

VOLKSWAGEN

AKTIENGESELLSCHAFT

Strategy\_\_\_\_\_

Economy\_\_\_\_\_

People\_\_\_\_\_

Environment\_

Indicators\_\_\_\_\_

SUSTAINABILITY REPORT 2013

## BRAND OVERVIEW



Audi



ŠKODA



BENTLEY



PORSCHE



Commercial  
Vehicles



SCANIA



## VOLKSWAGEN FINANCIAL SERVICES

AKTIENGESELLSCHAFT

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: [www.sustainabilityreport2013.volkswagenag.com](http://www.sustainabilityreport2013.volkswagenag.com)



—  
VOLKSWAGEN GOLF SPORTSVAN\*



—  
AUDI A3 SALOON



—  
SEAT LEON SC



—  
ŠKODA OCTAVIA ESTATE\*



—  
BENTLEY FLYING SPUR\*



—  
BUGATTI VEYRON\*



—  
LAMBORGHINI AVENTADOR\*



—  
PORSCHE 911



—  
DUCATI PANIGALE



—  
VOLKSWAGEN COMMERCIAL VEHICLES AMAROK\*



—  
SCANIA CITYWIDE



—  
MAN TGX

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A dedicated microsite at [www.sustainabilityreport2013.volkswagenag.com](http://www.sustainabilityreport2013.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 emission data for all models mentioned in this report are set out on page 138, as indicated by this symbol: \*

*Dear Reader,*

The Volkswagen Group can look back on a successful year. Despite difficult market conditions our Company remained on course, combining quantitative growth with greater quality, as evidenced by the 9.73 million vehicles we delivered to customers around the world – a new record figure. Further proof is provided by the Dow Jones Sustainability Index, where our Group was ranked in first place. Through these and many other success stories we have again made good progress towards becoming the world's best and most sustainable automaker by 2018.

What is it that sets us apart? We focus on providing an unparalleled diversity of powertrains, operating resource-efficient production plants and offering good, secure jobs. Last year we invested more than €10 billion in research and development alone, reflecting the ambitious nature of the goals we are pursuing. Volkswagen is the first automobile manufacturer to commit to reducing the average CO<sub>2</sub> emissions of its European new vehicle fleet to 95 g/km by 2020. We have already made substantial progress en route to this goal and last year for the first time brought the figure below 130 g/km. In addition, with the e-up!\*, e-Golf\*, Audi A3 e-tron\* and Porsche Panamera S E-Hybrid\* we further underpinned our claim to technology leadership in the field of electric mobility.

At the same time, in our plants around the world we are striving to make our operations 25% more environmentally compatible and resource-efficient by 2018. These efforts are documented by the seven production plants inaugurated in 2013 in China, Russia and Mexico, all of which comply with the highest environmental standards.

Last but not least, in the past year we created more than 23,000 new jobs. In all, we employ over 570,000 people. The number of young people in vocational training at our facilities around the world rose to 17,700. The Volkswagen Group has already established the proven model of dual vocational education and training at 40 sites in countries including Russia, the USA, India, Brazil and China. And for us, sustainability always includes a social dimension, which is why we set the highest standards for the working conditions and inclusion of our employees.

Why do we do all this? Because as a major automobile manufacturer we take seriously our responsibility for the sustainable development of the economy, the environment and society. Our aim is to create lasting value – for the Company, its employees and its shareholders, but also for the countries and regions in which we operate. This all-embracing view of sustainability is shared by all twelve brands, our companies and all our employees across the Group.

The fact that we unite such a great diversity of cultures, competencies and technical solutions makes us strong. And we are aiming to put these valuable assets to even better use by further intensifying the process of knowledge transfer within the Group. This will enable us to develop the right solutions for the challenges of the future – and make no mistake, those challenges are substantial. Markets are shifting, resources are becoming scarcer, emissions regulations are tightening up all over the world, and booming cities call for new and intelligent traffic and mobility concepts. We consider it part of our responsibility to find the right answers to these trends.

So how do we promote sustainability in concrete terms? This report provides the answer, illustrated by numerous examples from the world of Volkswagen as well as by facts and figures. To make our report transparent, verifiable and comparable, we have taken our lead from the guidelines of the Global Reporting Initiative (GRI). The report also constitutes our Communication on Progress to the United Nations Global Compact, which we joined with a promise to uphold human rights, promote good working conditions and environmental protection worldwide, and combat corruption. Since 2013 we have extended our engagement by also endorsing the Global Compact's CEO Water Mandate.

We invite you to familiarize yourself more closely with the diversity and internationality of the Volkswagen Group and with our contribution to sustainable development and hope you find this report makes inspiring reading.



**PROF. DR. MARTIN WINTERKORN**

Chairman of the Board of Management of  
Volkswagen Aktiengesellschaft



**BERND OSTERLOH**

Chairman of the General and  
Group Works Councils



Prof. Dr. Martin Winterkorn (right) and Bernd Osterloh (left).

# 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 2013 the Group increased the number of cars and commercial vehicles delivered to customers to 9.73 million, which equates to 12.8% of the global passenger car market. The Group's sales revenue totaled €197,007 million in 2013, while profit after tax came to €9,145 million.**

## STRUCTURE

The Volkswagen Group is a publicly quoted stock corporation under German law and owns twelve brands from seven European countries: Volkswagen, Audi, SEAT, ŠKODA, Bentley, Bugatti, Lamborghini, Porsche, Ducati, Volkswagen Commercial Vehicles, Scania and MAN. Each brand has its own distinctive character and operates autonomously in the marketplace with its own legal status. In its function as parent company, Volkswagen AG holds direct and indirect interests in AUDI AG, SEAT S.A., ŠKODA Auto a.s., Scania AB, MAN SE, Dr. Ing. h.c. F. Porsche AG, Volkswagen Financial Services AG and numerous other companies in Germany and abroad. These include Volkswagen do Brasil, Volkswagen of America, Volkswagen of South Africa and the joint ventures Shanghai-Volkswagen and FAW (First Automotive Works)-Volkswagen in China, to name the largest national companies. 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 Group's product portfolio ranges from two-wheeled transport and economical compact cars to luxury high-end models. In the commercial vehicle sector, the range starts with pick-up trucks and extends all the way to buses and heavy-duty trucks. In other business areas the products manufactured include large-bore diesel engines for marine and stationary applications, turbochargers, turbomachinery (steam and gas turbines), compressors and chemical reactors. The portfolio also comprises special gear units for vehicles and wind turbines, slide bearings and couplings, as well as testing systems for the mobility sector. Through Volkswagen Financial Services AG the Group provides products and services in the financing sector to private and corporate customers, as well as extending its range of integrated services focused on new mobility concepts.

## LOCATIONS AND EMPLOYEES

The Volkswagen Group operates 106 (2012: 99) production facilities around the world. Europe forms the core of the Group's production activities with 68 vehicle and component plants. The significance of the Asia-Pacific region is increasing, reflected in the current total of 22 production plants. In North America, the Volkswagen Group operates four production facilities, with nine in South America and three in Africa. Their locations are shown on the world map on the following pages. Around the world over 570,000 employees produce approximately 39,352 vehicles per working day or work in other fields of business. Any changes in sites or activities are set out in our current annual report.

## MARKETS

The Volkswagen Group sells its vehicles worldwide. The Group's share of the passenger car market in Western Europe reached 24.8% (2012: 24.4%), in Central and Eastern Europe 15.7% (15.2%), in North America 4.8% (4.9%), in South America 17.0% (19.5%) and in Asia-Pacific 12.9% (12.2%). The Group's worldwide market share totaled 12.8% (12.8%). The largest sales market for the Volkswagen Group is the Asia-Pacific region, followed by Western Europe, North America, South America and Central and Eastern Europe. Worldwide, for the manufacture of its products, the Group purchased goods and services to the value of €135.0 billion (previous year: €128.7 billion). The largest procurement market is Europe, with a volume of €87.9 billion, followed by the Asia-Pacific region with €31.9 billion.

Further details on the development of the Group, its holdings, the Volkswagen brand and this report: [1](#), [2](#), [3](#), [4](#), [5](#)



**INTERPRETATION AND MEANING OF GROUP, BRANDS AND COMPANIES**

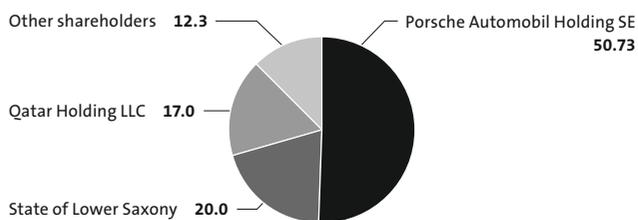
This report deals with Group-wide topics and therefore refers primarily to the Volkswagen Group or speaks of “we” and “us”. Otherwise, the individual brands or companies are mentioned by name. It is not entirely possible to avoid overlaps, not least because proven concepts are gradually rolled out at other companies and brands.

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

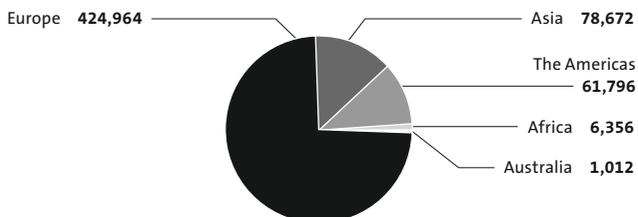
**Dr. h.c. Leif Östling** – Commercial Vehicles, **Christian Klingler** – Sales and Marketing, **Prof. Rupert Stadler** – Chairman of the Board of Management of AUDI AG, **Dr.-Ing. E.h. Michael Macht** – Production, **Prof. Dr. rer. pol. Horst Neumann** – Personnel Management and Organization, **Prof.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

**SHAREHOLDERS 2013**

*in % of voting capital*



**EMPLOYEES BY REGION 2013**



**GROUP KEY FIGURES**

Volume data	2013	2012
Vehicle sales (units) (in thousands)	9,728	9,345
Production (units) (in thousands)	9,728	9,255
Employees (yearly average)	563	533
Percentage of female employees	15.5	15.2
Absenteeism quota (percentage) <sup>1</sup>	3.3	3.2
CO <sub>2</sub> emissions of European new vehicle fleet in g/km	128	134
Direct CO <sub>2</sub> emissions in kg/vehicle <sup>2</sup>	422	449
Energy consumption in kWh/vehicle <sup>2</sup>	2,205	2,213

Financial data (IFRSs), in € million	2013	2012 <sup>3</sup>
Sales revenue	197,007	192,676
Operating profit	11,671	11,498
Profit before tax	12,428	25,487
Profit after tax	9,145	21,881

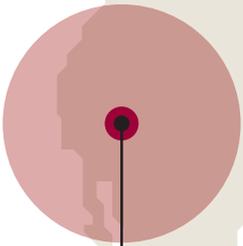
<sup>1</sup> Production sites from 1,000 employees excl. Scania, MAN, Ducati and Porsche.

<sup>2</sup> Cars and light commercial vehicles.

<sup>3</sup> Prior-year figures adjusted to reflect application of IAS19R.

# GROUP PRODUCTION PLANTS

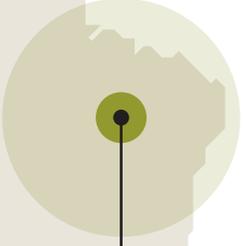
With its new components plant in Foshan, China, in December 2013 the Volkswagen Group opened its 106th production facility. Additional plants are at the planning stage or already under construction. Together, these measures set the stage in terms of production technology for the Group to reach its ambitious growth targets.



**NORTH AMERICA**  
 Chattanooga (USA), vw  
 Puebla (MX), vw  
 Querétaro (MX), MAN  
 Silao (MX), vw

In 2013 alone, the Volkswagen Group opened seven new production plants around the world. The new facilities meet high environmental standards and have adopted the dual model of vocational training for their employees. They also set high social standards in other respects. Through its commitment to the United Nations Global Compact, the Volkswagen Group has given a worldwide undertaking to uphold human rights, foster good working conditions, protect the environment and combat corruption. This applies to our business relations but above all at our production plants. In the regions in which we operate, we aim to be an attractive employer, a respected business partner and a good corporate citizen. You will find a list of plant certifications on the Internet: [📄 44](#)

The number of production plants is greater than the number of sites because some sites host more than one plant.



**SOUTH AMERICA**  
 Anchieta (BR), vw  
 Córdoba (AR), vw  
 Curitiba (BR), vw  
 Pacheco (AR), vw  
 Resende (BR), MAN  
 São Carlos (BR), vw  
 São Paulo (BR), SCANIA  
 Taubaté (BR), vw  
 Tucumán (AR), SCANIA

**EUROPE**

Angers (F), SCANIA  
 Ankara (TR), MAN  
 Augsburg (D), MAN  
 Barcelona (ES), SEAT  
 Berlin (D), MAN  
 Borgo Panigale (I), DUCATI  
 Bratislava (SK), VW  
 Braunschweig (D),  
 VW, MAN  
 Brussels (B), AUDI  
 Chemnitz (D), VW  
 Copenhagen (DK), MAN  
 Crewe (UK), BENTLEY

Deggendorf (D), MAN  
 Dresden (D), VW  
 Emden (D), VW  
 Frederikshavn (DK), MAN  
 Győr (HUN), AUDI  
 Hamburg (D), MAN  
 Hanover (D),  
 VW COMMERCIAL VEHICLES,  
 MAN  
 Ingolstadt (D), AUDI  
 Kaluga (RUS), VW  
 Kassel (D), VW  
 Kraków (PL), MAN  
 Kvasiny (CZ), ŠKODA

Leipzig (D), PORSCHE  
 Luleå (SE), SCANIA  
 Martin (SK), VW  
 Martorell (ES), SEAT  
 Meppel (NL), SCANIA  
 Mladá Boleslav (CZ), ŠKODA  
 Molsheim (F), BUGATTI  
 Munich (D), MAN  
 Neckarsulm (D), AUDI  
 Nuremberg (D), MAN  
 Oberhausen (D), MAN  
 Oskarshamn (SE), SCANIA  
 Osnabrück (D), VW  
 Palmela (PT), VW

Pamplona (ES), VW  
 Plauen (D), MAN  
 Polkowice (PL), VW  
 Poznań (PL),  
 VW COMMERCIAL VEHICLES,  
 MAN  
 Prat (ES), SEAT  
 Rheine (D), MAN  
 Saint-Nazaire (F), MAN  
 Salzgitter (D), MAN, VW  
 Sant' Agata Bolognese (I),  
 LAMBORGHINI  
 Sarajevo (BA), VW  
 Słupsk (PL), SCANIA

Södertälje (SE), SCANIA  
 St. Petersburg (RUS), MAN  
 Starachowice (P), MAN  
 Steyr (A), MAN  
 Stuttgart (D), PORSCHE  
 Velká Bíteš (CZ), MAN  
 Vrchlabí (CZ), ŠKODA  
 Winterthur (CH), MAN  
 Wolfsburg (D), VW  
 Zurich (CH), MAN  
 Zwickau (D), VW  
 Zwolle (NL), SCANIA

**ASIA**

Amata City (TH), DUCATI  
 Anting/Shanghai (CN), VW  
 Aurangabad (IN), ŠKODA, MAN  
 Changchun (CN), VW  
 Changzhou (CN), MAN  
 Chengdu (CN), VW  
 Dalian (CN), VW  
 Foshan (CH), VW  
 Jia Ding Qu/Shanghai (CN), VW  
 Loutang/Shanghai (CN), VW  
 Nanjing (CN), VW  
 Ningbo (CN), VW  
 Pithampur (IN), MAN  
 Pune (IN), VW  
 Urumqi (CN), VW  
 Yizheng (CN), VW

**AFRICA**

Olifantsfontein (RSA), MAN  
 Pinetown (RSA), MAN  
 Uitenhage (RSA), VW



# Strategy

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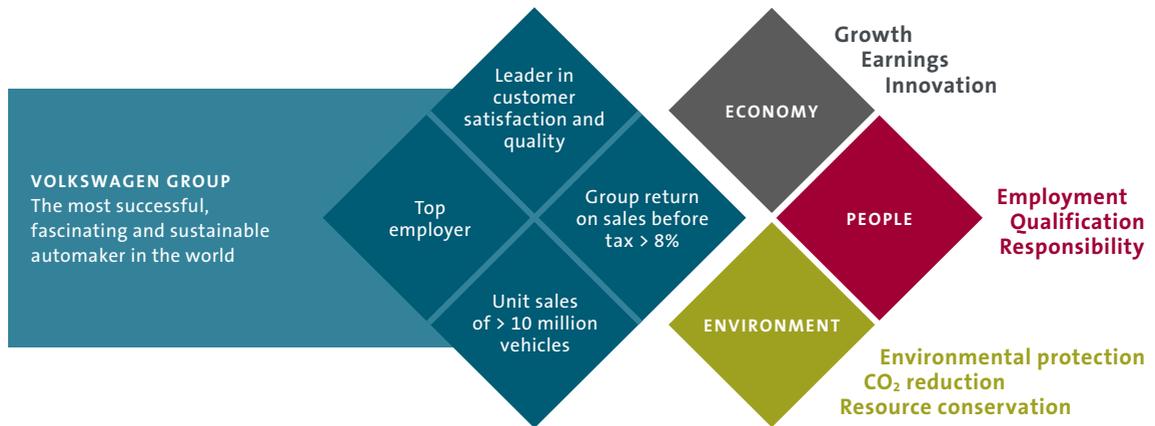
Economy

People

Environment

Indicators

The Group Strategy 2018 sets the pace. By 2018 the Volkswagen Group aims to be the world's most successful, fascinating and sustainable automaker. Achieving this calls for responsible long-term business practices that benefit everyone – employees, customers, investors, environment and society. In all of this we put our trust in proven concepts, which we also transfer – from brand to brand, from region to region.



# Strategy 2018

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**123,000**

**PEOPLE**

In Group and brand surveys in 2012 and 2013, customers, managers, employees and representatives of non-governmental organizations, academic and political circles provided feedback on their expectations in terms of sustainable business practices

**KEY TOPICS FOR THE  
VOLKSWAGEN GROUP ARE:**

Employer attractiveness and  
employment  
Environmental and climate protection  
Economic stability  
Customer satisfaction  
Resource-efficient products  
and production

**No. 1**

in the Dow Jones Sustainability Index  
means the Volkswagen Group is  
global sector leader in terms  
of sustainability

making  
progress.

# THINK BLUE. FACTORY.

Committed to conserving resources

By 2018, we aim to cut resource consumption at all Volkswagen brand production plants by 25% compared to 2010. This is the philosophy behind the “Think Blue. Factory.” program, part of our holistic attitude to environmental responsibility across the Group. The plant at Emden in Germany is a fine example.

One of 28 Volkswagen Group sites in Germany, the Emden plant ranks among the largest industrial employers in the East Frisia region, with a workforce of around 8,900 employees. The plant celebrates its 50th anniversary in 2014. The Volkswagen brand's Passat models manufactured here are shipped to more than 100 countries worldwide from the nearby port.



**The new bodywork plant at Emden commands an elevated position.** Because it is located in an area of former marshland, the architects decided to build the foundations on raised piles. In this eco-friendly design, more than half of the 5,500 piles enclose plastic pipes that run deep into the ground. The idea is to use the earth's low temperature to cool the water running through the pipes to 10°C. The water is then used to supply the bodywork production machinery. Currently the largest shallow geothermal system in the world, this is just one aspect of the Emden plant's commitment to the use of renewable energies.

The site has hosted a wind farm (owned by the public utility Stadtwerke Emden) since 1994, and is now home to a total of eleven turbines. Meanwhile, the largest photovoltaic system in Lower Saxony covers 3,000 m<sup>2</sup> of the factory's roof space. Inspired by these successful projects, the installation of a further solar system financed and operated by a workers' cooperative is imminent. Almost 80% of the heating for the plant's buildings and production halls is carbon-neutral district heating from a nearby biomass power plant, fueled in part by poplars and willows from the plant's own energy forest. These environmental commitments have earned the Emden plant a reputation as the "blue factory by the sea".

**Blue is the color of efficiency** for Volkswagen, as expounded in its "Think Blue." concept. Launched in 2005 as a scheme to highlight the Group's most fuel-efficient car models (BlueMotion), since 2010 it has evolved into a holistic philosophy on environmental responsibility. Since late 2011, "Think Blue. Factory." has broadened the concept to include production operations, and set an ambitious target for the Volkswagen factories: by 2018, the aim is to reduce the environmental impact per vehicle and component by 25% compared with 2010 levels. Attention focuses on five key environmental factors: energy, water, waste, CO<sub>2</sub> and solvent emissions, so that progress can be transparently measured. Volkswagen has also established a global standard to ensure uniform interpretation of the respective indicators.

A total of 27 of the 43 Volkswagen brand plants on four continents are currently taking part in the environmental program. By the end of September 2013, they had together identified resource-saving potential worth €114.3 million. More than one quarter of these measures are already up and running. In line with the Group's declared aim of becoming the world's most eco-friendly automobile manufacturer by 2018, this holistic, award-winning efficiency program will be successively rolled out to additional Group brands. ŠKODA has already adopted the entire system and is pursuing the 25% reduction target as part of its "Green Future" brand strategy.

The corporate program "Think Blue. Factory." was devised in collaboration with the Volkswagen plants. The status quo (baseline) was calculated for each plant, and binding targets were set for 2018. A catalog of 140 measures has been created to aid implementation. This is a concise compilation of best practices, pilot projects and technical innovations, and includes technical details, environmental impacts and contact details to encourage

knowledge-sharing between sites. From this catalog, the plants select the most appropriate measures for their purposes and arrange them on what is called a "migration path" of their own toward more eco-friendly production. "We have always been passionate about environmental issues. 'Think Blue. Factory.' allows us to channel this passion in a more focused way", says Thomas Laaken, Head of Environmental and Energy Management at the Emden plant and local "Think Blue. Factory." officer. The new ventilation system in the Emden assembly hall has attracted a great deal of interest from colleagues in other plants. Sensors and state-of-the-art control technology have reduced the system's electricity consumption by 80%, and it is also significantly quieter. "We have invested around €1.4 million, but this has translated into savings of approximately €850,000 per annum", says Laaken. The recently renovated administration building is likely to be a further talking point, as it has succeeded in reducing heat consumption by 80% and electricity consumption by 50%, thanks to high-performance insulation, LED lighting and heating/climate-control ceilings throughout, plus four high-efficiency mini combined heat and power plants in the cellar.

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**3,400 resource-saving measures are being implemented at Volkswagen sites worldwide in the context of "Think Blue. Factory."**

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**"Think Blue. Factory." is thriving,** mainly because the individual plants take inspiration from one another – and the systematic involvement of the employees, who have a hands-on knowledge of the best potential resource savings in the production sector. Consequently, "Think Blue. Factory" is closely interlinked with Volkswagen's ideas management system. In order to sensitize employees to the environmental program and reduction targets, specially trained ambassadors from the various trades have been tasked with spreading the word and acting as expert points of contact.

One thing is clear: achieving a 25% reduction will prove challenging for everyone, particularly those sites that have already worked hard to maximize efficiency in the past. "Nevertheless, we are very confident", says Laaken, who is even hoping to beat the CO<sub>2</sub> emissions target, and achieve carbon-neutral production as early as 2018. Planning is already well underway to install four wind turbines at the plant.

**STRATEGY**  
*Focus on Germany*



**1** – The collection and distribution center with heat pump puts the geothermal energy to good use. **2** – Thomas Laaken, Head of Environmental and Energy Management at the Emden plant. **3** – The largest photovoltaic system in Lower Saxony on the roof of the Emden plant.

# CENTRAL. LOCAL. GLOBAL.

The Volkswagen Group has a clear goal: by 2018 we aim to be the world's most successful, fascinating and sustainable automobile manufacturer. For us, sustainable means a form of responsible long-term economic activity that benefits everyone – employees, customers, investors, environment and society. This calls for appropriate endeavors by all brands in all regions where they operate, and along the entire value chain.

## OUR APPROACH

As one of the world's biggest automakers we bear a special responsibility for the environment and for people – whether as employees, customers, neighbors, or our suppliers' employees. By 2050, from a current level of about one billion, the number of vehicles on the world's roads will more than double. We will account for a considerable share of this increase. It will involve new jobs, but also rising emissions and increasing resource consumption. So we consider it one of our most important tasks to make mobility as eco-friendly as possible and affordable for large numbers of people. Individual mobility is not only a basic human need, but for many – especially in the emerging and developing economies – it is a sheer necessity. With trend-setting technologies and social competence we will make our contribution to a sustainable form of development that gives future generations the same opportunities as the present one.

**By 2050 the number of vehicles on the world's roads will have more than doubled.**

## Central Challenges

The Volkswagen Group has identified climate change, air quality, resource conservation and shifting demographic structures, especially in Europe and China, as primary central challenges with a global impact. These factors also involve social developments, which can differ widely depending on the individual markets. We analyze these developments carefully and gear our strategy to them in the interests of long-term success and profitability. Examples include progressive urbanization, increasing transparency requirements for businesses and a growing public awareness of employment and resource efficiency issues. These trends are ac-

companied by changes in consumer habits. Whereas a new middle class in the emerging economies wants high-quality products, the saturated market in Europe is calling for new services. At the same time new regulatory measures that have a considerable impact on our business operations are being introduced in both spheres.

**Public awareness of employment and resource efficiency issues is growing.**

Observation of environmental and social mega trends, analysis of the overall economic framework, tracking of upcoming customer trends and benchmarking against our competitors are brought together in a single process. This ensures that the important decisions for production, procurement and sales structures are taken with a ten-year timeline. Another instrument for identifying challenges and expectations and for dealing with changing conditions is the stakeholder dialogue, which we cultivate at both Group and market level (see page 23).

## Our Strategy

To meet the challenges and ensure the Group's sustainable success, we have identified action areas and defined strategic objectives for the year 2018. We have summarized these in a diagram in line with the three dimensions of sustainability – a vision that we pursue in all we do. This clearly outlines the pivotal key points for the entire Group for the years ahead.

VOLKSWAGEN GROUP STRATEGY 2018 AND SUSTAINABILITY GOALS



VOLKSWAGEN GROUP SUSTAINABILITY ROADMAP AT A GLANCE

<p><b>Growth Earnings Innovation</b></p>	<ul style="list-style-type: none"> <li>&gt; Reducing risks by stepping up compliance and training in antitrust and competition law, <b>ongoing</b></li> <li>&gt; Supplier training: in-depth audits and training in sustainability, step up supplier monitoring and E-Learning, <b>ongoing</b></li> </ul>	<ul style="list-style-type: none"> <li>&gt; More than two thirds of the total investment of €50.2 billion go into more efficient vehicles, new technologies and eco-friendly production, <b>2015</b></li> </ul>	<ul style="list-style-type: none"> <li>&gt; Top for customer satisfaction in core markets with product, dealership and latest workshop visit, <b>2018</b></li> </ul>
<p><b>Employment Qualification Responsibility</b></p>	<ul style="list-style-type: none"> <li>&gt; Establish three-tier pay systems with basic pay, profit sharing and performance component as Group standard, <b>ongoing</b></li> <li>&gt; Extend Volkswagen Checkups and screening programs, <b>ongoing</b></li> </ul>	<ul style="list-style-type: none"> <li>&gt; Develop graduate entrants and excellent training within all the Berufsfamilien (professional families), <b>ongoing</b></li> <li>&gt; Advancement of women to achieve the long-term goal of 30% women at all levels of hierarchy, <b>ongoing</b></li> </ul>	<ul style="list-style-type: none"> <li>&gt; Vocational, specialized and Meister (group leader) qualification to identical standards worldwide, <b>2018</b></li> </ul>
<p><b>Environmental protection CO<sub>2</sub> reduction Resource conservation</b></p>	<ul style="list-style-type: none"> <li>&gt; Optimize use of Modular Transverse Matrix (MQB), <b>ongoing</b></li> <li>&gt; Improve recyclability and ensure it by labeling materials, <b>ongoing</b></li> <li>&gt; Build and expand production facilities to the highest environmental standards, making use of renewable energy sources, <b>ongoing</b></li> <li>&gt; Creation of innovative mobility concepts, <b>ongoing</b></li> </ul>	<ul style="list-style-type: none"> <li>&gt; Reduce CO<sub>2</sub> emissions from European new car fleet by about 30% to 120 g/km, <b>2015</b></li> <li>&gt; Each new model presents superior environmental characteristics to its predecessor, <b>ongoing</b></li> <li>&gt; Introduce new models with economical or alternative drive technology, <b>ongoing</b></li> </ul>	<ul style="list-style-type: none"> <li>&gt; Become market leader in electric mobility, <b>2018</b></li> <li>&gt; Reduce energy and water consumption, waste and emissions per production unit by 25% Group-wide (base year 2010), <b>2018</b></li> <li>&gt; Reduce specific greenhouse gas emissions from energy consumption in Germany by 40%, <b>2020</b></li> <li>&gt; Reduce CO<sub>2</sub> emissions by European new car fleet to 95 g/km, <b>2020</b></li> </ul>

For further details on the sustainability roadmap see page 139.

## Guidelines and Principles

Our activities are governed not only by our strategic objectives, but also by our principles and voluntary undertakings. 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). 🚗 6
- **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. 🚗 7
- **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. The Code takes its lead from the Group values. 🚗 8
- **Commitment to United Nations Global Compact:** In 2002 the Volkswagen Group signed the Global Compact, thereby committing itself to the Compact's ten principles on human rights, labor, environment and anti-corruption. With our Communication on Progress on the implementation of these principles,

in 2013 we again reached "Global Compact Advanced Level" (see also page 144).

In 2013 this commitment was extended to include the CEO Water Mandate, which imposes obligations to make careful use of water resources.

We also make sure that our activities are in line with the

- Declarations of the International Labour Organization (ILO),
- Guidelines and conventions of the Organization for Economic Cooperation and Development (OECD) and
- UN international 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 page 58). Group-wide environmental protection is governed by the Group's Environmental Policy and its Environmental Principles Product and Environmental Principles Production (see page 92).



The new XL1\* is currently the world's most economical and eco-friendly car. Here we use the most innovative systems and materials available in the interests of maximum efficiency.

