that "Think Blue. Factory." can only succeed with the support and engagement of the employees, since 2013 specially trained environmental specialists have been acting as "ambassadors" at all participating locations. Worldwide, more than 1,000 ambassadors are now operating as front-line contacts and multipliers for the employees at these locations. The program has the full support of the Group Works Council, which has already organized its own training on the topic for approximately 250 council members. The program has so far won 30 awards. In 2014 these accolades included a National Energy Globe award from the Energy Globe Foundation (Austria) and the World Environment Center's Gold Medal for International Corporate Achievement in Sustainable Development (USA).

#### › CARBON TRUST STANDARDS

Bentley is the first British carmaker to achieve certification to all three "Carbon Trust" standards. This triple accolade reflected the significant reductions achieved by Bentley in CO<sub>2</sub> emissions, water use and waste output at its headquarters in Crewe (United Kingdom).

## Use of Resources in Production

The body accounts for approximately 40% of total vehicle mass, which is why lightweight body design is an important research and development focus at Volkswagen. Lightweighting techniques include functional integration – which involves integrating several different functions into one component – and use of low-density materials. At the same time however, cost factors and a wide range of environmental considerations must also be taken into account. Consequently, the Volkswagen Group brands always take an integrated approach to lightweight engineering, looking at the whole life cycle of the product, from manufacturing through to recycling. One example here is the question of whether to build bodies from aluminum or steel. Aluminum reduces the weight of the vehicle, which can significantly reduce CO<sub>2</sub> emissions during the use phase. However, production of aluminum is considerably more energy-intensive than production of steel, leading to higher CO<sub>2</sub> emissions at the manufacturing stage. This initial environmental disadvantage is offset only after many miles of driving. Aluminum also has the disadvantage of being considerably more expensive than steel, resulting in a significant increase in vehicle purchase price. This is why small and mid-range car bodies still tend to be made predominantly of steel.

That said, it is perfectly possible to build a lightweight vehicle using steel. Use of high-tensile and ultra-high-tensile steels allows component gauges to be reduced, bringing a reduction in total body weight – with no reduction in crash performance. Another principle of efficient steel-based lightweight design is the use of varying grades of steel – that is to say the right grades of steel are used at the right points in the body to meet local stiffness requirements.

## PLASTIC ALTERNATIVES

In 2014 Audi demonstrated that vehicle springs, too, offer significant scope for weight savings. Audi and an Italian supplier have developed glass fiber-reinforced plastic (GFRP) springs that are 40% lighter than comparable steel springs for vehicles in the upper mid-range segment, weighing just 1.6 kg. A set of four GFRP springs brings a total weight saving of 4.4 kg. And since this saving is partly made up of a reduction in unsprung weight, it also results in improved suspension response and ride comfort. The GFRP springs are also corrosion-proof and the manufacturing process consumes a lot less energy than production of steel springs.

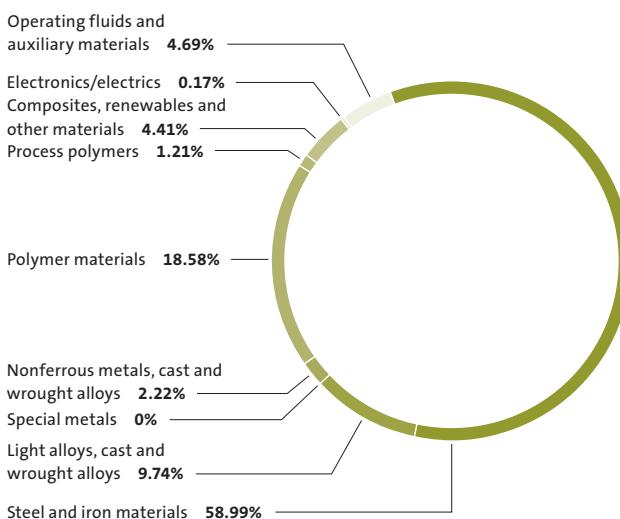
As well as improving the environmental footprint of vehicles in which they are used, recycled and renewable materials can also make good economic sense. New models of the Volkswagen brand already have a high recycled and renewable content. Calculations carried out for five models (Polo 5, Sharan NF, Golf 6, Golf 7, Passat 8) show that such content makes up approximately one-third of their weight. ☐ 50



The bodywork accounts for approximately 40% of total vehicle mass.

Wherever possible, the Group's brands use renewable raw materials. For example natural fibers like flax, cotton, wood, cellulose and hemp are used in floor insulation, boot linings, door and side panel trim and hood insulation. The Golf Sportsvan\*, for example, features an armrest containing kenaf and flax fibers, while paper fibers are used in the cargo floor and roof reinforcement structure, and cotton fibers in the floor insulation. ☐ 51

## MATERIAL COMPOSITION, VW GOLF





Volkswagen Chattanooga Solar Park is the largest solar power plant operated by an automaker in the USA.



Late in 2013, SEAT brought the auto industry's largest roof-mounted photovoltaic plant "SEAT al Sol" on stream in Martorell (Spain).

### **Energy Consumption and CO<sub>2</sub> Emissions**

In the reporting period, specific energy consumption per vehicle produced showed a continuous fall. As production volumes increased, however, total energy consumption rose, although less rapidly than in the previous year (see page 126). We now meet approximately one-third of our global electricity requirements from renewables. Between 2012 and 2020, the Volkswagen Group will invest some €600 million in continued expansion of renewable energies such as wind, hydroelectric power, solar power and biomass. Investments in 2014 reached approximately €23 million. On top of this, we have so far invested some €15 million in fuel conversion measures at our CHP plant in Braunschweig and some €65 million in the combined gas and steam plant in Kassel. By 2014, more than 25 solar photovoltaic systems were up and running at our locations, with a total generating capacity of approximately 60 MW. This is equivalent to the electricity consumption of approximately 20,000 private households. A number of brands have also set their own ambitious targets. Lamborghini for example is looking to make its production processes carbon-neutral by 2015. The 17,000 square-meter photovoltaic system on the roof of the central production shop at the Sant'Agata location is an important milestone en route to this goal.

**› We now meet approximately one-third of our global electricity requirements from renewables.**

Large photovoltaic systems have also been installed at the Emden (Germany), Crewe (United Kingdom), Martorell (Spain) and Chattanooga (USA) locations – and further installations are in the pipeline across the Group. In early 2014, a second photovoltaic system went into operation at the Volkswagen Braunschweig location.

Covering an area of 3,000 square meters, it has an annual capacity of 363 MWh, and is capable of reducing CO<sub>2</sub> emissions by up to 281 t. In 2014, a photovoltaic system also went into operation at the Volkswagen Zwickau location. It has an area of 900 square meters, can generate 90 MWh of electricity annually for use on the final vehicle assembly lines, and can reduce annual CO<sub>2</sub> emissions by up to 80 t.

In November 2014, drilling began for a geothermal heat plant close to the Audi factory in Győr (Hungary). When this plant goes into operation – probably in late 2015 – it will supply at least 82,000 MWh of geothermal energy annually, meeting approximately 60% of the plant's total heat requirements, and reducing Audi's CO<sub>2</sub> emissions by a further 23,000 t.

With the expansion of its Leipzig location, Porsche has incorporated features that will reduce CO<sub>2</sub> emissions by 11,637 t. annually compared with a conventional design. The biggest savings will come from the use of waste heat from the nearby wood-chip-fired heating plant, which will provide almost 80% carbon-neutral heating at the location and result in cost savings of approximately €360,000 per annum. A further important contributor is a rooftop photovoltaic plant installed on the body shop. In 2014, when operating well below full capacity, this system delivered CO<sub>2</sub> savings of 115 t. In the future, under optimal solar conditions, it will offer Porsche potential annual savings of at least 1,000 t of CO<sub>2</sub>. MAN, meanwhile, reduced CO<sub>2</sub> emissions at its production locations by approximately 105,400 t in 2014, bringing the total improvement over 2008 levels to 19% – a five percentage point improvement over 2013. A wide range of measures were responsible for this result, including more efficient production technologies, optimized heating and ventilation systems and use of renewable energy, for example with the installation of a photovoltaic system at the Pinetown location in South Africa.

In 2014, more than 1,500 process-optimization measures in the energy and environment sectors were filed across the Group on the intranet-based Volkswagen Group IT tool "Massnahmen@web". These led to CO<sub>2</sub> savings of 195,000 t, annual energy savings of 505 GWh, and cost savings of over €30 million.

#### › EMPLOYEES SUGGEST WAYS TO SAVE

We're all familiar with the topic from our homes – a substantial proportion of the energy we consume is accounted for by equipment that isn't being used and is merely in standby mode. The solution here is to rigorously switch off what is not in use. At the factory, however, the complex interdependency of various items of equipment means that switching off can be more complicated than it might seem at first glance. To indicate clearly which items of equipment can be shut down when, employees at the Kassel and Emden locations came up with the idea of using energy efficiency labels like the ones on domestic appliances and invented their own system along these lines. Now, employees on the shop floor can see at a glance what they can save by switching off their machines. If there are operational reasons for not switching off, the label shows a bright red "NO" and describes which items must not be shut down under any circumstances. In just one department of the Kassel location, systematically switching off all the equipment during production-free periods cut CO<sub>2</sub> emissions by 120 t. The potential offered by reducing the baseload was already brought to the attention of management and employees back in 2011 by annual competitions between the locations and production sectors at the Volkswagen and Volkswagen Commercial Vehicle brands. At the same time a process standard was drawn up along with a manual providing recommendations and measures, with the result that all production locations at these brands regularly conduct baseload monitoring exercises and report on their findings.

The participation of the Group brands in joint research projects with external partners is a further important source of inspiration and new ideas for energy savings. One example is Volkswagen and Audi's participation in the German research alliance "Innovation Alliance Green Carbody Technologies" (InnoCaT). In a recent InnoCaT research project, Siemens, Volkswagen and a Fraunhofer Institute studied the movement sequences of production robots and developed a simulation model to work out the most energy-efficient trajectories. Smoother trajectories result in a significant reduction in energy consumption, with tests showing that this approach can cut energy consumption by almost one-half. The goal is to develop software that can be used to reprogram existing robots for more energy-efficient operation, without making changes to the production process.

#### Green IT

Reducing the electricity consumption of IT components has been a strategic objective of the Volkswagen Group for many years. Dur-

ing the last RFQ process for PCs, in early 2014, common Group-wide specifications were drawn up for energy-efficient PC workstation hardware. For example, it was decided to exclusively use energy-efficient TFT monitors with LED backlighting. Only energy-efficient desktop PCs and laptops are now eligible for the Group's central IT purchasing basket. All Group companies across the globe can order this hardware via a special B2B portal. By the end of 2014, 150 companies in 35 countries were already using the central IT purchasing basket. Across the Group, savings in electricity consumption in 2014 from the introduction of new energy-efficient, eco-friendly equipment purchased from the central IT basket amounted to approximately 47,000 megawatt-hours (MWh). The savings work out at a reduction in annual electricity consumption per individual PC workstation from 206 to around 60 kilowatt-hours (kWh). In 2014 SEAT, a participant in the EuroEnergest project, an energy efficiency project supported by the European Commission, demonstrated how intelligent IT systems optimize energy consumption, maximize use of renewable energy and deliver 10% energy savings.

#### › EMISSIONS TRADING

The procedure for the allocation of CO<sub>2</sub> emissions certificates under the European Union's Emissions Trading System changed fundamentally in 2013, at the start of the third trading period (2013 – 2020). For electricity companies, full auctioning has been introduced. For the manufacturing industry and certain types of power plant (e.g. CHP plants), some certificates are still allocated free of charge. However, the number of free certificates will fall steadily throughout the trading period. Any certificates required on top of the free allocation will have to be either purchased at auction or covered by credits for emissions reduction projects under the Joint Implementation scheme and Clean Development Mechanism. 30 Volkswagen Group locations are included in the European Emissions Trading System. For 2014, the Group received a free allocation of 1,090,262 emissions certificates (169,925 less than the previous year). As well as the European Union, various other countries in which Volkswagen Group production locations are based are planning to introduce emissions trading. China for example has already launched seven pilot emissions trading schemes, in which the Volkswagen Group is not involved at the present time. Going forward, the Chinese government plans to expand these pilot projects into a national emissions trading system.

#### › AWARDS FOR SUSTAINABLE BUILDINGS

With the internally awarded "Blue Building" certification we aim to promote the construction of energy-efficient and sustainable buildings within the Volkswagen Group. These buildings must significantly surpass the requirements of energy efficiency legislation. Under the scheme, buildings that score highly on a number of supplementary criteria – employee-friendly design, cost-efficient operation and environ-



Volkswagen location in Pamplona (Spain): Despite a sharp increase in production, it was able to cut its absolute water consumption by half between 2001 and 2014.

mentally friendly planning and construction – win the additional designation “Plus”. At the present time, a variety of commercial and residential buildings currently under construction are being optimized in line with the “Blue Building” standards. The most outstanding example is a new office complex that will surpass statutory energy efficiency requirements by more than 35%.

In November 2014, the Volkswagen engine factory in Chemnitz received an external award for sustainable building design – the Gold Certificate of the German Sustainable Building Council (DGNB). The jury was particularly impressed by the way that expansion at the location had been integrated in a balanced way with the surrounding environment, and by the use of resource-efficient production equipment.

### Water Consumption

Despite the increase in the number of production locations within the Group, water consumption per vehicle manufactured was reduced in 2014 (see page 131). We are well aware that in many parts of the world water is a very valuable resource, and that managing this resource is an increasingly challenging task. That is why we adopted water as our focus topic for 2014. With our pioneering water footprint analysis in 2013, calculated on the basis of extensive LCA data, we identified those processes that consume most water over the life cycle of a representative selection of Volkswagen brand models. The water footprint calculation showed that as far as water is concerned, the use phase plays only a minor role. A large proportion of water consumption is attributable to the pro-

duction process. Of this, most is accounted for by upstream supply chain operations. Nevertheless, a review in 2014 underlined the importance for the Volkswagen Group of cutting water consumption. This is because 58% of our entire freshwater consumption – approximately 24 million cubic meters – is attributable to locations situated in regions where groundwater resources are at risk – above all Mexico, Spain, South Africa, India and China.

In our environmental management strategy we always take into account the fact that water resource availability varies greatly from region to region, and that solutions must be adapted accordingly. The same philosophy also underlies the water management strategy adopted by the Corporate Environment and Energy Steering Group in 2014, where four action areas were defined:

- **Safe and reliable water supply and sewerage.** We aim to protect groundwater reserves against pollution, and to avoid production downtimes caused by water shortages.
- **Efficient water use throughout the life cycle.** By using water as economically and efficiently as possible during the production process, and by recycling as much water as possible, we aim to reduce total water consumption to the greatest possible extent.
- **Social and environmental initiatives.** Particularly through our biodiversity projects, we help to protect water resources and to promote public environmental awareness.
- **Transparency.** We communicate our goals and activities to the public. In 2013 Volkswagen became the world's first automaker

to commit to the United Nations CEO Water Mandate. Also, since 2011, we have been providing extensive disclosure of our water management practices and progress, by completing the very detailed CDP water management questionnaire.

These four priorities were reflected in the water conservation measures that we pursued during the reporting period. In 2012, the paintshop at Volkswagen's Chengdu location (China) became the first paintshop in Asia to use "EcoDry Scrubber" technology, which reduces water consumption on the painting line by up to 23% compared with solvent-based processes. And at the Foshan location, also in China, we are aiming to go one step further and achieve 100% wastewater recycling by 2015. A wide range of treatment and recycling measures at the Bentley location in Crewe (United Kingdom) resulted in a 57% reduction in water use per vehicle manufactured between 2010 and 2014. The Volkswagen location in Pamplona (Spain) has been very successful over the years. Despite a sharp increase in production, it was able to cut its absolute water consumption by half between 2001 and 2014. At the Curitiba location in Brazil, one simple measure introduced in 2014 has had a big effect on water use: the water used during regular testing of the firefighting system is now drained off into a rainwater retention basin and recycled as cooling water. In this way, annual freshwater consumption has been reduced by approximately 18,000 m<sup>3</sup>.

**› We always take the fact into account  
that water resource availability varies  
greatly from region to region.**

### Solvent Emissions

During the reporting period, the increase in vehicle output and the related rise in the volume of painting work led to a slight increase in absolute solvent emissions (VOC) (see page 129). Reducing VOC emissions from manufacturing is therefore a key focus for 2015 in Volkswagen's "Think Blue. Factory." sustainable manufacturing program. To identify further scope for savings, a pilot workshop was held in Hanover in mid-October 2014 which brought together experts from the central environment functions, from "Think Blue. Factory." and from the planning sectors. Also present were paintshop, environmental protection, factory planning, brand planning and process engineering specialists. Like for the environmental indicators "waste for disposal" and "water consumption", a package of tools and suggested measures was drawn up, which was then passed on to all locations for implementation.

A further focus is on reducing energy consumption and CO<sub>2</sub> emissions. It should be noted that the number of employees capable of influencing this indicator, through their ideas and their personal behavior, is far greater than for VOC emissions.

### Waste Output

Owing to the rise in production output in the reporting period, the volumes of hazardous and non-hazardous waste also increased. The proportions of waste for disposal in these volumes were reduced in 2014, while the recycling ratio increased (see page 130). A waste strategy in force across the Group helps all locations to reduce and avoid waste. Optimal systems are in place for the recycling of production waste, packaging materials and waste from workshops and the Technical Development department. For recyclable production waste that can be sold on the market, a system has been rolled out across the Group that helps to improve the efficiency of the entire process. The focus is not only on revenue generation but also on optimized preparation of the waste for efficient transportation.  52

In 2014, Scania adopted waste as a focus topic. The target is improved recycling ratios and reduced consumption of materials. There are also plans to cooperate more closely with waste disposal contractors. Bentley already achieved its "zero to landfill" target in 2013, having cut waste per vehicle by 85% between 2000 and 2013. Recycling facilities are available across the factory. Waste reduction is an important focus at our Chinese locations too. In April 2014, we launched a waste project at the Anting and Foshan locations, together with our joint venture partners. In co-operation with employees and our partners, we are developing systems that will improve recycling ratios through improved sorting, storage and handling of waste at the factory itself, and through optimized recycling technologies at the waste disposal companies. The aim is to increase the recycling ratio to 80%.