## SUSTAINABLE GROWTH AS A CHALLENGE

The Volkswagen Group is growing. In five years' time we will once again be supplying substantially more cars and trucks than we do today. Of course, this also means we are contributing to rising CO<sub>2</sub> emissions and growing resource consumption. But the demand for individual mobility and transport services exists. What is more, it is increasing as globalization continues and as the emerging economies grow stronger and at the same time develop a new middle class. With innovative concepts we can ensure more jobs, greater resource efficiency and more renewable energy, and at the same time energetically pursue alternative drive technologies. However, we have no intention of limiting our marketing and advertising for our Group's vehicles. After all, commercial success is the yardstick of all business activities, and it puts us in a position to invest in technologies of the future. There is no listed group in the world today that spends more money on research and development than Volkswagen. We use these resources to shape the mobility of tomorrow – making it safer, better networked, more eco-friendly. And we stand by our aim that in everything we do – in production, in dealings with suppliers and in employee involvement – we should always be better from a sustainability point of view than our competitors.

### Outlook

Our aim is to practice sustainability and corporate responsibility worldwide. With over 570,000 employees and 106 production facilities on four continents we are in a particularly good position to do so. Our approach is to transfer best practices from brand to brand, from region to region. There are already numerous examples of how this works – from the Modular Transverse Matrix for the Volkswagen, Audi, SEAT and ŠKODA brands, through the dual vocational training and education system and in-service training opportunities that we introduce to the regions, to mobility services, concepts for road safety, social responsibility and biodiversity projects. In this way we seek to turn our size and growth to good advantage and exercise our responsibility for our employees, the environment and society.

## SUSTAINABLE MANAGEMENT

The Volkswagen Group has made a commitment to transparent and responsible management. The greatest challenge for putting this into practice at all levels and in all stages of the value chain is our complexity: with twelve brands and more than 570,000 employees we are one of the biggest companies in Europe. We follow the recommendations of the German Corporate Governance Code and have geared the remuneration of the Board of Management to the Company's long-term results.

## Remuneration of the Board of Management

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. 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 – subject to an introductory phase – 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.

**On the Supervisory Board of the Volkswagen Group there are three women, two of them on the shareholder side.**

## Composition of the Supervisory Board

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 Board has a total of 20 members, three of whom are women. Clear ideas have been formulated about the ideal composition of the Supervisory Board:

- At least three seats should be held by individuals of a particularly international character.
- On the shareholder side, at least four members of the Supervisory Board should be individuals free from potential conflicts of interests, especially conflicts which might arise from an advisory or official function in regard to customers, suppliers, lenders, or other third parties.
- Furthermore, at least four seats on the shareholder side should be occupied by individuals who are independent within the meaning of No. 5.4.2 of the German Corporate Governance Code.
- At least three members of the Supervisory Board should be women, and at least two of these seats should be held by shareholders.
- As a rule, no person aged 75 or over at the time of the election should be nominated for elections.

### Coordination of Sustainability

To coordinate sustainability and corporate responsibility, Volkswagen has put in place a clear structure. The Group Board of Management (Sustainability Board) is also the highest-ranking sustainability body in the company. It is informed about corporate responsibility and sustainability issues by the Group CSR & Sustainability Steering Group at least twice a year and takes central decisions. The Group CSR & Sustainability Steering Group includes top managers from central Group business areas, 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.

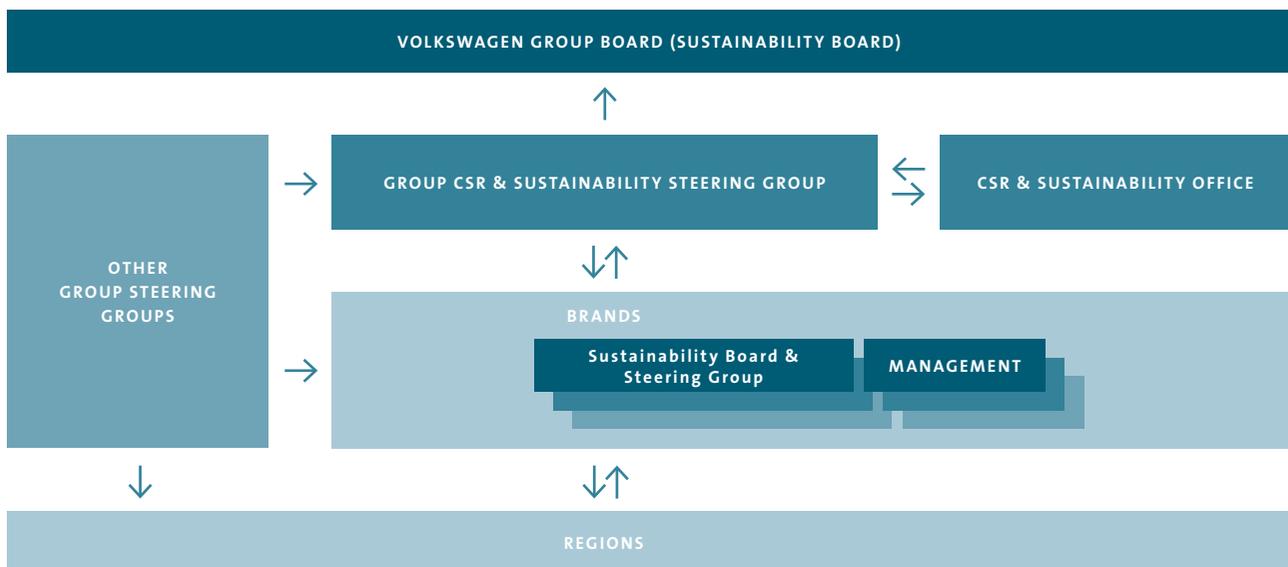
The Group CSR & Sustainability Steering Group is in turn supported by the CSR Office, which since 2006 has been coordinating all sustainability-related activities within the Group and the brands. Its remit also covers the stakeholder dialogue conducted at Group level including relations with sustainability-oriented 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 at the various brands and are being continuously strengthened.

### Global CSR Meeting

To promote dialogue across the Group, set up uniform structures and learn from one another, the CSR and sustainability coordinators of all brands and regions have been meeting annually in Wolfsburg since 2009. The Global CSR Meeting has thus become an important element in the Group-wide coordination structure. In 2013 the following topics were on the agenda of the two-day meeting: Sustainability Reporting, Information Management, Stakeholder Management and Corporate Citizenship. All four topics were discussed in moderated working groups. The meeting closed with the presentation of the results to the 70 participants:

- **Sustainability Reporting:** This means not only the Group Sustainability Report, but also the links between the various reporting and communication formats within the Group and their joint future development. The visibility of the brands is to be improved, the preparation processes synchronized and steps taken to ensure that key stakeholders are addressed.
- **Information Management:** Since all reporting is based on good data acquisition, the focus here was on designing a computerized information system. How can such a system meet the requirements of the Group and also of the brands and regions? What indicators are relevant, and at what level? What additional information of a qualitative nature is needed?

## VOLKSWAGEN SUSTAINABILITY ORGANIZATION





The CSR & Sustainability Coordinators of the brands and regions met in Wolfsburg in June 2013.



The e-up!<sup>\*</sup> and the e-Golf<sup>\*</sup>. Delegates to the Global CSR Meeting were able to test drive two electric models.

- **Stakeholder Management:** Here the focus was on the question of the main stakeholders and the various levels. How can we develop and refine efficient dovetailing of stakeholder management between Group and brands and ensure that stakeholder expectations are addressed? This requires systematic identification and classification of stakeholders and a basic approach that can also be transferred to the brands and regions.
- **Corporate Citizenship:** The Volkswagen Group takes this to mean voluntary initiatives and activities that create added value for communities and society. A wide variety of relevant approaches and projects, many of them arising from traditional processes, exist within the Group and its brands and regions, including as many as five corporate foundations such as the Volkswagen Community Trust set up by the Volkswagen brand in South Africa, or the Audi Stiftung für Umwelt (Environment Foundation). The aim here is to find a common systematic approach that also permits an impact assessment to be drawn up.

## Adopted in 2013: *the Group Environmental Strategy.*

### Coordination of Environmental Protection

In 2011 the Volkswagen Group appointed a Group Chief Officer for the Environment, Energy and New Business Areas, and took other important decisions for the ecological restructuring of the Group. At the end of 2013 the Group Board of Management approved the Environmental Strategy (see page 91). The Group Environmental Conference, which as a rule brings the environmental officers of the brands and regions together every four years, has been held since as long ago as 1998. Through the Corporate Environment and Energy Steering Group, which also reports to the Sustainability Board, the coordination of these issues follows the structure described above for CSR & Sustainability.

### Coordination of Employee Responsibility

The framework is defined by the Corporate Personnel Management (PM) department and implemented locally. In 2013 the PM strategy to support the Group goals for 2018 was adopted (see page 58).

### Coordination of Social Engagement

Social engagement falls largely within the responsibility of the brands, companies and sites. To ensure a certain standardization worldwide, the Group has defined central principles (see page 78).

### RISK MANAGEMENT

The sustainable success of our Company also depends on how quick we are to identify the risks and opportunities arising from our operations and how far-sighted we are in managing them. The Volkswagen Group's responsible approach to risks is supported by a comprehensive risk management and internal control system. The organization of the Volkswagen Group's risk management system (RMS) and internal control system (ICS) is based on the internationally recognized COSO Enterprise Risk Management Framework (Committee of Sponsoring Organizations of the Treadway Commission). Here Volkswagen has chosen a holistic, integrated approach that combines the risk management system, internal control system and compliance management system in a single management strategy (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. The Board examines risks and opportunities in connection with a wide variety of processes. The Audit Committee of the Group Supervisory Board receives regular reports on the effectiveness of the RMS/ICS.

### Three Lines of Defense

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 adopts 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 control process. In this, the brands, major companies and individual functional areas 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 as a whole. The Group Board of Management receives a report on significant risks, defined in terms of quantitative and qualitative assessment criteria and a probability rating.

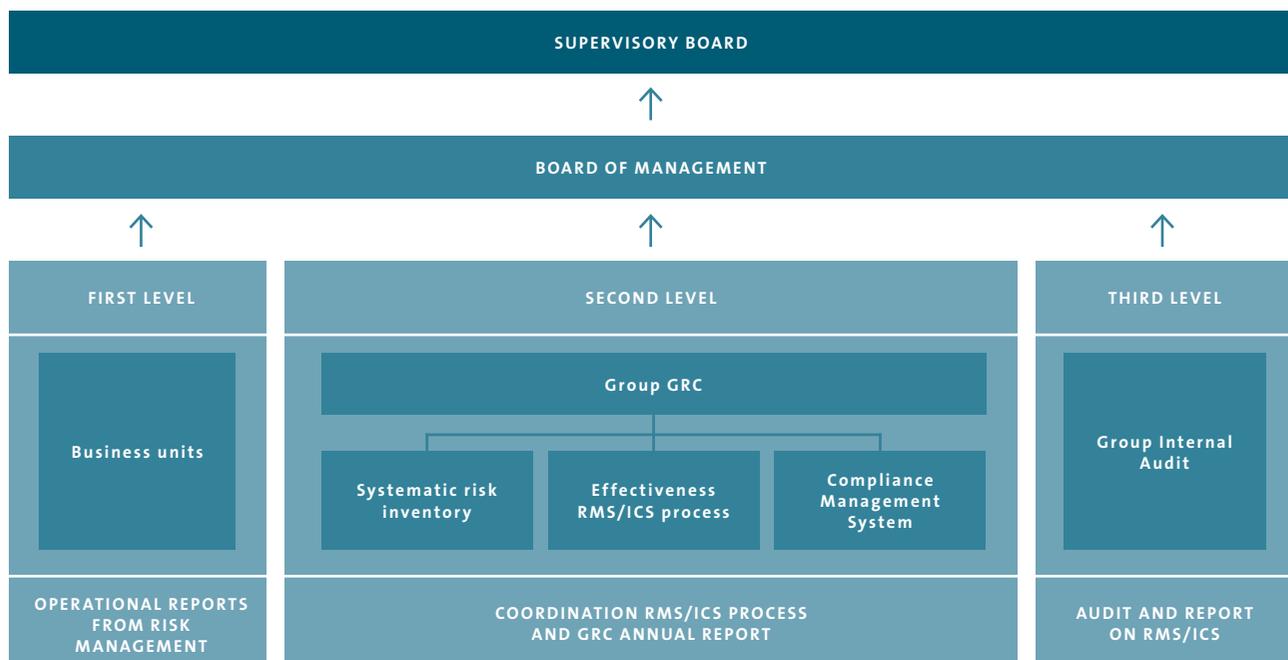
- The third line is Group Internal Audit, which makes regular checks on the structure and implementation of the risk management system as part of its independent audit procedures.

### Significant Risks

The biggest risks – i.e. risks with a high probability of occurrence and a large financial impact – may arise from

- adverse unit sales and market trends for vehicles and genuine parts
- development and creation of products not suited to demand and
- potential quality problems.

### “THREE LINES OF DEFENSE” APPROACH



## Environmental Risks

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 in one of our more than 100 production facilities worldwide.
- Regulatory measures, especially sanctions resulting from failure to achieve CO<sub>2</sub> emission targets for the fleet or comply with emission standards required by cities and municipalities. Emission requirements for vehicle taxation also play an important role here.

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 RMS/ICS and on economic, political, financial and operational risks, see the risk report in the 2013 Management Report. [🔗 9](#)

## STAKEHOLDER MANAGEMENT

In the long term we can only be successful if we are familiar with our stakeholders' needs and expectations. The larger and more diverse the Volkswagen Group and its products and services become, the greater our stakeholders' expectations will be and the broader the spectrum of relations that we need to actively address. These include analysts and investors, employees, talents, customers, neighbors, suppliers, business partners, legislators, public authorities, academia and non-governmental organizations.

### Goal: Create Understanding

For the Volkswagen Group, the dialogue with our stakeholders has many facets: it ranges from expectation management through innovation initiatives to risk identification. Here we pursue a systematic process and are basically in favor of an open and constructive dialogue in which we learn from each other, but also set out our own interests. The outcome of this process should be at least a mutual understanding of the different backgrounds and positions, but preferably a consensus on what a joint solution might look like. This should ideally be implemented in a joint project from which both sides benefit.

## Stakeholder Relations at Group Level

Direct contact with stakeholders, especially employees, talents, business 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 legislators, academia and non-governmental organizations.

We are aware of the accusation that lobbying would run counter to the interests of open dialogue. And we openly admit that we too pursue our own interests – in awareness of our responsibility for employment and prosperity in many countries around the world. This is both necessary and legitimate. Our aim is to maintain the Group's freedom of action. At the same time we help legislators by contributing our expertise to the processes of legislative and administrative decision making. We aim to do this as openly as possible, and have therefore joined the European Commission's Transparency Register. Here we disclose our objectives and the financial resources we allocate to representing our interests. We have representative offices in major European automotive locations. We do not make donations to political parties or party-affiliated institutions. [🔗 10](#)

## POSITIONS ON POLITICAL ISSUES

The central topic in 2013, which also dominated our dialogue with the NGOs, was the regulation of CO<sub>2</sub> emission levels for European fleets of passenger cars and light commercial vehicles. The Volkswagen Group spoke out at an early stage in favor of the European political target of 95 g for cars, and at the same time campaigned for financial assistance for alternative technologies of central importance for decarbonizing the transport sector. [🔗 11](#)

At Group level we particularly cultivate membership of organizations that involve an intensive dialogue on sustainable development issues. At international level these primarily include our engagement with the 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. [🔗 12](#)

## For 17 years a stakeholder panel *has been evaluating our reporting.*

### Stakeholder Panel and Annual Evaluation

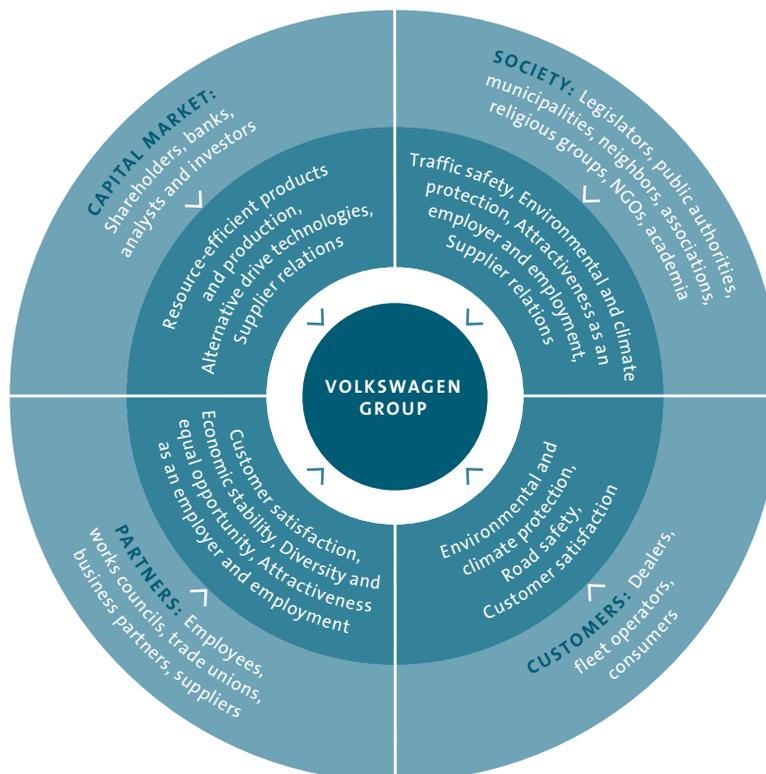
In cooperation with the Institute for Market, Environment and Society (imug) we established a stakeholder panel, which has now been running for 17 years. It follows our activities, especially our environmental and sustainability reporting activities, and produces a critical commentary every year. To this end, imug holds detailed interviews with a total of 33 representatives of different stakeholder groups. This evaluation helps us to critically scrutinize and improve our Sustainability Report, and also provides information about weaknesses in our Group-wide sustainability coordination. 13

The 2012 Group Sustainability Report scored very well on the whole – in fact it was rated the best ever. Criticism was voiced about its size: 170 pages. At the same time, however, the stakeholder representatives' comments indicate a need to improve the content, calling for more detailed treatment of quite a num-

ber of topics. The main recommendations are set out briefly below. We have also tried to address them in this report:

- › **Indicators:** Important indicators should be emphasized and their significance for management discussed. It would also be desirable to place the data in context and offer means of comparing them – both internally and with competitors.
- › **Dilemmas:** The report should devote more space to critical issues and discuss conflicts of interest. This also includes the issue of lobbying.
- › **Product responsibility:** As a global group, Volkswagen also bears responsibility for what happens to vehicles after they have been sold, and ought to make this clear. Stakeholders also want to see more about road safety.
- › **Intelligent mobility:** The Group should provide a more detailed presentation that is not confined to thinking within the Group, but also includes aspects going beyond its limits, such as how to design cities worth living in.
- › **Dealing with conflict materials:** This topic should be dealt with in greater detail. Stakeholders want to know where the raw materials used by the Group come from. There should also be a description of concrete measures.
- › **Social engagement:** The connection between social engagement projects and the Group's sustainability strategy should be

### THE VOLKSWAGEN GROUP'S STAKEHOLDERS AND THEIR EXPECTATIONS



See the Internet for a list of stakeholder dialogues in 2013 14

made clearer. Information about the evaluation of such projects would also be desirable.

### Stakeholder Surveys

The brands Audi, MAN, Volkswagen and Porsche have carried out their own – mostly very extensive – online surveys of their stakeholders, as have Volkswagen do Brasil and Volkswagen Financial Services. Moreover, in 2013 all companies in the Volkswagen Group took part in the “Stimmungsbarometer” – an opinion survey for employees of the Volkswagen Group (see page 67). This was the first Group-wide investigation of employee needs and interests. In future it will be conducted in this form every two years. The Group also has a standardized procedure for communication with customers. The Volkswagen brand, for example, runs a Marketing KPI Cockpit survey four times a year in 30 countries. In 2013 the brand and model image section for the first time included and analyzed issues of direct relevance to sustainability.

### STAKEHOLDER ENGAGEMENT AT VOLKSWAGEN DO BRASIL

In 2013 Volkswagen do Brasil published a Yearbook on sustainability as the outcome of an intensive process of identifying stakeholder needs. The following central groups were identified: dealers, suppliers, customers, employees, third parties and the Group. The most important topics to emerge from the materiality analysis were: non-discrimination, anti-corruption, product responsibility and freedom of association.

### Dialogue and Cooperation

Both the Volkswagen Group and the brands maintain an intensive dialogue with their stakeholders – their own employees, customers, suppliers, business partners and their local neighbors. This also includes a constructive exchange with public authorities and in most cases intensive long-term cooperation with organizations representing social and environmental interests. This is prompted by a desire not only to be a responsible corporate citizen but also to obtain insight into external perceptions of our own activities.

### RAISING AWARENESS AMONG MANAGEMENT

In 2012 MAN Truck & Bus initiated the “Manage responsibly” training course to integrate corporate responsibility in HR and management development. The training course was successfully continued in 2013. It puts managers in a position to implement the CR and climate strategy in their own areas of responsibility. To date, nearly 300 managers and multipliers have taken part in more than 30 half-day training sessions.

### NEIGHBORHOOD DIALOGUES

For the past 15 years Volkswagen Commercial Vehicles has been engaged in a dialogue with its neighbors at the Hanover site in Germany, because the factory is situated close to residential areas. It maintains a particularly intensive dialogue with the contact group elected by the participants, which meets several times a year for discussion with company representatives. This has made it possible to reduce misgivings and build up a climate of mutual understanding. For some years now, similar discussions have also been taking place at our Poznań site in Poland. The focus is not only on exchanging information and reaching an understanding with the neighbors, but also on long-term initiatives aimed at supporting and promoting various groups in local society.

### COOPERATION WITH NABU

For the past 13 years Volkswagen and NABU, Germany’s biggest environmental and nature conservation organization, have been engaged in a unique form of cooperation. Entitled “Mobile for mankind and nature”, it is reflected in a wide variety of projects and an ongoing critical dialogue on issues relating to environmental protection and sustainability. The environmental program developed jointly by NABU and Volkswagen Leasing GmbH, an eco-friendly fleet management service offered to major customers, makes a substantial contribution to reducing CO<sub>2</sub> emissions. The annual presentation of the “Green Fleet” award aims to encourage others to follow this example. Wherever possible, the partners link their initiatives for resource efficiency and environmental protection with NABU’s core concern, the conservation of nature and biodiversity. Important initiatives include not only the rehydration of peat and bog areas, but also the renaturing of the Lower Havel river, Europe’s biggest river meadow project. Since 2003 the partners have organized nationwide fuel economy action days in cooperation with local NABU groups and Volkswagen dealers. The “Mobile Dialogue” series of events fosters the public debate about major environmental and transport policy issues. “Welcome Wolf” is the title of an information campaign which has staged numerous activities since 2004 to promote protection for the wolves reintroduced into Germany.

## REPORTING AND ISSUES MANAGEMENT

Group-wide sustainability reporting plays a central role in the context of strategic development, because it creates internal transparency, bundles topics and facilitates coordination. But of course it also has a substantial part to play in terms of external presentation. For example, the Group Sustainability Report with its summary of progress builds a bridge to society, forming the basis for dialogue, understanding and further progress. In May 2013 the Group Sustainability Report, which follows the guidelines of the Global Reporting Initiative (GRI), and the associated Internet presence (microsite) were confirmed by the Group Board of Management as the Group's central reporting platform for sustainability and corporate responsibility.

### Status within the Group

The Audi, MAN, Porsche, Scania and ŠKODA brands prepare their own GRI-based sustainability reports. While the other brands and companies engage in target-group oriented communication on the subject, they do not produce a systematic GRI report of their own. For the present sustainability report, a company software tool was used for the first time to gather and document facts and figures. It is to be developed and expanded in future to support reporting and management within the Group. The existing microsite is also to be developed into a closely dovetailed sustainability site for the Group and its brands.

### Materiality Analysis

The Volkswagen Group uses a number of instruments to acquire the many topics and goals. From future research via stakeholder dialogue to our internal environment radar, they supply us with important information that is used in developing our strategy and in our reporting. In late 2013 we used the existing materiality matrix and the results of the various stakeholder surveys by the brands and companies to identify important recurring topics. In addition to the customer survey for the Volkswagen brand (see page 25), which covered answers from some 120,000 respondents, these included the broad stakeholder surveys for the Audi, MAN and Porsche brands as well as Volkswagen Financial Services. Together these surveys reach out to more than 6,000 respondents, with response rates of up to 40%.

We are of course well aware that this is not yet a consistent and systematic process taking equal account of all brands and companies. It was, however, adequate for identifying the material topics. In assessing the topics as set out in the Group materiality matrix, we take the following as our three central criteria:

- › stakeholder expectations,
- › the significance for the Company and
- › the extent to which the Company can influence the topic.

## Resource-efficient products and production *were rated much more important than in 2012.*

### Our Understanding of the Material Topics

The materiality analysis 2013 primarily involved arriving at more precise definitions of topics in line with the Group strategy for 2018. The biggest shift was seen in “resource-efficient products and production”, which our internal experts rated several degrees more important for the Company than in 2012. The importance of other topics remained more or less constant. What do they mean for us?

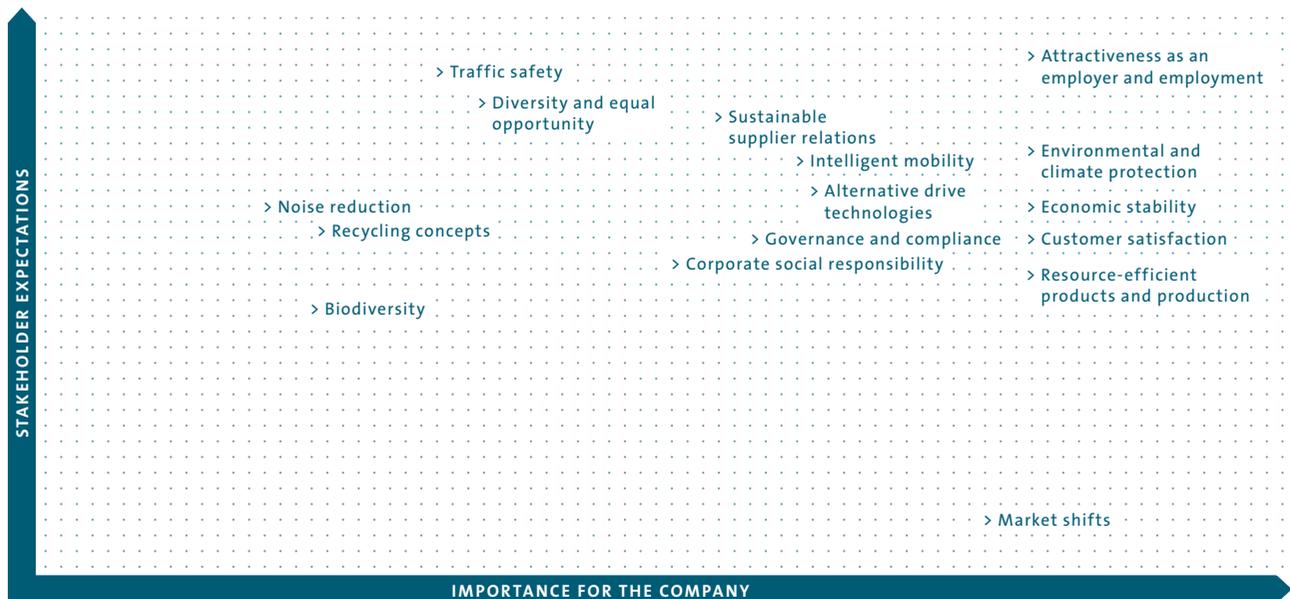
- › **Employer attractiveness and employment:** Stands for the way industry makes a substantial contribution to society by creating and offering jobs, and for everything that goes to make up an attractive employer – training, involvement, health, occupational safety, ergonomics and concepts for responding to demographic change.
- › **Environmental and climate protection:** We take this to mean overarching activities and concepts, such as our environmental management system, or mutual knowledge transfer on such topics, which help to improve the Group's environmental protection and climate response.
- › **Economic stability:** For us, this means more than just sales and profits. It also includes aspects like local sourcing, which seeks to ensure a broad and balanced supplier base, safeguarding against capital market risks, and forward-looking management activities.
- › **Customer satisfaction:** Goes beyond satisfaction with our products and includes not only evaluation of our service and our dealer networks, but also all aspects of practiced product responsibility and quality assurance. It also includes our ability to speedily identify new needs in the various markets and translate them into solutions.
- › **Resource-efficient products and production:** For us this means making efficient and sparing use of resources over the entire life cycle. The topic embraces a whole bundle of concepts ranging from product development, through purchasing and production, to the product use phase.

Our understanding of all the topics in the materiality matrix can be found on the Internet. 🌐 15

**MATERIALITY ANALYSIS: PROCEDURE IN THE VOLKSWAGEN GROUP**



**MATERIALITY MATRIX: TOPICS FOR THE VOLKSWAGEN GROUP**



**Decision and Outlook**

At the beginning of 2014 the Group CSR & Sustainability Steering Group approved the materiality matrix as the valid description and corridor for the ongoing strategic development of responsibility and sustainability in the Volkswagen Group. In preparation for the new requirements set out in the GRI's G4 guidance document, we will devise an approach that takes greater account of the brands' activities, bundles their findings better and feeds them into a Group analysis.

To ensure a systematic approach to stakeholder management within the Group, in 2014 we are introducing 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 stakeholder-oriented issues management in 2014 that helps to uphold the reputation of the Group.



# Strategy

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# Economy

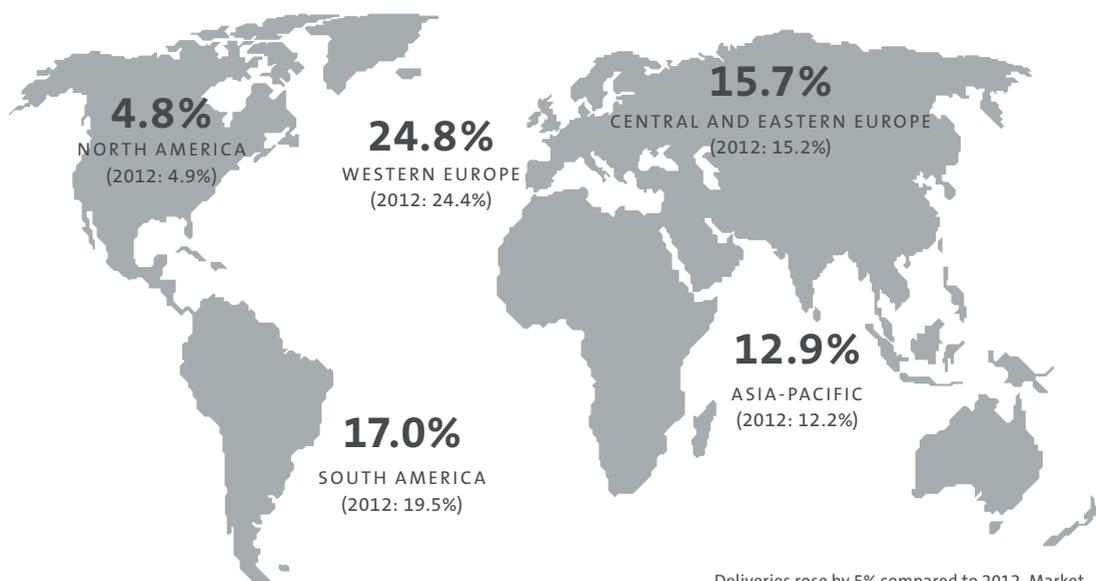
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People  
Environment  
Indicators

Steady growth that makes leadership possible forms the core of our Group Strategy 2018. To make it happen we are diversifying our product portfolio and adopting a broad-based position in global markets.

## PASSENGER CAR MARKET SHARES WORLDWIDE



Deliveries rose by 5% compared to 2012. Market shares for 2012 have been adjusted for reasons of statistical continuity. Deliveries by the Porsche brand are included from August 1, 2012.

# Economy

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“We are facing major challenges. But we are tackling them in a targeted way, which means we are continuing to invest heavily in eco-friendly technology, efficient drive systems and new models.”

HANS DIETER PÖTSCH

Member of the Group Board of Management  
responsible for Finance and Controlling



€197

billion

sales revenues  
in 2013

€9.1

billion

profit after tax



106

PRODUCTION PLANTS

worldwide operated  
by the Volkswagen Group  
and its brands

€135

billion

total Group procurement  
volume in 2013

€10.2

billion

Group investments in  
research and development  
in 2013

steady  
growth.

# GROWTH

## New concepts for new buyers

The Volkswagen Group is aiming to deliver more than 10 million vehicles per year worldwide from 2018. One central driver of this growth is the Chinese market, where for years Audi has been setting standards in the premium segment with its products and technologies. Now the brand is appealing to new target groups and customers with a digital showroom and a selection of used cars.

The Volkswagen Group began to tap into the Chinese market in the early 1980s. In 1988 Volkswagen and Audi began collaboration with local partner First Automotive Works (FAW) based in Changchun. The joint venture's first factory has been followed by another 16 plants, the most recent opening at the end of 2013 in Foshan. The gearbox plant in Tianjin will start production in the second half of 2014.



国贸桥  
GUOMAO Bridge

国贸桥  
GUOMAO Bridge

4m



南行非机  
动车请从  
西侧桥下  
行驶



**Prestige matters in China.** At the dealerships run by Patrick Chou, it is increasingly image that tips the balance when a customer is faced with the choice: will it be a new mid-size car or a used premium model? The market for used cars in China is still in its infancy. In 2013, for every new car sold, 0.35 used cars found new owners – compared with 2.4 in Germany. Having said that, with sales hitting between an estimated 6 and 6.5 million vehicles (2013), the Chinese market is already, in the space of just a few years, matching the volumes of large European countries (Germany 2013: 7.1 million). And the share of premium models in that number rose sharply to 8.8% in 2013.

“Buying a used car is all about trust, and that has to be built up”, says Chou, CEO of authorized Audi dealer group Better Life. Audi is making every effort to respond to this challenge in China. For example, the Audi stands at motor shows feature special used car terminals. Prospective customers are offered financing arrangements and an extensive range of services and warranty packages. With 291 authorized dealers, of which 60 are exclusive Audi centers, Audi has the largest dealer network for used cars, with almost 27,000 vehicles (+55%) sold in 2013. More than half of these belonged to the key “young used cars” segment (less than five years old) as part of the brand’s own “Audi refined recommendation User Car” program (+72% year on year).

This is another example of the influential role played by Audi in the Chinese car market. The premium manufacturer has been building cars in Changchun, northern China since 1988 – first under license, then in a joint venture with Volkswagen and local partner First Automotive Works (FAW). And since April 2013 the Audi Q3 has been rolling off the assembly line there alongside the Audi Q5 and special long-wheelbase versions of the Audi A4 and Audi A6 models. All four models are market leaders in their respective segments. Sales have kept pace with the rapid growth of the Chinese economy in general. By 2010, Audi had sold 1 million vehicles in China and Hong Kong, with the 2-million milestone coming up just three years later. With 491,989 units sold (+21%), the brand celebrated a record-breaking year in 2013.

That makes Audi by far the largest premium carmaker in China. And by the same token, China is the most important market of the future for Audi – and the Volkswagen Group as a whole. Indeed, in 2013 and 2014 the Group is opening seven new factories in China as part of its bid to become the world’s largest automaker by 2018. As a result, annual production is expected to rise from 3.27 million vehicles at present to over four million.

**The breathtaking pace of expansion** of the Chinese car market has slowed. The years of up to 46% growth (2009) have been followed by more moderate gains, most recently of 19%. State help-to-buy initiatives and high inventories have expired, and registration restrictions are now in effect. Beijing and five other cities have placed additional limits on private car registrations, and other smog-plagued cities are keen to follow suit. However, experts continue to rate the prospects for sales as very healthy. In 2013, China recorded some 16 million new registrations, making it the world’s second-largest market, just behind the USA.

The engine for this continuing growth is the newly moneyed middle class. Accordingly, nine out of ten Audi buyers in China are private customers. On average they are in their mid-thirties, well educated and often female, and most have a family. For roughly one third, an Audi is their first car. “Many people see compact premium cars as entry-level models”, explains Rene Koneberg, Head of Audi China Brand Marketing. In this segment Audi builds not one but two model series in China: along with the Audi Q3 in Changchun, since early 2014 the Audi A3 has been built at the new FAW-Volkswagen plant in Foshan, southern China. Together, the two plants will drive up annual production to 700,000 units over the medium term.

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**“Buying a used car is all about trust,  
and that has to be built up.”**

Patrick Chou, CEO of authorized Audi dealer group Better Life in Beijing

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**And they will do so the green way.** Foshan is one of the most environment-friendly car factories in China. And it’s not just the factories, because the Volkswagen Group’s €9.8 billion investment drive also includes a focus on building highly efficient products. An efficiency program launched in 2011 has seen the average fuel consumption of locally built Audi models drop by one fifth. Contributory factors here have included the integration of start-stop technology, brake energy recovery and lightweight components. In the future-focused electric mobility market, meanwhile, the premium manufacturer is looking to introduce e-tron technology soon, and already offers three full-hybrid models. Moreover, Audi is to build an engine that complies with the Euro 6 standard on site in China, thereby bringing future EU standards to the country. As a result, the fuel consumption limits announced by the Chinese government – an average 5l/100 km by 2020 – are no problem for Audi. The brand won several awards in China in 2013 for its environment friendliness and levels of customer satisfaction.

The brand’s customer-centric approach can be experienced in the fresh new surroundings of Audi City, which opened in Beijing in early 2013. Intuitively controlled powerwalls allow around 8,000 visitors per week to configure a full-size version of their personal dream car – from the inside, from the outside and using many color and equipment options. In the digital showroom on the first floor, visitors with a strong interest in purchasing a car can experience the haptic qualities of 15 display models, compare leather samples and wheel rims, and receive personal consultation.

Beijing is the second city (after London) in which Audi has used the Audi City concept to appeal to younger target groups in particular. “In China, where in the past customers have tended to buy their cars off the shelf, we are moving customer behavior to a higher level of individualization,” says marketing manager Koneberg. And that will be another growth driver in this expanding market.

**ECONOMY**  
*Focus on China*



- 1 – The new Audi showroom opened in Beijing at the beginning of 2013.
- 2 – Patrick Chou, CEO of authorized Audi dealer group Better Life in Beijing.
- 3 – Visitors engage in the digital configuration of their personal dream car.



# STABILITY. GROWTH. LEADERSHIP.

**2013 brought up another important milestone for the Volkswagen Group on its way to becoming the world's leading automobile manufacturer, with a new record number of vehicles delivered. Unit sales rose 5% to 9.73 million vehicles. That puts Volkswagen in second place in the worldwide rankings, with the second-highest growth in absolute terms.**

## MANAGEMENT APPROACH

Safeguarding economic stability is one of the most important goals for the Volkswagen Group. To ensure sustainable and stable growth we are constantly tapping new fields of potential: optimizing our production processes and refining our products, as well as making extensive investments in research and development, our plant and equipment and our employees.

Diversification of our product portfolio and broad-based positioning in the global markets also serve to promote economic stability by helping to reduce sectoral and geographical risks. By localizing value-added we can not only respond more flexibly to customer needs but also offset volatile exchange rates and mitigate risks resulting from protectionism.

## Challenges and Goals

The changing structure of the global economy and the growth prospects of individual countries and regions pose substantial challenges for the Volkswagen Group. In addition, the increasingly hard-fought competition in the various markets and the growing size and complexity of the Company call for a strategy that offers an effective response to both local requirements and global trends.

While in the USA demand for automobiles continued its recovery in 2013, it was above all the ongoing economic uncertainties in Western Europe that led to the weakest overall level of market activity of the past 20 years. At the same time, the intensity of competition in what since 2008 has been the world's fastest-growing sales region – Asia-Pacific – is constantly increasing. Along with the revived American automakers and the Japanese and Korean manufacturers who continue to expand, in the future the Chinese brands too will be building on their existing positions both within and outside China. German automobile manufacturers, particularly hard hit by the current weak state of the European market, are adapting capacities, stepping up cooperative activities and expanding their global presence in pursuit of a decisive improvement in their competitive position. At the same time, the shift in the global economy's centers of growth continues. Above all the BRIC countries (Brazil, Russia, India and China) will continue to gain importance in both economic and political terms, exercising a decisive influence on the state of the global economy.

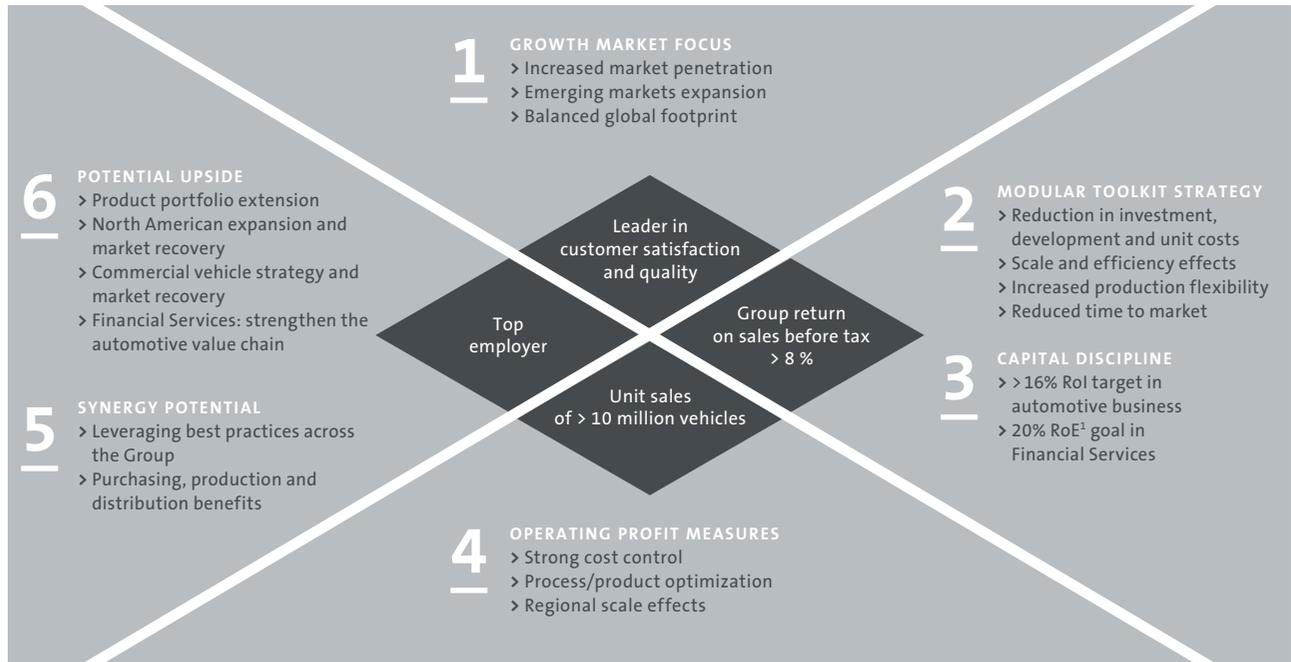
## KEY FIGURES BY MARKET<sup>1</sup>

Thousand vehicles/€ million	Vehicle sales		Sales revenue	
	2013	2012	2013	2012
Europe/Other markets	4,209	4,179	117,062	115,384
North America	901	896	27,434	25,046
South America	987	1,075	17,495	18,311
Asia-Pacific <sup>2</sup>	3,632	3,194	35,016	33,936
<b>Volkswagen Group<sup>2</sup></b>	<b>9,728</b>	<b>9,345</b>	<b>197,007</b>	<b>192,676</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.

**VOLKSWAGEN GROUP – A GLOBAL ECONOMIC AND ENVIRONMENTAL LEADER BY 2018**



<sup>1</sup> Normalized return on equity based on an equity ratio of 8%. <sup>2</sup> Including China. Note: All figures given for Volkswagen Group are financial goals for 2018.

For the Volkswagen Group the rapid growth of many emerging economies offers substantial opportunities in terms of the volume of sales. The social rise of broad swaths of the population and the rapid increase in the level of prosperity are giving rise to new groups of potential buyers with numerous local and international automakers competing for their custom. Consequently, successfully accessing new markets in the growth regions calls for the development of a localized and market-led product offering. But a global growth strategy can only succeed if the profitability of these products is assured. Moreover, high levels of flexibility and financial autonomy are essential in order to mitigate the effects of economic downturns and crises. The recent years of crisis have shown that investments in the development of products, processes and employees pay dividends and provide the key to lasting corporate success.

**Policies and Guidelines**

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

- > **Volkswagen Group corporate values:** Defined in 2002, these lay the foundations for our activities (see page 18). 🗳️ 6
- > **Volkswagen Group Code of Conduct:** Introduced in 2010, the Group-wide Code of Conduct (see page 18) must also be respected by our business partners. We reserve the right to have compliance with the requirements of the Code verified by experts.

The Volkswagen Group also expects its business partners to ensure compliance with the Code of Conduct by their own suppliers. 🗳️ 8

- > **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 and are based on documents such as the Principles of the United Nations 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 resulting environmental targets and requirements, the Group’s Quality Policy and the Volkswagen Declaration on Social Rights. 🗳️ 16
- > **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 Transverse Matrix

One key instrument in the pursuit of our economic goals is the Modular Transverse Matrix, also known by its German abbreviation MQB, which helps make our production operations flexible and efficient. For one thing it enables us to use identical components in different models, reducing the cost of each individual vehicle. And for another the MQB permits the replacement of individual components in response to revised customer wishes. This enables the Group to react promptly to changes in the marketplace and avoid excess capacities and misallocation of resources.

At the Volkswagen, Audi, SEAT and ŠKODA brands the MQB was introduced in 2012. Models already based on the MQB include the new Golf, the Audi A3, the ŠKODA Octavia and the SEAT Leon. In the near future, across the Group 40 models based on the MQB will be brought to market. 🚗 17

### Market Strategy “Go West”

China remains the Volkswagen Group’s most important single market. In 2013, the Group sold a total of more than 3.3 million vehicles in China, including some 3 million produced in the country itself. Our production plants in China are currently at the limits of their capacity. The Volkswagen Group is therefore planning to expand its local production capacity from 3 to 4 million vehicles by 2018. In this respect, the Volkswagen Group is responding to the wishes of the Chinese government for a stronger engagement in the west of the country and, among other things, is building a new plant in the northwestern region of Xinjiang. The region is generally considered a source of unrest, because the indigenous Uyghur people, a Muslim minority, feel that they are the victims of political, religious and economic repression. Volkswagen is aiming to integrate Uyghurs into the workforce at the new plant, based on a clear strategy of recruiting members of minorities in line with the proportion of the general population that they represent. 🚗 18

### THE CHALLENGE OF NEW MARKETS

The engagement of Shanghai Volkswagen (SVW) in Urumqi in the Xinjiang region of China is under critical scrutiny. It is widely known that this area is subject to conflicts between the various ethnic groups. Moreover, its economy and infrastructure are less developed than those of other Chinese regions. So the decision by the Volkswagen Group to build a production site there is accompanied by many challenges, not least in the field of sustainability. But the Group stands for a long-term strategy, as evidenced by the establishment of a training center in Urumqi. In addition, we have initiated numerous projects in the fields of environmental protection, education and sport. That’s because we believe in this important market and consider it our duty to drive progress here. We are also supporting the expansion of the local healthcare sector, for example, by funding exchanges and scholarships for young doctors.

### Quality Assurance

The growing number of production sites and market-specific model variants within our worldwide production network leaves quality assurance facing a major task. Our aim, in terms of reliability, functionality and perceived quality is to be “best of local”. That means operating at least at the same level as the best competitor in each case. With extended safety, comfort and electronics systems or new drive technologies finding their way increasingly into high-volume models, their integration needs to be tested at the early concept stage in order to ensure reliable, safe and trouble-free functionality.

### PRODUCT RESPONSIBILITY

We believe that offering our customers a wide range of efficient, affordable and practical powertrain and fuel technologies in order to reduce climate risks is the right way forward, although this approach requires extensive innovation and investment. At the same time, we set ourselves apart from other manufacturers by focusing our high quality standards not least on the mass market. The strategic framework for our product development work is provided by three key objectives from the Volkswagen Group’s environmental management system – climate protection, resource conservation and healthcare.

**All over the world, some 40,000 Volkswagen Group engineers are working on the innovations of tomorrow.**

### Innovation Management

In 2013, the Volkswagen Group spent approximately €10.2 billion on research and development. Over the coming five years, further investment of €84.2 billion in developing new models, environmentally friendly drive technologies and optimized production processes is planned. In order to offer all our customers products that are not only precisely tailored to their needs but also environmentally compatible, we are working intensively on solutions that range from highly efficient, eco-friendly diesel, petrol and natural gas engines to innovative hybrid drive systems and all-electric vehicles. Our aim is to be the world leader in electric mobility by 2018. The study “Industrial R&D Investment Scorecard”, undertaken for the EU Commission, reveals that Volkswagen is investing more in research and development than any other company in the world. The study compared the research and development expenditure of 2,000 international companies from a range of different sectors.

In its research into more efficient and more responsible forms of mobility, the Group is also looking into the use of alternative materials for automotive manufacturing and the various aerodynamic design options. Our research and development centers include sites in Wolfsburg (Germany), Anchieta (Brazil), Changchun and Shanghai (China) and Puebla (Mexico). Cooperating in some cases with universities and research institutes, the R&D centers are working on projects whose results will benefit the industry as a whole. In July 2013, the Volkswagen brand and the Fraunhofer Institute for Machine Tools and Forming Technology (IWU) presented the findings of their joint research project “Innovation Alliance Green Carbody Technologies” InnoCaT®, under which Volkswagen and more than 60 partners, led by the IWU, developed innovative solutions for future car body production processes. The German Federal Ministry of Education and Research (BMBF) contributed €15 million of funding towards this project.

**WORLD’S MOST INNOVATIVE AUTOMAKER**

In 2013, the Center of Automotive Management (CAM) and audit firm PricewaterhouseCoopers (PwC) named the Volkswagen Group the world’s most innovative automobile manufacturer, for the third consecutive year, based on an independent analysis carried out by CAM and PwC. Volkswagen also achieved the best ratings in the “conventional powertrain”, “alternative powertrain” and “information and communication systems” categories.

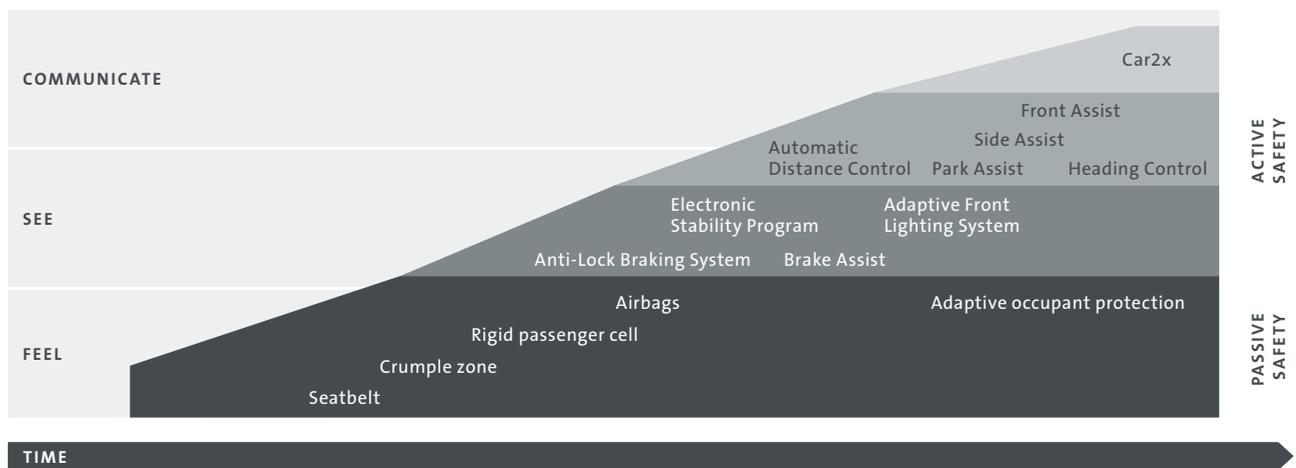
**Road Safety**

Road safety is a key research and development focus in the Volkswagen Group. 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. Although the number of road accidents in industrialized countries is falling, in developing countries it continues to rise. All of the Group’s brands offer advanced systems for the protection of driver and occupants. Our aim is to make these systems available to as many of our customers as possible. For example, the Volkswagen brand fits the Anti-lock Braking System and the Electronic Stability Program as standard on all its vehicles. The current-generation Golf is the first compact model to be fitted with assistance systems such as Automatic Distance Control, the Front Assist Ambient Traffic Monitoring System and the Lane Assist lane-keeping system. Along with the City Emergency Braking function with pedestrian recognition, new developments also include Emergency Assist, which intervenes if the system detects no steering or braking inputs from the driver. 19

Innovative driver assistance systems not only serve to make driving safer, they also make it less stressful. This is particularly important against a background of ageing populations in many parts of the world. The new technologies are based on improved sensors and intelligent connectivity. A system has even been developed which allows the vehicle to be parked by radio remote control or using a smartphone app. 20

On the active safety front the Group is involved in a variety of projects around the world aimed at improving road safety awareness. For example a road safety partnership between the Volkswagen brand and ADAC will allow Volkswagen to use ADAC’s Safety Demonstration Centers to stage its own driver training programs. And since 2010, Volkswagen and ADAC have to date organized

**VEHICLE AND ROAD SAFETY MEASURES**



more than 4,000 events under a joint initiative entitled “Safety in the Car” (Sicher im Auto), at which parents have been able to find out more about how to transport their children safely by car. And in China the Volkswagen brand is sponsoring a television program on road safety.

#### FOCUS ON ROAD SAFETY

The ŠKODA brand based in the Czech Republic has made road safety a strategic pillar of its social engagement. The country’s traffic fatalities are 42% higher than the European average. The company’s main aims here are to support education on the topic of road safety, to promote public and political engagement and to improve the passive safety of road vehicles. To this end, ŠKODA is stepping up its research activities and providing road safety information on two cooperating websites. 🚗 21

#### Product safety

With more than 9 million vehicles coming off the Volkswagen Group’s assembly lines every year, quality assurance – at all stages from purchasing right through to sales – is of vital importance. For example an in-house-tested and proven risk management system has been introduced which allows high quality standards to be ensured at a very early stage in the supply chain. Standardized

processes, which are continuously optimized, provide a benchmark in all parts of the value chain. And over recent years, we have continued to standardize our defect elimination process so that we can react even more quickly in the future to vehicle problems and help our customers even faster.

#### VEHICLES RECALLED FOR FUSE SWAP

No matter how intensive the quality assurance process may be, faults can never be completely ruled out. In late 2013, in-service vehicle monitoring by the Volkswagen brand identified a fuse fault on the Tiguan model that in some cases could lead to failure of one of the vehicle’s two light circuits. Although some lights would remain on, illuminating the vehicle perimeter, and although the driver would be informed of the problem on the instrument cluster, Volkswagen responded by recalling approximately 800,000 vehicles worldwide, built between early 2008 and mid-2011. Last year, the Volkswagen brand issued a voluntary recall for vehicles with seven-speed dual-clutch transmission sold in the Asian market, inviting customers to visit a workshop for an oil exchange after it was found that the synthetic oil used in these transmissions can cause malfunctioning of the transmission power supply.

#### PRODUCT AWARDS 2013

Award	Model	Awarding body
Car of the Year	Golf (Volkswagen)	International: Jury comprises 58 automotive journalists from 22 countries.
US Consumers Report (first place)	A6 (Audi)	US: The editors choose products on the basis of drivability, interior design, reliability and fuel consumption.
Golden Steering Wheel	Golf (Volkswagen)	German: Chosen by 200,000 readers of AUTO BILD and BILD AM SONNTAG, together with an expert jury.
Golden Classic Steering Wheel	911 (Porsche), Cayman* (Porsche)	German: Readers of AUTO BILD Klassik voted the Porsche 911 “Classic of the Year” and the Porsche Cayman* “Classic of the Future”.
VCD Top 10 ranking list of environment-friendly cars	eco up!* (Volkswagen), Citigo CNG* (ŠKODA), Mii Ecofuel* (SEAT)	German: These three models shared first place in the Top 10 environment-friendly cars ranking list 2013/2014 published by the German Traffic Club (VCD).
ACV mobil environmental award	Golf TDI BlueMotion* (Volkswagen)	Germany: Chosen by Automobil Club Verkehr (ACV) members’ poll.

### Customer Satisfaction

In line with Strategy 2018, customer satisfaction is of paramount importance for all Volkswagen Group brands. The Group monitors 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.

Across the world, satisfaction studies are carried out for all Group brands, focusing on the key areas of product, service and dealers. We use the study findings to ensure that we always maintain our focus on customer requirements and constantly improve our product and process quality. Volkswagen, Audi, ŠKODA and Porsche were again able to improve their customer satisfaction ratings compared to the previous year. In the USA, the Porsche and Audi brands took first and second places respectively for product satisfaction. In China, Porsche led the way on dealer and product satisfaction, while Volkswagen, Audi and Porsche took joint first place for service satisfaction. In their European home market, Audi and Porsche came first on dealer satisfaction, while Porsche also came first on product satisfaction, closely followed by Audi and ŠKODA in joint second place.

### 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 during correct operation and 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 also 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 138. The Volkswagen brand also publishes Environmental Commendations (see page 99), which describe improvements in the environmental performance of new vehicles and technologies over their predecessors or reference models.

### LOCAL VALUE ADDED

Within its growth strategy, the Volkswagen Group is focusing on localizing the value-added process. As a concept, localization stands for the regional integration and concentration of production activities and helps offset many of the drawbacks of an international distribution of labor in ecological, economic and social terms. Relocating supplier firms in the vicinity of new production plants creates new jobs and the local population benefits from rising prosperity. At the same time, the concept of localization also brings with it numerous economic advantages. These include lower logistics costs, procurement prices in line with local market conditions, elimination of import duties and immunity from volatile exchange rates.

#### Economic Benefits of Localization

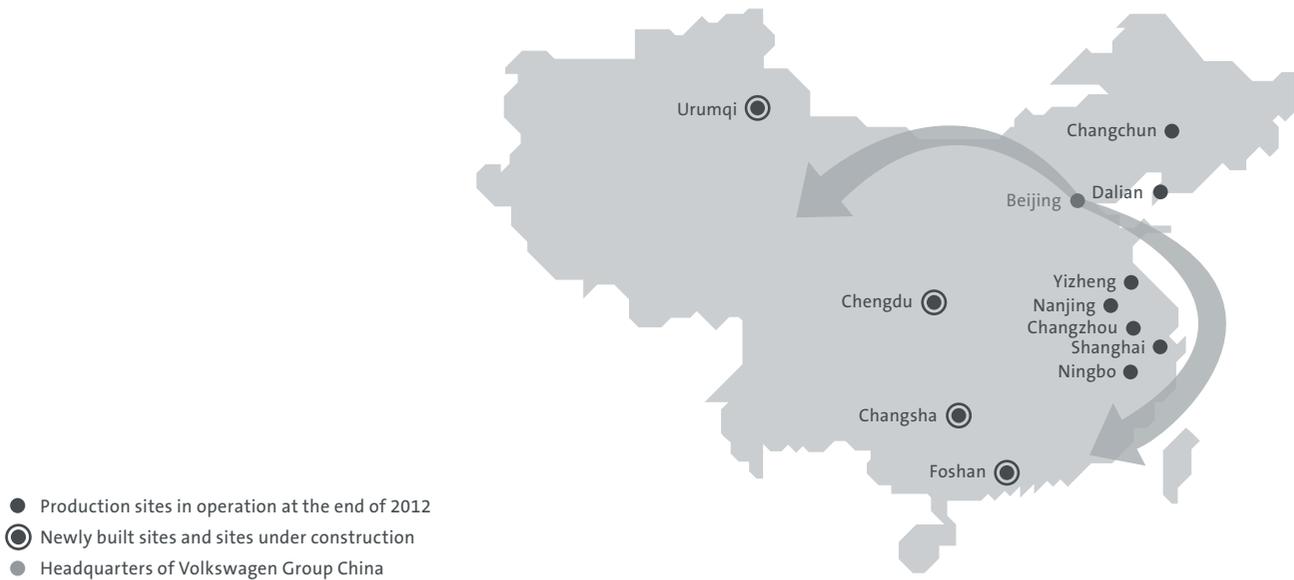
One inestimable advantage of localization is the proximity to the customer that it brings. This makes it easier to identify specific regional customer needs and design products accordingly. Also, products manufactured in the vicinity enable local people to identify with them. So the concept of localization systematically pursued by the Volkswagen Group serves not least to open up new markets. Thanks to the MQB we have a uniform global platform on which to make specific regional adaptations to our models while at the same time keeping our production operations lean and efficient. To prepare the ground, we observe the various markets, obtain information and link up to the regional knowledge networks. Our decentralized production and research sites provide valuable regional bases for these activities.