### Green Logistics

For our incoming deliveries of raw materials and supplies, for inter-location shipments and for shipments of vehicles leaving our locations, we utilize all modes of transport. The aim is to make logistics processes as environmentally compatible and efficient as possible and to shift an increasing share of total transportation volumes to rail and sea. Since 2012 a special Corporate Steering Group has been responsible for coordinating this "Green Logistics" approach. In 2014 this Steering Group defined work packages for specific measures, accounting practices, communication, qualification and internal target achievement methods. The German Nature and Biodiversity Conservation Union (NABU) played an active advisory role during this period.

In 2014, the Volkswagen Wolfsburg location became the first to define binding environmental performance objectives for its Plant Logistics, requiring CO<sub>2</sub> emissions from internal truck and rail freight movements to be reduced by one-quarter. A few statistics will help to illustrate the scale of logistics operations at this location. Every day, 3,400 new vehicles leave the location on 210 double-decker rail wagons and 140 road transporters, while inbound shipments of raw materials, parts and assemblies are received from around 2,600 suppliers, transported on around 100 rail wagons and some 910 trucks.

Since 2014, all finished engines transported from Chemnitz to Emden have now gone by rail, reducing CO<sub>2</sub> emissions by 165 t annually. As far as vehicle transportation is concerned, switching from road to rail reduced annual CO<sub>2</sub> emissions from European mainline operations by a further 1,812 t in 2014. At the same time we are making increased use of low-CO<sub>2</sub> rail wagons that also meet the strictest standards on noise emissions. For example Volkswagen Group Logistics has hired 300 sliding wall wagons from Touax Rail Ltd, built by the Polish manufacturer Greenbrier. These wagons, which are equipped with "whispering brakes" that reduce noise by more than 75%, are expected to be in use on rail routes between European locations of the Volkswagen Group by February 2015. This will result in a further shift in transport from road to rail and a further reduction in CO<sub>2</sub> emissions.

**› By making use of environmentally friendly and cost-efficient modes of transport, the logistics sector is making an important contribution to the corporate objectives of the Volkswagen Group.**

Every year, Porsche too sets green logistics targets. These targets are aimed at reducing packaging volumes, promoting the use of reusable containers and the purchasing of efficient plant and equipment, reducing transport operations and promoting the use of environmentally friendly modes of transport. On the inbound logistics side, haulage contractors must comply with green logistics requirements on aspects such as use of low-pollutant vehicles, driver training and vehicle maintenance intervals. Since 2014, 100% of haulage trucks operated by freight forwarders serving Porsche have complied with Euro 5 or higher emissions standards. All logistics processes at Porsche are also certified to DIN ISO 9001 and ISO 14001. Maritime shipping is a further important cornerstone of Porsche's logistics operations. By adding a third port to its logistics network in China, the company has reduced its CO<sub>2</sub> emissions in this country by 45%. Porsche has also expanded its transport network in the United Kingdom, where a second port has reduced CO<sub>2</sub> emissions by approximately 10%. As the Volkswagen Group's operations become increasingly internationalized, the importance of sea and inland waterway transport continues to grow. By making use of such environmentally friendly and cost-efficient modes of transport, the logistics sector is making an important contribution to the corporate objectives of the Volkswagen Group. A further important landmark in 2014 was the opening of the Fallersleben container terminal operated by GVZ Entwicklungsgesellschaft mbH, which has extended the capabilities of the Wolfsburg Multimodal Logistics Center. In its first year of operation, this terminal handled approximately 152,751 m<sup>3</sup> of goods for Volkswagen AG, which is one of GVZ Wolfsburg's main customers.

**› CLEAN SHIPPING INDEX**

In October 2013, the Volkswagen Group became the first German automaker to join the Clean Shipping Network. Since May 2014 Volkswagen Group Logistics has held a seat on the board of this association of vessel owners and users. The association's Clean Shipping Index (CSI) is used by Volkswagen Group Logistics as a tool for evaluating the environmental impacts of its ocean shipping. The index transparently informs the members of the Clean Shipping Network about the emissions of individual ships and individual routes, and allows them to take environmental criteria into consideration when selecting vessels. As well as the handling of chemicals and waste disposal, such criteria also include carbon dioxide (CO<sub>2</sub>), nitrogen oxide (NO<sub>x</sub>) and sulfur oxide (SO<sub>x</sub>) emissions.

**Biodiversity**

Conservation of biological diversity is one of the Volkswagen Group's stated aims. In 2007 Volkswagen formulated a mission statement in which it committed to preserving biodiversity "at all of its locations". As a member of the "Biodiversity in Good Company" initiative, we are also committed to integrating biodiversity protection step by step into our management processes. By 2014, for example, Volkswagen had commissioned 32 reports that analyzed and evaluated emissions risks to water, soil and biodiversity at its European production locations. We also give preference to brownfield sites when planning construction projects, in order to minimize land sealing. Volkswagen also promotes the development of practical biodiversity management tools, by participating in expert forums and scientific studies. These include the joint working group on management indicators of "Biodiversity in Good Company" and econsense, and a research project studying the impact of product systems on biodiversity led by the Fraunhofer Institute for Building Physics, a project in which the German Federal Ministry for the Environment is participating. ② 53

In 2014 we again used the "Biodiversity in Good Company" initiative as a learning and dialogue platform – for the first time also open to our suppliers – and as a tool for bringing together stakeholders from politics, public bodies, associations and universities at both national and international level. NABU continued to serve as an adviser and project partner.

Our voluntary initiatives to protect biodiversity or safeguard ecosystem services focused on the following areas: research funding; biotope networking; protection of nature and biodiversity; and afforestation and forest conversion. These initiatives were in many cases combined with environmental education measures. Lighthouse projects during the reporting period comprised:

- › The "Think Blue. Nature." project, in which Volkswagen's initial investment will be €260,000. As well as sponsoring for the CESMO (= Corridor Ecologico Sierra Madre Oriental, 4 million hectares) biodiversity corridor, which provides a habitat for



The environmental project drawn up by Volkswagen Financial Services and NABU combines promoting climate-friendly vehicle fleet management with restoring a number of German wetland areas.



Volkswagen de México's long-running initiative "Por amor al planeta" is the country's largest private research funding program.

around 650 endangered species, this project also comprises the "Eco Chavos" initiative, which was launched in April 2014 and is a joint project between Volkswagen de México, the Mexican government and Deutsche Gesellschaft für Internationale Zusammenarbeit. Under this project, 300 young people will act as environmental ambassadors to inspire a further 10,000 young people to take part in nature conservation activities in one of the seven conservation areas in the CESMO corridor. ② 54

- Volkswagen de México's long-running initiative "Por amor al planeta" (for love of the planet), the country's largest private research funding program.
- Jointly with NABU, Volkswagen is also supporting the "Welcome Wolf" information campaign and the project to renaturalize the Lower Havel River in Germany, home to around 1,000 endangered species.
- A project jointly developed by Volkswagen Financial Services and NABU to promote climate-friendly vehicle fleet management and simultaneously restore a number of German wetland areas (carbon sinks). 13 wetlands are now included in the scheme, which in September 2014 was named an official project of the UN Decade on Biodiversity.
- The "Natural Classroom" at the Environment Center in Breiten-güßbach, which has been named an official project of the UN Decade on Biodiversity and is funded by the AUDI Environment Foundation. The Foundation will also be providing €250,000 of funding over a five-year period for the Steigerwald Sustainability Center.

In 2014, the Chattanooga location of Volkswagen Group of America was presented with the Environmental Protection Agency's new "Rain Catcher Award". The award was presented for the location's excellent green infrastructure measures and protection of water resources. In 2014 the Chattanooga location also received the Chattanooga Times Free Press "Best Green Business Award".

## SALES, USE AND RECYCLING

Our philosophy of forward-thinking, environmentally minded mobility spans every stage in the value chain, but the use phase is pivotal, not just in terms of its impacts; it is also critical to success, because customers' needs are evolving. Fuel-efficient vehicles are just one, albeit vital, component of progressive mobility that produces less CO<sub>2</sub>. Which is why we are committed to offering our customers the fullest possible range of mobility services. And the Group's Environmental Strategy also extends to the final stage of the vehicle's life cycle: recycling.

### Sales Initiatives

The Volkswagen brand is gradually anchoring its "Think Blue." strategy in other business areas to boost environmental sustainability: in early 2014, the brand began a campaign to get the 1,200 Volkswagen dealerships in Germany more closely involved in its environmental management system. The aim is to cut CO<sub>2</sub> emissions from our dealer network by 25% by 2020 – which will also help to cut operating costs. By the end of 2015, we want more than 60% of car dealerships to have benefited from our advisory service. Our eco-efficiency service is available to all partner companies. In a "pre-check", the Volkswagen consultants collate data on the dealers' energy consumption, building shell and technology, and the use of regenerative energies. Each dealer can then take suitable action based on the results. Standout eco-friendly dealerships are awarded the "Future Climate inspired by Think Blue." certificate. Volkswagen is advised on this project by the German Nature and Biodiversity Conservation Union (NABU). From 2015, we will be extending this initiative to our 11,500 dealers outside of Germany: the "Think Blue. Dealer." initiative wants up to 60% of dealers worldwide to have received energy efficiency advice by 2018. Approved dealers may use the "Certified Think Blue. Dealer" logo.

Porsche has also launched a sustainability initiative to support dealers, aimed at improving energy efficiency among existing

Porsche Centers and ensuring that new centers are organized as efficiently as possible. Porsche provides its international network with a comprehensive planning manual and software tool which addresses many aspects of environmental sustainability, from water saving, to construction, building services and renewable energies, to information on the handling of hazardous goods.

### **Supplementary Mobility Card**

At present, electric vehicles are still limited by their range. In response, Volkswagen has joined forces with Euromobil to devise the "Supplementary Mobility Card". Euromobil is the car hire arm of the Volkswagen Group sales and service partners, and boasts the largest network in Germany, with over 2,400 rental locations. Customers can rent vehicles from the Volkswagen, Audi, SEAT and ŠKODA brands.

Within the first three years of purchasing one of our electric cars, the Supplementary Mobility Card allows customers to borrow a conventional-powertrain vehicle free of charge from any of the participating Euromobil outlets in Germany for up to a maximum of 30 days a year, including a set free kilometer allowance.

### **Volkswagen Mobility Card**

As part of the German Government's "Electromobility Showcase" program, the first pilot phase of the "Volkswagen Mobility Card" was launched in June 2014 in Hanover, with 50 participants. The card provides customers with an integrated range of services designed to make electromobility more user-friendly and efficient. For example, it can be used to reserve selected charging stations and parking spaces before setting out on a journey. Accounts are settled via the Volkswagen app, which also offers route planning with up-to-date traffic and parking information, so that customers can select the best mode of transport to their destination. The trial phase will run until the end of 2015; depending on the results, the Volkswagen Mobility Card will then be rolled out to other regions.



Very low fuel consumption: the ŠKODA Octavia Greenline\*.

### **› THE CHALLENGE OF DIGITIZATION**

Growing digitization and new mobility concepts pose fresh challenges for vehicle sales. In November 2014, this prompted the Volkswagen brand to join with the Institut für Automobilwirtschaft (IFA) at Nürtingen-Geislingen University (HfWU) to create the "Future Retail Lab". The lab will develop new sales strategies and concepts for the industry, and translate them into practice at Volkswagen.

### **Marketing Initiatives**

Alongside the development of ever more fuel-efficient new models, the Group boasts a wide range of other offerings for eco-friendly mobility. These include:

- › Spotlighting particularly efficient vehicles and low-carbon technologies in our product communications by awarding them efficiency badges (pages 95–98), and reporting on environmental progress in new models through Life Cycle Assessments and Environmental Commendations (see pages 94–95).
- › Information and campaigns inspiring drivers to adopt fuel-efficient, eco-friendly driving habits.
- › e-mobility service offerings such as green electricity tariffs and a rapid-charging infrastructure such as the "wallbox".

The "electrified! – electric mobility weeks by Volkswagen", held in March 2014 at the former Tempelhof airport in Berlin, were attended by some 10,000 visitors keen to find out more about electric mobility at Volkswagen. Our alternative-powertrain vehicles were taken for a total of 6,000 test drives. From July to October, Volkswagen then took its electric models on tour to nine German cities on the "electrified! tour 2014".

### **› The use phase is decisive for the success of future-oriented and environmentally minded mobility.**

Driving electric vehicles and plug-in hybrids has become far more convenient in Germany since the introduction of the "Charge&Fuel Card" from Volkswagen Financial Services in January 2015. It allows Volkswagen and Audi customers to fill up with electricity and conventional fuel on the same card. The Charge&Fuel Card provides access to more than 1,200 public charging stations around the country run by RWE, EnBW and Ladenetz. Previously, each charging operation had been billed locally and at different rates by individual suppliers. The card can also be used to fill up with regular fuel at around 10,000 filling stations. In the past, this would have meant customers having to carry up to 40 different cards, codes or other forms of authentication with them. The new service from Volkswagen consolidates all this onto a single card or app.

#### › SAMPLE CALCULATION OF ADDITIONAL SAVINGS POTENTIAL RESULTING FROM ECO DRIVER TRAINING

	Consumption	Calculation	Total
Without ECO driver training	4.6 l/100 km	€1.40/l diesel x 4.6 l/100 km x 90,000 km x 100 vehicles	€579,600
With ECO driver training (average fuel savings 10%)	4.1 l/100 km	€1.40/l diesel x 4.1 l/100 km x 90,000 km x 100 vehicles	€516,600
<b>Total savings</b>			<b>€63,000</b>

Typical fleet of 100 vehicles (Passat Estate 2.0 l TDI BlueMotion Technology\*), leasing term 36 months, 30,000 km/year.

\*Combined CO<sub>2</sub> emissions: 120 g/km; fuel consumption in l/100 km: urban: 5.6; extra-urban: 4.0; combined: 4.6.

#### Eco-Friendly Driving

Regardless of model or brand, along with the development of ever more efficient vehicles, eco-friendly driving habits are the decisive way to cut fuel consumption and emissions of CO<sub>2</sub>, noise and airborne pollutants. We support our customers in this respect with a range of courses:

- › In Germany, Volkswagen and NABU offer free fuel economy training in the project "Change over – just save fuel". Courses are held in collaboration with local NABU groups, Volkswagen dealers and a team of professional trainers from Volkswagen Driving Experience.
- › Customers can also book "Think Blue. Eco-Training" courses directly with Volkswagen in Germany, Hong Kong and Singapore.
- › In collaboration with Deutsche Verkehrswacht and caremotion, Volkswagen Financial Services offer "ECO driving courses" for drivers of fleet vehicles.

In 2014, the eco-driving courses conducted by Volkswagen Driving Experience attracted 978 participants. These courses currently focus on Germany and the Volkswagen brand, but there are plans to roll them out across the Group over the next few years.

**Green Electricity.** Electric vehicles powered by green electricity produce zero emissions. The Volkswagen, Audi and Porsche brands have come up with suitable tariffs for their customers. e-up!\* drivers can charge their vehicles with "BluePower" carbon-neutral electricity, generated by hydropower plants in Germany, Austria and Switzerland. BluePower is also available for the Porsche hybrid vehicles. And following the launch of the A3 e-tron\* in 2014, customers can now also purchase "Audi energy", likewise generated by hydroelectric power stations in Germany, Austria and Switzerland, as documented by the "ok power" logo.

**Green Gas.** Audi A3 Sportback g-tron\* drivers have been virtually carbon-neutral since March 2014, thanks to the "Audi e-gas fuel card". Audi records the quantities of gas each customer purchases with the card, and ensures that exactly the same quantity of synthetically produced, renewable Audi e-gas is fed into the German

natural gas network to compensate. The green gas is produced at Audi's own power-to-gas plant in Werlte, which uses waste CO<sub>2</sub> as a raw material in production (see page 92).

#### › SAVE FUEL WITH "THINK BLUE. TRAINER."

"Think Blue. Trainer." is a driver assistance program offering vital information on current fuel consumption during the journey, to encourage more eco-friendly driving habits. Essentially, the display system operates on the principle "blue = good", "gray = bad", and uses the Blue Score assessment system: if the driver is driving economically, the circle will fill with blue bars, and if they are not, the majority of bars will be grey. A Blue Score of 100 represents optimal driving performance. The Trainer also provides the driver with valuable live feedback on gear shifts, speed and foresight, as well as coasting and overrun fuel cut-off. The "Think Blue. Trainer." already features in the conventional-powertrain e-up!\* and up!\* models, as well as in the Polo\* and Passat\*, and will be gradually rolled out to other models as well. The range of functions offered by the "Think Blue. Trainer." can be further extended with the "Volkswagen Car-Net Think Blue. Trainer." app, which communicates with the vehicle and can be operated via the infotainment system. The app contains training challenges that provide additional motivation. All trips are automatically stored, and can later be used for cross-comparison.

#### Eco-Friendly Fleet Management

Commercial fleets are a powerful lever for making road traffic more environmentally compatible. More than 60% of all newly registered cars are fleet vehicles, and most of them clock up very high mileage. What is more, they are often leased, and therefore replaced every few years. Volkswagen Financial Services and NABU have come up with an environmental program which allows the fleet manager to protect the environment and cut costs at the same time. Since the program was launched, Volkswagen Leasing GmbH has seen the number of particularly fuel-efficient vehicles in its portfolio increase. As a result, over the past six years the average CO<sub>2</sub> emissions of newly registered fleet vehicles for key-account

customers have dropped by 17.7%. Fleet vehicles are subject to ever more stringent requirements, including a maximum emissions limit of just 110 g CO<sub>2</sub>/km in 2014 and an efficiency label of A or A+.