#### Contributing to Regional Development

Through the localization of value added, we are giving people in many parts of the world an opportunity to improve their standard of living. Many jobs are being created at our newly built plants in places such as Silao (Mexico), Foshan and Urumqi (China), leading to additional jobs being generated outside the Company among suppliers, service providers and local craftsmen. In Pune (India) for example, since the Volkswagen plant was set up, 67 new supplier companies have been founded, together providing work for around 13,000 people.

AUDI AG is underpinning its successful growth in the North American market by establishing a new plant in San José Chaipa, Mexico. The cornerstone ceremony took place in May 2013. The plant will have its own body shop, paintshop, assembly lines and press shop, representing an investment of more than €900 million. Three years before start of production is scheduled, in the summer of 2013 the first training course began for 64 future mechanics and mechatronics specialists. Training is aligned with the German dual model of vocational training that unites theory and practice. In addition, German language courses are provided for the young Mexicans. At the end of February 2014 a further 46 young people joined them at the training center that Audi had built at the site.

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**GO WEST: THE VOLKSWAGEN GROUP'S STRATEGY IN CHINA**


In China, the Group will open yet another production plant by the end of 2014. By 2018 the number of employees in China is set to rise from around 75,000 to 100,000 as production capacity increases to more than 4 million vehicles per year. At the same time, research and development resources are to be expanded to 2,500 employees. Overall, and particularly through our Go West strategy (see page 38) in China we are helping create broad-based participation in prosperity and economic growth.

As our engineers in Germany supervise the construction of the new factories and monitor component testing and quality assurance at our plants overseas, expansion abroad at the same time invariably helps safeguard jobs in Germany.

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**MARKET EXPANSION IN RUSSIA**

The Volkswagen Group is one of the largest foreign investors in the automotive industry in Russia. Our company Volkswagen Group Rus brings together the activities of seven Group brands: Volkswagen Passenger Cars, Audi, ŠKODA, SEAT, Volkswagen Commercial Vehicles, Bentley and Lamborghini in the Russian market. Between 2006 and 2013, a total of some €1.3 billion was invested in local production. By the end of 2018 we will be investing another €1.2 billion. In November 2013 the 700,000th Volkswagen brand vehicle rolled off the production lines in Kaluga, where operations have created 5,500 direct jobs and at least twice as many indirect ones. At the end of 2012 contract production also began at the Nizhny Novgorod plant of partner company GAZ, where 2,200 people are employed.

**Concepts in Germany**

In Germany too the Volkswagen Group is providing new impetus for growth. Take Osnabrück for example, where we acquired the insolvent Wilhelm Karmann GmbH and in 2012 launched series production of the Porsche Boxster\* and the Porsche Cayman\*. In the meantime the plant has established itself as a center of excellence for cabriolets and small-series models. At the Group's Wolfsburg site we have joined forces with the civic authorities to form Wolfsburg AG with the aim of promoting business in the region and at the same time improving the quality of life. In addition, the "Allianz für die Region" or Regional Alliance, which arose in January 2013 out of a joint initiative between Wolfsburg AG and the REGION BRAUNSCHWEIG GMBH project, is striving to enhance local facilities for residents and businesses and to attract skilled labor to the area.



The Porsche Cayman\*. At the end of 2012 production started at the Osnabrück plant as well.

### Subsidies and Taxes

For the expansion of its activities in the field of research and in the creation of new production plants, in 2013 the Volkswagen Group received €610 million in public subsidies.

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. We pay taxes wherever we add value – the majority in Germany. In 2013 we paid the tax authorities a total of around €3.1 billion in income tax alone.

### SUPPLIER MANAGEMENT

The Volkswagen Group fosters sustainability along the entire value chain, thereby ensuring stable and efficient flows of goods and supplies. With this in mind, in 2006 we formulated our Sustainability in Supplier Relations concept, which we have since been implementing step by step. 22

It is based on four main pillars:

- > Sustainability requirements for direct suppliers (tier 1) that have to be acknowledged by all suppliers before submitting a quotation. Since November 12, 2013, in all agreements newly concluded by General Procurement, these have formed part of the General Terms and Conditions of Purchase and are thus contractually integrated.
- > An early warning system for identifying and minimizing risks along the supply chain.
- > Integration into the procurement process, for example by means of the sustainability questionnaire.
- > Supplier monitoring and development.

### Supplier Requirements

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 37). Other binding parts of the contract include the Environmental Goals, as defined in VW Norm 01155 and VW Norm 99000. For example, when wood from rainforests is used a seal of approval from the Forest Stewardship Council (FSC) must be provided. The requirements apply to all outsourced goods and services worldwide. We expect our tier 1 suppliers to not only respect these requirements but also pass them on to their own suppliers. Our main suppliers are also required to put in place a certified environmental management system in accordance with ISO 14001 or EMAS. Such systems have been verified or documented at 84% of our main suppliers.

### Risk Analysis

In order to obtain information about the importance attached to sustainability in the respective region before entering into negotiations with potential suppliers, Volkswagen has performed a country risk analysis with the assistance of independent institutions. This analysis showed that there is an increased risk of non-compliance with our sustainability requirements in Brazil, India, China, Mexico and Russia. In 2013 this led to supplier audits being conducted in India and Mexico. In 2014 these will be extended to other high-risk countries and groups of suppliers. With the introduction of the Dodd-Frank Act in 2014, the US government is also intending to prevent armed groups in the Congo benefiting from mineral mining and trade. The Act will require disclosure of conflict minerals contained in products. The Volkswagen Group is not, however, directly affected by the Act.

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

	2013	2012
<b>Environmental certification (EMAS, ISO 14001)</b>		
Verified <sup>1</sup>	44%	30%
Self-assessed	40%	not taken into account
<b>Total</b>	<b>84%<sup>2</sup></b>	<b>not taken into account</b>
<b>Social certification (OHSAS 18001, SA8000, AA1000)</b>		
Verified <sup>1</sup>	6%	not taken into account
Self-assessed	from 2014	not taken into account
<b>Total</b>	<b>6%<sup>2</sup></b>	<b>not taken into account</b>

<sup>1</sup> Verified by Volkswagen. Certificates archived in an internal database.

<sup>2</sup> Taking all suppliers into account, 75% have EMAS/ISO 14001 and 5% social certification.

**2013 PROCUREMENT VOLUMES***in € billion*

By brand	
Volkswagen Passenger Cars	79
Audi <sup>1</sup>	23.6
MAN	8.8
ŠKODA	6.5
Scania	6.4
SEAT	3.9
Volkswagen Commercial Vehicles	2.4
Porsche	3.7
Bentley	0.7
<b>Volkswagen Group</b>	<b>135</b>
By region	
Europe/Other markets	87.9
Asia-Pacific	31.9
South America	8.9
<b>North America</b>	<b>6.3</b>

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

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

**2013 PROCUREMENT VOLUMES BY COMMODITY***in %*

Metal	30
Powertrain	22
Electrical	19
Interior	15
Exterior	14
<b>Volkswagen Group</b>	<b>100</b>

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. The Volkswagen Group also demonstrates a commitment to transparency in the supply chain as a standing member of the UN Global Compact Advisory Group on Supply Chain Sustainability.

The Volkswagen Group subjects all potential new business partners and suppliers to an integrity check (Business Partner Check), thereby reducing the risk of a relationship that could adversely affect the Group and its business. In 2013 this business partner check was carried out in respect of more than 12,000 potential new suppliers worldwide.

**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 the interests of effective prevention, all Group suppliers are included in the pool of suppliers who are basically to be monitored. If there is evidence pointing to a risk, a detailed risk analysis is drawn up for the supplier in question. Depending on the outcome, the supplier is assigned to one of three risk categories (low, medium or high risk). This assessment is arrived at by evaluation of all risks that could endanger the contractually agreed supply process.

The risk analysis and evaluation process takes account of industry-specific factors in line with four key indicators taken from profit-and-loss, financial and balance-sheet analysis and collected over several years. Along with figures from the past, the analysis also takes account of current performance and budgeted figures. As a rule, such analyses are updated annually.

To arrive at an appraisal of the stability of Group suppliers that is as comprehensive as possible, product-related risks are also analyzed, as are the material groups concerned, the relevant market in each case, the supplier/competition situation in the respective market and the strategic development of the supplier. In addition, the development of external creditworthiness ratings is also monitored for all Group suppliers. This indicator is updated every two weeks and also serves as an early warning mechanism.

If evidence emerges that the stability of a supplier is threatened, appropriate measures are taken to assess, evaluate and avoid or minimize possible supply risks. This means analyzing supply flows across the Group and coordinating activities with all of the procurement functions concerned at the Group brands and regions.

**Integration in the Procurement Process**

To become a business partner of the Volkswagen Group, our suppliers must first register on the Group Business Platform and then complete the following process:

- > **Sustainability requirements:** Before submitting a quotation, the supplier must acknowledge the sustainability requirements. Since November 12, 2013, for all suppliers to General Procurement, the requirements have been contractually integrated as part of the General Terms and Conditions of Purchase.
- > **Sustainability questionnaire:** In the course of the business process, the supplier is required to complete a sustainability questionnaire: by December 31, 2013, 11,749 tier 1 suppliers had done so. In terms of procurement volume that equates to 82%.
- > **E-Learning:** In the interests of continuing supplier development, in the course of our business relations we make available

to all suppliers an electronic learning module in eight languages, including Chinese and Russian. After completing this task, the supplier has to perform a self-check. The sustainability learning module is not regarded as “passed” until this check is successfully completed. By the end of 2013, 8,652 tier 1 suppliers had successfully completed the E-Learning module, which equates to 50% in terms of procurement volume.

**TRAINING TOOL FOR ALL SUPPLIER EMPLOYEES**

Since October 2013, the Volkswagen Group’s E-Learning tool has also been available to suppliers to raise awareness among an unlimited number of their employees. By way of example, over 100 employees of supplier REGE Motorenteile learned about our sustainability requirements on the Group Business Platform.

**Supplier Monitoring**

If we receive information or our early warning system gives reason to suspect that tier 1 suppliers or their suppliers are failing to comply with our sustainability requirements or the answers to our sustainability questionnaire are not satisfactory, we ask the party concerned for a written statement using a standardized 6D Report. Based on the six points in the report, they can describe the status quo and any remedial measures. If the answers again 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 expert teams from the relevant brands and regions. Depending on the situation, experts from specialist areas such as Occupational Health and Safety or Human Resources may also be called in. In 2013 there were 29 ad-hoc cases in all, eight of which involved tier 2 suppliers. Eleven cases occurred in Europe, 13 in Asia, four in North and South America and one in Africa. The increase compared to the previous year is due not least to the fact that quality process auditors and field service staff from Procured Component Management are continuously being made more aware of the need to look out for non-compliance by suppliers.

Sustainability courses have been integrated into the curriculum at the procurement academies at the various production sites and also take place at specialist department level. At the Wolfsburg site, for example, some 1,200 employees from Procurement, Quality Assurance, Compliance and related specialist departments were trained in 15 separate courses.

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. In addition, internal and external parties can address possible cases of non-compliance via national and international employee representation bodies (such as the General and Group Works Councils or the European and World Works Councils) and the national and international trade union federations (such as IG Metall or IndustriALL).

**Audits and On-Site Inspections**

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 long-term collaboration. At the same time, the Volkswagen Group reserves the right to have compliance with the sustainability requirements verified by experts at the supplier’s premises during regular business hours. In the event of non-compliance with the sustainability requirements we will, however, terminate business relations particularly if the supplier shows no interest in long-term improvement. No such case occurred during the reporting period.

In the monitoring process, the Procurement function is also supported by our field service staff. In particular, in the course of their supplier audits, the quality process auditors focus on whether the supplier has answered the sustainability questionnaire and understood the contents, and they inform Procurement if this is not the case. The next step is to launch an escalation process which includes the use of the 6D Report.

**STATUS QUO: SUSTAINABILITY QUESTIONNAIRE AND E-LEARNING**

	Number completed in 2012	Number additionally completed in 2013	Total in 2012 + 2013	Equates to % of procurement volume in 2013	Procurement volume-based target for 2014
Sustainability questionnaire	7,812	3,937	11,749	82%	88%
Average score	90/100	89/100	90/100		
E-Learning	2,420	6,232	8,652	50%	70%

## AD-HOC CASES IN 2013

Geographical distribution <sup>1</sup>		Context		Type of supplier	
Europe	11 cases	Environmental protection	1 case	Direct supplier	21 cases <sup>2</sup>
Asia	13 cases	Social standards	26 cases	Sub-supplier	8 cases
North and South America	4 cases	Environmental protection & social standards	2 cases		
Africa	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.

### Supplier Training Courses

As in previous years, workshops or sustainability training courses were staged in various regions in the reporting period with and for local suppliers. In June 2013, for example, Volkswagen Argentina met up with its 45 largest suppliers for an exchange of ideas and concepts as to how sustainability could together be realized along the value chain. The aim was to arrive at a common understanding of the various ecological and social challenges involved. In São Paulo (Brazil), Volkswagen do Brasil organized a workshop with some 70 strategically important suppliers. Using examples of best practices they discussed the practical implementation of sustainability requirements and prepared the ground for anchoring responsible business processes in the strategic planning of the business partners.

Also in 2013, as part of the “Automotive Industry Action Group” and “European Automotive Working Group on Supply Chain Sustainability” initiatives in which we are involved, training courses for tier 1 suppliers were held in Mexico, Brazil and Romania. These focused on basic requirements such as occupational safety and environmental protection, adapted in each case to the local legal context. Here, together with other automobile manufacturers, 129 persons from 87 Volkswagen Group suppliers were given training in respect of sustainability requirements. They were also encouraged to pass on the lessons learned to their own suppliers. 🌐 23

### Status Quo and Outlook

One central goal for 2013 was the integration of the Porsche, Scania, MAN and Ducati brands into the “Sustainability in Supplier Relations” concept, a goal that – subject to implementation of individual elements – we were able to meet. We also expanded our supplier monitoring and training as planned. We are aiming to continue with this in 2014 as well as making our E-Learning tool available to the employees of additional tier 1 suppliers. Our aim in this respect in 2014 is to reach 70% (procurement volume-based)

coverage for the E-Learning tool and 88% for our sustainability questionnaire among tier 1 suppliers.

Our core concern is to ensure that the sustainability requirements are integrated into all of the Group’s agreements. Since January 2014 the sustainability requirements have been integrated into the agreements with suppliers of production material. At the same time we are also planning to expand our external CSR audits as well as CSR training for our direct suppliers.

### Training courses were held for tier 1 suppliers in Mexico, Brazil and Romania.

## 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.

### OUR UNDERSTANDING OF COMPLIANCE

At Volkswagen, compliance means playing by the rules. It is a cornerstone of sustainable business – a view expressly shared by the Company's management. Speaking to an audience of more than 5,000 at a management event in 2013, Chairman of the Board of Management of the Volkswagen Group, Prof. Dr. Martin Winterkorn, emphasized this point: "Operating a sustainable business means we continue to take the subject of compliance seriously. We do not break the law, or other rules and regulations! This applies to all our brands and in all regions. Volkswagen enjoys an excellent reputation internationally. It is our responsibility as managers to ensure that it is upheld." Other members of the Group Board of Management and brand boards of management also called on the workforce to comply with the rules over the course of the past fiscal year.

We adopt a preventive compliance approach and foster a corporate culture that stops potential breaches before they occur. Group Internal Audit and Group Security as well as the Human Resources and Group Legal departments 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 at all consolidated brand companies and can be accessed by all Group employees via the Volkswagen portal.

**14 Chief Compliance Officers,  
175 Compliance Officers and  
500 employees in 49 countries  
*safeguard our integrity.***

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), as well as some 175 Compliance Officers in the Group companies. Compliance forms an integral part of the Governance, Risk & Compliance (GRC) organiza-

tion in which around 500 employees are currently employed in 49 countries. Networking of the organization is regularly promoted by measures including regional workshops.

### Compliance Risk Assessment

The risk management system, the internal audit system and the compliance management system are closely interlinked through the Governance, Risk & Compliance (GRC) approach. 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 some 2,000 assessments of potential compliance risks and the relevant remedial measures were reported across the Group. More specifically, these included risk assessments on the topics of anti-corruption, competition law and antitrust law. Based on the findings, preventive measures are drawn up and the appropriate compliance programs defined. In 2013 more than 500 tests were staged to evaluate the effectiveness of these measures.

### Expansion of Compliance in 2013

Compliance activities in 2013 focused on expanding the GRC organization and on anti-corruption measures in China. To this end a China Compliance conference was held in Beijing in May 2013. The conference provided an opportunity to train the local management, assess the specific situation in China from a compliance perspective and develop future local compliance strategies in workshops. In addition, at German companies measures were introduced to prevent money laundering. These comply with the new requirements of the Geldwäschegesetz (GwG – German Money Laundering Act), which came into force in 2012. In the reporting year, risk-based training on competition and antitrust law was provided for employees in Germany and abroad.

Compliance is integrated into a variety of operational processes. For example, 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. The integrity of Volkswagen Group suppliers is systematically examined through a Business Partner Check based on the "Volkswagen Group requirements regarding sustainability in its relationships with business partners (Code of Conduct for business partners)" (see also page 37).

### Prevention through Information and Training

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. Information events for employees at all levels of the hierarchy are a particularly important means of communication. In 2013 over 200,000 employees across the Group took part in 4,319 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. At Volkswagen AG, for example, completion of the online training module on the Code of Conduct has been mandatory for all new employees since July 1, 2012.

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.

#### COMPLIANCE TRAINING COURSES

No. of participants Group-wide	2013	2012
<b>Classroom training</b>		
General compliance	69,426	18,945
Code of Conduct	28,420	16,543
Anti-corruption	13,494	6,119
Money laundering	2,585	n.a.
Human rights	881	n.a.
Competition and antitrust law	4,202	3,852
<b>Total participants</b>	<b>119,008</b>	<b>45,459</b>
<b>E-Learning programs</b>		
General compliance	4,917	n.a.
Anti-corruption	31,608	19,228
Code of Conduct	34,148	7,835
Money laundering	2,678	n.a.
Human rights	8,891	n.a.
Competition and antitrust law	1,224	n.a.
Other topics	n.a.	3,842
<b>Total participants</b>	<b>83,446</b>	<b>30,905</b>

#### Checks, Audits and Sanctions

Group Internal Audit and Group Security regularly and systematically monitor compliance with the rules, carrying out random checks irrespective of any suspicion of non-compliance and investigating whenever breaches are actually suspected. The worldwide ombudsman system in place since 2006 can be used to report any breaches or suspicions (particularly regarding corruption) in nine 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. In 2013, the ombudsmen passed on 30 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 65 cases directly. During local internal audits of the brands and Group companies, 251 reports of suspected fraud were submitted. 24

## Over 200,000 employees attended compliance training in 2013.

All information is followed up. All breaches of the law or internal regulations are appropriately punished. In 2013 action was taken against a total of 101 employees across the Volkswagen Group as a result of findings of investigations based on information received. In 54 of these cases worldwide, the employee's contract was terminated. Moreover, during the reporting year, five contracts with business partners were terminated or not renewed because of infringements related to corruption.

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. In the process, 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 2013 a total of 1,745 audits were conducted at 246 companies (including Volkswagen AG). Among other things, the audits cover internal control mechanisms for the prevention of corruption (four-eye principle, segregation of functions), the existence of compliance guidelines and preventive measures. In addition, Group Internal Audit has set up a Continuous Monitoring unit. This is tasked not least with supporting the documentation of the effectiveness of the internal control system, based on structured data analysis of financial and/or other upstream systems. Further information on compliance at the Volkswagen Group can be found in our current Annual Report.

## RATINGS AND INDEXES

The ratings awarded by sustainability-oriented investors, analysts and rating agencies are an important measure of success for the Volkswagen Group as it pursues its strategy. At the same time, good marks for sustainability also make our shares more attractive. The fact that, in September 2013, we became global sector leader in the Dow Jones Sustainability Index with 89 out of a possible 100 points, documents our systematic efforts across all areas – from environmental protection to corporate governance. In November 2013 we were awarded the German Investors Award for Responsible Business, presented by Deutsche Asset & Wealth Management (DeAWM) and publishing house DuMont Verlag. The award analyses the performance of 175 listed companies in line with environmental, social and governance (ESG) factors.

### Global sector leader in the Dow Jones Sustainability Index.

Moreover, the Volkswagen Group was also listed in the Global Compact 100 index launched in 2013. Compiled by the UN Global Compact in partnership with the rating agency Sustainalytics, the new index comprises particularly responsibly managed companies that also demonstrate sound profitability. In order to qualify for the index, companies must have been signatories to the Global Compact for at least one year, be listed on the world's leading share indexes and have returned a positive EBIT for the

three years preceding the annual index review. The Norwegian pension fund Storebrand, one of the largest in the world, also lists the Volkswagen Group among the world's 100 most sustainable companies.

In 2013 we were listed for the first time in both CDP indexes, the CDP Global 500 Climate Disclosure Leadership Index and the CDP Global 500 Climate Performance Leadership Index. These listings honor both our transparency (Disclosure) and our successes (Performance) in the field of climate protection and led to us being presented with the Performance category award at the annual CDP Conference in November 2013. The Volkswagen Group can point to a growing number of investors who base their activities on sustainability criteria. These include some 100 European mutual funds that apply social and ecological criteria. The largest institutional investors in Europe include the Norwegian and Swedish pension funds. In all, in 2012 some 20% of the free float of Volkswagen shares was in the hands of investors with a focus on sustainability.

### MAN LISTED IN DOW JONES SUSTAINABILITY INDEXES

The publicly listed Group company MAN was again included in the Dow Jones Sustainability Indexes World and Europe in 2013. Scoring 83 points out of a maximum of 100, MAN was able to improve its overall performance and is the only German company from the mechanical engineering sector represented in this renowned sustainability index.

### RANKINGS IN RATINGS AND INDEXES

Index/rating	Ranking 2013	Ranking 2012
CDP Global 500 Climate Performance Leadership Index	listed (A)	not listed (B)
CDP Global 500 Climate Disclosure Leadership Index	listed, 99 points out of 100	not listed
Dow Jones Sustainability Index World	global sector leader with 89 points out of 100	listed
Dow Jones Sustainability Index Europe	listed, 89 points out of 100	not listed
ECPI Ethical Indexes (Europe, EMU, Global)	listed	listed
ESI Excellence Indexes (Euro, Europe, Global)	listed	listed
FTSE4Good	listed	listed
Global Compact 100	listed	listed
oekom research	see 2012	Prime Status (B-)
STOXX Global ESG Leaders Indexes	listed	listed



# Strategy Economy People

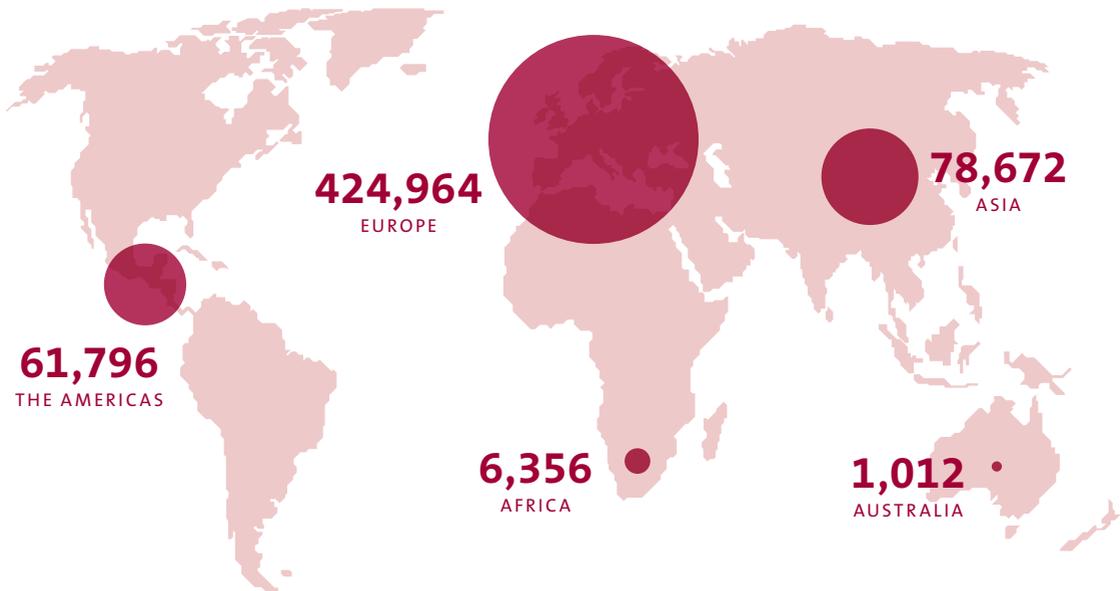
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The Volkswagen Group, its brands and its companies are moving steadily closer to the goal of being a top global employer, thanks not least to their outstanding record on employment, participation and qualification. Over the past year, the Group had a total of 17,703 apprentices, and the number of employees worldwide rose by 4.2%.

572,800 EMPLOYEES WORLDWIDE



# People

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**“We want to make a good team into a top team, with employees who have the skills and motivation to perform to the highest level, enjoy their job and are moving steadily towards the very top.”**

**DR. HORST NEUMANN**

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

## INVOLVING EMPLOYEES



More than 450,000 employees were invited to take part in the “Stimmungsbarometer” opinion survey in 2013. This sixth survey covered 121 locations and companies in 40 countries. Over 400,000 employees provided feedback. The employee satisfaction index during the reporting year was 79 out of 100

## QUALIFICATION

Throughout their working lives our employees are qualified within the “Berufsfamilien” (professional families). One key underlying principle here is knowledge transfer from our own experts. Qualification follows the dual model, which involves close coordination between theory and practice

# excellent performance.

# DUAL MODEL OF VOCATIONAL EDUCATION AND TRAINING

Taking responsibility

Top-class vocational education and training is an essential part of delivering high quality and outstanding performance. Our standards in this respect are high – not only in Germany, but around the globe. We are bringing the proven dual model – based on the close integration of theoretical and practical forms of learning – to all our sites.

Since 2012 SEAT has been offering the dual model of vocational education and training at its Martorell plant in Spain. Along with in-depth theoretical qualification, 1,700 hours of hands-on experience at the company are included in the three-year curriculum.

# Matrickeria y Moldes



**Iván Vendrell quickly crosses the workshop** at the SEAT vocational school to join his fellow students. In the hall next door, Débora Ocaña stands in front of a machine tool that she has just programmed, tracking its movements and making notes. “Perfect. Exactly how I wanted it to work.” The sparkle in her eyes shows just how pleased she is. You only need to watch Débora and Iván on this completely ordinary Wednesday morning to see the passion they bring to their work. They are proud to be learning their trade at SEAT.

This applies in particular to 17-year-old Iván, who is qualifying to be a motor vehicle mechatronics technician. He is one of the first young people to have started a dual model of vocational education and training at SEAT. In September 2012, the car-maker became the first large company in Spain to introduce this successful model, which combines theory and plenty of practice. In the past, the standard three-year apprenticeship at SEAT included 600 hours of practical instruction. Now the training involves 1,700 hours of work at the company and in its qualification workshops. This allows Iván and the other apprentices to gain experience in their future professions at an early stage. And it is rounded off by another 600 hours of project-based training in which they work on orders for in-house customers.

**SEAT’s new vocational education** and training program also gives apprentices more time to try out what they have learned, and that is motivating. Electronics apprentice Débora is fascinated by the technology involved in modern automobile production. She likes to tinker and wants to know exactly how everything works. “Although I knew in theory how robotic welding worked, I only really understood it here on the shop floor.”

Iván too feels most at home in the workshop. He proudly points to the small metal stairs he milled in the third week of his apprenticeship. They are a testament to the meticulousness and dedication with which Iván is preparing for his career. He approaches his second great passion – breakdancing – in just the same way. Each step, each turn has to be perfect. He regularly meets friends after work to learn new moves and styles.

**Many of his friends wish** they had an apprenticeship like Iván’s. Spain has the second-highest youth unemployment rate in Europe. The Spanish government is supporting the new dual model of vocational education and training by allowing the apprentices to be integrated into production operations at the plant. This was previously not possible. Students at vocational schools could only gain practical experience through internships. Today, the work entrusted to SEAT’s apprentices includes producing special parts for the model making department.

For SEAT and the Volkswagen Group, sound qualifications are first and foremost an investment in their own competitiveness. That is why the carmaker is exporting the dual model of vocational training and education system to all its locations around the world – China, India, and the USA are joining the twelve European coun-

tries that have already rolled out the program. At SEAT in Spain a total of 167 young people began their apprenticeship in line with the new curriculum in 2013.

The launch of the dual system was accompanied by the introduction of the remuneration policy practiced in Germany, which has different pay grades for apprentices in different years of their training. SEAT is planning to offer permanent employment with the company to all its apprentices who successfully complete the course.

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## **167 young people are currently engaged in the dual model of vocational education and training at SEAT.**

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For Débora and Javier, memories of their first exciting days as apprentices are not quite as fresh. Débora, a confident 22-year-old, is already in the third year of her apprenticeship. She was a little nervous about her first hands-on experience on the production line at the plant. So she was glad that, like all apprentices at SEAT, she could rely on the advice and support of her mentor.

Débora will also be one of the first to sit two exams in 2014 in line with Spanish and German guidelines (the latter in conjunction with the German Chamber of Commerce). This way she will end up with a dual qualification that again underlines the quality of the training she has received.

Last year, 20-year-old Javier Sánchez completed his training as an industrial mechanic and toolmaker. Now he speaks from experience as an employee at the press shop in Barcelona when he says: “We learn faster than other apprentices because we specialize earlier – that’s an unbeatable advantage in the world of work.”