“The Green Fleet” award has been presented annually by Volkswagen Leasing and NABU since 2010, and recognizes ecologically responsible fleet managers. In 2014, for the first time ever, more than 100 key accounts competed for the award, setting a new record and demonstrating that eco-friendly fleet management is no longer a peripheral issue but at the very heart of fleet business. Awards were presented to the companies with the highest proportion of eco-friendly Volkswagen Group vehicles in three different fleet size categories.

### Solutions for Urban Mobility of the Future

The challenges of urban mobility, and the possible solutions to this problem, have long been the subject of much debate. Expanding urban populations, megacities, lack of parking spaces, traffic jams, overloading of public transport, digitization and networking are the buzzwords. Systematically analyzing these challenges, and deriving possible solutions, is an ongoing task for mobility research. 2013 saw publication of the “Urban Mobility 2030” film, the first ever comprehensive visualization of this topic. ② 55

In fiscal 2014, we held intensive discussions with the general public, for example at the Volkswagen eMobility week in Berlin, early in the year, as well as at a string of conferences. The Volkswagen Group has also stepped up its intelligent mobility activities, including the Volkswagen CarNet with online traffic information in selected car models, the pilot project “Think Blue. Share a Volkswagen.”, and a mobility card in the context of the “Lower Saxony Electromobility Showcase”, plus a number of innovative driver assistance systems for our production vehicles, and demonstrations of automated and piloted driving. Research projects such as the Intersection Pilot for interaction between the vehicle and the traffic lights on the one hand, and location-specific mobility and traffic management concepts such as the Traffic Task Force in Wolfsburg on the other, round out our wide range of ideas on how to make future mobility more intelligent. ② 56

### Carsharing

“Quicar” is the name of the Volkswagen carsharing project, operated by Volkswagen Financial Services: Over 200 Golf BlueMotion 1.6 TDI\* cars from the Volkswagen brand are available to rent at approximately 50 stations in and around Hanover. Some 12,000 customers have already registered with the Quicar scheme, which offers widespread availability of these efficient vehicles, an inexpensive and flexible system of charges and a simple operating concept. In 2013, Volkswagen Financial Services, together with its partner Pon Holdings B.V., also acquired a stake in Collect Car B.V., better known as “Greenwheels”. “Greenwheels” is the leading carsharing operator in the Netherlands, with around 2,000

vehicles. The companies are planning to jointly take the business model forward, and in a subsequent step roll out activities in other countries, primarily in Europe. At the same time, Volkswagen New Mobility Services Investment Company China (VW NMS), a 100% subsidiary of Volkswagen Financial Services AG, has been piloting the VRent corporate carsharing model for companies and their employees since 2014. This is a brand new concept for China, offering customers uncomplicated, flexible and direct access to a comprehensive fleet of vehicles in various categories. A tariff model based solely on usage, with monthly invoicing, ensures complete transparency and cost control.

As part of the “Electromobility Showcase” program, in November 2014 Volkswagen began providing selected universities in Lower Saxony with 50 e-up!\* cars at attractive rates for carsharing. The aim is to gauge customers’ expectations of e-carsharing and establish what challenges this places on the infrastructure, the vehicle components or the business model, for example.

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### ➤ “INTERSECTION PILOT” RESEARCH PROJECT

The joint German research initiative UR:BAN (Urban Space: User-Friendly Assistance Systems and Network Management), scheduled to run until 2016, is designed to provide passenger car and commercial vehicle drivers with anticipatory, intelligent, individual assistance in urban traffic situations. As part of the “Smart Intersection” sub-project, Volkswagen is developing the Intersection Pilot, the first system to supply drivers with information about the next intersection and support optimal driving maneuvers, helping to keep traffic flowing more smoothly and safely, and achieve a further cut in fuel consumption.

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### Reducing Traffic Noise

How best to provide individual mobility while at the same time reducing noise pollution is a task for all stakeholders, and the Volkswagen Group is committed to playing its part. The Volkswagen brand is working intensively to further reduce noise emissions from its vehicles. At the Volkswagen Acoustics Center in Wolfsburg, noise minimization efforts focus on continuous optimization of all aspects of the powertrain, the vehicle aerodynamics and tire/road noise. Noise emissions are a key factor in tire selection for every new vehicle across the Group. But the Volkswagen Group also goes one step further: in collaboration with Hamburger Lärmkontor GmbH (Germany), we have developed a noise tool to evaluate the effectiveness of noise abatement measures. Our noise research examines how individuals are impacted by noise, and we engage in ongoing dialogue with the affected community. This includes collaborating with local authorities and participating in the public debate, for example at the “DVWG Traffic Noise Forum” in 2014.



The Intersection Pilot supplies drivers with information about the next intersection, helping to keep traffic flowing more smoothly and safely.

#### ➤ SUSTAINABLE MOBILITY 2.0

As a long-standing member of the World Business Council for Sustainable Development (WBCSD), we collaborate with other member companies in all industries on the “Sustainable Mobility 2.0” project to develop solutions for sustainable future urban mobility. Potential solutions must be both pragmatic and based on sound technical research. The project entered its second year in 2014, kicking off a debate about the findings from all six model cities around the globe.

The future recycling of electric vehicle batteries containing lithium is today taken into account at the vehicle development stage. To this end, the Volkswagen brand has set up take-back systems for batteries and participated both in the joint project LithoRec I, completed in 2011, and the follow-on project LithoRec II, which is still ongoing. The recycling of lithium ion batteries is currently being tested. Since December 2013 we have also been involved in the research and development project ElmoReL2020 for the recycling of power electronics from electric vehicles. By 2016, the project partners are aiming to draw up recycling procedures for the key power electronics components.

In the field of commercial vehicles and power engineering, upstream of recycling, we are focusing on extending the life span of vehicles and plant by replacing components and upgrading efficiency. MAN Truck & Bus professionally remanufactures used parts for use in vehicle repairs under the “MAN Originalteile® ecoline” brand. This helps to conserve resources, saves energy, and cuts costs by an average of 30%. Web-based training courses for vehicle workshops can be booked via the MAN Academy. Customers in most parts of Europe also have access to an extensive portfolio of replacement and spare parts. MAN PrimeServ, the service brand of MAN Diesel & Turbo, has continuously refined its range of retrofits and upgrades to meet ever more stringent emissions and environmental compatibility requirements. Retrofit solutions are amalgamated under the name PrimeServ-Green, and help to boost efficiency and reduce emissions in diesel engines, marine propulsion systems, compressors and turbines. This service is offered by MAN Diesel & Turbo at 116 PrimeServ locations around the world.

#### ➤ VOLKSWAGEN ORIGINAL PARTS CENTER

The Original Parts Center (OTC) is the largest of its kind in Europe. It opened in 1994 and has been growing ever since. With 500,000 m<sup>2</sup> of buildings, it now covers the equivalent of 70 football pitches. In addition to manufacturing components and handling the sale of original parts, the OTC also remanufactures used engines and gearboxes, thereby extending the service lives of our models. Since the OTC opened, it has saved some 351,000 t of steel and almost 49,000 t of aluminum.

#### After-Sales and Recycling

The processes introduced by the Volkswagen Group ensure that our vehicles are at least 85% recyclable, and 95% recoverable overall (in accordance with standard ISO 22628). These quotas have been verified using vehicles manufactured between 2007 and 2012. Our strategy for meeting recycling and recovery quotas, adopted in May 2007, continued to be implemented in 2014. The Vehicle Recycling Steering Group controls all relevant Group and brand activities.



# › INDICATORS AND GOALS

## CONTENTS

- 116** Our Approach
- 118** Financial Indicators
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- 125** Environmental Indicators
- 134** Goals and Actions

## VOLKSWAGEN GROUP PRODUCTION LOCATIONS BY REGION

2014



**VALUE ADDED GENERATED  
BY THE GROUP**  
2014, in € millions

**52,109**

(2013: €48,198 millions)

**FOREIGN SERVICE EMPLOY-  
EES WITHIN THE GROUP**  
2014, in thousands

**4,507**

(2013: 4,052)

**COMPLIANCE WITH  
ISO 14001/EMAS WITHIN  
THE GROUP\***  
2014, in %

**97.7**

(2013: 96.8%)

\* Basis: Employees (106 production sites as at December 31, 2014).



# BECAUSE PERFORMANCE IS WHAT COUNTS.

In this chapter we report on how our key financial, personnel and environmental indicators have developed over recent years. These indicators provide information on what has already been achieved, but they also point to where there is still room for improvement. The charts and figures are therefore followed by a presentation of our goals and an estimation of the extent to which those goals have so far been achieved.

## **OUR APPROACH** G4-17, G4-22, G4-23

The principles of sustainability management in the Volkswagen Group are described in detail in the Strategy chapter (see page 20), as are our continuous improvement goals. Our goals and actions, together with planned activities and current status, are presented in greater detail at the end of this chapter (see pages 134–137). The table on page 117 provides an overview of Group-wide principles, agreements and methods, which form the basis for our shared understanding of sustainability across the Group, allowing performance to be measured, controlled and improved.

### **Management by Key Indicators**

In order to manage its sustainability performance, the Volkswagen Group collects central performance indicators in line with the requirements of the Global Reporting Initiative (GRI) and the ESG (Environment, Social, Governance) indicator framework of the European Federation of Financial Analysts Societies (EFFAS). Shareholders and investors are increasingly demanding transparency, which makes them an important target group for our sustainability reporting. What follows is an overview of our economic, environmental and social performance which is as comprehensive as possible and stated in quantitative terms.

### **› Creating transparency in line with Global Reporting Initiative requirements.**

The key indicators presented are a continuation of those from previous years. There have been no changes in reporting and measurement methods for our sustainability performance. The Volkswagen Group's production network comprised 118 production locations at the end of the reporting year. This figure is based on a revised and harmonized method of counting loca-

tions compared to the previous year, with the increase being largely accounted for by the commercial vehicle sector. This is now the third time that we have reported emissions in line with Scope 3 of the Greenhouse Gas Protocol (GHG), which makes us trailblazer in our industry.

### **› Trailblazer in the industry in reporting emissions in line with Scope 3 of the Greenhouse Gas Protocol.**

### **Frame of Reference**

In principle, the indicators relate to the entire Group, including any companies in which our equity interest exceeds 50%. For our joint ventures in China, we report social indicators "at equity", in other words 50%, but 100% of environmentally relevant data. However, due to differing definitions or collection methods, it is not yet possible in all areas to consolidate the data reported by the brands and regions, which means that there are still numerous exceptions. In this report, all indicators which are collected and consolidated across the Group are therefore marked with a symbol 

### **Auditing and Standards**

The Volkswagen Group Sustainability Report 2014 has been audited by PricewaterhouseCoopers AG Wirtschaftsprüfungs-gesellschaft (PwC) against the relevant requirements and criteria laid down in the G4 Sustainability Reporting Guidelines of the Global Reporting Initiative, taking supplementary account of the International Standard on Assurance Engagements (ISAE) 3000. Audit activities which were carried out include: management surveys, surveys of employees responsible

for reporting sustainability information, and recording of the processes used to collect, calculate and report sustainability information. The quantitative details for the report year 2014 which have been audited by PwC are marked with the following symbol in the Indicators chapter below: . Further information about the audit can be found in the Independent Assurance Report on pages 145 – 147.

locations compile as part of their voluntary participation in the European EMAS (Eco-Management and Audit Scheme) system. The sustainability reports of the Audi, MAN, Porsche, Scania and ŠKODA brands are also indicative of the Group's commitment to sustainability.

### **Further Reporting within the Group**

More detailed insight into our environmental management is provided by the Environmental Statements which numerous

#### ➤ SUSTAINABILITY IN THE VOLKSWAGEN GROUP: PRINCIPLES, STANDARDS AND PROCEDURES

	Introduced	Coverage 2014
<b>Sustainability in general</b>		
Model of Sustainability	2002	Group
Volkswagen Group requirements regarding sustainability in its relationships with business partners	2006	Group
Commitment to United Nations Global Compact	2002	Group
<b>Business</b>		
Code of Conduct	2010	Group
Anti-Corruption Guide	2012	Group
<b>People</b>		
Charter on Labour Relations	2009	Group
Charter on Temporary Work	2012	Group
Declaration on Social Rights and Industrial Relations at Volkswagen (Social Charter)	2002, updated 2012	Group
Occupational Safety Policy	2004	Group
“Stimmungsbarometer” (employee opinion survey)	2008	Group
<b>Environment</b>		
Environmental Policy	1995	Group
Environmental Principles Product	2008	Group
Environmental Principles Production	2007	Group
Mission Statement on Biodiversity	2008	Group
CEO Water Mandate	2013	Group

**FINANCIAL INDICATORS**

A detailed presentation of financial indicators can be found in the current Volkswagen Group Annual Report. The indicators shown below comply with the International Financial Reporting

Standard (IFRS) for the entire 2010 to 2014 period. The indicators audited by PricewaterhouseCoopers in the context of the Volkswagen AG Annual Report 2014 (status report) for calendar year 2014 are marked with the following ☑.

» VOLUME DATA<sup>1</sup> ☑

in thousands

	2014	2013	2012	2011	2010
<b>Vehicle sales (units)</b>	<b>10,217</b>	<b>9,728</b>	<b>9,345</b>	<b>8,361</b>	<b>7,278</b>
Germany	1,247	1,187	1,207	1,211	1,059
Abroad	8,970	8,541	8,137	7,150	6,219
<b>Production (units)</b>	<b>10,213</b>	<b>9,728</b>	<b>9,255</b>	<b>8,494</b>	<b>7,358</b>
Germany	2,559	2,458	2,321	2,640	2,115
Abroad	7,653	7,270	6,934	5,854	5,243
<b>Employees (yearly average)</b>	<b>583</b>	<b>563</b>	<b>533</b>	<b>454</b>	<b>389</b>
Germany	265	255	237	196	178
Abroad	318	308	296	258	210

<sup>1</sup> These figures were audited by PricewaterhouseCoopers in the context of the 2014 Annual Report of Volkswagen AG (Management Report).

» FINANCIAL DATA<sup>1</sup> ☑

in million €

Volkswagen Group	2014	2013	2012	2011	2010
Sales revenue	202,458	197,007	192,676	159,337	126,875
Operating profit	12,697	11,671	11,498	11,271	7,141
Profit before tax	14,794	12,428	25,487	18,926	8,994
Profit after tax	11,068	9,145	21,881	15,799	7,226
Profit attributable to Volkswagen AG shareholders	10,847	9,066	21,712	15,409	6,835
Cost of materials	132,514	127,089	122,450	104,648	79,394
Personnel expenses	33,834	31,747	29,504	23,854	19,027
Pension provisions	29,806	21,774	23,939	16,787	15,432

Autotive Division<sup>2</sup>

Cash flows from operating activities <sup>3</sup>	21,593	20,612	16,232	17,109	13,930
Cash flows from investing activities attributable to operating activities <sup>4</sup>	15,476	16,199	16,455	15,998	9,095
Net liquidity at Dec. 31	17,639	16,869	10,573	16,951	18,639

<sup>1</sup> These figures were audited by PricewaterhouseCoopers in the context of the 2014 Annual Report of Volkswagen AG (Management Report).

<sup>2</sup> Including allocation of consolidation adjustments between the Automotive and Financial Services divisions.

<sup>3</sup> Before consolidation of intragroup transactions: €22,217 million (€21,270 million).

<sup>4</sup> Excluding acquisition and disposal of equity investments: €15,719 million (€14,497 million).

» VALUE ADDED GENERATED BY THE VOLKSWAGEN GROUP<sup>1</sup> ⓘ

in million €

Source of funds	2014	2013	2012	2011	2010
Sales revenue	202,458	197,007	192,676	159,337	126,875
Other income	14,192	13,994	24,642	13,125	10,787
Cost of materials	-132,514	-127,089	-122,450	-104,648	-79,394
Depreciation and amortization	-16,964	-14,686	-13,135	-10,346	-10,097
Other upfront expenditures	-15,063	-21,027	-22,070	-9,759	-15,250
<b>Value added</b>	<b>52,109</b>	<b>48,198</b>	<b>59,663</b>	<b>47,709</b>	<b>32,922</b>

Appropriation of funds in € million	2014	%	2013	%	2012	%	2011	%	2010	%
to shareholders (dividend)	2,294	4.4	1,871	3.9	1,639	2.8	1,406	2.9	1,034	3.1
to employees (wages, salaries, benefits)	33,834	64.9	31,747	65.9	29,504	49.5	23,854	50.0	19,027	57.8
to the state (taxes, duties)	3,817	7.3	3,865	8.0	4,322	7.2	4,525	9.5	3,105	9.5
to creditors (interest expense)	3,389	6.5	3,442	7.1	3,957	6.6	3,530	7.4	3,563	10.8
to the Company (reserves)	8,774	16.8	7,274	15.1	20,242	33.9	14,393	30.2	6,193	18.8
<b>Value added</b>	<b>52,109</b>		<b>48,198</b>		<b>59,663</b>		<b>47,709</b>		<b>32,922</b>	

<sup>1</sup> These figures were audited by PricewaterhouseCoopers in the context of the 2014 Annual Report of Volkswagen AG (Management Report).» KEY FIGURES BY BRAND AND BUSINESS FIELD<sup>1</sup> ⓘ

Thousand vehicles/€ million	Vehicle sales		Sales revenue		Sales to third parties		Operating profit	
	2014	2013	2014	2013	2014	2013	2014	2013
Volkswagen Passenger Cars	4,583	4,704	99,764	99,397	68,396	71,426	2,476	2,894
Audi	1,444	1,349	53,787	49,880	36,105	34,560	5,150	5,030
ŠKODA	796	719	11,758	10,324	6,144	5,379	817	522
SEAT	501	459	7,699	6,874	3,412	3,044	-127	-152
Bentley	11	11	1,746	1,679	1,175	1,122	170	168
Porsche <sup>2</sup>	187	155	17,205	14,326	15,727	13,175	2,718	2,579
Volkswagen Commercial Vehicles	442	436	9,577	9,370	4,826	4,651	504	448
Scania <sup>2</sup>	80	80	10,381	10,360	10,381	10,360	955	974
MAN <sup>3</sup>	120	140	14,286	15,861	14,092	15,744	384	319
VW China <sup>4</sup>	3,506	3,038	-	-	-	-	-	-
Other	-1,454	-1,364	-45,885	-40,047	22,127	20,227	-2,052 <sup>5</sup>	-2,725 <sup>5</sup>
Volkswagen Financial Services <sup>3</sup>	-	-	22,139	18,983	20,072	17,319	1,702	1,614
<b>Volkswagen Group</b>	<b>10,217</b>	<b>9,728</b>	<b>202,458</b>	<b>197,007</b>	<b>202,458</b>	<b>197,007</b>	<b>12,697</b>	<b>11,671</b>
Automotive Division <sup>6</sup>	10,217	9,728	177,538	175,003	179,864	176,914	10,780	9,807
of which: Passenger Cars business area	9,575	9,071	143,601	140,077	151,138	147,107	9,835	9,013
Commercial Vehicles/ Power Engineering business area	642	657	33,937	34,927	28,726	29,808	945	794
Financial Services Division	-	-	24,920	22,004	22,594	20,093	1,917	1,863

<sup>1</sup> These figures were audited by PricewaterhouseCoopers in the context of the 2013 Annual Report of Volkswagen AG (Management Report).

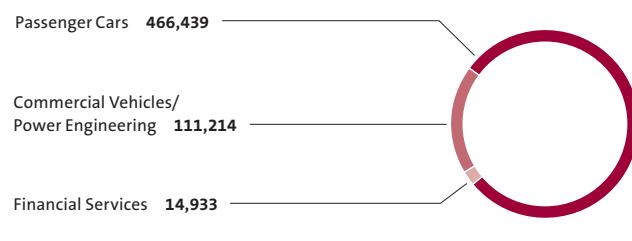
All figures shown are rounded, so minor discrepancies may arise from addition of these amounts.

<sup>2</sup> Including financial services.<sup>3</sup> MAN Finance International GmbH has been reported within Volkswagen Financial Services since its acquisition by Financial Services AG as of January 1, 2014. The prior-year figures have not been adjusted.<sup>4</sup> The sales revenue and operating profit of the joint venture companies in China are not included in the figures for the Group. The Chinese companies are accounted for using the equity method and recorded a proportionate operating profit of €5,182 million (€4,296 million).<sup>5</sup> Mainly intragroup items recognized in profit or loss, in particular from the elimination of intercompany profits; the figure includes depreciation and amortization of identifiable assets as part of the purchase price allocation for Scania, Porsche Holding Salzburg, MAN and Porsche.<sup>6</sup> Including allocation of consolidation adjustments between the Automotive and Financial Services divisions.

## PERSONNEL INDICATORS

As at 31 December 2014, the Volkswagen Group, including the Chinese joint ventures, had 592,586 employees, 3.5% more than at the end of the 2013 financial year. Major factors in this rise were new hirings in growth markets, in particular in China, and the employment of specialists and experts, not least in Germany. The distribution of Group employees between Germany and outside Germany remained virtually unchanged over the past year: as at the end of 2014, 45.7% of employees worked in Germany on the reporting date.

### › NUMBER OF EMPLOYEES IN THE VOLKSWAGEN GROUP BY SEGMENT



### › TOTAL WORKFORCE OF THE VOLKSWAGEN GROUP

2014	592,586
2013	572,800
2012	549,763
2011	501,956
2010	399,381

### › NUMBER OF EMPLOYEES IN THE VOLKSWAGEN GROUP BY TYPE OF WORK

	2014	2013	2012	2011	2010
Production workers	273,418	265,474	258,685	246,071	207,391
Non-production workers	300,709	289,623	274,364	240,864	181,445
Apprentices	18,459	17,703	16,714	15,021	10,545
<b>Total workforce</b>	<b>592,586</b>	<b>572,800</b>	<b>549,763</b>	<b>501,956</b>	<b>399,381</b>
of whom active employees	566,998	545,596	525,245	482,447	384,058
of whom in passive phased retirement	7,129	9,501	7,804	4,488	4,778

### › NUMBER OF EMPLOYEES IN THE VOLKSWAGEN GROUP BY REGION

	2014	2013	2012	2011	2010
Europe	438,631	424,964	410,427	378,030	290,159
The Americas	59,790	61,796	63,193	58,072	54,571
Africa	6,330	6,356	6,461	6,602	6,546
Asia	86,752	78,672	68,704	58,540	47,607
Australia	1,083	1,012	978	712	498
<b>Total</b>	<b>592,586</b>	<b>572,800</b>	<b>549,763</b>	<b>501,956</b>	<b>399,381</b>
of whom temporary staff	15,161	17,419	24,914	28,342	21,119
of whom permanent staff	577,425	555,381	524,849	473,614	378,262

## ➤ FEMALE EMPLOYEES IN THE VOLKSWAGEN GROUP\* ✓

in %

2014	15.7
2013	15.5
2012	15.2
2011	14.7
2010	14.2

\* From 2011 incl. Scania.  
From 2013 incl. MAN and Porsche.

## ➤ PROPORTION OF WOMEN IN THE VOLKSWAGEN GROUP IN GERMANY\*

in %

	2014	2013
Total apprentices	28.2	27.4
Industrial apprentices	21.8	21.4
Commercial apprentices	56.2	53.2
Students on "dual system" courses	32.1	31.4
Total management	10.2	9.8
University graduates recruited**	30.9	35.3

\* Excl. Scania, MAN and Porsche.

\*\* Volkswagen AG.

One of the Company's goals is to continue to increase the proportion of women from 15.7% across the Group, especially in management. In the reporting year, the proportion of women in management roles in the Volkswagen Group in Germany was

increased to 8.3% among senior management and 11.7% in management, while among top management the proportion rose from 4.8% in 2013 to 5.7% in the reporting year (situation at year end, excluding Scania, MAN and Porsche).

## ➤ APPRENTICES IN THE VOLKSWAGEN GROUP IN GERMANY

in %

2014	4.8
2013	4.8
2012	4.8
2011	4.8
2010	4.6

## ➤ LEVEL OF QUALIFICATIONS IN THE VOLKSWAGEN GROUP\*

in %

2014	20.2
2013	59.5
	17.5
	2.8
2013	21.1
	56.1
	19.8
	3.0

■ Higher education  
■ Secondary education  
■ Vocational education and training  
■ Other

\* Excl. Scania and MAN.  
From 2014 incl. MAN.

Due to its targeted recruitment measures, the Volkswagen Group employs a large proportion of well qualified employees. Some 97% of employees hold some form of qualification.

### › VOLKSWAGEN AG: AVERAGE AGE

	2014	2013	2012	2011	2010
Women	38.4	38.3	38.0	37.8	37.9
Men	43.6	43.7	43.4	43.1	43.2
<b>Total Volkswagen AG</b>	<b>42.8</b>	<b>42.9</b>	<b>42.6</b>	<b>42.3</b>	<b>42.4</b>

Since 2009, the average age at Volkswagen AG has been relatively constant, which is a sign of a healthy balance between recruit-

ment of employees on completion of their vocational education and training and retirement of long-serving employees.

### › VOLKSWAGEN AG: EMPLOYEE TURNOVER\*

in %

	2014	2013	2012	2011	2010
<b>Total</b>	<b>0.4</b>	<b>0.4</b>	<b>0.4</b>	<b>0.4</b>	<b>0.5</b>
Women	0.3	0.3	0.2	0.4	0.4
Men	0.4	0.4	0.4	0.4	0.5

\* Not incl. age-related turnover.

The employee turnover rate indicates the percentage of employees that leave the Company in the course of a year. As the chart shows,

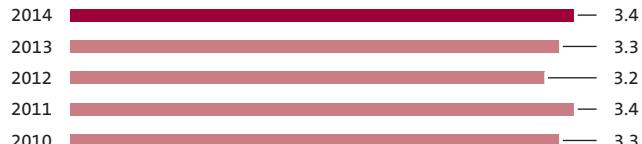
there is a very high level of stability in the Volkswagen workforce.

### › VOLKSWAGEN AG: AVERAGE PERIOD OF EMPLOYMENT



### › ABSENTEEISM – CUMULATIVE VALUES\*

in %



\* Production locations with over 1,000 employees, not incl. Scania, MAN, Ducati, Shanghai Volkswagen Powertrain and Volkswagen Automatic Transmission, from 2014 incl. Porsche.

Low absenteeism calls for increased availability of diagnostic and screening measures. Absenteeism is calculated using the formula: number of days lost to illness or accident multiplied by 100, divided by total possible days' attendance in the relevant period.

### › VOLKSWAGEN AG: PARENTAL LEAVE

	2014	2013	2012	2011	2010
Total	2,259	1,822	1,586	1,367	1,150
Women	601	537	472	406	351
Men	1,658	1,285	1,114	961	799

### › EMPLOYEE OPINION SURVEY IN THE VOLKSWAGEN GROUP

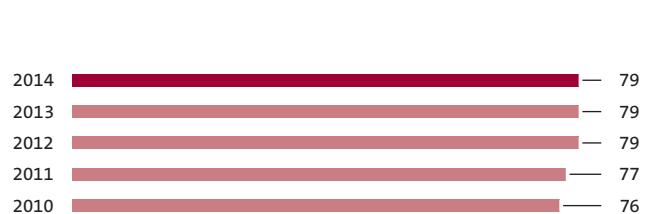
#### LEVEL OF PARTICIPATION ● ✓

in %



### › EMPLOYEE OPINION SURVEY IN THE VOLKSWAGEN GROUP

#### EMPLOYEE SATISFACTION INDEX ● ✓

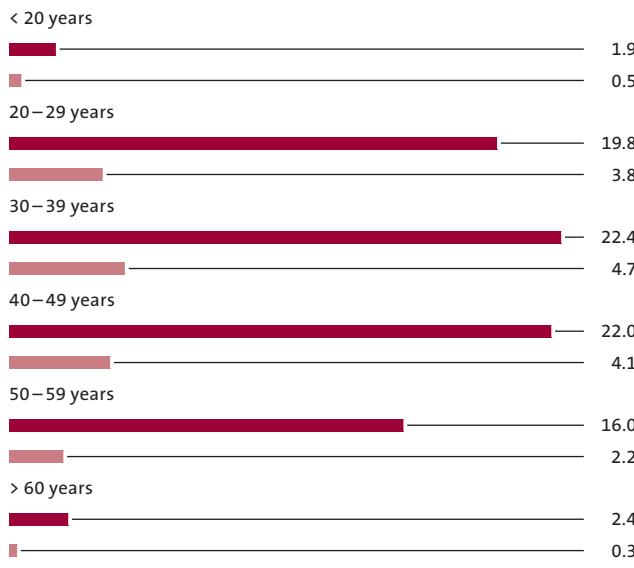


The annual employee opinion survey (“Stimmungsbarometer”), introduced in 2008, is an established standardized Group-wide tool designed to assess employee satisfaction, eliminate errors

and improve work processes. Its acceptance and level of participation are at a constant high level.

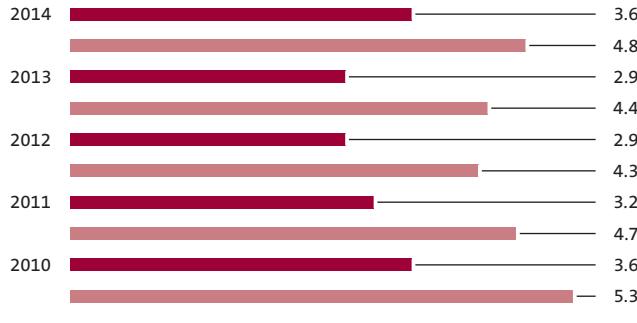
### › AGE STRUCTURE OF THE VOLKSWAGEN GROUP ●

in %

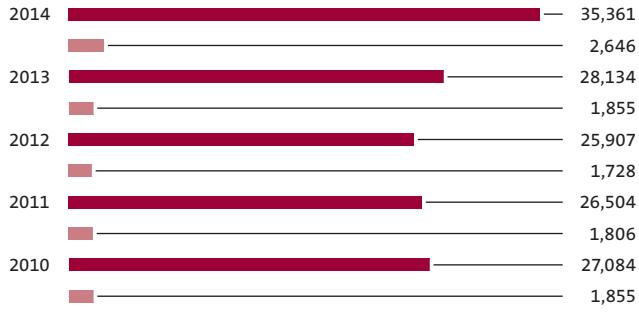


### › FOREIGN SERVICE EMPLOYEES WITHIN THE VOLKSWAGEN GROUP\*

\* From 2013 also including MAN, Scania, Porsche AG, Ducati and Porsche Holding.

› ACCIDENT INDEXES GROUP\* 

■ Accident frequency ■ Accident severity

› ACCIDENT SEVERITY GROUP\* 

■ Working days lost ■ Number of occupational accidents

\* Production locations not incl. Scania, from 2014 incl. MAN. In line with the harmonization of the data basis within the Group, calculation of the coverage rate of the Group's production locations for 2014 has been adjusted and extended. The coverage rate for accident indexes for the year is 69.1%.

The accident frequency index is an indication of the frequency with which accidents at work occurred in relation to the total number of hours worked. The formula for calculating the index is: number of occupational accidents, multiplied by 1 million, divided by the number of hours worked.

The accident severity index indicates how serious the accidents are by relating the total number of working days lost to the number of hours worked. The formula for calculating the index is: number of working days lost, multiplied by 1 million, divided by the number of hours worked multiplied by ten.

The number of occupational accidents, the accident frequency index and the accident severity index have risen in the Volkswagen Group. This is primarily due to the integration of a new company into the Group.

The greatest improvements in accident frequency were achieved at Volkswagen do Brasil (Anchieta, Curitiba, Taubaté) and SEAT (Barcelona, Martorell).

In 2014, one employee of the Volkswagen Group died as a result of an occupational accident.

› APPRENTICES WITHIN THE VOLKSWAGEN GROUP 

December 2014	Total	Germany	International
Volkswagen Passenger Cars	6,692	5,390	1,302
Audi	2,647	2,521	126
ŠKODA	889	6	883
Porsche	632	611	21
SEAT	168	0	168
Bentley	95	0	95
Others	2,153	1,152	1,001
<b>Automotive Division</b>	<b>13,276</b>	<b>9,680</b>	<b>3,596</b>
MAN	3,312	2,341	971
Scania	702	0	702
Volkswagen Commercial Vehicles	993	736	257
<b>Commercial Vehicles/Power Engineering Division</b>	<b>5,007</b>	<b>3,077</b>	<b>1,930</b>
Financial Services Division	176	147	29
<b>Group</b>	<b>18,459</b>	<b>12,904</b>	<b>5,555</b>

## ENVIRONMENTAL INDICATORS

This chapter presents selected environmental data for the Volkswagen Group in aggregated form. The data are collected, checked and approved at the production locations in line with an internal standard (VW standard 98 000). In order to improve the accuracy and consistency of the resultant information, the collection of environmentally relevant consumption and emission data is subject to a continuous improvement process. This applies in particular to those items of information which have to be recorded with the assistance of specific calculation algorithms. Moreover, the values for December of the preceding year may include some estimated data, for example if they are based on bills from power suppliers or waste disposal providers which were not yet available at the time of compilation. In the next data collection round, these estimated data are then replaced with the values for December which have become available in the meantime.

In a similar way to corporate environmental strategy monitoring, the reported time series are relative to the 2010 baseline. The current reporting year and the corresponding preceding year complete the reporting period.

Overall, the environmental data are collected from production locations with some 550,000 employees (as at December 31, 2014), which equates to a proportion of around 97 percent. In addition, the production locations in Ningbo (Shanghai-Volkswagen Automotive Company Ltd.), Foshan (FAW-Volkswagen Automotive Company Ltd.) and Foshan (Volkswagen FAW Platform Company Ltd.) were included in the data collection for 2014.

The data in the “car and light commercial vehicle” category for the years 2010, 2013 and 2014 are recorded as in the Volkswagen Group’s Annual Report. The data for the brands Scania AB, MAN SE, Ducati Motor Holding S.p.A. and VW Kraftwerk GmbH are reported in the “Other divisions” category.

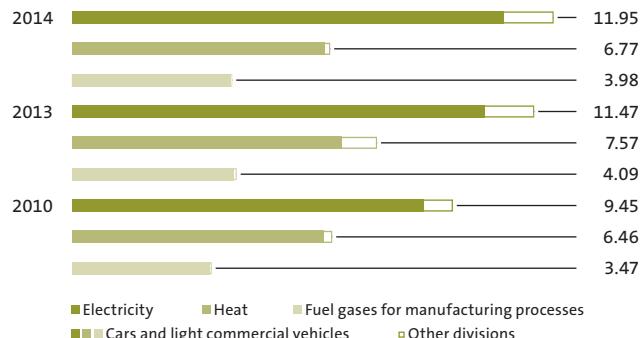
The respective proportions are indicated separately in the graphs. Unless indicated otherwise, all the Group’s production locations and the power stations and boiler plants operated by Volkswagen AG at the Wolfsburg, Kassel and Hanover locations in Germany are included in both categories. The Volkswagen Group is essentially an automotive manufacturer which produces cars and light commercial vehicles as well as heavy-duty commercial vehicles and buses. MAN SE does, however, also manufacture marine engines or power station components. Due to this product diversity, the entirety of the environmental impact cannot simply be related to the volume of vehicles produced. Relative indicators are thus only stated for the “car and light commercial vehicle” category. The number of vehicles produced in 2014 totaled 10,014,282 cars and light commercial vehicles, as well as 198,280 heavy-duty commercial vehicles.