**This smart young man** is not the first skilled mechanic in the family. His father runs a small machine shop and taught Javier how to handle tools as a boy. These days, though, it is Javier who gives his father tips as they talk shop about the quality of the various tools, and sometimes he even helps finance a new addition to his father’s array of tools.

“The dual model of vocational education and training is a real boon for us. The close link between theory and hands-on practice ensures that our future employees have a high level of expertise”, says Manuel Moreno, who is responsible for initial and in-service training at SEAT Personnel Management. But it’s not just SEAT that benefits – quality vocational education and training for its young people ultimately also strengthens Spain’s industry as a whole.

PEOPLE  
*Focus on Spain*



1 – Iván Vendrell 2 – Débora Ocaña 3 – Javier Sánchez

# EXCELLENCE. SUCCESS. INVOLVEMENT.

Successfully tackling the current and future challenges facing the Volkswagen Group depends on all our employees – from apprentices right up to top managers – consistently turning in an outstanding performance to ensure that our innovation and product quality remain at the very highest level in the long term. That means recruiting talent and promoting skills, health and commitment. But it also means enabling our employees to play their part in building our success – and share in it. And it's how we plan to achieve our goal of becoming the most attractive employer in the automobile industry by 2018.

## 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. We are explicitly committed to diversity within the Company and support it through open attitudes, equal opportunities, and the targeted advancement of women.

### Challenges and Goals

The increasingly international nature of the Volkswagen Group and its complexity are the key challenges facing our PM work. Only a top team can deliver the outstanding performance that is required to make Volkswagen the top global automotive manufacturer. So, more than ever before, we need to promote talent across all areas. Our aim for the coming years is to continue to develop our employees' existing high skills levels and problem-solving abilities. Vocational education and training and study form the basis for skills development within Volkswagen's "Berufsfamilien" (professional families). Building on this basis, our employees continue to learn and develop their skills throughout their working lives. Knowledge transfer – the passing on of knowledge and experience by our own specialists – is a key part of our strategy. Qualification takes place in line with the dual model, which integrates theoretical learning with practical training.

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**Underpinning our basic principles  
with equal opportunities and equal  
treatment.**

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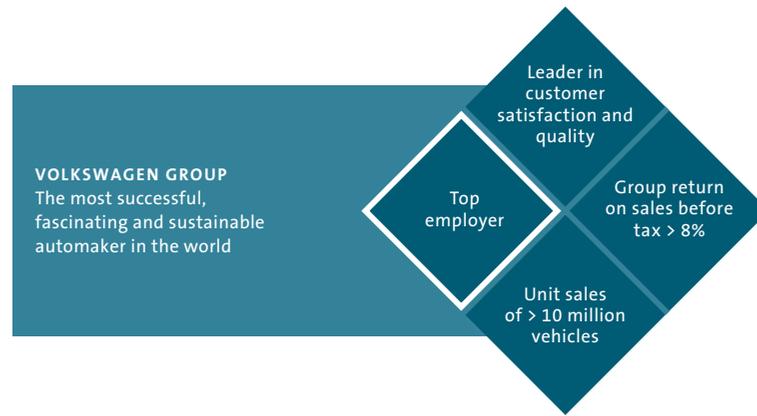
## Policies and Guidelines

As a global undertaking with 106 manufacturing plants across Europe, North America, Asia and Africa, we are committed to respect, tolerance and cosmopolitanism. Volkswagen guarantees equal opportunities and equal treatment regardless 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 following documents constitute the framework for personnel management across the Volkswagen Group and apply worldwide:

- **The Volkswagen Code of Conduct:** The Code came into operation in 2010 and creates the framework for lawful and ethical behavior (see page 18). [8](#)
- **The Declaration on Social Rights and Industrial Relations at Volkswagen (Social Charter):** In 2002, Volkswagen used this Declaration to document the basic social rights and principles that underpin its corporate identity. The social rights and principles set out in the Declaration are based on relevant International Labour Organization Conventions (see page 18). [25](#)
- **The Charter on Labour Relations:** The Charter came into force in autumn 2009 and combines wide-ranging rights to consultation with shared responsibilities. It provides for rights to information, consultation and codetermination for employee representatives in the brands, companies and locations represented on the Group Global Works Council (see page 66). [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 (see page 67). [27](#)

VOLKSWAGEN GROUP STRATEGY 2018



By 2018 Volkswagen is aiming to be the most attractive employer in the automobile industry. To build the best vehicles takes the best team in the industry: highly qualified, fit and above all motivated.

**Systems and Tools**

The key systems and tools we use to manage our PM strategy are organized by focus:

- > **Qualification within the “Berufsfamilien” (professional families):** Vocational education and training in line with the dual model, with the Volkswagen Group Academy as the umbrella body for all initial vocational education and training up to academic in-service qualification across the Group
- > **Performance and participation:** Promoting performance and sharing profits, participation and codetermination, the Volkswagen “Stimmungsbarometer” (employee opinion survey), the “Volkswagen Way” and the Volkswagen “Ideenmanagement” (ideas management) unit
- > **Health and fitness:** Workplace ergonomics, integrated health management, and occupational safety
- > **Advancing women and diversity:** Recruiting and developing talented women, combining work and family, inclusion and equal opportunities
- > **Corporate social responsibility:** Commitment to the regions, volunteering and donations

**Employment Trends in 2013**

Including the Chinese joint ventures, the Volkswagen Group employed a total of 572,800 people on December 31, 2013 – 4.2% more than at the end of 2012. Significant factors in this increase were the volume-related expansion of the workforce in growth markets, in particular in China, and the recruitment of specialists and experts in Germany and elsewhere. In 2013, Volkswagen AG,

Volkswagen Sachsen GmbH, AUDI AG and Volkswagen Financial Services AG put a total of 4,828 temporary workers on permanent contracts; MAN and Porsche took 543 temporary employees into the core workforce in Germany.

**GROUP AND BRANDS RANKED TOP EMPLOYERS**

In 2013, we secured leading positions in a number of employer rankings. A survey among Europe’s future IT experts and engineers by the consultancy company trendence, for example, saw the Volkswagen Group improve its ranking from fourth to second most attractive employer in Europe. In two further trendence surveys, more than 320,000 graduates in engineering, IT and business studies from a total of 24 European countries voted the Group “Best employer in the automotive sector”, while Audi was voted the most popular employer by engineering and business studies graduates for the fourth consecutive year. The Volkswagen brand was ranked third by business studies graduates and fourth by engineers in the same survey. We achieved similar positive results in other countries, too, including Brazil, China, Mexico, Poland and South Africa. **29**

## QUALIFICATION WITHIN THE BERUFSFAMILIEN

To ensure that employees in all our locations maintain an outstanding level of qualification, we need individual qualification and personnel development across the “Berufsfamilien” (professional families) that make up the Volkswagen Group.

A Berufsfamilie includes all employees with related specialist skills who work together, regardless of their level of experience or development. Learning and teaching involve the Company’s own experts, and learning processes are tailored to specific working processes and the technical skills requirements of the relevant Berufsfamilie.

Shared learning is being continuously developed and extended within Volkswagen as more and more Berufsfamilien set up their own Academy to provide qualification. In January 2013, the Group launched the “Volkswagen Group Academy” to serve as the umbrella body for all the Academies within the Group. It was formed following the reintegration of Volkswagen Coaching GmbH and its merger with the AutoUni. The reorganization creates a qualification network spanning initial vocational education and training up to academic in-service qualification that exploits synergies to ensure high skills levels and quality standards across the Group.

## Group-wide “Personnel Management Academy” established.

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

Vocational education and training in line with the dual model underpin the Volkswagen Group’s efforts to build a top team. In December 2013, the number of employees in vocational education and training within the Group totaled 17,703 worldwide, including 12,611 in Germany – a record number. Volkswagen AG alone offers training in a total of 30 professions and on 19 courses to apprentices and students on combined practical and theoretical courses within the Company. Hands-on experience days offer young people an opportunity to find out more and are held at Volkswagen AG, among other locations. **30**

The dual model of vocational education and training has now been adopted at many sites outside Germany, with others developing the system. Over three quarters of all apprentices within the Group are currently being trained in line with this tried-and-tested system, including those in Spain, Hungary, Russia, the USA, Mexico, India and China.

Dual vocational training began at Volkswagen’s Kaluga plant in Russia in 2010, and since 2012, the plant has added the role of warehouse logistics operator to its existing training professions (motor vehicle mechatronic, construction and production mechanic, automotive painter, and general mechatronic technician). Since 2011, Volkswagen has also been training general mechatronic technicians to German standards at its Indian plant in

Pune. The “Volkswagen India Academy” collaborates with the local Industrial Training Institute to provide this training.

In May 2013, Volkswagen Group South Africa was commended for its ongoing commitment to initial and continuing qualification in the context of South Africa’s most important empowerment awards.

In 2012, SEAT switched its vocational education and training system in Spain over to the dual model and has, since then, integrated the facility more closely as a training location. This was made possible by a reform of local education and training legislation, boosting the practical element within training programs, which had previously had a stronger academic focus. And in summer 2013, Audi began training the first apprenticeship year of young skilled workers for its new San José Chiapa plant in Mexico, which is scheduled to come on stream in 2016. In Hungary and China, the Company is already making use of the tried-and-tested combination of theoretical learning and practice-based training. A further pilot project is currently under way at the Belgian location in Brussels.

### DUAL MODEL OF VOCATIONAL EDUCATION AND TRAINING WORLDWIDE

In 2013 the first apprenticeship year of twelve apprentices completed the dual model of vocational education and training for mechatronic technicians at the Volkswagen Chattanooga plant (USA). Along with the course for industrial mechatronic technicians, in 2012 a program for motor vehicle mechatronic technicians was launched. Another technical qualification model is currently being drawn up and there are plans for a commercial version as well. At present, 61 young people are being trained at Chattanooga. The apprentices rotate through six different stations in the plant, receiving instruction from skilled workers. The theory modules, which make up some 30% of the vocational education and training, are taught by teachers from Chattanooga State Community College with whom the Company cooperates. Instruction takes place at the Volkswagen Qualification Academy, located in the grounds of the plant. Investments in the qualification facility alone have totaled USD 40 million. After passing their final examination, the apprentices in Chattanooga not only receive a German “Facharbeiterbrief” (skilled worker’s certificate), but also a college diploma that would allow them to continue their studies at university. In addition to a hiring guarantee in their specialized area, Volkswagen also offers them attractive benefits, a Bachelor’s degree program and opportunities to gain international experience within the Group.

In Chattanooga, instruction began even before the first vehicle rolled off the assembly lines, because well-qualified skilled workers are hard to find in the USA. There is no institutionalized vocational education and training system in the USA; new workers usually just receive on-the-job training. That is why other German companies too are using the dual model of vocational education and training at their US plants. The special thing about the vocational education and training offered by Volkswagen is that it is so far the only



In November 2013, the the Group Board of Management and the Group Global Works Council held the 13th award ceremony for the Group's top apprentices around the world. Nine women and 31 men from 20 occupations and 15 different countries won the "Best Apprentice Award".

program in the USA to be recognized by the German Chamber of Industry and Commerce and the German American Chamber of Commerce. At the heart of the model is the conviction that outstanding quality results from consistently high professional standards (qualification level). And so the Volkswagen Group's aim is to roll out this successful model at all its production sites outside Germany.

#### A YEAR'S SUPPORT FOR YOUNG PEOPLE

A new initiative at Porsche in 2013 was the "Förderjahr" (A year's support) scheme, a program governed by collective agreement that offers young people with social, academic, or other difficulties 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 a standard vocational training program. Nine of the eleven participants were able to complete the program successfully and began conventional vocational training in September 2013.

#### APPRENTICE INVOLVEMENT IN THE AUSCHWITZ MEMORIAL AND MUSEUM

Volkswagen is deeply committed to its apprentices' involvement with the Auschwitz Memorial and Museum, which is recognized around the world. The scheme has been running for more than 20 years. 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. More than 2,400 young Germans and Poles have so far taken part in this program. At the General Works Council's initiative, the commitment has been broadened substantially, and since 2008, separate groups of managers, management trainees and Meister (group leaders) have also been involved.



Hands-on experience days offer young people guidance about the careers and opportunities on offer within the Volkswagen Group.

### Programs for Young Skilled Workers

Volkswagen AG promotes future generations of skilled workers through its “talent groups”. “Talent groups” for young skilled workers enable us to support particularly talented employees on their transition from training to professional work. This two-year training and development program recruits the best 10% of apprentices from each apprenticeship year, with an emphasis on the individual development of technical excellence.

The Volkswagen Group promotes intercultural understanding between young employees through a program enabling them to work abroad, known as the “Wanderjahre” (years abroad) program – the name alludes to the tradition among newly-qualified craftsmen of traveling 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 35 Volkswagen Group companies in 19 countries are now involved in this development program, with MAN Türkiye A.Ş. in Ankara joining the scheme for the first time in 2013 by hosting one participant. So far, almost 400 young employees have taken up this opportunity, and in 2013, 55 participants from Germany and 12 from a further five countries spent twelve months at one of the Group’s international locations.

### Developing Graduates

Volkswagen recruits and develops young graduates through the Student Talent Bank and the Academic Talent Pool. Volkswagen AG has been using the Student Talent Bank since 1998 to bring on par-

ticularly able students in workplace-related and cross-functional areas. Almost 2,300 students who have demonstrated outstanding technical and personal abilities during their internship at Volkswagen have now been included in the Student Talent Bank. Volkswagen supports these former interns while they complete their studies, for example by inviting them to lectures and presentations, seminars, and trips to Volkswagen sites. Shortly before they graduate or complete their doctorate, these talented students are then moved into the Academic Talent Pool, which provides the Company with a way to identify individuals with potential for graduate-level entry into a specialized area within Volkswagen.

In 2013 alone, Volkswagen AG alone recruited a total of 360 graduates, of whom around 30% were female. The StartUp Direct and StartUp Cross trainee programs give university students a head start within the Company. Over a two-year period, participants in the StartUp Direct program not only work within their own department and familiarize themselves with the Company but also have the opportunity to attend additional qualification programs. The program also includes placements of a few weeks in production and an optional foreign placement. University graduates with an international focus may opt for the StartUp Cross program instead. This 18-month international program includes a three-month international placement. Over 2,700 trainees have acquired their initial experience with Volkswagen on one of these two programs since they were launched.

Many graduates in southern Europe are currently experiencing difficulty in finding employment despite having excellent skills. Since 2012, our StartUp Europe program has been offering

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

Program	Target group	Focus	Area
Welcome Days	New recruits	An initial insight into the world of Volkswagen, motivating and engaging recruits	Volkswagen Group
Talent groups for young skilled workers	Talented young people who have completed their vocational education and training	Individual development of specialized and crossdisciplinary 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, from 2014, Italy	Recruitment of international talent, social commitment	Volkswagen Group



Volkswagen offers every employee the opportunity to develop their skills within the Berufsfamilien.

young engineers from southern Europe an opportunity to gain international work experience. The initial target group was graduates from Spain and Portugal, and from 2014, the program has been 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. On completing the two-year program, they may be offered permanent employment. Since the initiative was launched in 2012, no fewer than 5,700 young people have applied for the 67 places on the program.

### Qualifying Every Employee

The Volkswagen Group Academy run by Volkswagen AG offers employees a wide range of skills development measures, including personnel development programs, cross-functional seminars and courses and specialized qualification programs geared to the specific requirements of individual Berufsfamilien. The dual model of vocational training underpins the Academy's offering, acknowledging that close coordination between theoretical learning and practice-based qualification is the best way to ensure that employees continue to develop their specialist skills throughout their working lives.

During 2013, a total of 86,316 participants benefited from 10,060 qualification programs organized by the Volkswagen Group Academy, representing 213,678 participant-days. In the area of specialist skills development (e.g. factory automation, robotics and applications engineering or management), 56,554 participants attended 7,591 seminars over 126,976 participant-days. Meanwhile, in the field of "cross-functional skills development" (which includes leadership skills and personal development), 29,762 participants attended 2,469 courses, representing 86,702 participant-days. 369 new programs and courses were developed over the course of the reporting year to ensure that the Company's in-service qualification provision continues to meet its needs.

The creation and development of Berufsfamilie Academies means that sites outside Germany are increasingly involved in this quali-

fication model, for example via the "Beschaffungsakademie" (Procurement Academy) at ŠKODA in the Czech Republic, the "Akademie der Qualitätssicherung" (Quality Assurance Academy) in Mexico and the "Produktakademie" (Product Academy) in China. Brandspecific qualification provision is complemented, optimized and extended by cross-brand provision.

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**86,316 employees attended 10,060 qualification programs.**

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The Group-wide "Personnel Management Academy" was set up in mid-2013 for employees in the Personnel Management Berufsfamilie. It was followed, in late 2013, by the "Finanzakademie" (Finance Academy), the Group-wide "Logistikakademie" (Logistics Academy), and the "Academy of Communications". A further new Academy is the "FS Akademie" (FS Academy), in which Volkswagen Financial Services AG brings together its qualification activities and expert knowledge.

### Further Development in Leadership and Management

Initial and in-service qualification for Meister is a particular priority for the Volkswagen Group. Meister qualifications are currently being brought into line with uniform worldwide standards. A Group Leader Qualification prepares the Meister of tomorrow for their role as production managers. Qualification has already been standardized at Group locations in India, Poland and Russia, and 322 Meister completed their qualification at Volkswagen in 2013, including 84 outside Germany.

Meanwhile, Volkswagen prepares its future supervisors for their leadership role by means of Basic Leadership Qualification followed by an examination. Both elements are being rolled across Group companies. India, Mexico, Poland, Russia, the Czech Republic, the USA, Spain, Brazil and China already provide standardized qualification for managers.

Employees' development into management roles is supported by the management selection process: in a comparative discussion with the relevant specialist departments, management candidates are selected on the basis of their technical competencies, while their entrepreneurial skills are assessed in a Company-wide Management Assessment Center. In 2013, the Management Assessment Center was launched successfully at Volkswagen in Argentina, Spain, Mexico, the USA, China, Brazil and Slovakia and at the SEAT, MAN and Bentley brands.

### Professional Academic Training

Under the auspices of the Volkswagen Group Academy, the AutoUni provides specialist academic knowledge and offers employees a chance to learn from top experts within the Volkswagen Group.

The qualification provision offered in conjunction with the specialist departments and partner universities is tailored to the needs of the Berufsfamilien. In-service qualification events enable participants to learn from leading specialists within the Berufsfamilien, selected university professors, and experts from the private sector. This ensures that knowledge and experience are passed on within the Group and that new research cascades down into Group companies. In 2013, there was a particular emphasis on intelligent mobility, including electric traction, innovative drivetrains, lightweight design, and the sustainability of transport systems.

Over the past few years, the work of the AutoUni, which is based in Wolfsburg (Germany), has been extended around the world, with provision opening up in 2013 in Group locations in Bratislava (Slovakia), Mlada Boleslav (Czech Republic), Martorell (Spain), and Shanghai and Beijing (China), among other locations. In 2013, around 9,000 people took part in over 220 AutoUni courses. As part of our regional social outreach, around 20% of these events were open to the public. The AutoUni puts on more than 650 speakers each year, with over 300 from the automotive sector alone.

In the field of research, the AutoUni collaborates with leading international universities, institutes and research centers on a range of research projects and on academic dissertations and theses. It is also intensively involved in the Volkswagen Group's own doctoral student program, in which over 420 doctoral students were supervised in 2013 by the various companies within the Volkswagen Group in Germany. These doctoral students undertake research into ambitious PhD thesis topics with relevance for the Company. To this end they work closely with their own department within the Group, which also appoints a supervisor from within the Company. The latest research findings then feed directly into AutoUni courses. AutoUni supports doctoral students by providing seminars on academic writing, and its doctoral colloquium offers them the opportunity to present work-in-progress to a Group-wide audience and discuss their theses. 🎯 31

AutoUni also supports the Volkswagen Group in identifying appropriate academic partners from within research and teaching. It networks the persons responsible for university contacts within the Group to create synergies between brands and companies and to ensure that the processes involved in developing and implementing university cooperation arrangements are consistent.

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### INTERNATIONAL "SCIENCE AWARD ELECTROCHEMISTRY"

Since 2012, we have joined forces with BASF to jointly sponsor outstanding researchers and create new impetus for international basic research in the area of storage technologies, which are vital to electric mobility. The €50,000 prize money is intended as start-up funding for research activities. In 2013, the prize was won by the Max-Planck-Institut für Eisenforschung in Düsseldorf (Germany) for a research project on electrocatalysts.

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### PERFORMANCE AND PARTICIPATION

Fair pay and a 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 codetermination rights for employee representatives are key factors in the Volkswagen Group's success, so we engage in dialogue with our employees to set standards for good work.

### Promoting Performance and Sharing Profits

The systematic fostering and recognition of good performance is another vital element in our PM strategy, along with redesigning our pay system to ensure that employees have a sustainable share in the success and profits of the Company.

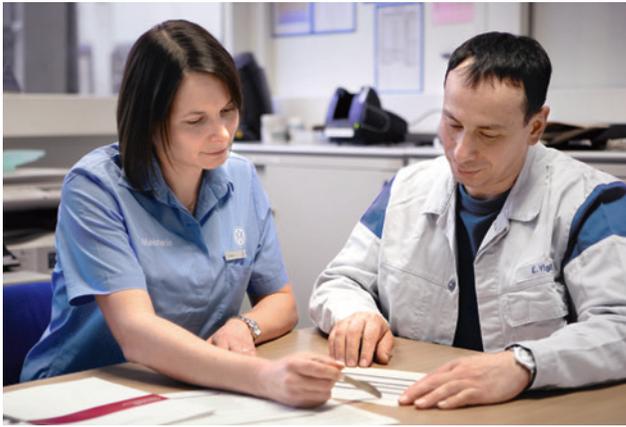
Since 2010, Volkswagen AG has had detailed standard criteria for skills development and performance assessment. These criteria cover the entire workforce, from apprentices to top managers, and are underpinned by concrete incentive systems within the pay structure.

The pay system for Volkswagen AG employees covered by collective agreement comprises three main components:

- 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 has proven its worth within Volkswagen AG as a tool enabling the workforce to participate in the Company's success. At the same time, it helps recognize individual achievements while maintaining competitiveness.

The system is, therefore, increasingly being implemented as standard throughout the Group, including at Audi, ŠKODA and Volkswagen Slovakia. In 2013, employees at more than 30 Group sites benefited from profit-sharing.



As part of the introduction of a performance-related pay component, it was agreed that each employee should have an annual appraisal with his or her line manager.

## Sustainable pay components for members of the Board of Management and management.

### COLLECTIVE AGREEMENTS IN 2013

In 2013, the Volkswagen Group conducted more than 20 rounds of collective bargaining in Germany and at sites around the world. There was a strike at one Group site that was, however, part of a sector-wide dispute between the relevant employers' umbrella organization and the trade union and was resolved at that level. To preserve competitiveness and protect employment, a number of sites concluded collective agreements running for periods of more than one year. Volkswagen AG's 2013 settlement runs for 20 months and provides for basic pay to rise by 3.4% from September 1, 2013 and again, by 2.2%, from July 1, 2014. Volkswagen AG also boosted pension provision for its employees by making a one-off employer contribution of €300 per employee to the Company pension plan. At Volkswagen do Brasil plants, management and unions concluded local agreements in 2012 and 2013 that run for up to five years. Volkswagen of South Africa (Pty.) Ltd. concluded a three-year collective agreement in July 2013, while ŠKODA Auto a. s. concluded a five-year agreement for permanent employees at its three locations in the Czech Republic, including a job security guarantee that is to date unique in the country.

### Long Term Incentive (LTI) for Long-Term Success

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. 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.

### Annual Appraisal

As part of the introduction of a performance-related pay component, it was agreed that each employee should have an annual appraisal with his or her line manager. This appraisal has two components, performance assessment and development planning. Each employee is given specific feedback on his or her performance and clear guidance on career prospects. Recognizing and valuing good performance is just as important in this context as identifying individual potential or specific further training needs. Appraisals using the same criteria were also carried out within Volkswagen Financial Services AG and Volkswagen Immobilien Service GmbH.

The system of appraisals linked in part to a performance-related pay component is being rolled out across Group brands and companies. Over the reporting year, for example, appraisals in line with Group standards were introduced for all employees covered by collective bargaining at VW Group Rus in Kaluga (Russia). Individual appraisal was also introduced for all management staff in 2010. As well as performance assessment and development planning, these appraisals include target-setting and assessment of target achievement.

Since 2013, all temporary external personnel employed at Volkswagen AG also benefit 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 appraisal process at Volkswagen AG.

### Employment Security

We use a wide range of flexibility tools to help maintain competitiveness and protect jobs. In 2013, we again responded flexibly to changes in the business environment. For example, we were able to protect jobs at Volkswagen Autoeuropa by relocating around 200 Portuguese production staff to Volkswagen AG in Wolfsburg for several months, enhancing value at the German plant.

Under the collective agreement on sustainable site retention and employment protection, all Volkswagen AG employees enjoy employment security until at least the end of 2014. The Innovation Funds set up at the initiative of the General Works Council and governed by the same collective agreement represent a major contribution to safeguarding employment. There are two Funds:

- **Innovation Fund I**, set up in 2007, helps to further develop existing skills areas at the various Volkswagen sites.
- **Innovation Fund II**, set up in 2011, develops new areas of business closely related to the automotive value production chain.

Until at least the end of 2014, Volkswagen AG is committed to recruiting apprentices and, subject to specific performance criteria, giving them permanent employment on completion of their training. 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 constitutes the basis for the decision as to whether to take them on permanently.

### RECRUITING LOCAL PERSONNEL

We support the recruitment and qualification of local personnel as a way of developing the local communities and regions in which the Volkswagen Group operates. And when we open a new site, we always seek to recruit local personnel. For example, when we opened the plant in Chattanooga (USA), we agreed to give local people priority in recruitment. The same is true of 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 (see page 38).

### Participation and Co-Determination

The International Charter on Labour Relations first came into force in 2009 and links increased participation rights with shared responsibility. The Charter applies internationally and provides for phased rights to information, consultation and codetermination for employee representatives of the brands, companies and sites represented on the Group Global Works Council. The rights it guarantees employee representatives relate, among other areas, to PM 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.

Since 2009, management and employee representatives at many sites outside Germany have negotiated declarations of intent and outline implementation arrangements. Further site agreements on local implementation of the Charter were concluded in 2013, including at Porsche Holding Gesellschaft m. b. H. in Salzburg and the Volkswagen Group United Kingdom Ltd. 2013 also saw plant-level co-determination being extended at a number of sites in line with the Charter: the Indian plant at Pune, for example, was one of several to hold inaugural townhall meetings or symposia. At many sites, the work of local employee representatives is now being coordinated or developed within special committees.

### Qualification workshops for local implementation of the Charter on Labour Relations.

The Group Global Works Council and Company management regularly monitor implementation of the Charter on Labour Relations in individual Group companies. At meetings of the European Group Works Council and the Group Global Works Council, representatives from the various sites report back on how local bodies and working structures are being set up and developed and how the tools contained in the Charter are being applied, sharing examples of best practice. In 2013, a number of qualification workshops were held to help employee representatives implement the Charter locally: these workshops were held at cross-company level (for the Central and Eastern Europe region) as well as for specific sites, such as Volkswagen in Poznań (Poland), for production companies such as Volkswagen India, and for the sales and financial services sector (Volkswagen Group Sverige).

To improve the situation of workers, working conditions, participation rights and job security in the Group's Chinese joint ventures, a Liaison and Coordinating Committee was set up back in 2008, bringing together the General Secretary of the Group Global Works Council, the Presidents of the trade unions within the Chinese joint venture companies, and representatives of the Company itself. Chinese joint venture companies that were not previously represented joined the Committee in 2013, most notably the components plants.

In September 2012, the Group Global Works Council set up a Commercial Vehicles Committee, bringing together employee representatives from the Scania, MAN and Volkswagen Commercial Vehicles brands. This Committee supports the integration of commercial vehicle brands in the Volkswagen Group and also has extensive information and co-determination rights. Since 2008, the Group Global Works Council has also had a Sales and Financial Services Committee. One of the roles of this Com-

mittee is to review and develop the co-determination rights of the companies represented on it in line with the International Charter on Labour Relations.

#### 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 underlying aim is to ensure that temporary external personnel benefit from appropriate employment and remuneration conditions and that temporary work is managed consistently across the Volkswagen Group. The main provisions of the Charter relate to:

- > 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 qualification provision with the permanent 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. However, temporary work is one way in which Volkswagen can manage fluctuations in the economy or particular projects, such as constructing plants or sections of plants. In such cases, temporary work, along with outside recruitment, may be a sensible PM strategy for supplementing the core workforce. In 2013, measures were agreed at Volkswagen Group locations to implement the Charter on Temporary Work, with the first packages of measures being put in place. Specific agreements implementing

the provisions on equal pay and equal treatment were concluded at SITECH Sitztechnik GmbH and Volkswagen Osnabrück GmbH as well as at Bentley and ŠKODA.

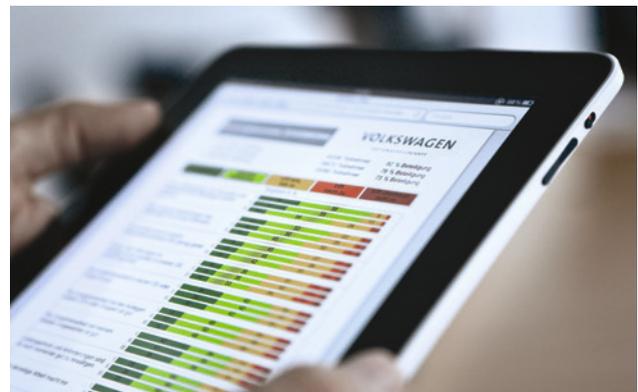
#### The Employee Opinion Survey – Worldwide

The employee opinion survey, or “Stimmungsbarometer”, is a tool that involves employees actively in what is going on in the Company. This standardized Group-wide survey measures employee satisfaction annually, and once the survey is complete, the findings are jointly discussed by supervisors and employees, a process that highlights problems on the one hand and suggestions for improvements to work processes on the other. Improvements agreed on are then implemented before the following year’s survey.

The employee opinion survey was conducted for the sixth time in 2013, and during the reporting year, a twelfth statement was added to the survey, seeking employees’ views on provision for in-service training. The survey covered 121 corporate sites and companies in 40 countries, and over 400,000 employees took part out of a possible total of around 450,000 – a response rate of 89%. The reporting year saw employees of Porsche, MAN, Volkswagen Group Retail Deutschland GmbH and Volkswagen Group Polska Sp. z o. o take part for the first time.

Alongside the employee response rate, the key indicator generated by the employee opinion survey is the employee satisfaction index. During the reporting year, the score on this indicator was 79 out of 100. **32**

**412,795 ideas from employees saved more than €312.5 million.**



The employee opinion survey enables employees to take an active part in what is going on in the Company. It measures employee satisfaction annually and, once the survey is complete, the findings are jointly discussed by supervisors and employees.

### Continuous Improvement and Ideas Management

Employees use their creativity, knowledge and initiative to take responsibility for process and product improvement under the Ideas Management program. Ideas management is a vital management and motivational tool for line managers across the Company and has been an integral part of Volkswagen's culture of improvement for many years. The ideas management process also helps to make working at Volkswagen both safer and healthier. The challenges of demographic change are given a high priority, with special consideration given to suggestions for ergonomic improvements.

### THE "VOLKSWAGEN WAY"

The "Volkswagen Way" is a key tool for securing continuous improvement. It has been an integral part of the way Volkswagen operates for six years. The core of the "Volkswagen Way" is a process of continuous improvement which aims permanently to develop productivity and quality as well as ergonomics, leadership and teamwork. In the "Volkswagen Way", the Company has established a tool that consistently applies high standards to driving improvement and solving problems systematically and sustainably across all areas. The commitment and involvement of every employee is essential to the success of this tool. In 2013, the focus was on optimizing overarching workflows and improving teamwork.

### Company Benefits

The Volkswagen Group offers all its employees the opportunity to acquire a vehicle from at least one Group brand on favorable terms. The terms of this benefit must be affordable for the employee and commercially viable for the Company. Apprentices at Volkswagen AG, for example, enjoy special concessions on the purchase or leasing of a vehicle.

Volkswagen AG 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, the Company grants employees a short-term loan. 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
- › discounts on selected leisure activities.

Health care benefits or additional pension insurance round off the range of company benefits.

### 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 pretax 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 2013, 22 other Group companies in Germany were also using these arrangements.

At year-end 2013, the Company's pension fund had total assets of €3,508 million for employees' retirement and disability pensions and lifelong annuity benefits for surviving dependents in the event of death. Employees can also make direct contributions to their own pension provision by converting a proportion of their salary into pension contributions.

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 bring forward their retirement age by making contributions from 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 e. V. The Time Assets accumulated can then be used to enable employees to take paid time off in the run-up to retirement. At the end of the reporting year, the Time Asset Fund had assets of €1,519 million.

The assets of the Volkswagen Pension Trust are invested in special funds that comply with the provisions of Germany's investment legislation. The two funds – one for the Company pension plan and the other for the Time Asset Bond – comprise individual segment funds for different investment classes. These segment funds are administered by independent professional special fund managers. The Volkswagen Pension Trust lays down investment guidelines for the special fund managers. These guidelines form part of the contract governing all special fund managers and specifically exclude any investment in companies manufacturing cluster munitions. This exclusion applies to all individual funds within the overall portfolio of around €5 billion. Within this portfolio, we have also set up two special sustainable investment funds, which apply sustainability criteria to investments in Europe and around the world.

## HEALTH AND FITNESS

Protecting and promoting good health is not just a social responsibility and part of Volkswagen's corporate culture but also vital to the Company's ongoing economic health and viability. The Volkswagen Group's integrated approach to health management goes well beyond traditional preventive health care and occupational safety and also includes a number of aspects such as work organization, ergonomics, leadership style and prospects for each individual.

### Workplace Ergonomics

The Group Production Ergonomics department, Health Services, the Works Council and the Occupational Health and Safety department are collaborating with Group brands to develop standards for an integrated approach to ergonomics.

Ergonomic improvements across the entire product development process and throughout production ensure that workplace quality and the stress and strain on employees caused by production processes are taken into account at the vehicle planning and design stages. The common objective is to combine ergonomically state-of-the-art workplaces and innovative work processes using a mix of scientific findings and practical experience. The successful switch to the new Volkswagen Golf model in 2012 provided an opportunity to make ongoing improvements in workplace ergonomics. The deployment of occupational assistants on the production lines means that employees are able to receive advice and guidance directly at their workplace about how to implement their workflows more ergonomically.

To reduce the impact on health of shift work, Volkswagen AG plants have introduced new shift patterns. Ergoshift patterns involving short-cycle, forward-rotating shifts facilitate the body's transition from one shift pattern to the next. Surveys among around 1,200 employees across five Volkswagen AG plants show that these ergo-shift patterns impose less stress on employees' fitness, health and well-being.



Ergonomic improvements across the entire product development process and throughout production ensure that workplace quality and the stress and strain on employees caused by production processes are taken into account at the vehicle planning and design stages.

Now established at Volkswagen locations, "Ergonomics and Demographics Days" not only provide a forum for experts but also involve the entire workforce. As part of the Company's Holistic Ergonomics Strategy, the 2013 "Ergonomics Day" at the Volkswagen brand in Wolfsburg (Germany) presented measures for adapting both products and production processes to different age groups.

MAN has put all jobs at its production plants through a systematic ergonomic assessment as a way of managing demographic change, boosting employee performance and preventing physical impairment.

### Integrated Health Management

The Audi Checkup has been running since 2006, while Volkswagen introduced its Checkup in 2010. The Checkup is a free, comprehensive preventive medical examination available to all employees. It helps maintain and improve the health, fitness and performance of the workforce. Employees value the Checkup's high diagnostic quality: nearly 61,000 staff have so far undergone Volkswagen Checkups, while almost 60,000 Audi Checkups have been carried out.

Following the successful introduction of the Checkup at sites in Germany, the Company has systematically broadened the range of both internal and external preventive health measures and training provision linked to the initiative. And the rollout of the Volkswagen Checkup has continued across many Group sites abroad, while other Group companies have been bringing existing screening and preventive health programs into line with the Group-wide standards represented by the Checkup. In 2013 these included ŠKODA in the Czech Republic, where more than 15,000 ŠKODA Checkups have since been carried out. MAN also offers employees an annual MAN Checkup as part of a multilevel preventive health program.

Extensive building work and new medical facilities at a range of Group sites helped to further optimize health provision for employees in 2013: for example, health centers were built or



Following the successful introduction of the Checkup at sites in Germany, the Company has systematically broadened the range of both internal and external preventive health measures and training provision linked to the initiative.

refurbished at Volkswagen in Osnabrück (Germany), Puebla (Mexico) and Uitenhage (South Africa) and at the SEAT plant in Barcelona (Spain).

To ensure a common standard of health provision across the Group, a multi-level audit system was developed in 2010, comprising self-audit and expert audit. Many sites have already successfully completed a self-audit, and some have conducted an expert audit.

## COMBATING INFECTIOUS DISEASES

Volkswagen continued its international commitment to combating infectious diseases in 2013, for example through measures against HIV/AIDS and tuberculosis. A particular focus was South Africa where, according to current statistics, HIV infection is becoming more prevalent among women aged between 25 and 35. In view of the continuing high rates of HIV infection, Volkswagen has continued with an information, advice and testing program as part of its Checkup. In 2013, the rate of new infection was below 1%.

### Occupational Safety

As part of management development, supervisors in the Company are being made aware of the need to take greater account of the links between leadership and employees' health in the way they do their job as managers. 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 qualification modules, the qualification building blocks for future Meister were standardized in 2013 and made a compulsory part of the group leader qualification. Since 2009, occupational safety officers at all German sites have been receiving occupational safety qualification. **28**

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 have now carried out a comprehensive analysis of their existing occupational safety structures and processes. The findings are now available across the Group via a central database, and examples of good practice across the Volkswagen Group are systematically disseminated. A health and safety committee has been set up at each included site to represent the entire local workforce. Moreover, all those involved have agreed to conduct a brand-specific audit at all Volkswagen sites around the world from 2012. The Group's occupational safety management system was successfully audited at Anchieta (Brazil), Puebla (Mexico), Poznań (Poland), and Osnabrück (Germany) during the reporting year. **33**

## BRATISLAVA WINS 2013 OCCUPATIONAL SAFETY CUP

2013 saw the 28th annual Occupational Safety Cup competition for Volkswagen brand and Volkswagen Commercial Vehicles plants in Europe: once again, the cup for safest plant went to the Bratislava site in Slovakia. The wide range of occupational safety measures continues to help reduce the frequency and consequences of accidents.

## ZERO-ACCIDENT INITIATIVE AT MAN DIESEL & TURBO

MAN Diesel & Turbo launched its zero-accident initiative in 2012 with the aim of achieving further substantial reductions in the number and severity of work-related accidents. Alongside measures such as safety training courses and workshops to enable employees to share experiences, staff are also encouraged to be proactive. The aim is to create a culture in which each individual feels responsible for his or her own safety – and for the safety of colleagues. Below are just a few of the measures taken as part of the initiative at MAN plants:

- > accident analysis and lessons learned (Augsburg, Germany)
- > reduction in the number of injuries involving crushing (Oberhausen, Germany)
- > safety trail to raise awareness of risk (Zurich, Switzerland)
- > reporting and assessment of 'near misses' and hazardous situations (Copenhagen/Fredrikshavn, Denmark)

### 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.

### Rehabilitation Measures

A tailored rehabilitation program operates in many locations to reintegrate employees after serious and/or long-term illness, offering early intervention and job-related support. The aim is to restore or stabilize the employees' capacity and performance ability within three to six months. Depending on the particular needs in each case, the program also now includes preventive provision such as medical physical therapy, rehabilitation sport, functional training, and special back exercises.

Support and mentoring opportunities for employees with mental health or psychosomatic problems are also being expanded on an ongoing basis. Among other measures, employees with health problems have access to inhouse medical and psychological

support, social coaching, a psychological counseling service and specific arrangements for psychosomatic consultations.

A preventive process for assessing the risk of psychological stress has been developed and is used to analyze jobs in a standardized and objective way. Specially trained analysts have used this to analyze more than 900 jobs as part of a pilot project. The findings will now be evaluated, with plans under way to roll the process out more widely.

Many performance-impaired employees have talents and expertise that can be developed with targeted support; it is then often possible to move these employees to a job within the Company that is in line with their capacity. This recognition underpins the Work-2Work program, which has been creating new job opportunities for performance-impaired employees at Volkswagen AG since 2001. Over recent years, some 1,800 employees have benefited from the program, and over 770 people are now employed in Wolfsburg in around 90 different fields of activity that have been adapted to their specific capacity.

#### AUDI'S "WORK AND PSYCHOLOGICAL HEALTH" PROGRAM

Over the last few years, AUDI AG has been developing and implementing its "Work and Psychological Health" program on an ongoing cross-functional basis. Modules already in place within the company's health provision include early recognition, advice and coaching for employees with mental health problems or who are at risk of addiction. Employees are also offered the opportunity for specialist mental health consultations. A further company-wide health initiative, "Audi in Balance", is to be extended to improve communications around the issue of mental health. In collaboration with the Audi Academy, seminars aimed at specific target groups are being developed to enhance the mental wellbeing of managers and employees.

#### Provision for Older Employees

On the initiative of the German automotive industry's representatives of people with severe disabilities, Volkswagen AG, AUDI AG and Porsche AG took part in a research study entitled "Ageing Healthily and Appropriately in the Automotive Industry: Career-Long Participation and Inclusion", known by its German acronym, PINA. This cooperation project, which is funded by Germany's Federal Ministry of Labour, also involves Darmstadt University of Technology and the University of Cologne. The partners are developing tools and initiatives to maintain the health and working capacity of older employees. The initiative aims not only to network operational processes and actors but also to focus on the interfaces with bodies responsible for prevention and rehabilitation, such as health, pension and accident insurance providers.

Volkswagen supports employees making the transition from employment to retirement. The Group's internal "Senior Expert" program, for example, saw more than 400 retired Volkswagen employees passing on their experience in 2013, to mostly younger colleagues. These Senior Experts make a valuable contribution to knowledge transfer at Volkswagen, enabling valuable expertise to remain within the Company.

#### PROGRAM FOR OLDER WORKERS AT ŠKODA

ŠKODA's "Seniority Programme" in the Czech Republic has for many years been taking preventive measures to promote the health of older workers. Specially trained experts ensure that older production workers benefit from a working environment that protects their health, while the company holds regular "health days" to raise awareness of the issues. ŠKODA has received both national and international awards for this initiative.



More than 400 retired Volkswagen employees passed their experience on to younger colleagues in 2013. These Senior Experts make a valuable contribution to knowledge transfer.

#### ADVANCING WOMEN AND DIVERSITY

As we move towards being top employer in the automotive sector, we want to make use of the potential that our diverse workforce represents. To mobilize this potential, we are explicitly advancing women, improving the scope for combining work and family, and making full use of the diversity existing within the Group.

### Recruiting and Developing Talented Women

The Volkswagen Group is aiming to have 30% women at all levels of the management hierarchy in Germany in the long term. In line with this, the proportion of women in management within the Volkswagen Group in Germany rose from 9.3% in 2012 to 9.8% in 2013. The increased proportion of qualified women joining the Company will enable us steadily to lift the proportion of female executives over the coming years.

#### VOLUNTARY UNDERTAKING

The Volkswagen Group considers both career and family life extremely important. 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.

### Our aim: 30% women at all levels of the management hierarchy.

Volkswagen recruits the best graduates in their cohort in the skills areas it needs and develops them systematically. As a starting

point, we take the proportion of female graduates in each discipline, so that, for example, around 10% of all the mechanical engineers we recruit should be women. For electrical engineers, the proportion is also 10%, rising to 50% in business areas. 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 2013, around 30% of graduate recruits at Volkswagen AG were female.

Women accounted for 27.4% of all apprentices in 2013 and for 21.4% of apprentices in industrial or technical professions. This means that the Volkswagen Group in Germany has one of the highest proportions of female apprentices of any automotive company in the country. Volkswagen is keen to increase the proportion to nearly 30%, however, and is actively seeking to recruit talented women. The tools it is using include special information days on industrial or technical vocational education and training at Volkswagen and hands-on experience days for young women. For a number of years, the Volkswagen, Audi, MAN and Porsche brands have taken part in a national initiative, "Girls' Day", and in 2013, they offered 2,370 female school students in Germany a practical insight into the careers offered by the automotive industry.

In 2012, Volkswagen began collaborating with universities to offer female students with the Abitur – Germany's school-leaving examination – a six-month internship. Known as the "Lower Saxony Technikum", this internship is designed to make technology more attractive to young women and encourage them to take up courses in such areas as mechanical engineering, electrical engineering, vehicle technology, and mechatronics. 22 of the 24 young women who took part in 2012 went on to study for a degree in a technical area in 2013. In 2013, 25 young women completed the "Lower Saxony Technikum".

Volkswagen forges links with female students early in their academic careers. Its "Woman Experience Day", launched in 2012, is aimed at female students and graduates in engineering subjects. Participants spend a day and a half with Volkswagen and



Girls' Day 2013 at the Wolfsburg plant – girls are showing unprecedented interest in Germany's most attractive employer.



"Woman Experience Days": young female engineers get to know Volkswagen at first hand and try out the Touareg.



A further step on the way to becoming a family-friendly employer is the ongoing expansion of tailored childcare provision.

are able to talk to experienced female engineers and PM experts. The Company has so far run seven “Woman Experience Days”, offering more than 120 young women an insight into the wide variety of career opportunities the Company can offer them.

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## 27.4% of all apprentices across the Group in 2013 were women.

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Since 2004, the Company has been running the “Woman DrivING Award”, a competition aimed at top female engineers. The competition is held across Germany every two years and is designed to encourage young female graduates into employment in technical areas, where they can contribute to designing and producing the cars of tomorrow. 📍 34

Volkswagen AG also offers a mentoring program. Having been through 21 cycles with almost 400 female participants, it is a recognized development program within the Group for bringing on female specialists and managers. 40 women took part in the Volkswagen AG mentoring program in 2013 and received support in their move into management.

Volkswagen is also aiming to increase the proportion of skilled female workers and female Meister to 10%. In 2013, 30 women within Volkswagen AG benefited from a tailored mentoring program designed to help them progress to Meister grade.

Audi, too, is aiming to recruit talented women, for example through careers guidance events targeting female school students and the “CareerDay Women” initiative for young women studying technical subjects. To boost the proportion of women in management positions, the “Sie und Audi” (Women and Audi – You and Audi) initiative offers a range of programs aimed specifically at advancing women to leadership or junior management roles.

Since 2001, Porsche has been using the “Femtec.Network” platform as a targeted tool for recruiting highly skilled female engineers. The platform is a collaboration between eleven tech-

nology companies, with nine technical universities joining the scheme in January 2014. The aim is to foster women studying engineering and science subjects.

### Combining Work and Family

As well as recruiting and advancing talented women, Volkswagen is working continually to improve employees’ ability to combine work and family responsibilities. These include:

- substantial flexibility in relation to hours of work
- an extensive range of part-time and shiftworking arrangements
- a return to work at the same level after parental leave
- childcare either within or near the company premises.

Measures such as teleworking and new information and communications technologies are also helping employees to find the solution to combining work and family responsibilities that suits them best.

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 seminars. Since 1995, the Company has been running “Family Management and Career” seminars at the Wolfsburg plant, while Volkswagen Commercial Vehicles offers similar provision. All employees on parental leave are invited in to the Company six months before they are due to return to work to discuss how they want to manage their working life and future career and obtain information and advice on the range of childcare provision available. At the same time, they are also briefed on the statutory provisions and Company arrangements for parental leave and returning to work.

A further step on the way to becoming a family-friendly employer is the ongoing expansion of tailored childcare provision. From 2013, childcare during school holidays is now available at all Volkswagen AG sites following the introduction of such provision at Volkswagen Financial Services AG and AUDI AG, which have been running schemes since 2008 and 2011 respectively.

Volkswagen Sachsen GmbH and Volkswagen Osnabrück GmbH also rolled out holiday childcare provision in 2013.

The Volkswagen Group has found it beneficial to establish childcare facilities within or near the Company. For example, MAN offers company childcare facilities at its Munich and Augsburg locations. Volkswagen Financial Services AG's "Frech Daxe" nursery in Braunschweig is one of Germany's largest company nurseries, while Volkswagen Group of America has been offering childcare provision at its Chattanooga (USA) plant since 2012.

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 or to make other arrangements. They may also take up to six months' part-time or full-time leave to fulfill their caring responsibilities.

Volkswagen is particularly flexible in its commitment to reemploying 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.

### **Inclusion**

People with disabilities made up 7.18% of the total workforce of Volkswagen AG in 2013 – once again, well above the statutory quota. 55% of all employees with disabilities worked in production and 45% in the non-production sector. The Company is particularly committed to helping employees with disabilities. When new buildings are constructed or existing ones are refurbished, emphasis is placed on creating accessible workstations, staff canteens, and toilets and washrooms. A Company-wide working group on inclusion is also focusing on establishing a corporate culture of inclusion; the Company and the Works Council are working together on ways to boost inclusion. This includes qualification and awareness-raising for managers and PM experts and ensuring that the application process is accessible to candidates with disabilities.

Volkswagen is also helping to boost employment for people with severe disabilities outside the Company: during the reporting year, it placed orders worth more than €22.5 million with workshops employing people with disabilities.

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 plants in the Czech Republic. Working closely with KOVO, the local trade union, ŠKODA continues to use these facilities to create new employment prospects for employees whose health is impaired. The "New Horizon"

program being run by MAN Latin America since 2011 offers young people with disabilities a chance to work within the Company, benefit from further training measures and qualify for a grant for degree-level study on the same terms as able-bodied employees. In the 2013 financial year, 22 young women and men took part in "New Horizon".

### **INCLUSION AWARD 2013**

During the reporting year, Volkswagen AG was awarded the "Inklusionspreis 2013 – Unternehmen fördern Inklusion" (Companies Promoting Inclusion) prize. The award recognizes Volkswagen's achievements in the area of inclusion and is sponsored by the UnternehmensForum, an association devoted to ensuring that people with disabilities are able to play a full part in employment. In 2013, the prize was jointly sponsored by the German government's Anti-Discrimination Agency and the German employers' association (BDA). It recognizes exemplary commitment to cooperation between people with and without disabilities.

Mobility aids boost independence: with manual controls, relocated accelerators, indicators and wiper controls, and steering wheels with rotary knobs, Volkswagen has for many years been helping to give people with disabilities some of their independence back.

### **International Diversity**

The Volkswagen Group is a complex global undertaking with 106 manufacturing plants across Europe, North America, Asia and Africa. Volkswagen vehicles are sold in 153 countries and in 2013, Volkswagen AG alone employed nationals of 104 countries. The Company is deeply committed to promoting peaceful cooperation between diverse traditions and cultures.

### **Equal Opportunities**

Volkswagen is committed to respect, tolerance and cosmopolitanism. Treating each other with respect and working together means valuing each individual's personality. Volkswagen guarantees equal opportunity 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.

The fact is, however, that discrimination happens in all parts of society. Openness and transparency, collegiality, and civil courage have proved the best tools with which to combat it, so every employee is under an obligation to notify any breach of the Code without delay. If an employee feels he or she is being discriminated against, the Company meets the statutory provisions for whistle-blowing but also provides access to trained personnel to support and advise the individual concerned. At the employee's request, meetings can be organized with all parties to resolve the situation, and this system has proved successful in resolving many disputes before they ever reached the formal complaint stage. If there is a major breach of the Code of Conduct, 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.

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 sites. The agreement was revised in 2007, and every new employee receives a copy or a briefing when they are appointed.

#### RESPECT AND EQUAL OPPORTUNITIES AT PORSCHE

Porsche sees itself as a multicultural company, employing around 60 different nationalities at its two plants in Germany. Since 2011, the Executive Board and the General Works Council have been involved in a nationwide initiative, "Respekt! – Kein Platz für Rassismus" (Respect! No Room for Racism). The initiative originates in sport and is intended to combat racism and discrimination in society and in companies. The company supports it with regular activities, including a film shown on the staff TV channel and display of "Respect" posters at the plant gates.

#### SOCIAL RESPONSIBILITY

For the Volkswagen Group, corporate social responsibility means commitment to local well-being beyond the factory gates. Our 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 we promote volunteering by our employees.

#### Commitment to the Regions

We are committed to the regions in which our sites 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), provides a fine example here. 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.



Mobile doctor's surgery: the administrative district of Wolfenbüttel is piloting solutions for providing healthcare in rural areas and for house-bound patients as a pilot region in the "Health in the Future Regions" project.  35

### Commitment to Education

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). The park was opened in 1999 and is aimed at children aged five to 15. It is a community project run by Volkswagen Navarra and the Navarra savings bank foundation and supported by the regional government and a number of local businesses. In 2013, the park attracted 7,100 schoolchildren, taking the total numbers visiting the park since it was opened to 105,050.

In addition to regional infrastructure projects, Volkswagen 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. In the current (2013/2014) school year, the school has some 600 students in years 1 to 4 and 5 to 9 (those aged between six and nine and between ten and 14).  36

As well as school-based educational projects, many Group locations have also launched road safety initiatives. Porsche AG, for example, runs its “Kids Driving School” across Germany. This unique initiative, developed with Ferrero and its “Kinder Surprise” range, enables children to learn road safety through play.

ŠKODA, too, is constantly expanding its road safety training activities. The multimedia tool “Playful ŠKODA” is aimed primarily at school-age children and helps young children to get to grips with the concepts and rules of road traffic. This interactive tool can be accessed in four languages via the ŠKODA website (see page 40).

### Volunteering

Volkswagen takes enormous pride in its commitment to volunteering. The “Volkswagen pro Ehrenamt” (Volkswagen Supports Volunteering) initiative is aimed both at current employees and their partners and at retirees. It operates as a clearing house, linking community initiatives looking for volunteers with Volkswagen staff wanting to help their society. The aim is to boost the profile of volunteering in the public perception and to support and promote volunteering. However, we also gain from having employees who devote their free time to their local community and thereby enhance their social skills. “Volkswagen pro Ehrenamt” is thriving: during summer 2013, for example, more than 700 Volkswagen employees volunteered to help the victims of flooding in Germany. Employee volunteers enjoy the support and appreciation of their line managers, too. In 2013 alone, line managers held more than 950 debriefings with volunteers, and by the end of the reporting

year, the initiative had placed around 1,700 volunteers. Similar programs have now been introduced in other Group companies, including Audi, MAN and ŠKODA.

The Volkswagen Group also supports volunteering by its employees at locations around the world. For example, Porsche supports the work done by the charity “Un Techo Para Mi País” (A Roof for My Country) in more than a dozen countries in Latin America, including Brazil, Argentina and Chile. Since 1997, this charity – which now works across 19 Latin American and Caribbean countries – has been helping to provide permanent housing for socially disadvantaged and isolated people and to integrate them into stable communities. Financial support from Porsche has helped to build more than 250 homes over the past two years, and more than 2,000 volunteers have been involved, including the Porsche Latin America team but also staff from local Porsche importers.

**Around 1,700 Volkswagen volunteers have been placed since 2008.**

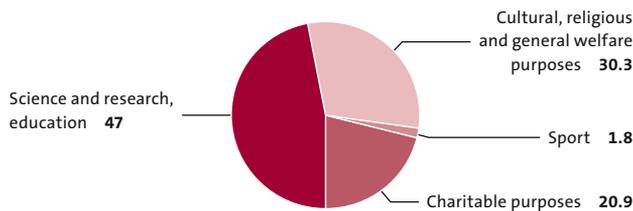
### Company Donations

The Volkswagen Group’s commitment to donations and sponsorship is a key part of our corporate identity and reflects our desire to fulfill 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.

Volkswagen AG is committed to research, education, charitable purposes, sport, culture, general welfare and other causes, and churches, religious bodies and learned bodies. Volkswagen grants donations 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 €19 million. 2013 donations supported social bodies but also gave particular help to the victims of major natural disasters: the relevant Group brands and companies provided support for those affected by flooding across Europe (see overview).

## TOTAL DONATIONS BY VOLKSWAGEN AG IN 2013

in %



**Total €19 million.<sup>1</sup>**

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.

### Employee Donations

In 2013, employees of Volkswagen AG alone gave more than €3.5 million to good causes. Workforce donations represent a major contribution by Volkswagen AG companies and their employees to those in need in locations where the Company operates, including the “Starthilfe” (Getting Started) project devoted to combatting the growing problem of child poverty 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.

Employees at Volkswagen, Audi, Porsche and MAN also donated around €1.7 million to victims of flooding in Germany; the money helped support a number of reconstruction projects in the four federal states affected.

## 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 adolescents regardless of their origin, background or beliefs. To achieve this effectively, the Volkswagen Employees’ Foundation restricts its activities to areas surrounding the Group’s locations worldwide. It focuses primarily on vocational training for socially disadvantaged young people. For the purposes of implementation, the Foundation partners with the children’s charity “terre des hommes”; this charity oversees projects supported by the Foundation, particularly those outside Germany, works alongside local cooperation partners, and monitors the progress of projects. Since 2011, the Volkswagen Employees’ Foundation has launched or supported six projects in Germany and elsewhere in line with its aims.

### Volkswagen AG: Workforce Donations in 2013

Employee giving	€594,775
“One Hour for the Future”	€1,060,500
Disaster support	€1,715,865
“A chance to play – o direito de brincar”	€135,400

### Fairtrade

At the suggestion of the General Works Council, Volkswagen AG has been selling Fairtrade-branded products in its catering facilities via its catering provider, Service Factory Gastronomie und Hotellerie, since 1999. Fairly traded products help producers in developing countries to earn an independent and dignified livelihood, and support for Fairtrade has been growing across the Group: in 2013, for example, total consumption of Fairtrade coffee rose 4.3% to 48.5 t. And since 2012, Volkswagen has also been selling Fairtrade craft items: producers in Madagascar use recycled cans to produce model vehicles based on the iconic VW Beetle and VW Transporter T2.

# OUR GLOBAL APPROACH.

The Volkswagen Group has always taken its social responsibility as a company seriously, and corporate social responsibility (CSR) forms part of our wider corporate culture. We are involved in more than 100 projects around the world that reflect our civic responsibility and we place particular emphasis on continuity and sustainability in our choice of projects. Our aim is to provide socio-economic impetus for local structural development and equal opportunities.

## OUR COMMITMENT REFLECTS THE GROUP'S BASIC PRINCIPLES

The Volkswagen Group supports a wide range of projects promoting the arts and culture, education, science, health and sport, regional structural development and environmental protection. 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.

The long-standing and wide-ranging cooperation arrangements we have with Germany's Nature and Biodiversity Conservation Union (NABU – see page 109) and the German Red Cross (DRK) are prime examples of our activities as a good corporate citizen. Companies within the Group have similar cooperation arrangements: MAN, for example, works with the SOS Children's Villages charity. These projects, and those outlined below, illustrate our philosophy of CSR based on continuity and sustainability.

As one of the world's largest automotive companies with plants on virtually every continent, we want to create added value in the regions in which we operate. Our aim is that employees, shareholders, the local population and customers should all benefit from what we do. Please see our 2012 brochure "Responsibility knows no boundaries" for further information on the host of projects we support to achieve this aim.  37

## FOUNDATIONS WITHIN THE VOLKSWAGEN GROUP

In most cases, the projects adopted by foundations within the Volkswagen Group are funded out of returns on share capital and by workforce and Company donations. The foundations support and foster employee engagement for the welfare of the respective region, process and decide on project applications, and ensure that the funds are deployed where they are needed.

- › Audi Stiftung für Umwelt (Germany): the aim of this environmental foundation, which was set up in 2009, is to support charitable causes and, in particular, conservation and environmental protection and research.
- › Fundação Volkswagen (Brazil): this foundation has been supporting education and social development for 33 years, and 1 million schoolchildren have already benefited from its projects.
- › The Volkswagen Employees' Foundation (Germany): set up in 2011, this foundation focuses on socially disadvantaged children and adolescents living near Volkswagen Group plants around the world. It supports initial, continuing and vocational training, education, and youth work, with a special focus on improving the lives of children and adolescents (see page 77).
- › Volkswagen Community Trust (South Africa): founded in 1988, the Trust aims to help people in the region to help themselves. The Trust is active in the fields of education and employment, health care and sport and involves Volkswagen employees through volunteering programs (see page 118).
- › Volkswagen Slovakia (Slovakia): this foundation, created in 2008, has the aim of promoting education and training in Slovakia.