The influence of increasing production volumes is reflected in an increase in absolute values for many indicators. However, thanks to increased efficiency, an improvement in specific values has been achieved for many indicators. A high level of capacity utilization of the production locations has also had a positive impact on specific indicators.

Weather conditions have an appreciable, but uncontrollable, impact on consumption of resources. This primarily relates to space heating demand, both for production for non-production sectors, since changing annual average temperatures have an impact on direct consumption of energy sources as well as on the amount of purchased energy. Various aspects thus exert an influence on the specific values. On the one hand, absolute consumption or emission values may change, while on the other hand rising or falling production volumes at the individual production locations also influence the indicators.

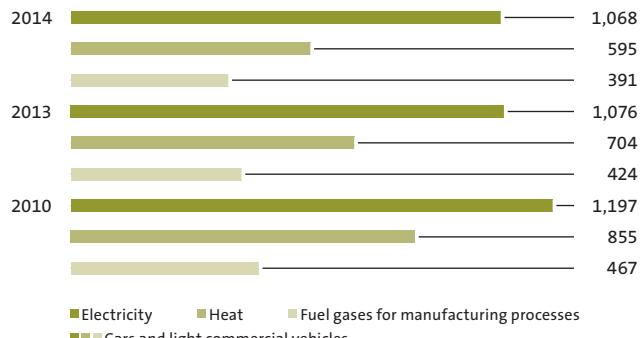
### › ENERGY CONSUMPTION\* ● ✓

in million MWh/year



### › ENERGY CONSUMPTION\* ● ✓

in kWh/vehicle



\* Group production sites

\* Group production sites

Over the reporting period shown, a continuous reduction in specific energy consumption per vehicle was achieved. As a result of higher production volumes, absolute energy consumption rose, but with a slight decline in the rate of increase compared to the previous year.

The proportion of electrical energy has risen continuously over the reporting period, but measures to increase efficiency reduced the proportion per vehicle produced. Heat consumption is subdivided into heating demand for heating production and non-production sectors, and heating demand for industrial processes. Since space heating accounts for the greater proportion of total heating demand, weather conditions have a major impact on trends in overall heating demand.

Accordingly, 2014's above-average temperatures had a positive influence on heat consumption.

In addition to this influence, measures to increase efficiency reduced the specific value per vehicle.

Fuel gases for production processes are mainly used for industrial processes during production. For example, they are used as combustion fuels for operating industrial afterburning facilities in paintshops or in annealing furnaces in component manufacture. Consumption of these fuel gases thus increases with rising production volumes. Thanks to implementation of the Group's resource conservation strategy, fuel gas consumption figures relative to production volume have been reduced.

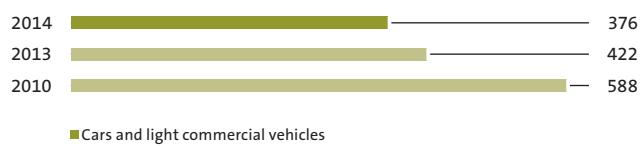
### › DIRECT CO<sub>2</sub>-EMISSIONS SCOPE 1\* ● ✓

in million tonnes/year



### › DIRECT CO<sub>2</sub>-EMISSIONS SCOPE 1\* ● ✓

in kg/vehicle



\* Group production sites

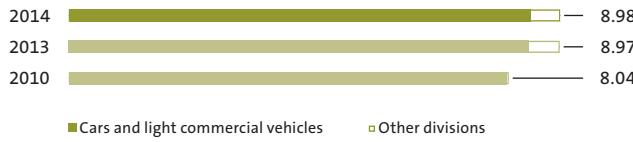
\* Group production sites

Despite increased production volumes and the inclusion of new production locations, with a consequent increase in energy consumption, direct CO<sub>2</sub> emissions have been falling since 2010. Direct CO<sub>2</sub> emissions are associated with the combustion of fossil energy sources. A positive trend in CO<sub>2</sub> emission factors

from in-house energy supplies has a positive impact on the trend in direct emissions of CO<sub>2</sub>. Resource-optimized manufacturing processes have also played a part in this positive trend in direct CO<sub>2</sub> emissions.

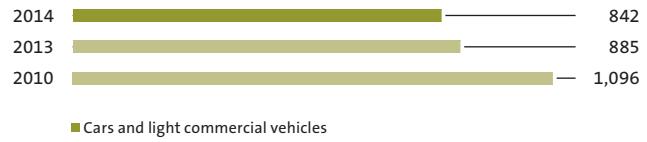
### ➤ CO<sub>2</sub>-EMISSIONS (SCOPES 1 & 2)\* ● ✓

in million tonnes/year



### ➤ CO<sub>2</sub>-EMISSIONS (SCOPES 1 & 2)\* ● ✓

in kg/vehicle



\* Group production sites

\* Group production sites

Total CO<sub>2</sub> emissions have risen due to increased consumption of electrical energy, heat and fuel gases for production. The rise in total CO<sub>2</sub> emissions is, however, limited due to increased use of renewably generated energy and the associated improvement in CO<sub>2</sub> emission factors.

By using suitable CO<sub>2</sub> emission factors to evaluate energy and heat consumption figures for production locations, the CO<sub>2</sub> emissions arising from power and heat generation for Volkswagen AG's production locations in power stations and boiler plants operated by Volkswagen AG are included in the total volume of CO<sub>2</sub> emissions.

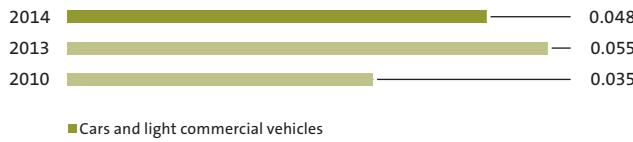
The stated carbon dioxide emissions do not include the emissions arising from district heating and power supplied to third parties from power stations operated by Volkswagen AG. For 2014, these emissions amounted to 297,371 tonnes of carbon dioxide.

A continuous reduction in CO<sub>2</sub> emissions per vehicle produced was achieved over the stated reporting period.

The "Other divisions" category also includes CO<sub>2</sub> emissions from the manufacture of heavy-duty commercial vehicles, which account for around 75 percent of total CO<sub>2</sub> emissions in this category.

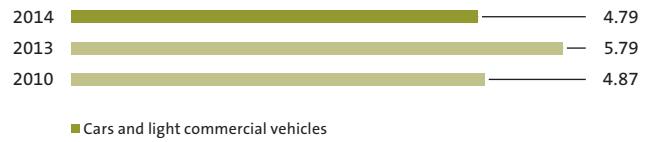
### ➤ CO<sub>2</sub> EQUIVALENTS\*

in million tonnes/year



### ➤ CO<sub>2</sub> EQUIVALENTS\*

in kg/vehicle



\* Group production locations

\* Group production locations

CO<sub>2</sub> equivalents are calculated on the basis of the specific global warming potentials of individual, emitted refrigerants. Since such emissions do not occur continuously and are not dependent

on a location's production volume, relatively large fluctuations may arise over a time series.

## › GROUP GHG EMISSIONS (SCOPE 3) (CARS AND LIGHT COMMERCIAL VEHICLES)

No.	Category	2014 <sup>2</sup>		2013 <sup>2</sup>	
		tonnes CO <sub>2</sub>	%	tonnes CO <sub>2</sub>	%
1	Purchased goods and services ✓	58,561,828	17.8	56,435,510	17.6
2	Capital goods	10,994,208	3.3	10,018,369	3.1
3	Fuel/energy	1,305,944	0.4	1,338,497	0.4
4	Upstream transportation and distribution (U <sup>3</sup> )	3,277,617 <sup>1</sup>	1.0	3,277,617	1.0
5	Waste generated in operations	1,968,941	0.6	1,943,160	0.6
6	Business travel	639,993	0.2	618,624	0.2
7	Employee commuting	912,283	0.3	881,823	0.3
8	Upstream leased assets (U <sup>3</sup> )	Not reported	0.0	Not reported	0.0
9	Downstream transportation and distribution (D <sup>4</sup> )	Not reported	0.0	Not reported	0.0
10	Processing of sold products	12,994	0.004	6,926	0.002
11	Use phase (150,000 km) <sup>5</sup> ✓	247,176,955	75.2	243,015,544	75.6
12	End-of-life treatment	1,748,899	0.5	1,375,646	0.4
13	Downstream leased assets (D <sup>4</sup> )	731,813	0.2	746,532	0.2
14	Franchises	1,550,000	0.5	1,550,000	0.5
15	Investments	Not reported	0.0	Not reported	0.0
<b>Total of reported Scope 3 emissions<sup>2</sup></b>		<b>328,881,475</b>	<b>100</b>	<b>321,208,248</b>	<b>100</b>

<sup>1</sup> Value given in the 2014 CDP Report – the value for 2014 is destined for the 2015 CDP Report.<sup>2</sup> Individual figures are rounded. This can lead to minor discrepancies in the sum total.<sup>3</sup> Upstream.<sup>4</sup> Downstream.<sup>5</sup> Well-to-wheel.

In line with the Scope 3 standard published in 2011 by the World Business Council for Sustainable Development and the World Resources Institute, Volkswagen reports CO<sub>2</sub> emissions for twelve out of a total of 15 Scope 3 categories. The calculations have revealed that the “purchased goods and services” and “use phase” emission categories account for more than 93% of all Scope 3 emissions. CO<sub>2</sub> emissions in the use phase are calculated on the

basis of a Group fleet value representing the global vehicle population in the four major regions (EU28, USA, Brazil and China). In view of the preponderance of these two categories, the relevant data were the subject of separate audits by external auditors from PricewaterhouseCoopers in compliance with audit standard ISAE 3000 “International Standard on Assurance Engagements”.

› CO<sub>2</sub>-EMISSIONS OF THE VOLKSWAGEN GROUP'S EUROPEAN (EU 28) NEW PASSENGER CAR FLEET

ing/km

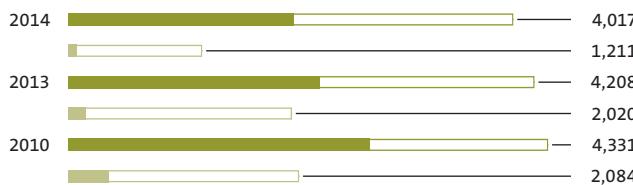


\* Subject to official publication by the European Commission.

The ruling for 2014 was that 80% of the new car fleet must not exceed the prescribed level of 130 g CO<sub>2</sub>/km.In the reporting year, this value for the Volkswagen Group was 115 g CO<sub>2</sub>/km.

**➤ DIRECT NO<sub>x</sub> AND SO<sub>2</sub> EMISSIONS\***

in tonnes/year

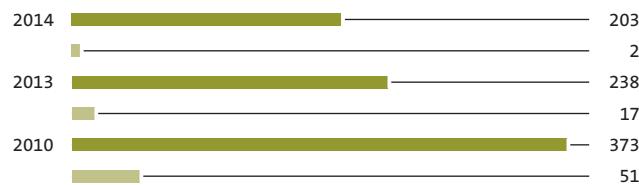


■ Cars and light commercial vehicles: nitrogen oxides (NO<sub>x</sub> as NO<sub>2</sub>)  
 ■ Cars and light commercial vehicles: sulfur dioxide (SO<sub>2</sub>)  
 □ Other divisions

\* Group production sites

**➤ DIRECT NO<sub>x</sub> AND SO<sub>2</sub> EMISSIONS\***

in g/vehicle



■ Cars and light commercial vehicles: nitrogen oxides (NO<sub>x</sub> as NO<sub>2</sub>)  
 ■ Cars and light commercial vehicles: sulfur dioxide (SO<sub>2</sub>)

\* Group production sites

There was a clear decline in NO<sub>x</sub> emissions in the 2010 to 2014 period.

The sharp decline in direct sulfur dioxide emissions in 2014 is the result of changes in ownership of a power generation plant.

**➤ VOC EMISSIONS\***

in tonnes/year



■ Cars and light commercial vehicles    □ Other divisions

\* Group production sites

**➤ VOC EMISSIONS\***

in kg/vehicle



■ Cars and light commercial vehicles

\* Group production sites

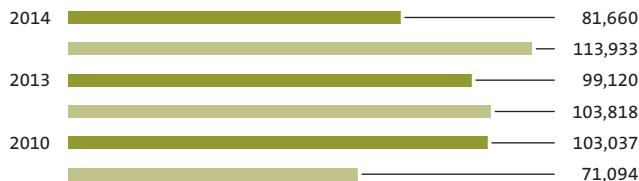
Coating processes account for the majority of VOC emissions. Modern paintshops use coating and process materials which contain less solvents. In addition, steps are taken during the coating process to collect or eliminate any solvents which are emitted. This is achieved, for example, by thermal afterburning of the exhaust air from the dryers, which are downstream of the actual coating process. Emissions into the environment are determined on the basis of both instrumental measurements and calculations.

The complexity of the overall coating process and new insights into determination methods may result in adjustments being made to previously determined emission values. The result is, however, always a higher degree of accuracy of the recorded environmental data.

Increased vehicle production volumes and an increase in the associated coating operations resulted in a slight rise in absolute VOC emissions over the entire reporting period. Due to the influencing factors described above, emissions per vehicle produced fell over the reporting period.

» WASTE FOR DISPOSAL<sup>1, 2</sup>

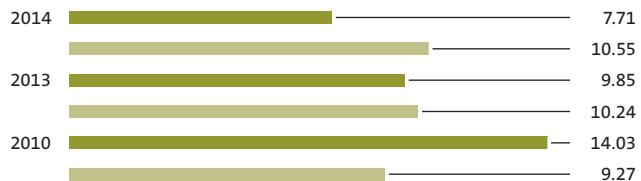
in tonnes/year



- Cars and light commercial vehicles and other divisions: non-hazardous waste for disposal
- Cars and light commercial vehicles and other divisions: hazardous waste for disposal

» WASTE FOR DISPOSAL<sup>2</sup>

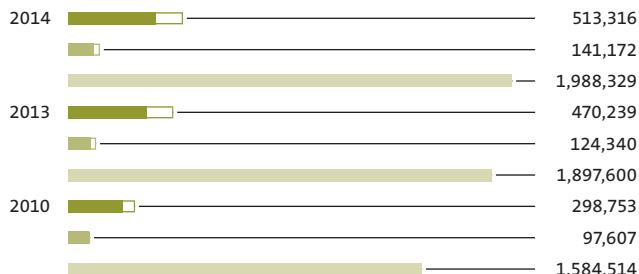
in kg/vehicle



- Cars and light commercial vehicles: non-hazardous waste for disposal
- Cars and light commercial vehicles: hazardous waste for disposal

» WASTE FOR RECYCLING<sup>1, 2</sup>

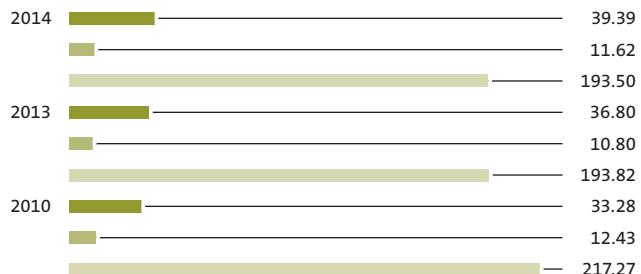
in tonnes/year



- Cars and light commercial vehicles: non-hazardous waste for recycling
- Cars and light commercial vehicles: hazardous waste for recycling
- Cars and light commercial vehicles: metallic waste
- Other divisions

» WASTE FOR RECYCLING<sup>2</sup>

in kg/vehicle



- Cars and light commercial vehicles: non-hazardous waste for recycling
- Cars and light commercial vehicles: hazardous waste for recycling
- Cars and light commercial vehicles: metallic waste

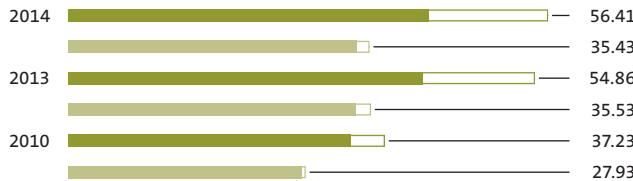
<sup>1</sup> In the bars showing "Non-hazardous waste for recycling", as well as "Hazardous waste for recycling" and "Metallic waste", the share accounted for by other Group divisions is shown. This is not depicted separately for the other fractions, however, on account of the low proportions.

<sup>2</sup> Group production sites

As a result of higher production volumes over the reporting period, larger volumes of hazardous and non-hazardous waste were also generated, while the proportion of waste for disposal has been reduced from around 31% in 2010 to around 23% in 2014. In contrast, the proportion of waste for recycling has been increased from around 69% in 2010 to around 77% in 2014. The increase in the proportion of recycled waste is also the result of the Group's waste strategy, the first stage of which targets higher recycling rates. The second stage of this strategy is in the in-

troductory phase and targets the reduction of total volumes of hazardous and non-hazardous waste per vehicle.

The absolute quantity of metallic "waste", which in the light of its high recycling rate can be considered to be a valuable material, has increased in absolute terms over the reporting period as a whole due to increased production volumes across the Group. The volume of metallic waste per vehicle, however, has been reduced by improvements in material utilization and resource-optimized manufacturing processes.