## OUR GLOBAL ENGAGEMENT

**ANTARCTICA**

- > Antarctica/Volkswagen/Princess Elisabeth Antarctic Station

**AFRICA**

- > Ethiopia/MAN/Education initiatives
- > Mali/Volkswagen/Development assistance for Tuareg people
- > South Africa/Volkswagen/Volkswagen Community Trust
- > South Africa/Volkswagen/Great Show of Hands
- > South Africa/Volkswagen/AIDS care
- > South Africa/Volkswagen/Rally to Read

**ASIA**

- > China/Volkswagen/Accident research
- > China/Volkswagen/China river oases
- > China/Volkswagen/Intercultural dialogue
- > China/Volkswagen Group China/Xinjiang special fund with grants for young artists
- > China/Volkswagen Group China/Rainbow Bridge project
- > China/Volkswagen Group China/SVW Xinjiang education fund
- > China/Volkswagen Group China/SuMaRiO project
- > China/Volkswagen Group China/Ya'an earthquake relief project
- > India/Volkswagen/Volkswagen India Academy
- > Iraq/Scania/Swedish Transport Academy
- > Israel/Volkswagen/Bilateral training
- > Japan/Volkswagen/Biodiversity

**AUSTRALIA**

- > Australia/Volkswagen/Fuel-saver courses

**EUROPE**

- > Czech Republic/ŠKODA/ŠKODA Auto Brass Band
- > Czech Republic/ŠKODA/ŠKODA Handy – barrier-free mobility
- > Czech Republic/ŠKODA/Long-term employee giving
- > Czech Republic/ŠKODA/Regional grant programs
- > Czech Republic/ŠKODA/Young Designer
- > Czech Republic/ŠKODA/“Playful ŠKODA” multimedia website for traffic education
- > Czech Republic/ŠKODA/Roads Through the Cities
- > Czech Republic/ŠKODA/Paraple Center
- > Czech Republic/ŠKODA/One Tree per Car
- > Czech Republic/ŠKODA/Na Karmeli



- > Germany /Volkswagen /Renaturation of Aller River biotope
- > Germany /Volkswagen /Support for NABU's German Wildlife Corridor Network project
- > Germany /Volkswagen /Recycling center
- > Germany /Volkswagen /Young drivers
- > Germany /Volkswagen /Junior Coach
- > Germany /Volkswagen Commercial Vehicles /Neighborhood Dialogue
- > Germany /Volkswagen Financial Services /New Responsibility Foundation
- > Germany /Volkswagen Financial Services /Museum Bus
- > Germany /Volkswagen Financial Services /Foundation – Our Children in Braunschweig
- > Germany /Volkswagen Financial Services /Day of action: building bridges – commitment of companies
- > Germany /Volkswagen Financial Services /Helping children in Braunschweig
- > Germany /Volkswagen Financial Services /FleetCompetence eCO<sub>2</sub>
- > Germany /Volkswagen Financial Services /Protecting moorland near Gifhorn
- > Hungary /Audi /Audi Kreativität
- > Slovakia /Volkswagen /Inventory in Paradise
- > Spain /SEAT /"LIVE" sustainable mobility initiative
- > Spain /SEAT /SEAT's dual vocational training system
- > Spain /SEAT /SEAT in the Sun
- > Spain /SEAT /SEAT committed to young engineers
- > Sweden /Scania /Scania driver competition
- > Sweden /Volkswagen /Fun Theory
- > Turkey /Volkswagen /Road safety awareness
- > United Kingdom /Bentley /Green Travel Plan
- > United Kingdom /Bentley /Encouraging STEM careers
- > Italy /Lamborghini /Solar power plant
- > Italy /Lamborghini /Oak forest research project
- > Poland /Volkswagen /Children and Career
- > Portugal /Volkswagen /ATEC training center
- > Russia /Volkswagen /Dual vocational education
- > Russia /Volkswagen /Sports sponsorship

## SOUTH AMERICA

- > Argentina /Volkswagen /Grupo de Voluntarios
- > Argentina /Volkswagen /Ferdinand Porsche Institute
- > Argentina /Volkswagen /Global Compact
- > Argentina /Volkswagen /Water biotope
- > Brazil /Volkswagen /Sustainable Life program
- > Brazil /Volkswagen /Volkswagen Fundação
- > Brazil /Volkswagen /Hydroelectric power plants
- > Brazil /Volkswagen /Sewing the Future
- > Brazil /Volkswagen /Nature and species conservation projects
- > Brazil /Volkswagen /Water pump project
- > Brazil /Volkswagen /Accelerated Learning
- > Brazil /Volkswagen /Wastewater treatment
- > Brazil /Volkswagen /Water purification
- > Brazil /Volkswagen /Industrial water treatment
- > Brazil /Volkswagen /A Chance to Play
- > Brazil /Volkswagen /Playing – Childhood Education
- > Brazil /Volkswagen /Small hydropower stations
- > Brazil /Volkswagen /Pro-Educate Brazil
- > Brazil /Volkswagen /Volkswagen in the Community
- > Brazil /Volkswagen /HIV/AIDS program
- > Brazil /Volkswagen /Quality of Life
- > Brazil /Volkswagen /Fitness Index
- > Brazil /Volkswagen /Regional school program
- > Brazil /Volkswagen /Fitness competition
- > Brazil /Volkswagen /Chemical Dependency Program
- > Brazil /Volkswagen /Infant care
- > Brazil /Volkswagen /Home care
- > Brazil /Volkswagen /Enter the Reading Ring
- > Brazil /Volkswagen /Protecting plant biodiversity
- > Netherlands Antilles /MAN /Wind-diesel power plant
- > Venezuela /Volkswagen /All for One

- > Czech Republic /ŠKODA /Sheltered workshops
- > Czech Republic /ŠKODA /Clown Doctor "Red Noses"
- > Germany /Audi /"Audi Ehrensache"
- > Germany /Audi /Urban Future
- > Germany /Audi /Eco-friendly use of resources
- > Germany /Audi /Water usage at Audi
- > Germany /MAN /Disaster relief – floods in Germany
- > Germany /MAN /SOS-Berufsausbildungszentrum Nürnberg
- > Germany /Volkswagen /Work2Work integration project
- > Germany /Volkswagen /Centers of Competence e.V.
- > Germany /Volkswagen /Volkswagen pro Ehrenamt
- > Germany /Volkswagen /Senior experts
- > Germany /Volkswagen /Nature and species conservation projects

## NORTH AMERICA

- > Haiti /MAN /Long-term aid for SOS Children's Village in Haiti
- > Mexico /Volkswagen /Tress between volcanoes
- > Mexico /Volkswagen /Automotive engineers for Mexico
- > Mexico /Volkswagen /Volkswagen Award
- > Mexico /Volkswagen /For the love of the planet – promotion of protection of the environment and biodiversity in Mexico
- > Mexico /Volkswagen /A Day for the Future – help for children in Puebla
- > USA /Volkswagen /Partners in education
- > USA /Volkswagen /MoMA partnership
- > USA /Volkswagen /VSA Arts
- > USA /Volkswagen /Green factory in Chattanooga
- > USA /Volkswagen /Battery research
- > USA /Volkswagen North America /National Mall
- > USA /Volkswagen North America /Donation to American Red Cross and Habitat for Humanity for Tornado Relief

## EXAMPLES OF PROJECTS FROM AROUND THE WORLD

### Autostadt GmbH: Learning sustainability

The “Mobility Curriculum in the Autostadt in Wolfsburg” initiative has been officially incorporated in the United Nations Decade of Education for Sustainable Development, qualifying as part of the national action plan. The Official Measures of the UN Decade play a central role in the German UNESCO commission’s efforts to meet the strategic goals in the national action plan. “In contrast to the many UN Decade projects with a primarily local focus that have been recognized as best practice examples, the Official Measures make a structural contribution toward anchoring sustainable-development education in the system.”

### Bentley: Voluntary Support for Hospice

For many years, employees at Bentley in Crewe (United Kingdom) have been supporting St. Luke’s Hospice. Most recently, they helped renovate a classic Routemaster London bus, fitting it out with a Bentley interior. The bus, which they have named Luke, houses a charity shop and is a very successful way of raising donations for the work of the hospice. 59 Bentley employees have devoted a total of 2,000 hours of their free time to the project.

### MAN Latin America: New Horizons for People with Disabilities

Official statistics show that people with disabilities in Brazil face greater difficulty in accessing education and training. To help remedy the situation, MAN Latin America has set up the “New Horizon” program in cooperation with universities in Resende, Barra Mansa and Volta Redonda. Each year, the program provides grants for students with a disability; MAN benefits by gaining access to new talent. MAN also supports “Ambassadors of Joy”, Brazil’s first samba school for people with disabilities.

### Volkswagen Group: School Forests against Climate Change

Since 2011 the Volkswagen Group has been supporting the “School Forests against Climate Change” project run by the Future Forest Foundation, an initiative of the Lower Saxony Forestry Office. By participating in reforestation efforts, schoolchildren are making an active contribution to reducing greenhouse gases, working together to promote biodiversity, and becoming more aware of nature conservation issues. In the year under review the project was honored by the German National Committee of the UN Decade of Education for Sustainable Development. Students had a chance to demonstrate their creativity in a competition for the best song lyrics about the School Forests project. The winning song was recorded by musician and music producer Leslie Mandoki.

### Scania: Academy in Iraq

Together with the United Nations Industrial Development Organization, the Swedish International Development Cooperation Agency and the Kurdish regional government, Scania is training young

Iraqis as service mechanics at the Swedish Academy for Training. The Academy can train up to 500 apprentices at one time and focuses particularly on offering initial and continuing training opportunities to young people from the region. Recruiting female talent is particularly important to Scania. The original target was to have 30% female apprentices, but at 43%, the current figure is higher.

### Volkswagen Group of America: MoMA Partnership Renewed

In 2013, the Volkswagen Group of America, the Museum of Modern Art (MoMA) in New York and the affiliated MoMA PS1 renewed their 2011 partnership for a further two years. A highlight of the partnership in 2013 was the “EXPO 1: New York” exhibition, which ran from May to September and highlighted environmental challenges against the backdrop of a tough economic and social climate.

### Volkswagen Financial Services: “My Finance Coach”

Volkswagen Financial Services AG’s nationwide program in Germany, “My Finance Coach”, has two aims. It works to give children and adolescents a good general education about money and finance but also tackles a social issue that has become more acute over recent years. The company sees itself as an integral part of society and is keen to boost social development, so staff from Volkswagen Financial Services have got involved in what they know best: passing on knowledge about the economic context and how to handle money and financial affairs.

### Volkswagen India: Broad-Impact Initial and In-Service Training

Located at the Volkswagen plant in Pune, India, which opened in 2009, the Volkswagen India Academy fulfills a number of training roles and contributes to the future viability of the region. The Academy’s main role is to train young people to Group standards. It offers continuing professional development for employees at the Pune plant and at Volkswagen’s other Indian plant in Aurangabad. It also provides in-service training for external service staff and dealers in all the Group brands represented in India.



On the Sustainability Report microsite you can access further details about all projects by clicking them on a map. [38](http://www.sustainabilityreport2013.volkswagenag.com)  
[www.sustainabilityreport2013.volkswagenag.com](http://www.sustainabilityreport2013.volkswagenag.com)



Strategy  
Economy  
People

# Environment

## CONTENTS

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Indicators

The Volkswagen Group has set itself the goal of becoming the world leader in environmental protection. We will achieve this through resource-efficient production plus a unique, broad-based approach to our powertrain and fuel technology. This will help to conserve resources and shape the mobility of the future.

## ENERGY CONSUMPTION IN PRODUCTION

PER MANUFACTURED VEHICLE



**2,519**

kWh/vehicle

2010



**2,213**

kWh/vehicle

2012



**2,205**

kWh/vehicle

2013

# Environment

“Resource conservation and sustainability in the production sector are pivotal for achieving our Group goals for 2018. We’re aiming not only to adopt eco-friendly practices but also to strike a balance between the three main factors: economy, ecology and society.”

DR.-ING. E.H. MICHAEL MACHT  
Member of the Group Board of Management  
responsible for Production



## RENEWABLES



The Group meets one third of its  
electricity needs from regenerative  
sources

**95**  
grams CO<sub>2</sub>/km

by 2020 is  
our declared aim

**12.5%**

Status 2013

**25%**  
MORE  
ECO-FRIENDLY

by 2018 is  
our goal



# impact reduced.

# WIND AND WATER

## Focus on renewables

Renewable energies are a pivotal element in the Volkswagen Group's Strategy 2018. Making the best possible use of renewables requires dedicated concepts for each market. Brazil, for example, offers favorable conditions for the use of hydropower. Volkswagen do Brasil already meets almost one fifth of its electricity requirements from renewables with the Anhanguera power plant, and is also committed to ensuring reliable access to drinking water.

In South America, the Volkswagen Group is represented by a total of nine sites in Brazil and Argentina. The Volkswagen brand is a major producer alongside Scania and MAN. By way of example, the São Carlos (Brazil) plant, with a workforce of around 730 employees, produces engines for 48 different models. Volkswagen do Brasil has four production sites in the country.



**Water is life.** But in Brazil, with its numerous rivers and high gradients, water is also a key source of energy. Around 80% of the energy produced in Brazil comes from hydropower. The Volkswagen Group is a significant contributor. The Anhanguera small hydropower plant, built in collaboration with two local partners, went on stream in 2010, and feeds around 100 gigawatt-hours of electricity into the national grid each year. This covers a good 18% of the energy used by the four Brazilian Volkswagen plants. The province of São Joaquim da Barra also draws lasting financial benefits from the hydropower plant, which brings a 25% increase in its annual tax revenues.

—  
**“Our long-term aim is to meet up to 80% of our energy requirements from our own sources.”**  
—

**Eduardo Barros, Head of Legal Affairs and Board Member of Volkswagen do Brasil responsible for sustainability**

For Volkswagen do Brasil, Anhanguera is just the start of an ambitious initiative to generate the company's own green electricity. “Our long-term aim is to meet up to 80% of our energy requirements from our own regenerative sources and protect ourselves against future price increases,” explains Eduardo Barros, Head of Legal Affairs and Board Member of Volkswagen do Brasil responsible for sustainability. Another form of energy that is due to take on a more significant role in the energy mix is wind energy, which has today become the most economical source of energy in Brazil. The potential here is enormous, with recent studies quoting a theoretical total potential of 143 gigawatts.

The company's sustainable energy strategy is already paying dividends: in 2012 Volkswagen do Brasil became the first automobile manufacturer in Brazil to be given the go-ahead to issue CO<sub>2</sub> certificates by the Secretariat of the United Nations Framework Convention on Climate Change. Over a ten-year period, the Volkswagen Group is entitled to sell certificates for a total of around 162 tonnes of CO<sub>2</sub> on the open market.

Generating energy in an eco-friendly fashion is part of the global Volkswagen “Think Blue. Factory.” strategy (see pages 14, 104). The solar park at the Volkswagen plant in Chattanooga (USA), which went on stream in early 2013, is a good example. It generates up to 13,100 megawatt-hours (MWh) of electricity each year, which is used directly in production, covering 12.5% of the plant's energy demand at full capacity. The SEAT plant in Martorell (Spain), meanwhile, boasts the largest rooftop solar plant of any automaker, with an annual output capacity of 15,000 MWh of electricity. By 2018 the Volkswagen Group plans to invest around €600 million in photovoltaics, combined heat and power plants, biomass plants and wind farms at its sites around the world.

**Implementation of these projects** is subject to stringent environmental conditions. Take Brazil, for example: hydropower plants often require large reservoirs, which can mean severe intrusion on nature. As part of its commitment to minimize environmental impacts, Volkswagen do Brasil prefers to focus on small plants, which only require a small reservoir and do not significantly alter the natural water flow. At the Anhanguera small hydro, the impounded water remains in the reservoir for just 24 hours before passing through the three turbines and resuming its course down the Sapucaí River. This eliminates the risk of methane formation associated with lengthy stagnation. Volkswagen do Brasil operates a comprehensive reforestation program to keep the surrounding ecosystem intact. 116 hectares of varied, species-rich forest has been planted around the reservoir, in place of the former sugar cane monoculture. Upstream of the dam, there is now a 5.8 kilometer greenbelt with more than 100 species of plants and trees. In addition, in close cooperation with experts including scientists from the University of São Paulo, a monitoring and protection program for indigenous fauna has been created that also covers the various life forms in the rivers. On the Sapucaí River, a fish ladder has been installed to enable the fish to progress unhindered. The company's efforts have caused quite a stir in the expert community. At the “Hydro Vision Brasil 2013” conference for hydropower in Latin America, Anhanguera was awarded first prize in the “Ecological Sustainability” category.

—  
**€600 million will be invested by the Volkswagen Group in renewable electricity generation at its sites around the world by 2018.**  
—

**Volkswagen do Brasil's involvement with water** goes beyond its own production operations; the company also builds easy-to-install, maintenance-friendly water pumps that supply free water to nine Brazilian states. Although Brazil has a very high annual rainfall, this is unevenly distributed over the country. Volkswagen do Brasil has so far installed more than 1,000 manually operated pumps as part of the Popular Water Pump initiative, giving 140,000 people access to drinking water, especially during periods of drought. During his visit to Brazil in May 2013, German President Joachim Gauck praised this commitment, and even had a go at turning the wheel of a “bomba d'água popular” himself.



- 1 – The Anhanguera power plant has an annual output of 100 gigawatt-hours of electricity.
- 2 – Upstream of the dam, a 5.8 kilometer greenbelt surrounds the reservoir.
- 3 – Eduardo Barros, Head of Legal Affairs and Board Member of Volkswagen do Brasil responsible for sustainability.



# GOOD. BETTER. SUSTAINABLE.

**By 2018 the Volkswagen Group wants to become the world's most sustainable automobile manufacturer and has set itself some ambitious environmental targets in order to achieve this.**

**In 2013 we moved a significant step closer to meeting our goals in terms of production, product design and intelligent mobility concepts. And with our broad-based Powertrain and Fuel Strategy, we are also on the right track in commercial terms.**

## MANAGEMENT APPROACH

The Environmental Strategy signed off by the Group Board of Management provides a framework for taking the Company to the top of the environmental league and is based around four target areas: "Top in intelligent mobility", "Leaders in eco-friendly products", "Top in lifecycle-based resource conservation" and "Consistent anchoring throughout the Company". Intelligent mobility unites our philosophy of mobility and comfort, environmental protection and low costs with the avoidance of wastefulness in transport. Efficient interplay between people, infrastructure, technology and transport is pivotal to our approach. Driven by our quest for environmental leadership by 2018, we are committed to making our production up to 25% more eco-friendly per vehicle manufactured than in 2010. In concrete terms, 25% reductions are to be achieved in energy and water consumption, as well as in CO<sub>2</sub>/km and solvent emissions and waste for disposal.

## 25% less energy, water, waste, solvents and CO<sub>2</sub> by 2018.

For our German sites, which currently account for around 45% of our Group-wide CO<sub>2</sub> emissions from production, we have set ourselves an even more ambitious target: greenhouse gas emissions associated with the supply of energy to production are to be cut by 40% by 2020 compared with 2010 levels, in line with the German Government's target. Alongside efficient, resource-conserving production and intelligent mobility concepts, the development of eco-friendly vehicles is a major focus of our activities. By 2020, we are aiming to reduce the CO<sub>2</sub> emissions of our European new-car fleet to 95g/km (CO<sub>2</sub>/km). We also aim to make every new Volkswagen generation between 10 and 15% more efficient than its predecessor.

Our lifecycle-based approach to resource conservation means that our developers are committed to making the environmental characteristics of each new model better than those of its predecessor, and we have embedded this goal in our Group Environmental Principles Product.

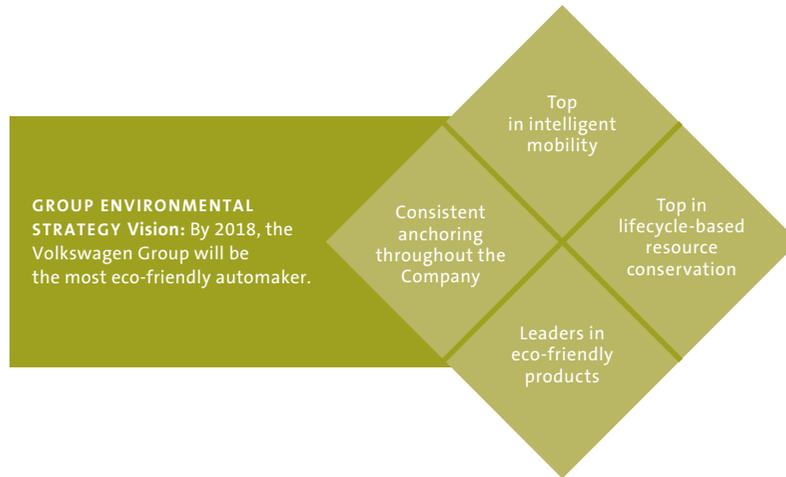
To firmly anchor this principle in our corporate conscience, we have devised a modular structure based around the business areas at every stage of the value chain. Not only do we address environmental issues relating to production and the products themselves; we also extend this approach to logistics and recycling. We have defined a fixed organizational and reporting structure to manage these topics, and those responsible systematically share best practices in a global network. In the reporting year 2013, we held a Group-wide strategy workshop with all business areas, culminating in the compilation of an ambitious raft of measures and the definition of clear responsibilities and reporting structures.

## Challenges and Goals

The serious risks associated with climate change pose a central challenge for the Volkswagen Group. The Group-wide risk management system therefore analyzes every risk from a quantitative and qualitative perspective and rates it according to defined indicators (see page 23). At the same time, climate change is transforming customer requirements and creating fresh opportunities. Volkswagen is developing a growing number of new technologies, products and services to address the challenges associated with climate change, from eco-friendly vehicles and supplementary services, to fuel-saver driving courses and energy products for mobility and beyond. For example, we offer:

- A unique portfolio of 324 low-consumption model variants with emissions of 120g CO<sub>2</sub>/km or less, including 54 model variants with emissions below 100g CO<sub>2</sub>/km.

**VOLKSWAGEN GROUP ENVIRONMENTAL STRATEGY**



- > The use of efficiency badges in our product communications, to spotlight particularly efficient vehicles and technologies with low CO<sub>2</sub> emissions. Our Environmental Commendations have an important part to play here (see page 99).
- > Information and campaigns that encourage users to adopt fuel-efficient, eco-friendly driving practices.
- > New developments such as high-efficiency cogeneration plants powered by the latest natural gas engines, which are marketed as “home power plants” by our cooperation partner LichtBlick and linked into the grid.
- > New e-mobility services, such as a green power scheme in collaboration with LichtBlick and a rapid-charging infrastructure (“wallbox”) in collaboration with Bosch Automotive Service Solutions.

**Our Commitment to Emission Targets**

In March 2013, we announced that the Group was planning to reduce the fuel consumption of its new-car fleet even further than originally planned. We aim to meet the European Union’s average emission target of 95 g CO<sub>2</sub>/km by 2020. The Volkswagen Group is the first car manufacturer to commit to this ambitious target, which equates to an average fuel consumption of less than four liters (4.1 l petrol, 3.6 l diesel) per 100 km across all segments and vehicle classes. Greenpeace Germany called this decision an “important symbol of commitment to environmental protection and society, and to the mass production of climate-friendly technical solutions”. With our intermediate target of reducing CO<sub>2</sub> emissions from the European new-car fleet to 120 g CO<sub>2</sub>/km by 2015 we will already be 12 g below the legal requirement. The current Group Environmental Principles Product also stipulate requirements on CO<sub>2</sub> reductions. The Group reports regularly on its climate protection strategy to

the CDP (formerly known as the Carbon Disclosure Project), a consortium of institutional investors. In September 2013, CDP listed us in their Performance and Disclosure Leadership Index for the first time and in the same year presented the Group with an award for its performance.

**95 g CO<sub>2</sub> per kilometer by 2020:**  
*Volkswagen Group is backing the European emissions target.*

In China, the Volkswagen Group is launching the biggest investment program in the country’s automotive history. Of the €9.8 billion earmarked for the expansion of manufacturing capacity by 2015, more than two thirds will be invested in high-efficiency products and resource-conserving production. Average fuel consumption by the 70 plus models in the fleet had already been reduced by 20% between 2005 and 2010, and a further 11% will be cut by 2015. Volkswagen already meets legal requirements on fleet consumption in China that came into force in 2012, and has ambitious plans to reduce this still further over the next few years, not least by boosting the efficiency of its engines and introducing alternative powertrains. These efforts will be assisted by a drive to build local research and development expertise.

### Our Policy and Principles

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

- > **Group Environmental Policy:** First adopted in 1995, this policy provides the framework for all environmental activities of the brands and companies. 📄 39
- > **Group Environmental Principles Sites/Production (2007):** Include production processes, infrastructure and general principles. 📄 40
- > **Environmental Principles Product (2008):** Focusing on the aspects of climate, resources and health, these principles state that over its entire lifecycle, every new vehicle model should exhibit superior environmental characteristics to its predecessor. 📄 41
- > **Mission Statement on Biodiversity (2008):** We recognize our responsibility for species conservation and show that it is possible to successfully combine the requirements of material production with the conservation of biodiversity, in keeping with our philosophy of sustainable development. 📄 42

- > potential for reducing CO<sub>2</sub> emissions along the product life cycle
- > climate strategy management using relevant performance indicators.

As MAN became part of the Volkswagen Group in 2012, MAN's Climate Strategy, which was signed off in 2011, differs from the Volkswagen Group's Environmental and Sustainability Strategy, which has a target date of 2018.

All those responsible at Group headquarters, within the brands and at the sites are urged to comply with these environmental principles in every decision they take. The brands are free to formulate their own, farther-reaching environmental management guidelines and principles, should they wish. For example, based on the environmental principles, the Volkswagen brand has defined more stringent Environmental Goals for Technical Development relating to climate protection, resource conservation and health protection, and set specific targets within the framework of its "Think Blue. Engineering." initiative.

### MAN'S CLIMATE STRATEGY 2020

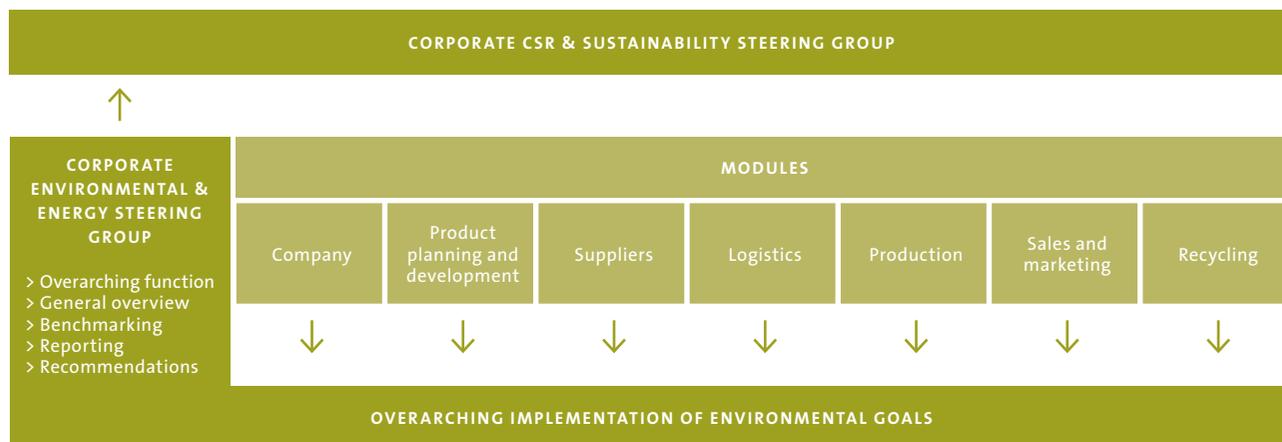
In 2011, MAN adopted its own climate strategy incorporating five core initiatives. 📄 44 The company reports annually on the progress made in these areas as part of its sustainability reporting:

- > 25% reduction in CO<sub>2</sub> emissions at MAN production sites by 2020 (baseline 2008)
- > consistently efficient product portfolio
- > customer involvement and dialogue

### Organization of Environmental Protection within the Group

The Group Chief Officer for the Environment, Energy and New Business Areas, a new post established in 2011, reports directly to the Volkswagen Group's Sustainability Board. He heads up the Corporate Environmental & Energy Steering Group, which is dedicated to strengthening all activities around the world that help implement the Group Environmental Strategy and develop new business areas. This body and the Corporate CO<sub>2</sub> Steering Group are made up of environment and sustainability experts,

### CORPORATE ENVIRONMENTAL & ENERGY STEERING GROUP



together with decision-makers from all relevant brands and areas. They draw on internal management and analysis tools such as Life Cycle Assessments (LCA) and the CO<sub>2</sub> Registry, a tool which checks every Group vehicle project to gauge its contribution to the fleet CO<sub>2</sub> target. Environmental officers at our European sites have been sharing their knowledge and experience since 1976. 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. Work centers around the preparation of action plans which are subsequently discussed and adopted. Effective Group-wide environmental controlling supports these activities and provides a yardstick of progress for the Volkswagen Group.

## Regular Group Environmental Conferences have been held since 1998.

We have also established a Group-wide network of climate and energy experts to foster knowledge-sharing between all brands and regions. As well as exchanging best practices, participants are also encouraged to engage in debate with international scientists, experts and other stakeholders.