**FRESHWATER ✓ AND WASTEWATER\***in million m<sup>3</sup>/year

■ Cars and light commercial vehicles: freshwater volume  
 ■ Cars and light commercial vehicles: wastewater volume □ Other divisions

**FRESHWATER ✓ AND WASTEWATER\***in m<sup>3</sup>/vehicle

■ Cars and light commercial vehicles: freshwater volume  
 ■ Cars and light commercial vehicles: wastewater volume

\* Group production sites

\* Group production sites

Given the increase in production volumes of cars and light commercial vehicles, consumption of freshwater has also risen continuously over the last five years. The construction of new locations has made a major contribution to the increase in consumption over this period. Despite the increased number of Group locations, freshwater consumption per vehicle has been reduced by around 6.8% over the reporting period. This has been achieved by numerous recycling measures including reuse of used water in coating processes.

Wastewater volumes show a similar trend to freshwater. Thanks to the introduction of increasing numbers of waterless manufacturing processes and water recycling, wastewater volumes per car and light commercial vehicle produced have been reduced by around 10.1% over the reporting period. For instance, purified wastewater from an evaporator is reused for cleaning workshop floors.

**CHEMICAL OXYGEN DEMAND (COD)\***

in tonnes/year



■ Cars and light commercial vehicles

**CHEMICAL OXYGEN DEMAND (COD)\***

in g/vehicle



■ Cars and light commercial vehicles

\* Group production sites

\* Group production sites

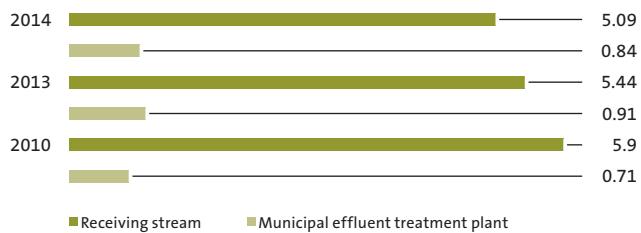
Due to increased production across the Group, there was a rise in the wastewater parameter chemical oxygen demand, both in absolute terms and per vehicle produced. This parameter is an indicator of the level of contamination of wastewater.

Depending on where wastewater is purified, a distinction is drawn between locations which, as indirect dischargers, discharge

wastewater into municipal sewers for further purification, and those locations which, as direct dischargers, carry out wastewater treatment in-house and discharge the purified wastewater directly into a body of water. In 2014, indirectly discharging locations accounted for 92% (2010: 91%; 2013: 92%) of the Group's total wastewater volumes (excluding MAN SE and Scania AB).

### › WASTEWATER DISCHARGES

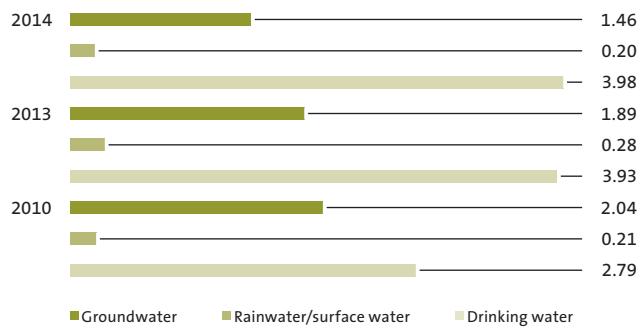
*in million m<sup>3</sup>/year*



Figures for sites of Volkswagen AG, Volkswagen Sachsen GmbH, Volkswagen Osnabrück GmbH (since 2012) and Volkswagen Hannover GmbH.

### › WATER WITHDRAWAL BY SOURCE

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



Figures for sites of Volkswagen AG, Volkswagen Sachsen GmbH, Volkswagen Osnabrück GmbH (since 2012) and Volkswagen Hannover GmbH.

### › ENVIRONMENTAL PROTECTION COSTS\*

*in € million/year*



\* German production sites Volkswagen AG.

### › ENVIRONMENTAL PROTECTION COSTS\*

*in €/vehicle*



\* German production sites Volkswagen AG.

The environmental protection costs of Volkswagen AG's German locations are shown above.

Both capital and operating costs for environmental protection have risen over the reporting period. This is also reflected in the specific environmental costs per manufactured vehicle.

Volkswagen breaks down expenditure for environmental protection measures in "Capital expenditure and operating costs for production-related environmental protection". Of total capital expenditure, only those items which are solely or predominantly dedicated to environmental protection are counted as capital expenditure for environmental protection. A distinction is drawn between additive and integrated capital expenditure. Additive environmental protection measures are separate plants isolated from the remainder of the production process. They may be locat-

ed upstream or downstream of the manufacturing process. In contrast to additive environmental protection facilities, in integrated measures the environmental impact is mitigated while the product is being produced. The focus of environmental protection in 2014 was on water quality management.

The indicated operating costs solely concern production-related environmental protection measures which help to conserve the "environment" as a protected resource from harmful impact by avoiding, reducing or eliminating emissions from the Company's activities. Operating costs include, for example, expenditure for the operation of plant and equipment that serves to protect the environment, as well as expenditure for measures not related to plant and equipment. The priorities in 2014 were water quality management, waste management and air pollution control.

**> VOLKSWAGEN GROUP GERMANY PARTICULATE EMISSIONS  
(TOTAL DUST)**

*in tonnes/year*



**> VOLKSWAGEN GROUP GERMANY PARTICULATE EMISSIONS  
(TOTAL DUST)**

*in kg/vehicle*



The development of particulate emissions in the passenger car and light commercial vehicle category at the Group's production locations in Germany is related not least to the increase in unit out-

put. In addition, at one production location temporary above-average emission values were determined which have since been reduced by means of appropriate measures.

**> PLANTS IN THE VICINITY OF PROTECTED SITES**

Plants	Distance (km)	Area* (ha)	Plants	Distance (km)	Area* (ha)
Braunschweig (D): Oker	0.8	53	Poznań, Logistics (PL): Dolina Cybiny	2.7	30
Chemnitz (D): Zwönitz	2.5	21.3	Poznań, Foundry (PL): Fortyfikacje-w-Poznańiu	6.7	40
Dresden (D): Mühlberg	1	8.3	Poznań, Production (PL): Dolina Cybiny	0.6	40
Ehra-Lessien (D): Vogelmoor	3.9		Mlada Boleslav, Production (CZ): Radouci	1.2	212
Emden (D)	0.9	400	Vrachlabí, Production (CZ): Krkonose	1.1	23
Hanover (D): Leine	0.75	118	Kvasiny, Production (CZ): Uh inov-Benátky	5	42
Ingolstadt (D): Übungsplatz	3.8	200	Martin, Components (SK): Malá Fatra	< 5	12.4
Kassel (D): Fuldatale	1.6	280	Bratislava, Production (SK): Moravy	< 2	178
Leipzig (D): Tannenwald, Strohgäu	0	20	Palmela, Production (POR): Arrabida	3.5	24.5
Neckarsulm (D): Jagst, Kocher	0.1	95	Barcelona, Production (ES): Llobregat	3.6	39.3
Osnabrück (D): Mausohr, Belm	5.45	36.1	Martorell, FE, Production (ES): Llobregat	0.85	800
Salzgitter (D): Heerter See	7.5	280	Pamplona, Production (ES): Pena de Etxauri	15	163
Stuttgart (D): Max-Eyth-See	0.75	28.8	Prat, Components (ES): Llobregat	0.7	15.5
Weißbach (D): Enztal, Stuttgarter Bucht	0.05	84.9	Brussels, Production (B): Verrewinkel-Kinsendael	3	44
Wolfsburg (D): Barnbruch	0.2	800	Györ, Components (HU): Göny i homokvidék	< 1	30
Zwickau (D): Zwickauer Muldetal	0.1	180	Crewe (UK): West Midlands Moor	5.7	
			Polkovice, Components (PL): Jelonek	7.9	
			Polkovice, Sitech (PL): Jelonek	3.2	

\* Area = surface area of the production site.

The locations stated here are the Volkswagen brand's production locations in Germany and the rest of Europe which are located in the vicinity of protected sites pursuant to Council Directive

92/43/EEC of May 21, 1992 on the conservation of natural habitats and of wild fauna and flora (The Habitats Directive).

## GOALS AND ACTIONS

The goals set out below relate primarily to the Volkswagen Group. Along with those related to Group-wide sustainability management, the goals are aligned with the three dimensions of Economy, People and Environment. In addition, the main brands and companies within the Volkswagen Group have set up detailed sustainability goals of their own which are aligned with the Group's corporate goals.

### » STRATEGY & COORDINATION

Action areas	Goals and actions	Deadline	2014 implementation
Management	Ensure similar management of sustainability in the Group and in the brands and companies	2015	Management structure introduced at Volkswagen Commercial Vehicles
Transparency	Establish IT-based sustainability management system at Group, brand and company level	2016	Group-wide provision of data for the Sustainability Report 2014
	Group Sustainability Reporting Guideline	2014	Drawn up and signed off by the Corporate CSR & Sustainability Steering Group
Stakeholder dialogue	Establish IT-based stakeholder management system at Group, brand and company level	2016	Definition of criteria and indicators for the Stakeholder Relationship Management System

### » ECONOMY

Action areas	Goals and actions	Deadline	2014 implementation
Customer satisfaction	Top customer satisfaction with product, dealer and last workshop visit in the core markets	2018	Overall satisfaction: all Group brands with top scores in overall evaluation in core markets EU5, China, USA and Brazil Product satisfaction: all Group brands in first place in comparison with competitors in EU5 markets Dealer satisfaction: In China, ŠKODA dealers have the most satisfied customers across the market, closely followed by the Volkswagen and Audi brands Service: Group brands particularly impressive in EU5: Audi, ŠKODA and SEAT generate the highest satisfaction scores for workshop service in comparison with competitors
Quality	Strengthen innovation and technology leadership	2019	2015–2019 investment program: €85.6 billion earmarked for intelligent innovations and technologies

Action areas	Goals and actions	Deadline	2014 implementation
Stability & profitability	Return on sales before tax for the Group >8% “Future Tracks” efficiency and future initiative	2018 ongoing	7.3% 2015-2020: savings of €10 billion
Compliance, risk management, governance	Strengthen networking of compliance organization and activities  Firmly embed compliance culture and improve awareness of relevant compliance values and principles in the workforce  Continuous optimization of Compliance Management System (CMS)  Ongoing optimization of integrity checking of business partners (Business Partner Check)  Carry out and enhance Group-wide compliance training for various target groups  Operate and further develop risk management and internal control system (RMS/ICS) in operating business units  Standardize and further develop risk management methods and processes to safeguard the future viability of the Volkswagen Group	ongoing	All Group brands involved in exchange of experience in Governance, Risk & Compliance (GRC) in Braunschweig; regional network meetings and GRC wiki as information and exchange platform for GRC organization  Information supplied to specific target groups via different media in various brands and companies  Further development of CMS taking account of international legislation and internal Group benchmarks  Further development and roll-out in new companies  Risk-based approach in classroom and online training courses  Operating business units advised during ongoing implementation of RMC/ICS guideline  GRC IT system further developed to ensure consistent and standardized recording of risks; good practices for typical risks, appropriate risk control measures and suitable monitoring schemes for selected risk areas developed
Supplier relations	Integrate sustainability requirements into contracts between the Group and its suppliers  Extend E-Learning tool and sustainability questionnaire  Perform in-depth sustainability audits  Provide supplier qualification on sustainability	2014 ongoing ongoing ongoing	Sustainability requirements contractually integrated into the procurement process  In terms of procurement expenditures 71% coverage for E-Learning tool and 87% for sustainability questionnaire; planned increase of coverage to 73% for E-Learning and 89% for sustainability questionnaire in 2015  10 audits carried out over the reporting period. Extension to 30 audits planned in 2015  Qualification of more than 900 suppliers on the subject of sustainability
Vehicle safety	Vision Zero: develop innovative driver assistance systems with the goal of accident-free mobility	ongoing	Traffic Jam Assist introduced in the Passat*

## › PEOPLE

Action areas	Goals and actions	Deadline	2014 implementation
Attractive Employer	Top employer in the automotive sector	2018	Our aim is to become the most attractive employer in the automotive sector. We aim to achieve long-term success through the excellent performance of a top team of almost 600,000 employees. In 2014 we attained leading positions in several different employer rankings.
Qualification	Provide excellent qualification within all the "Berufsfamilien" (professional families)	ongoing	90% of the 36 Berufsfamilien at Volkswagen have already introduced their own specific qualification programs, while preparations have been made at the remaining 10%. Qualification is coordinated by a current total of 13 Berufsfamilien Academies. These are grouped under the umbrella of the Volkswagen Group Academy, whose aim is to leverage synergies and ensure an outstanding level of employee qualification across the Group.
	Strengthen dual vocational education and training internationally. Introduce personnel development in leadership and management to same standards worldwide	2018	More than three-quarters of all apprentices at the Volkswagen Group learn their profession in line with the principle of dual vocational education and training. In 2014, 432 Volkswagen Group employees worldwide completed the group leader qualification (Meister-Basis-Qualifizierung). Uniform standards for personnel development processes for future supervisors and managers within the Group were agreed for the Volkswagen, Audi, MAN, SEAT, ŠKODA and Porsche brands at the beginning of 2014.
Participation	Enhance performance and ensure all employees share in success: establish three-part pay system with basic pay, performance-related component and entitlement to profit-sharing as Group standard	ongoing	In 2014, employees at more than 30 Group locations benefited from profit-sharing, including those at Volkswagen locations in Spain, Poland, Russia, Mexico and China.
Health	Promote health, fitness and ergonomics: extension of the Checkup and follow-up screening and training programs	ongoing	The Checkup is now established at all German and many international sites. For example, over 18,000 Checkups were carried out at ŠKODA AUTO a.s. in the Czech Republic in 2014.
	Promote health, fitness and ergonomics: continuous improvement of preventive health measures and training provision	ongoing	The "Fit in the Factory" program aims to reduce physical stresses and strains for those working on the shop floor. Between May 2013 and June 2014, some 15,700 employees completed one of these programs at Volkswagen in Wolfsburg.
Occupational Safety	Improve Group occupational safety management system at all production locations	ongoing	An audit of the Group occupational safety management system was carried out successfully during 2014 at the following locations: São Carlos (Brazil), Curitiba (Brazil), Pamplona (Spain) and Pacheco (Argentina).
Diversity and Equal Opportunities	Increase the proportion of women at all levels of management: 30% at all levels of management in the Volkswagen Group in Germany; female graduates to account for 30% of graduate recruitment in the Volkswagen Group in Germany	ongoing	In 2014 around 30% of graduate recruits at Volkswagen AG were female. In the medium to long term this will lead to an increase in the proportion of women in management roles with the Volkswagen Group in Germany. In 2014, for example, the proportion of women in management within the Volkswagen Group in Germany rose from 9.8% in 2013 to 10.2%.
Social Responsibility	Introduce Group-wide analysis of the effectiveness of Corporate Citizenship activities and incorporate into sustainability management system	2015	Criteria-based IT analysis of CSR projects.
	Introduce guidelines for developing and carrying out CSR projects at the Group, brand and company level	2015	Group platform for the exchange of best-practice projects.
	Foster volunteering by Volkswagen Group employees	ongoing	The Volkswagen pro Ehrenamt office supports all Group companies in providing strategic support for employee volunteering. A volunteer database provides effective assistance in matching supply and demand, as well as providing information. By the end of 2014, 2,034 employees had been successfully placed in volunteer roles.

## › ENVIRONMENT

Action areas	Goals and actions	Deadline	2014 implementation
Climate and environmental protection	Implement Group environmental strategy	ongoing	Activities in target areas continued; key focus on water adopted
	Review brand environmental strategies	2015	"Bentley Environmental Factory"
	Establish biodiversity management: analysis of the impacts of business activity, inclusion in environmental management system, cooperation with environmental associations and suppliers, reporting and communications	ongoing	Anchored in environmental management; continuous updating of location reports; participation in expert dialogue on development of indicators and impact assessment, dialogue with suppliers; cooperative projects
Environmentally friendly products/electrification	Cut European new car fleet CO <sub>2</sub> emissions by around 30% to 120 g CO <sub>2</sub> /km over the period 2006 to 2015	2015	EU fleet CO <sub>2</sub> emissions in 2014: 126 g
	Cut European new car fleet CO <sub>2</sub> emissions to 95 g CO <sub>2</sub> /km	2020	EU fleet CO <sub>2</sub> emissions in 2014: 126 g
	Win top places in selected product rankings, ratings and awards	ongoing	eco-up! <sup>*</sup> , Citygo CNG <sup>*</sup> and Mii Ecofuel <sup>*</sup> win 2nd place in VCD "Cars and the Environment" table (Top Ten 2014/15), 4th place for Audi A3 Sportback g-tron <sup>*</sup> ; e-Golf <sup>*</sup> winner of eCarTec award 2014; Volkswagen Group natural gas vehicles win top five places in 2014 VCS "Cars and the Environment" table
	Every new model generation to be 10-15% more fuel-efficient than its predecessor	ongoing	Systematic implementation of Group Environmental Principles Product, latest proof: Passat B8 approx. 20%
	Extend availability of alternative powertrain systems as an integral part of the CO <sub>2</sub> mitigation strategy	ongoing	Market launch of new CNG models, plug-in hybrids and electric vehicles; see pages 96–99 for details
	Be the market leader in electric mobility	2018	e-up! <sup>*</sup> , e-Golf <sup>*</sup> and Golf GTE <sup>*</sup> in series production, Passat plug-in hybrid <sup>*</sup> (from 2015) Porsche: Panamera S E-Hybrid <sup>*</sup> , 918 Spyder, Cayenne S E-Hybrid <sup>*</sup>
	Be consumption leader in each vehicle class (Volkswagen brand)	ongoing	85 models below 100 g; new in 2014: the Polo TSI BlueMotion <sup>*</sup> , with the lowest fuel consumption in its class
Intelligent mobility and networking	Extend range of available products and services	ongoing	Market launch of Supplementary Mobility Card for Volkswagen electric-mobility customers; CarNet extended; "Think Blue. Share a Volkswagen" and Mobility Card pilot projects feature in Lower Saxony electric mobility showcase and "VRent" in China
	Forecast and analyze mobility trends, derive challenges and approaches for future mobility	ongoing	Presented and discussed in internal Group and brand Steering Groups and in stakeholder dialogue
	Carry out or participate in research projects	ongoing	Sustainable Mobility 2.0 project (WBCSD); INEES project: smart grid connection of electric vehicles, funded by German Federal Ministry for the Environment; URBAN project: improving traffic flow at junctions, funded by German Federal Ministry for Economic Affairs & Energy; Urban Mobility 2030 film published and discussed at numerous events; Audi Urban Future Award 2014 presented
Resource conservation across the life cycle	Reduce energy and water consumption, waste and emissions per unit produced across the Group by 25% (baseline: 2010)	2018	19.3% reduction achieved by 2014 (cars and light commercial vehicles)
	Reduce greenhouse gas emissions from energy supplies to production in Germany by 40% by 2020 (baseline: 2010)	2020	Braunschweig: new CHP plant came on stream (~30,000 t CO <sub>2</sub> /year); Emden: new wind park in factory grounds came on stream
	Every new model generation to demonstrate better environmental properties over the full life cycle than its predecessor	ongoing	Group Environmental Strategy and Group Environmental Principles Product implemented consistently, as demonstrated in 2014 not least by Environmental Commendations for e-Golf <sup>*</sup> and Passat <sup>*</sup>
	Increase efficiency at Volkswagen dealerships in Germany by reducing CO <sub>2</sub> emissions by 25% by 2020 (baseline: 2014)	2020	Advised Volkswagen dealerships by successively providing customized quotations; some 160 dealerships advised to date, 175 more planned for 2015

## GRI INDEX

The present sustainability report takes account of the fourth edition (G4) of the reporting guidelines of the Global Reporting Initiative (GRI) in line with the “Comprehensive” option. At the same time, we set out how we implement the requirements of the United Nations Global Compact (UN GC) and of the German Sustainability Code (GSC). A full overview of the GRI Index is available on the microsite. ☈ 4



Disclosure of G4 Indicators		Reference	Omissions	UN GC	GSC	Assurance
<b>Strategy and Analysis</b>						
G4-1	Statement from the most senior decision-maker	12–13		1	–	
G4-2	Key impacts, risks, and opportunities concerning sustainability	14–15, 18, 22–23, 86–87, 134–137		2	15, 18	
<b>Organizational Profile</b>						
G4-3	Name of the organization	2		–		
G4-4	Primary brands, products, and services	2, AR 21–46		AR 304		
G4-5	Location of the organization's headquarters	2		–		
G4-6	Countries with significant operations	2–3, 6–7		–		
G4-7	Nature of ownership and legal form	3, AR 52–53		AR 304		
G4-8	Markets served	2–3, AR 21–46		AR 304		
G4-9	Scale of the organization	2, AR 21–46		AR 304		
G4-10	Employees by employment type, gender and region	2–3, 120, 121	D	6	120	
G4-11	Percentage of employees covered by collective bargaining agreements	56, 64, MS 26	D	3	–	
G4-12	Description of the supply chain	42–43		42–43		
G4-13	Significant changes during the reporting period	AR 52, 53		AR 304		
G4-14	Implementation of the precautionary principle	22–24, AR 160–174		AR 304		
G4-15	External initiatives that the organization endorses	20, 24, 26–27		3	–	
G4-16	Significant memberships in industry and business associations	26–27, MS 14		1–10	–	
<b>Identified Material Aspects and Boundaries</b>						
G4-17	Entities included in the consolidated financial statements	AR 52–53		AR 304		
G4-18	Process for defining the report content	15–17		15–17, 145		
G4-19	Material Aspects identified	18		18, 145		
G4-20	Aspect Boundaries within the organization	17–18		17–18, 145		
G4-21	Aspect Boundaries outside the organization	18, 24		18, 145		

Disclosure of G4 Indicators	Reference	Omissions	UN GC	GSC	Assurance
G4-22 Restatements of information provided in previous reports	116				-
G4-23 Significant changes in the Scope and Aspect Boundaries	116				-
<b>Stakeholder Engagement</b>					
G4-24 Stakeholder groups engaged	24, MS 13		9		-
G4-25 Identification and selection of stakeholders	16, 23		9		-
G4-26 Approach to stakeholder engagement and frequency	16, 24, MS 13		9		-
G4-27 Key topics and concerns raised through stakeholder engagement and response	24, MS 13		9		-
<b>Report Profile</b>					
G4-28 Reporting period	U5				-
G4-29 Date of most recent previous report	U5				-
G4-30 Reporting cycle	U5				-
G4-31 Contact point for questions regarding the report	148				-
G4-32 "In accordance" option with GRI and Content Index chosen	138–143				-
G4-33 External verification of the report	145–147				-
<b>Governance</b>					
G4-34 Governance structure, incl. committees of the highest governance body	3, 20–21, AR 7–11				AR 304
G4-35 Process for delegating authority for economic, environmental and social topics	21–22, AR 118				AR 304
G4-36 Executive-level position with responsibility for economic, environmental and social topics	20–22, 46, 87, AR 118				AR 304
G4-37 Processes for consultation between stakeholders and the highest governance body	AR 75, 93, 95				AR 304
G4-38 Composition of the highest governance body and its committees	21, AR 7–11, 54–58				AR 304
G4-39 Independence of the Chair of the highest governance body	AR 55–56, 70–73				AR 304
G4-40 Nomination and selection processes for the highest governance body and its committees	AR 54–58				AR 304
G4-41 Process for avoiding conflicts of interest	AR 9, 55				AR 304
G4-42 Highest governance body's role concerning strategy and goals	AR 54–58				AR 304
G4-43 Measures taken concerning the highest governance body's knowledge in sustainability issues	AR 54–58				AR 304
G4-44 Evaluation of the highest governance body's performance concerning sustainability	AR 54–58		7, 8		AR 304
G4-45 Highest governance body's role concerning sustainability impacts, risks, and opportunities	20–22, AR 54–58		6		AR 304
G4-46 Highest governance body's role concerning the effectiveness of the risk management	22–23, AR 58				AR 304
G4-47 Frequency of the highest governance body's review of sustainability impacts, risks, and opportunities	20–22, AR 54–58		6		AR 304
G4-48 Highest committee that formally reviews and approves the sustainability report	21				-
G4-49 Process for communicating critical concerns to the highest governance body	AR 54–58				AR 304
G4-50 Critical concerns that were communicated to the highest governance body	AR 7–11				AR 304
G4-51 Remuneration policies for the highest governance body and senior executives	22, AR 59–69		8		AR 304
G4-52 Process for determining remuneration	AR 59–69				AR 304
G4-53 Stakeholders' views regarding remuneration	AR 59–69				AR 304
G4-54 Ratio of the highest annual total compensation to the median annual total compensation	62–63, AR 59–69	D			AR 304
G4-55 Ratio of percentage increase in the highest annual total compensation	62–63, AR 59–69	D			AR 304

Disclosure of G4 Indicators	Reference	Omissions	UN GC	GSC	Assurance
<b>Ethics and Integrity</b>					
G4-56 Values, principles, standards and norms of behavior	20, 117	10	5	–	
G4-57 Mechanisms for seeking advice on ethical and lawful behavior	47–48	10	–		
G4-58 Mechanisms for reporting concerns about unethical or unlawful behavior	48, GB 56–57	10	–		
<b>Category: Economic</b>					
Management approach	34–36	–			
ECONOMIC PERFORMANCE					
G4-EC1 Direct economic value created and distributed	75, 119	18	AR 304		
G4-EC2 Financial implications and other risks and opportunities due to climate change	14–15, 22, 86–87; AR 145	7	AR 304		
G4-EC3 Coverage of benefit plan obligations	66, AR 240–247	–	AR 304		
G4-EC4 Financial assistance received from governance	42, AR 213	–	AR 304		
MARKET PRESENCE					
G4-EC5 Ratios of standard entry level wage compared to local minimum wage	62–63, MS 25, 26, 27	6	–		
G4-EC6 Proportion of senior management hired from the local community	64, MS 26	6	–		
INDIRECT ECONOMIC IMPACTS					
G4-EC7 Infrastructure investments and services provided	40–41, 73–77	–			
G4-EC8 Indirect economic impacts	19, 40–42	–			
PROCUREMENT PRACTICES					
G4-EC9 Proportion of spending on local suppliers	40–43	D	–		
<b>Category: Environmental</b>					
Management approach	86–89	7, 8, 9	86–89		
MATERIALS					
G4-EN1 Materials used by weight or volume	42, 101	7, 8	11	–	
G4-EN2 Percentage of materials used that are recycled input materials	101, MS 50	8	12	–	
ENERGY					
G4-EN3 Energy consumption within the organization	102, 126	7, 8	12	126	
G4-EN4 Energy consumption outside of the organization	–	D	8	12	–
G4-EN5 Energy intensity	126	8	12	126	
G4-EN6 Reduction of energy consumption	100, 102–103	8, 9	–		
G4-EN7 Reductions in energy requirements of products and services	95–100	8, 9	–		
WATER					
G4-EN8 Total water withdrawal by source	131–132	7, 8	12	131	
G4-EN9 Water resources significantly affected	104	8	–		
G4-EN10 Water recycled and reused	104–105, 131	D	8	–	
BIODIVERSITY					
G4-EN11 Operational sites in protected areas	133	8	–		
G4-EN12 Impacts on protected areas or areas of high biodiversity value	106–107, MS 53	8	–		
G4-EN13 Habitats protected and restored	106–107, MS 53	8	–		
G4-EN14 Affected endangered animal and plant species	MS 53	8	–		
EMISSIONS					
G4-EN15 Direct greenhouse gas (GHG) emissions (Scope 1)	90–91, 116, 126–127	7, 8	13	126	

Disclosure of G4 Indicators	Reference	Omissions	UN GC	GSC	Assurance
G4-EN16 Energy indirect greenhouse gas (GHG) emissions (Scope 2)	116, 127	7, 8	13	127	
G4-EN17 Other indirect greenhouse gas (GHG) emissions (Scope 3)	93, 116, 128	7, 8	13	—	
G4-EN18 Greenhouse gas (GHG) emissions intensity	126–127	8	13	126–127	
G4-EN19 Reduction of greenhouse gas (GHG) emissions	100, 102–103	8, 9	—		
G4-EN20 Emissions of ozone-depleting substances (ODS)	D	7, 8	—		
G4-EN21 NO <sub>x</sub> , SO <sub>x</sub> and other significant air emissions	129, 133	7, 8	—		
<b>EFFLUENTS AND WASTE</b>					
G4-EN22 Total water discharge by quality and destination	131–132	8	—		
G4-EN23 Total weight of waste by type and disposal method	130	8	12	130	
G4-EN24 Total number and volume of significant spills	D	8	—		
G4-EN25 Handling of hazardous waste	—	D	8	—	
G4-EN26 Water bodies significantly affected by discharges of water and runoff	133, MS 53	8	—		
<b>PRODUCTS AND SERVICES</b>					
G4-EN27 Mitigation of environmental impacts of products and services	89, 94–100, 101, 104, 109	7, 8, 9	10	—	
G4-EN28 Reclaimed products and packaging	105	8	—		
<b>COMPLIANCE</b>					
G4-EN29 Fines and sanctions for non-compliance with environmental regulations	D	8	—		
<b>TRANSPORT</b>					
G4-EN30 Significant environmental impacts of transporting products	105–106, 128	8	—		
<b>OVERALL</b>					
G4-EN31 Environmental protection expenditures and investments	132, AR 137	7, 8, 9	—	AR 304	
<b>SUPPLIER ENVIRONMENTAL ASSESSMENT</b>					
G4-EN32 Percentage of new suppliers that were screened using environmental criteria	43–45	D	8	42–46	
G4-EN33 Significant environmental impacts in the supply chain	44–46	D	8	42–46	
<b>ENVIRONMENTAL GRIEVANCE MECHANISMS</b>					
G4-EN34 Grievances about environmental impacts	—	D	8	—	
<b>Category: Social</b>					
<b>Labor Practices and Decent Work</b>					
Management approach	56–57	1, 3, 6	—	56–57	
<b>EMPLOYMENT</b>					
G4-LA1 New employee hires and employee turnover	122	D	6	—	
G4-LA2 Benefits provided to full-time employees	63, 66	D	—		
G4-LA3 Return to work and retention rates after parental leave	123	D	6	—	
<b>LABOR/MANAGEMENT RELATIONS</b>					
G4-LA4 Minimum notice period(s) regarding operational changes	64, AR 74–75, MS 28	3	—	AR 304	
<b>OCCUPATIONAL HEALTH AND SAFETY</b>					
G4-LA5 Percentage of total workforce represented in health and safety committees	68	—	—	—	
G4-LA6 Injuries, occupational diseases, lost days, and work-related fatalities	122, 124	D	15	122, 124	
G4-LA7 Workers with high incidence or risk of diseases	67	—	16	—	
G4-LA8 Health and safety topics covered in formal agreements with trade unions	67	—	—	—	
<b>TRAINING AND EDUCATION</b>					
G4-LA9 Average hours of training	60–62	D	6	16	—
G4-LA10 Programs that support the continued employability of employees	57–62, 74	—	—	—	
G4-LA11 Percentage of employees receiving regular performance and career development reviews	63	D	6	—	

## BACKGROUND

Disclosure of G4 Indicators	Reference	Omissions	UN GC	GSC	Assurance
<b>DIVERSITY AND EQUAL OPPORTUNITY</b>					
G4-LA12 Composition of governance bodies and breakdown of employees by aspects of diversity	3, 69–72, 121, 123, AR 55	D	6	16	AR 304
<b>EQUAL REMUNERATION FOR WOMEN AND MEN</b>					
G4-LA13 Ratio of basic salary and remuneration of women to men	62	D	6	—	—
<b>SUPPLIER ASSESSMENT FOR LABOR PRACTICES</b>					
G4-LA14 Percentage of new suppliers that were screened using labor practices criteria	43–45	D	—	42–46	—
G4-LA15 Significant impacts for labor practices in the supply chain	44–46	D	—	42–46	—
<b>LABOR PRACTICES GRIEVANCE MECHANISMS</b>					
G4-LA16 Formelle Beschwerden bezgl. Auswirkungen auf Arbeitspraktiken	—	D	—	—	—
<b>Human Rights</b>					
Management approach	34–36, 56–57	—	1–6	—	—
<b>INVESTMENT</b>					
G4-HR1 Significant investment agreements and contracts that include human rights clauses or screening	47	D	2	17	—
G4-HR2 Employee training on human rights issues	47	D	1	—	—
<b>NON-DISCRIMINATION</b>					
G4-HR3 Incidents of discrimination and corrective actions taken	48, 72	—	6	16, 17	—
<b>FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING</b>					
G4-HR4 Operations and suppliers identified in which the right to exercise freedom of association may be violated or at risk, and measures taken	20, 42–46, 64	—	3	—	—
<b>CHILD LABOR</b>					
G4-HR5 Operations and suppliers having significant risk for incidents of child labor, and measures taken	20, 42–46, 56	—	5	17	—
<b>FORCED OR COMPULSORY LABOR</b>					
G4-HR6 Operations and suppliers having significant risk for incidents of forced or compulsory labor, and measures taken	20, 42–46, 56	—	4	17	—
<b>SECURITY PRACTICES</b>					
G4-HR7 Percentage of security personnel trained in the field of human rights	47, MS 25, 26	D	1	—	—
<b>INDIGENOUS RIGHTS</b>					
G4-HR8 Violations involving rights of indigenous peoples and actions taken	20, 47	—	1	—	—
<b>ASSESSMENT</b>					
G4-HR9 Operations that have been subject to human rights reviews	20, 47	—	1	—	—
<b>SUPPLIER HUMAN RIGHTS ASSESSMENT</b>					
G4-HR10 Percentage of new suppliers that were screened using human rights criteria	43–45	D	2	17	42–46
G4-HR11 Significant human rights impacts in the supply chain	44–46	D	2	—	42–46
<b>HUMAN RIGHTS GRIEVANCE MECHANISMS</b>					
G4-HR12 Grievances about human rights impacts	47	D	1	—	—
<b>Society</b>					
Management approach	34–36, 73	—	10	—	—
<b>LOCAL COMMUNITIES</b>					
G4-SO1 Percentage of operations with implemented local community engagement, impact assessments, and development programs	23–24, 27, 41, 68, 73, 76–77, MS 29	—	1	18	—
G4-SO2 Operations with actual and potential negative impacts on local communities	88, 100, 104, 106	—	1	—	—
<b>ANTI-CORRUPTION</b>					
G4-SO3 Percentage of operations assessed for risks related to corruption and risks identified	47–48	D	10	—	—
G4-SO4 Communication and training on anti-corruption	47	D	10	—	—
G4-SO5 Confirmed incidents of corruption and actions taken	47–48	—	10	20	—

Disclosure of G4 Indicators		Reference	Omissions	UN GC	GSC	Assurance
<b>PUBLIC POLICY</b>						
G4-SO6	Total value of political contributions	75	10	—	—	—
<b>ANTI-COMPETITIVE BEHAVIOR</b>						
G4-SO7	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	D	—	—	—	—
<b>COMPLIANCE</b>						
G4-SO8	Fines and sanctions for non-compliance with laws and regulations	D	—	20	—	—
<b>SUPPLIER ASSESSMENT FOR IMPACTS ON SOCIETY</b>						
G4-SO9	Percentage of new suppliers that were screened using criteria for impacts on society	43–45	D	—	—	—
G4-SO10	Negative impacts on society in the supply chain and actions taken	44–46, 47	D	2	—	—
<b>GRIEVANCE MECHANISMS FOR IMPACTS ON SOCIETY</b>						
G4-SO11	Number of grievances about impacts on society	47	D	2, 3	—	—
<b>Product Responsibility</b>						
<b>Management approach</b>						
<b>CUSTOMER HEALTH AND SAFETY</b>						
G4-PR1	Percentage of significant product and service categories for which health and safety impacts are assessed	35, 37–39	—	—	—	—
G4-PR2	Incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services	38–39, AR 170–172	—	—	AR 304	—
<b>PRODUCT AND SERVICE LABELING</b>						
G4-PR3	Principles/ procedures for product and service information and labelling	39–40, 93–95, 108	—	—	—	—
G4-PR4	Incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling	D	—	—	—	—
G4-PR5	Results of surveys measuring customer satisfaction	39	—	—	—	—
<b>MARKETING COMMUNICATIONS</b>						
G4-PR6	Sale of banned or disputed products	D	—	—	—	—
G4-PR7	Incidents of non-compliance with regulations and voluntary codes concerning marketing communications	AR 170–172	—	—	AR 304	—
<b>CUSTOMER PRIVACY</b>						
G4-PR8	Substantiated complaints regarding breaches of customer privacy	D	—	—	—	—
<b>COMPLIANCE</b>						
G4-PR9	Significant fines concerning the provision and use of products and services	D	—	—	—	—

**Key:**

AR = 2014 Annual Report

UN GC = United Nations Global Compact

MS = 2014 Sustainability Report Microsite

GSC = German Sustainability Code

D = Direct Answer (online-index)

## » CONSUMPTION AND EMISSION DATA

Model	Output kW (PS)	Fuel consumption (l/100 km)			CO <sub>2</sub> emissions (g/km)	
		extra-		combined		
		urban	urban			
Audi A6 2.0T TDI ultra	114 (190)	5.2	3.9	4.4	114	
SEAT Leon ST 1.4 TGI	81 (110)	4.5 kg	2.9 kg	3.5 kg	96	
ŠKODA Citigo G-Tec	50 (68)	3.6 kg	2.5 kg	2.9 kg	79	
Volkswagen Golf VII TSI 1.2l*	77 (105)	5.9–5.6	4.4–4.3	4.9–4.8	114–112	
Volkswagen Golf VII TSI 1.4l*	90 (122)	6.6–6.2	4.3	5.2–5.0	120–116	
Volkswagen Golf VII TDI 1.6l*	77 (105)	4.6	3.5–3.3	3.9–3.8	102–99	
Volkswagen Golf VII TDI 2.0l*	110 (150)	5.2–5.0	4.0–3.6	4.4–4.1	117–106	
Volkswagen Golf BlueMotion 1.6 TDI	81 (110)	3.8	3.0	3.2	85	
Audi A3				8.3–1.5	194–35	
Audi A3 Sportback				6.5–3.3	149–88	
Audi A3 Sportback e-tron				1.5–1.7/114.0–124.0 Wh	35	
Audi A3 Sportback g-tron				5.2/3.3 kg	120–92	
Audi A6				9.6–4.2	223–109	
Audi Q7				10.7–7.2	249–189	
Audi TT				7.3–4.2	169–110	
Audi TT Coupé				6.4–4.2	149–110	
Bentley Continental GT V8				10.6	246	
Bugatti Veyron Vitesse				23.1	539	
Lamborghini Aventador Roadster				16.0	370	
Porsche Cayenne S E-Hybrid				3.4/20.8 kWh	79	
Porsche Macan				9.2–6.1	216–159	
Porsche 918 Spyder Plug-in-Hybrid				3.1–3.0/12.7 kWh	72–70	
Porsche Panamera SE-Hybrid 3				3.1	71	
Scania G 410				23.29	734	
SEAT Mii Ecofuel				2.9	79	
SEAT Leon ST				6.7–3.3	150–87	
SEAT Leon				6.6–3.3	154–87	
SEAT Ibiza				5.9–3.4	139–89	
ŠKODA Octavia Greenline				3.2	85	
ŠKODA Fabia				4.8–3.4	110–88	
Volkswagen Caddy EcoFuel				8.8–8.7	157–156	
Volkswagen eco up!				4.4 m <sup>3</sup> (2.9 kg)	79	
Volkswagen e-Golf				12.7 kWh	0	
Volkswagen Golf GTE				1.7–1.5/12.4–11.4 kWh	39–35	
Volkswagen Golf Variant CNG				5.4–5.2	127–122	
Golf Variant TGI BlueMotion				5.3–5.1	124–119	
Volkswagen Golf Sportsvan				5.5–3.6	126–95	
Volkswagen e-up!				11.7 kWh	0	
Volkswagen Passat				6.2–4.1	143–106	
Volkswagen Passat GTE				1.7–1.6	39–37	
Volkswagen Passat Variant				7.1–4.1	146–107	
Volkswagen Polo				6.0–3.4	139–82	
Volkswagen Polo TDI BlueMotion				3.1	82	
Volkswagen Polo TSI BlueMotion				4.1	94	
Volkswagen Tiguan				8.6–5.3	199–138	
Volkswagen Touareg				9.1–6.6	239–143	
Volkswagen XL1				0.9/7.2 kWh	21	

This table shows the consumption and emission data for all models mentioned in this report.

# INDEPENDENT ASSURANCE REPORT

To Volkswagen AG, Wolfsburg

We have been engaged to perform a limited assurance engagement on the description of the necessary materiality analysis for a sustainability report and selected issues of the Corporate Responsibility Report 2014 of the Volkswagen AG, Wolfsburg, (hereinafter: the Company), for the business year from January, 1st to December, 31st 2014.<sup>1</sup> The sustainability information, which were selected by the Company and reviewed by us, are marked with the following symbols (✓✓✓✓) in the Sustainability Report.

## **Management's Responsibility**

- The company's Board of Managing Directors is responsible for the accurate preparation of the Sustainability Report in accordance with the criteria stated in the Sustainability Reporting Guidelines Vol. 4 of the Global Reporting Initiative (GRI).

This responsibility includes the selection and application of appropriate methods to prepare the Sustainability Report and the use of assumptions and estimates for individual sustainability disclosures which are reasonable in the circumstances. Furthermore, the responsibility includes designing, implementing and maintaining systems and processes relevant for the preparation of the report.

## **Our Independence and Quality Control**

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants (IESBA-Codex), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

The firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

## **Practitioner's Responsibility**

Our responsibility is to express a conclusion based on our work performed as to whether anything has come to our attention that causes us to believe that:

- the marked (✓) description of the materiality analysis is necessary for a sustainability report to determine its content and the boundaries of its aspects is not in accordance with the criteria "Stakeholder Inclusiveness", "Sustainability Context", "Materiality" and "Completeness" of the GRI's Sustainability Reporting Guidelines Vol. 4 and that they were not used during the Sustainability Report's preparation,
- the management approaches marked with (✓✓ and ✓) in the Sustainability Report are not in accordance with the requirements of the standard disclosures G4-DMA of the Sustainability Reporting Guidelines Vol. 4 or that
- the quantitative information marked with (✓ and ✓) in the Company's Sustainability Report for the business year 2014, is in material aspects not in accordance with the criteria "Completeness", "Comparability", "Accuracy", "Clarity", "Timeliness" and "Reliability" of the GRI's Sustainability Reporting Guidelines Vol. 4.

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<sup>1</sup> Our engagement applies to the German paper version of the Sustainability- Report. This text is a translation of the Independent Assurance Report issued in German language - the German text is authoritative.

It was not part of our engagement to review any additional information outside the scope of the given information or statements.

We also have been engaged to make recommendations for the further development of the sustainability management and the sustainability reporting based on the results of our assurance engagement.

We conducted our work in accordance with the International Standard on Assurance Engagements (ISAE) 3000. This Standard requires that we comply with ethical requirements and plan and perform the assurance engagement, under consideration of materiality, in order to provide our conclusion with limited assurance.

In a limited assurance engagement the evidence-gathering procedures are more limited than for a reasonable assurance engagement and therefore less assurance is obtained than in a reasonable assurance engagement.

Within the scope of our work we performed amongst others the following procedures concerning the materiality analysis, management approaches and key data – for the aspects that are marked by a check (✓ ✓ ✓ ✓) in the Sustainability Report.

- Inquiries of personnel responsible for the preparation of the report regarding the process to prepare the reporting of sustainability information and the underlying internal control system;
- Understanding the Company regarding to its sustainability organizational structure, stakeholder dialogue and development process of the sustainability program;
- Recording of the systems and processes for collection, analysis, validation and aggregation of sustainability data and their documentation on a sample basis;
- Performance of site visits as part of the inspection of processes for collecting, analyzing and aggregating selected data at:
  - Skoda Auto a.s., Mladá Boleslav, Czech Republic;
  - Volkswagen do Brasil Indústria de Veículos Automotores Ltda., Anchieta, Brazil;
  - FAW-Volkswagen Automotive Company Ltd., Changchun, China
  - Volkswagen Group China, Peking, China
- Analytical procedures on relevant data;
- Comparison of corresponding data in the Company's Consolidated Financial Statements 2014;
- Gaining further evidence for selected data of the report through inspection of internal documents, contracts and invoices.

### **Conclusion**

Based on our limited assurance engagement, nothing has come to our attention that causes us to believe that

- the marked (✓) description of the materiality analysis, which is necessary for a sustainability report to determine its content and the boundaries of its aspects, is not in accordance with the criteria "Stakeholder Inclusiveness", "Sustainability Context", "Materiality" and "Completeness" of the GRI's Sustainability Reporting Guidelines Vol. 4 and that they were not used during the report's preparation,
- the management approaches marked with (✓ ✓ ✓) in the Sustainability Report are not in accordance with the requirements of the standard disclosures G4-DMA of the Sustainability Reporting Guidelines Vol. 4 or that
- the quantitative information marked with (✓ and ✓) in the Company's Sustainability Report for the business year 2014 is in material aspects not in accordance with the criteria "Completeness", "Comparability", "Accuracy", "Clarity", "Timeliness" and "Reliability" of the GRI's Sustainability Reporting Guidelines Vol. 4.

#### **Emphasis of Matter - Recommendations**

Without qualifying our conclusion above, we make the following recommendations for the further development of the Company's sustainability management and sustainability reporting:

- For a materiality analysis according to the G4 standard it is necessary to further improve the analysis of consequences for the defined topics in order to enable a stronger focus on the material aspects.

Without limiting the above conclusion, we advise the following recommendations for further improvement of the selected organizational management approaches:

- More structured presentation of the material management approaches in the report.

Without limiting the above conclusion, we advise the following recommendations for further improvement of the selected organizational key figures:

- Further standardization and formalization of processes and controls for data collection
- Explicit differentiation between the Volkswagen Group and the Volkswagen brand in the Sustainability Report
- Further increase of the coverage of key figures that are used for presenting the Volkswagen Group's perspective

Hannover, 7th April, 2015

**PricewaterhouseCoopers  
Aktiengesellschaft  
Wirtschaftsprüfungsgesellschaft**

Frank Hübner  
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.

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### › YOUR FEEDBACK

In the interests of improving and advancing our commitment to sustainability, we would be delighted to receive your feedback on our sustainability report. You can send us your views online at:

[sustainabilityreport2014.volksagewagen.com/feedback](http://sustainabilityreport2014.volksagewagen.com/feedback)

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# ABOUT THIS REPORT

The Volkswagen Group's Sustainability Report has been published annually since 2011. This report contains information about the Group's sustainability activities in the 2014 financial year (January 1 to December 31, 2014). The report, which is available in German and English, went to press on January 31, 2015. The next Group Sustainability Report will be published in the second quarter of 2016.

The Strategy chapter presents the fundamentals of the Group's strategy for implementing sustainable development across all its brands. The Economy, People and Environment chapters set out our management approach in each case before outlining how the various aspects of these topics are implemented. The key Group-wide indicators and the overarching corporate sustainability roadmap are described in the Indicators and Goals chapter. Significant changes in holdings or in the data acquisition process are described on pages 5 and 116. True to the character of a progress report we aim to focus on the essentials while at the same time communicating a balanced picture of our activities that takes account of all Group brands and companies. Audi, MAN, Porsche, Scania and ŠKODA publish their own sustainability reports, either annually or at two-year intervals.

## FUNDAMENTALS

This report was drawn up in accordance with the fourth generation of guidelines from the Global Reporting Initiative (GRI-G4) with the aid of an IT system that is to be used for Group-wide data acquisition and control activities, as well as for stakeholder management within the Group. Important guidance in terms of content was provided by the questionnaires and appraisals of sustainability-oriented rating agencies and RobecoSAM in particular. We also took our lead from Stakeholder Engagement Standard AA1000.

To identify material topics for the Volkswagen Group resulting from the global challenges, we drew upon the findings of the Volkswagen Group's Stakeholder Panel which has been in place for many years now, as well as on the latest comprehensive stakeholder surveys conducted by Group companies Audi, MAN, Porsche and Volkswagen Financial Services. The resultant materiality matrix (see page 17) was validated by the Corporate CSR & Sustainability Steering Group. The present report takes account not only of the recommendations of the Stakeholder Panel, following its evaluation of the 2013 Group Sustainability Report (see pages 25–26), but also of the advice provided by the auditors.

## STANDARDS

This report has been approved by the Board of Management of Volkswagen Aktiengesellschaft and verified by a firm of auditors (see pages 145–147). The GRI has confirmed the location of the indicators G4-17 to G4-27 through its Materiality Disclosure Service (see page 138). Compliance with the GRI indicators is shown in the GRI Content Index on pages 138–143, as is the

implementation of the relevant criteria for the Communication on Progress to the United Nations Global Compact. The GRI Content Index also documents compliance with the German Sustainability Code.

## ADDITIONAL INFORMATION

The contents of this report are closely interlinked with further information published on a dedicated report microsite at [sustainabilityreport2014.volkswagenag.com](http://sustainabilityreport2014.volkswagenag.com) where all the copy and graphics in this report plus additional documents can be found (see page U6–U7 for a list of numbered links). At all points in the report where more in-depth information is available online, numbered symbols appear in the body copy. On the microsite a prominently displayed list of links showing the relevant numbers permits rapid access to the documents. The latest news on sustainability at the Volkswagen Group can be found on the Group portal, the contents of which have been brought into line with the 2014 report: [www.volkswagenag.com/sustainability](http://www.volkswagenag.com/sustainability)

## FRAME OF REFERENCE

The information in this report relates to the Volkswagen Group as a whole. If any information relates to individual Group brands only, this is clearly indicated in the copy.

## FORWARD-LOOKING STATEMENTS

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



All contents of this report, further information, brand portraits and links to the brands can be found on the microsite at:  
[sustainabilityreport2014.volkswagenag.com](http://sustainabilityreport2014.volkswagenag.com)



## SUPPLEMENTARY INFORMATION ↗

The Volkswagen Sustainability Report 2014 microsite provides access to all links at [sustainabilityreport2014.volkswagenag.com](http://sustainabilityreport2014.volkswagenag.com). There, under the relevant number, you will find supplementary information to the contents of this report. You will also find an overview of the brands and links to their sustainability reports and information.

Topic	Content	Type of information	Number
<b>GENERAL INFORMATION</b>			
Group development 2014	Online Annual Report	Link	1
Brands and companies	Volkswagen online brand portal	Link	2
	Associated companies	Link	3
Reporting in line with GRI	GRI index	Table	4
<b>STRATEGY</b>			
	Materiality analysis	Graphic	5
	Media analysis	Document	6
	Group values	Document	7
	Model of Sustainable Development	Document	8
	Code of Conduct	Document	9
Principles	Board remuneration	Link	10
Risk management	Risks and opportunities in the management report	Link	11
	Volkswagen in the Transparency Register	Link	12
	List of stakeholder dialogues	Table	13
	Group memberships	Table	14
	Guidelines for political lobbying	Document	15
	Volkswagen Group website	Link	16
Stakeholder management	Stakeholder panel and evaluation	Document	17
<b>ECONOMY</b>			
	Volkswagen Group requirements regarding sustainability in its relationships with business partners	Document	18
	Taxes and duties policy	Document	19
Principles	Brochure on the shift to renewables	Brochure	20
Product Responsibility	Road safety at ŠKODA	Link	21
Supplier management	Sustainability in Supplier Relations brochure	Brochure	22
	Training, cooperations, activities	Document	23
Compliance	Compliance in the Annual Report	Link	24

Topic	Content	Type of information	Number
<b>PEOPLE</b>			
Principles	Social Charter Charter on Labour Relations Charter on Temporary Work	Document Document Document	25 26 27
Participation	Stimmungsbarometer employee opinion survey	Document	28
Social responsibility	CSR worldwide	Project map	29
<b>ENVIRONMENT</b>			
Principles	Group Environmental Policy Group Environmental Principles Locations/Production Group Environmental Principles Product Mission Statement on Biodiversity Volkswagen brand environmental statement ISO TR 14062 certificates Overview of environmentally certified locations Think Blue. Audi ultra Bentley Environmental Factory Lamborghini environmental commitment MAN's Climate Strategy Porsche environmental commitment Scania Ecolution by Scania SEAT Ecomotive ŠKODA GreenFuture “Resource Efficiency” brochure Environmental Goals of Technical Development Life Cycle Assessments and Environmental Commendations	Document Document Document Document Document Document Table Link Link Link Link Link Link Link Link Link Link Link Link Link Document Document Document	30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
Product planning and development	Think Blue. Factory. Secondary materials Renewable raw materials Recycling Engagement for biodiversity	Link Document Document Link Document	49 50 51 52 53
Production and logistics	Think Blue. Nature. Urban Mobility 2030	Document Film	54 55
Sales, use and recycling	Think Blue. Carsharing.	Document	56

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