### Environmental Management System

The Group-wide environmental management system provides the organizational basis for meeting the Group’s environmental targets. Volkswagen ensures Group-wide compliance with all relevant national legislation. Building on the Group’s Environmental Policy and Environmental Principles, all brands are required to organize their environmental management systems autonomously in line with international standards. The Chief Environment Officer (Group Research) is responsible for the environmental management system at Volkswagen AG and at the Technical Development department of the Volkswagen Passenger Cars brand. Since 1995, the Volkswagen brand’s German sites have participated in EMAS (the European Eco-Management and Audit Scheme) while its production sites worldwide have undergone environmental certification procedures to international standard ISO 14001. The brand has been driving forward certification of its energy management systems to ISO 50001 since 2009. One particularly important factor here is to inform the employees and involve them in the management systems. To this end an intranet portal has been created to showcase best practice examples and facilitate direct contact with those responsible for their implementation. The portal also outlines basic regulations and provides tips on saving energy, including some generated by the central ideas management system. Nearly all of the Volkswagen brand’s European sites have now been certified to the new energy management standard ISO 50001. Other sites will follow over the next few years. In 1995, the Volkswagen brand’s Technical Development department established an environmental management system

for the “development of motor vehicles with continuously improved environmental properties” to ISO 14001. Now in its 18th year, the system successfully completed its sixth recertification in 2013. Since 2009, the Technical Development environmental management system has also been aligned with ISO TR 14062. [43](#)

### SITES WITH ENVIRONMENTAL CERTIFICATION

EMAS	ISO 14001	ISO 50001
22	89	22

Some sites apply both EMAS and ISO 14001. The figures do not include our newly built sites in China, where the appropriate certification will follow. A list of all certified sites can be found on the Internet. [45](#)

### PRIZE FOR GREEN CONTROLLING

In November 2013, the Volkswagen brand was awarded the “Green Controlling Prize” by the International Controllers’ Association (ICV) for its successful environmental controlling through the “Think Blue. Factory” program. The jury praised the fact that the controlling system did not merely track and report ratios, but also incorporated many change management control tools. The particular challenge here is to map the high real net output of the 27 sites worldwide, and to ensure that highly complex data and measurement variables are reliably and consistently recorded.

### Greenhouse Gas Inventory Tool (Scope 3)

The Volkswagen Group published its first Scope 3 Inventory for CO<sub>2</sub> emissions (see page 133) as part of the 2012 Group Sustainability Report. In conjunction with the Scope 3 Standard published in 2011 by the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI), the present report analyzes CO<sub>2</sub> emissions for twelve out of a total of 15 Scope 3 categories. The data reveals that more than 93% of the total Scope 3 volume is generated in the emissions categories “Purchased goods and services” and “Use phase”. The data in these two categories are validated by external auditors from PricewaterhouseCoopers in accordance with the standard: ISAE 3000 International Standard on Assurance Engagements. [61](#)

**GROUP-WIDE PROGRAMS**

Across the world, the introduction of regulations to curb CO<sub>2</sub> emissions is continuing. In Europe the limit for new-car fleet-average emissions will be reduced to 95 g CO<sub>2</sub>/km by 2021. At the same time, energy is becoming more expensive and raw materials increasingly scarce. These factors, along with increasing urbanization and the worldwide growth in goods and traffic flows, define the parameters within which the Volkswagen Group conducts its core business as a mobility provider, and help to explain our focus on combating climate change. We are carrying out large-scale investment in research and development with the aim of achieving our ambitious environmental goals, and in order to become market leader in the field of electric mobility. And we are progressively integrating environmental considerations into our value chain and across all Group brands and companies.

**Our Powertrain and Fuel Strategy**

The Volkswagen Group is facing up to the challenge of innovative powertrain development. In 2013 alone, our research and development spending totaled approximately €10.2 billion. Much of this investment was devoted to reducing the CO<sub>2</sub> emissions of our new-vehicle fleet, within the framework of our Powertrain and Fuel Strategy. Under this strategy we are continuing the electrification of the model range, increasing the number of natural-gas vehicles and steadily improving the efficiency of our gasoline and diesel engines. As a result of these efforts, the Volkswagen Group has become the world's leading innovator in the field of powertrain technology, according to the Center of Automotive Management (CAM). CAM published the results of its latest comparison of the powertrain development activities and innovative capability of 20 international automobile manufacturers in December 2013. The high quality and large number of its powertrain innovations meant that the Volkswagen Group was able to extend its leadership over the previous year. 📈46

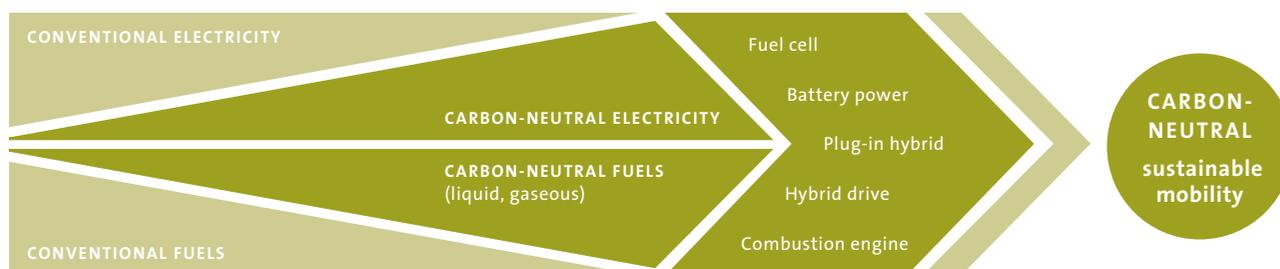
**Research and Development Projects**

Together with partners from the field of industry and research, in 2013 we again took part in a range of industry-leading joint research projects:

**Lightweight design:** With the new Golf, the Technical Development department has succeeded in turning the tide of spiraling weight. The new-generation model is lighter than its predecessor. Thanks to extensive lightweight design measures, weight has been reduced by as much as 100 kg, depending on specification level, and even more in the case of the Golf estate. The Automotive Research Centre Niedersachsen (NFF) is stepping up its focus on lightweight design with the construction of an Open Hybrid LabFactory at its Wolfsburg site, where it will be researching new development and production methods in cooperation with Volkswagen and suppliers. The NFF is a research center set up in 2007 with the support of the Lower Saxony state government and the Volkswagen Group to serve as a platform for cooperation between industry and science.

At the same time, we are working with Laser Zentrum Hannover e.V. (LZH) and other partners to develop a laser process for the automated cutting of carbon fiber reinforced plastic (CFRP) components. This would allow this lightweight material to be used in automotive mass production, thereby reducing vehicle weight – which will be one of the most crucial parameters in automotive design and production in the future. If cars based on CFRP are to be massproduced in future, then automated production technologies – in particular cutting technologies – are essential. In the joint project “HolQueSt 3D”, seven partners from industry and research, led by Volkswagen, are working together to develop a process for 3-D high-performance laser machining of CFRP lightweight structures.

**THE ROAD TO CARBON-NEUTRAL MOBILITY**



**New materials for e-mobility:** The limited battery capacity of electric vehicles means that efficient temperature management is one of the technical challenges that have to be addressed when developing electric mobility. Cooling of the passenger compartment in summer and heating of the passenger compartment in winter means taking valuable energy away from the high-voltage battery, significantly reducing the range of the electric vehicle. Valuable energy can be saved, and the vehicle's driving range extended, by using new materials to assist cabin temperature management. The e-STROM initiative, which runs from 2013 to 2016, is developing concepts based on innovative materials that will provide a basis for efficient temperature management in electric vehicles. The aim of the project is to reduce the climate-control-related drain on the battery at all times of the year, so that use of comfort-related vehicle functions does not impact on the driving range of electric vehicles. The joint project, coordinated by Volkswagen Group Research, is being supported by the German Ministry for Education and Research (BMBF) as part of the government's high-tech strategy.

**Intelligent grid integration of electric vehicles:** A further pilot project launched in 2013 and coordinated by Volkswagen Group Research is the INEES project on intelligent grid integration of electric vehicles and provision of grid support services. The project has been awarded "Lighthouse Project" status by the German Environment Ministry. The idea is that electric vehicles would form a local energy buffer of significant size that would help to stabilize the grid by offsetting fluctuations in production of wind and solar power. As and when required, the batteries of electric cars in this buffer – provided they were coupled to a charging station – would be able to flexibly feed power back into the grid. This would help to stabilize the grid during periods when the amount of power being generated was temporarily not sufficient to meet demand.

## Goal: to be market leader in electric mobility by 2018.

### Our Electric Mobility Program

Our goals for 2018 also include becoming the electric vehicle (EV) market leader by this date. By the end of 2014, a total of 14 models from various Group brands will already feature an all-electric or hybrid powertrain. If there is sufficient demand, up to 40 new models could be fitted with alternative powertrains. We have already built up the necessary know-how for electric motors and battery systems at our own components plants. We began manufacturing battery systems at the Braunschweig plant in Germany in March 2013 and have also trained almost 70,000 development, production and service staff in EV technology – the biggest training initiative of its kind in our industry. The Modular Transverse Matrix platform (MQB, see page 38) is key to a speedy and cost-effi-

cient introduction of electric mobility across all brands and vehicle classes. From the outset, the MQB was designed to cater for electric powertrain technology as it takes account of all types of powertrain, including systems of the future. The common engine mounting position not only reduces the number of engine/transmission combinations, it also means that alternative powertrains, too, can be integrated in the vehicle with a minimum of effort. The heavy investment in this system is now paying big dividends in terms of the speed and cost efficiency with which it is allowing the Volkswagen Group to get alternative all-electric, fuel cell or plug-in hybrid powertrains into production. The MQB is therefore a foundation not only for economical and resource-saving production but also at the same time key to rolling out efficient mobility concepts for the future (see page 96).

On the new e-mobility Internet portal, launched in November 2013, the Volkswagen brand is showcasing its electric vehicles and EV-related ideas and technologies. It all began with the NILS concept car and today Volkswagen already has the Touareg Hybrid\*, Jetta Hybrid\*, the limited-production XL-1\* and the all-electric e-up!\* on the market. 🌱 47, 48, 49

SEAT concluded its CENIT VERDE electric mobility project in 2013. In the course of this four-year research project, more than 800 professionals from 16 companies and 14 public research centers and universities, led by Centro Técnico de SEAT, came together to develop EV automotive technology, infrastructures and energy systems. The project results were presented in the form of the "SEAT Leon VERDE\*\*" prototype, a plug-in hybrid based on the new Leon. The project has broadened the technological know-how and competitiveness of the participating companies and promoted the technologies necessary for a general roll-out of electric mobility. SEAT is continuing to supply plug-in hybrids and electric vehicles to company fleets for quality testing and improvement purposes.

### THE E-UP!\* – THE NEW BENCHMARK

In 2013, the Volkswagen brand presented its first production electric car: the e-up!\*. From launch, the e-up!\* was also backed up by extensive services:

- In cooperation with Bosch Automotive Service Solutions, Volkswagen is offering a complete wallbox-plus-installation package for vehicle charging. The wallbox reduces the charging time required, compared with the standard solution, to six hours.
- If "BluePower" electricity is used, e-up! drivers can not only drive with zero tailpipe emissions, they can also charge their vehicle on carbon-neutral electricity, produced by hydroelectric power stations in Germany, Austria and Switzerland. In this case, operation of the first all-electric volume-production model from Volkswagen has a zero carbon footprint along the entire energy chain. The green power is supplied in cooperation with partners LichtBlick and Volkswagen Bank.

MQB – SUPPORTING ACHIEVEMENT OF EMISSION TARGETS



- > Using the “Volkswagen Car-Net e-Remote” app, e-up!<sup>®</sup> owners can access vehicle data and program a variety of settings via a smartphone or the Car-Net website, irrespective of their current location.
- > The Environmental Commendation for the e-up!<sup>®</sup> provides customers with a transparent analysis and description of the vehicle's improved Life Cycle Assessment performance compared with a conventional petrol-engined model, and highlights the role of integrated product development.



The Volkswagen e-up!<sup>®</sup>.

**The “Think Blue.” Philosophy**

The “Think Blue.” philosophy expresses the Volkswagen brand's thinking on environmental sustainability, looking in particular at the question of how to balance personal mobility with good environmental practice. At the same time this internationally focused strategy adopts a perspective that goes far beyond the products and technologies themselves. It inspires and motivates customers and the public at large to contribute ideas and input and looks to engage with a wide range of environmental organizations throughout the world, in a variety of ways. 50

One of Volkswagen's priorities as an automotive manufacturer is to develop eco-friendly products and technical solutions, focusing amongst other things on fuel-efficient technologies, on electric mobility that caters to everyday needs, and on innovative mobility concepts like the carsharing project “Quicar” or the “Think Blue. Factory.” program (see pages 14, 104). In each market, “Think Blue.” activities focus on the most urgent environmental challenges in that particular country – for example in Mexico and Spain measures against soil erosion, or in South Africa biodiversity conservation. “Think Blue.” also aims to raise public awareness of the importance of sustainability and involve the public in this “rethinking” process, not least by coming up with entertaining ideas to promote awareness of fuel-efficient driving techniques (see page 112). 51



In the annual “Think. Blue Challenge.” rally, the driver with the lowest fuel consumption wins.



Raising awareness: “Think. Blue.” already has a high profile at the Volkswagen plants.

Since 2010, “Think Blue.” has been steadily evolving and taking root in the various business units of the Volkswagen brand right across the value chain. This starts at the planning and vehicle design stage, where the Technical Development department has set ambitious goals in terms of an integrated approach to climate protection, resource conservation and health protection throughout the product life cycle. Since late 2012 this strategy, known as “Think Blue. Engineering.”, has brought together all programs and measures aimed at improving the life cycle environmental performance of new vehicle models, based on the environmental goals of the Technical Development department. Environmental aspects are identified at an early stage and taken into account across the entire product life cycle. In 2013, Volkswagen Research and Development created the “Think Blue. Engineering. Awards” to promote special projects that can make an important contribution to climate protection, resource conservation and health protection.

In addition to the ongoing technological development of products and production processes, the Volkswagen brand has also launched a “Think Blue.” campaign to reduce CO<sub>2</sub> emissions at its authorized dealers in Germany by 25% by 2020. From 2014, an eco-efficiency advisory service for all dealerships will suggest possible improvement measures. Particularly eco-friendly dealerships will be issued with the “Future Climate® inspired by Think Blue.” certificate. More information about “Think Blue.” and about current projects can be found at [www.volkswagen.com/thinkblue](http://www.volkswagen.com/thinkblue).

#### GREEN PROGRAMS OF THE BRANDS

All the brands have launched initiatives to identify potential and to develop strategies and solutions for achieving the Volkswagen Group’s sustainability objectives. In 2013, SEAT launched ECOMOTIVE FACTORY, an umbrella initiative for all production-related environmental activities. The aim of this project is to put SEAT vehicles at the forefront of environmentally friendly production by 2018. To achieve this goal, a variety of production-related environmental protection measures have been adopted that will lead to a reduction of up to 25% in electricity and water consumption, CO<sub>2</sub> emissions, emissions of volatile organic compounds and waste output. ŠKODA has grouped its sustainability efforts within its GreenFuture strategy. Based on the three pillars GreenProduct, GreenFactory and GreenRetail, ŠKODA is aiming to increase its portfolio of eco-friendly cars and produce and sell them in a sustainable manner. Scania’s green strategy, known as “Ecolution by Scania”, aims to reduce customers’ energy consumption and CO<sub>2</sub> emissions not only at the product development stage but also through optimized vehicle operation, driver training and the ideal maintenance. Audi will be expanding its “ultra” model strategy in 2014, with eleven new models. In the A4, A5 and A6 ranges, a new, powerful and highly efficient 2-liter TDI engine will be launched, developing 100 kW (136 PS), 120 kW (163 PS) and 140 kW (190 PS), with emissions ranging from just 104 to 119 g CO<sub>2</sub>, depending on the model.

**PRODUCT DEVELOPMENT**

We look to develop products that will make the most efficient possible use of energy, fuel and resources. The Volkswagen Group develops all vehicles and technologies with the goal of improving on the environmental performance of their predecessors. That means for example that every new vehicle generation from the Volkswagen brand must be between 10 and 15% more efficient than its predecessor. At the same time Volkswagen was also the first 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.

In order to achieve this, we seek to minimize the environmental impact of our products from the very earliest stages of the development process. In accordance with the Group Environmental Principles Product, we aim to continuously improve our products with particular reference to climate protection, resource conservation and health protection. The figures prove that our product development strategy is making good headway. The average CO<sub>2</sub> emissions of our European fleet were reduced from 159 to 128 g CO<sub>2</sub>/km between 2008 and 2013 (EU 28, including Croatia from July 1, 2013) – a fall of approximately 19%. A total of 324 model variants emit less than 120 g CO<sub>2</sub>/km and 54 model variants already emit less than 100 g CO<sub>2</sub>/km.

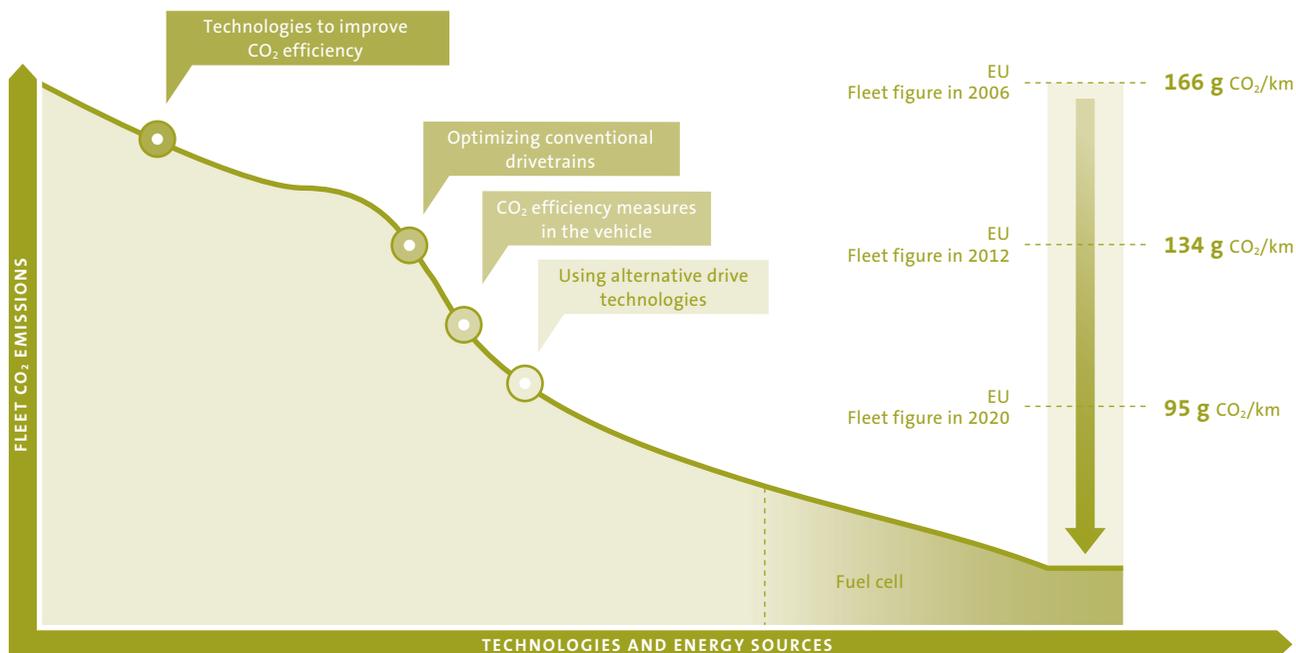
**ENVIRONMENTAL MENTORS**

At the Volkswagen brand, responsibility for product-related environmental protection lies with the Environment Officer Product and is integrated into the Volkswagen management structure. The Environment Officer Product initiates and monitors environmental improvements that go far beyond statutory legal requirements across the entire product development process. He is assisted by environmental mentors who are assigned to new-vehicle projects from the earliest planning stages through to the start of production, and who contribute their know-how across the entire development process. The environmental mentors use a wide range of inhouse and external analysis tools, materials data systems and controlling instruments to assess the vehicle right down to component level.

**Life Cycle Engineering**

The term “Life Cycle Engineering” means improving the environmental footprint of the vehicle over its entire life cycle. This process begins with a Life Cycle Assessment (LCA), in which the environmental impacts of the vehicle are assessed across the full life cycle – from resource extraction, through production and opera-

**REDUCTION IN VEHICLE EMISSIONS**



**THE VOLKSWAGEN GROUP'S TOP TEN BEST-SELLING MODELS IN 2013**

Model group <sup>1</sup>	Engines	Fuel	CO <sub>2</sub> emissions (combined) <sup>2</sup>	Unladen weight <sup>2</sup>	Efficiency class
up! <sup>*</sup>	3-in-line 1.0l 44kW SRE 4V	petrol	95 g [CO <sub>2</sub> /km]	940 kg	B
up! <sup>*</sup>	3-in-line 1.0l 55 kW SRE 4V	petrol	98 g [CO <sub>2</sub> /km]	940 kg	B
Golf VII <sup>*</sup>	4-in-line 1.2l 77 kW TSI 4V	petrol	114 g [CO <sub>2</sub> /km]	1,210 kg	B
Golf VII <sup>*</sup>	4-in-line 1.4l 90 kW TSI 4V	petrol	116 g [CO <sub>2</sub> /km]	1,249 kg	B
Golf VII <sup>*</sup>	4-in-line 1.6l 77 kW TDI-CR 4V	diesel	99 g [CO <sub>2</sub> /km]	1,295 kg	A
Golf VII <sup>*</sup>	4-in-line 2.0l 110 kW TDI-CR 4V	diesel	106 g [CO <sub>2</sub> /km]	1,354 kg	A
Tiguan <sup>*</sup>	4-in-line 2.0l 103 kW TDI-CR 4V	diesel	138 g [CO <sub>2</sub> /km]	1,541 kg	B
Caddy <sup>*</sup>	4-in-line 1.6l 75 kW TDI-CR 4V	diesel	119 g [CO <sub>2</sub> /km]	1,549 kg	A
Audi A3 sportback <sup>*</sup>	4-in-line 2.0l 110 kW TDI-CR 4V	diesel	108 g [CO <sub>2</sub> /km]	1,385 kg	A
Passat estate <sup>*</sup>	4-in-line 2.0l 103 kW TDI-CR 4V	diesel	120 g [CO <sub>2</sub> /km]	1,571 kg	A

<sup>1</sup> Shown in ascending order by segments, fuels and engines.

<sup>2</sup> CO<sub>2</sub>/km and unladen weight figures may vary depending on vehicle configuration (for example, transmission, BMT versions and equipment lines).

tion to eventual recycling. Amongst other things, a Life Cycle Assessment reveals the quantitative variations in environmental impacts over the different phases of the vehicle’s life cycle. In the case of conventional petrol or diesel vehicles for example, it reveals that most CO<sub>2</sub> – approximately three quarters – is emitted in the use phase. The fraction emitted at the manufacturing stage is much smaller. In the case of water on the other hand, the picture is quite different. Even if it is regularly washed, the consumption of water during the vehicle’s useful life is very low. Most water is consumed at earlier stages in the life cycle (see page 106).

**Established Group-wide in 2013:**  
*the Corporate Working Group “Life Cycle Engineering”.*

Analyzing the life cycle environmental impact of a vehicle is a complex task. For the production phase, data must be inventoried for all components and all processes. This data is drawn from vehicle parts lists, the Volkswagen Material Information System (MISS) and external databases. From these various sources, a Life Cycle Inventory is prepared using a Volkswagen-developed IT tool. Fuel consumption and emissions during the use phase are calculated for the entire useful life of the vehicle, using the statutory New European Driving Cycle (NEDC). In addition to driving emissions, the use phase emissions also include emissions from fuel production processes. Finally, for the last phase of the life cycle – recycling – energy consumption and emissions for dismantling and recycling the end-of-life vehicle are calculated.

In a further step, the inventoried data on emissions is then classified into environmental impact categories. CO<sub>2</sub> and methane for

example contribute to the category “global warming”. The other environmental impact categories considered are photochemical ozone creation, acidification, ozone depletion and eutrophication potential. The results of the Life Cycle Assessment, which is carried out in strict compliance with the ISO 14040 and 14044 international standards on Life Cycle Assessments, allow the company to identify the most ecologically advantageous solutions at an early stage. Based on these findings, development work can then be geared to achieving the greatest possible environmental benefits over the entire life cycle of the product. **52**

In 2013 the Corporate Working Group “Life Cycle Engineering” was set up, in which experts from the brands are working to harmonize the guidelines and methodology for Life Cycle Assessments across the entire Group and to support best practice-sharing among successful Life Cycle Engineering projects.

**Environmental Commendations and Life Cycle Assessments**

For selected models, the Volkswagen brand publishes Environmental Commendations, which inform customers and the general public about the ecological progress represented by the new model at life cycle level, compared with its predecessors. The comparison is based on the detailed Life Cycle Assessments described above, which are certified for Volkswagen by independent auditor TÜV NORD to confirm that they are based on reliable data and were drawn up in accordance with the requirements of ISO 14040 and 14044. By the end of 2013, Volkswagen Passenger Cars and Volkswagen Commercial Vehicles had published a total of 18 Environmental Commendations. **53**

Since 2010, Audi has been producing Life Cycle Assessments for new model series and publishing them at market launch. Life Cycle Assessments have been published for the Audi A3, the Audi A6 and the Audi e-gas project. In 2013, SEAT published a “Carpeta ambiental” (environmental profile) for the new Leon, which shows

how the new model compares with predecessor models in terms of its key environmental data. Also, for the first time, a Life Cycle Assessment was carried out for the SEAT Leon.

### New Models from the Brands

The Volkswagen Group believes in the importance of offering a diversity of different technologies. This broad-based approach differentiates the company from its competitors (see page 94). Alongside the further improvement of petrol (TSI) and diesel (TDI) models, the Group's technologies and development activities also span natural-gas vehicles, all-electric vehicles and hybrid vehicles with battery and fuel-cell technology. This comprehensive approach supports the corporate goal of developing attractive and affordable vehicles to cater to the widest possible spectrum of requirements. These vehicles must use scarce resources as efficiently as possible and at the same time offer highest standards of comfort and convenience.

### Efficiency Models (TSI and TDI) 2013

**Volkswagen.** The third generation of the Golf TDI BlueMotion\* was presented by Volkswagen in spring 2013. This vehicle's fuel consumption of just 3.2 liters of diesel per 100 km and emissions of 85 g CO<sub>2</sub>/km (NEDC) are among the best in its class. The low fuel consumption is largely down to the newly developed four-cylinder 110 PS diesel engine. In line with corporate objectives, the engineers achieved a 15% reduction in fuel consumption over the predecessor model. The Golf TDI BlueMotion\* is equipped with automatic stop-start functionality and braking energy recuperation. Aerodynamic refinements, low vehicle weight, the modified six-speed manual transmission and extra low rolling-resistance tires are further factors contributing to high fuel efficiency.

With the Caddy BlueMotion\*, unveiled in 2013, Volkswagen Commercial Vehicles presented a version of the popular urban delivery van which consumes up to 1.1 l/km less fuel than a Caddy without BlueMotion. The fuel consumption of 4.5 l/100 km is

achieved using a variety of aerodynamic and technical modifications – for example it features start-stop functionality, low rolling resistance tires, reduced ride height and braking energy recuperation.

**Audi.** The most fuel-efficient production model of the Audi brand is the 110-PS Audi A3 1.6 TDI ultra\* which, despite its comfortable specification, boasts fuel consumption of 3.2 l/100 km, corresponding to CO<sub>2</sub> emissions of just 85 g/km. This new A3 model version entered the market in fall 2013. It is the most efficient model in the current Audi range, and is also the brand's first model to bear the "ultra" badge. This label stands for Audi's commitment to systematic sustainability in its products and production processes.

**Trucks are constantly in use,  
so efficiency improvements generate  
even bigger benefits.**

**Scania.** In July 2013, Scania Germany reported shipment of its 1,000th Euro VI compliant truck, a Scania R 440. And in 2011, Scania had already become the first manufacturer to put Euro VI-engined trucks on the road. The Euro VI standard reduces the nitrogen oxide (NOx) and particulate emissions limits of Euro V regulations by approximately 80%.

The Scania Streamline range of G- and R-series long-haul trucks are optimized for low fuel consumption. To maximize fuel savings, their automatic transmission's new Economy mode is fully integrated with the Scania Active Prediction cruise control system. Together with the new, more efficient second-generation Euro VI engines this enables fuel savings in long-distance haulage of up to 8%. Euro VI will be mandatory for all newly registered heavy-duty



The SEAT Leon is the model with the lowest emissions in its segment.



Scania Euro VI engines set standards for how to meet even the strictest emission regulations.

vehicles from January 2014 and for newly registered vehicles of all types from September 2014.

In the second half of 2013 Scania presented its Eco-roll system, which can cut customers' fuel costs by up to 2%. Eco-roll calculates the exact point at which the truck can start to use gravity on downhill stretches. On long descents, this system decides whether it is more fuel-efficient for the truck to use gravity to coast downhill with the transmission in neutral and the engine idling, or whether to use the engine brake with the fuel supply shut off.

**SEAT.** With its reduced CO<sub>2</sub> emissions of just 85 g/km, the Leon 1.6 TDI CR 110 CV Ecomotive\* set a new milestone at its launch in late 2013, with the lowest emissions of any vehicle in its segment. Ecomotive versions with reduced emissions are available for all the other models in the SEAT range too. In these versions the Ibiza\* and Ibiza ST\* achieve 88 g/km, the Toledo\* 99 g/km, the Altea\* and Altea XL\* 111 g/km and the Alhambra\* 143 g/km.

**ŠKODA.** Despite adverse weather conditions, record-breaking driver Gerhard Plattner recorded fuel consumption of just 2.7l/100 km with a standard ŠKODA Fabia Combi GreenLine\* model in the "Trans-Germany Economy Drive" in October 2013. This is a 0.3l/100 km improvement on the official fuel consumption of 3l/100 km. This thrifty performance comes amongst other things from braking energy recuperation, the start-stop system and aerodynamic refinements.

**Audi.** The Audi A3 sportback g-tron\*, which went into production in Ingolstadt in December 2013, returns average fuel consumption of between 3.2 and 3.3 kg of CNG per 100 km. CO<sub>2</sub> emissions are just 88 to 92 g/km. And if it runs on Audi e-gas, which is produced from CO<sub>2</sub> and green electricity, the A3 sportback g-tron\* is virtually carbon-neutral, emitting exactly the same amount of CO<sub>2</sub> when the fuel is burnt as was absorbed when manufacturing the fuel in the first place.

**SEAT.** SEAT is focusing its efforts on cutting the CO<sub>2</sub> emissions of its entire model range. The Mii 1.0 MPI Ecofuel Ecomotive\*, launched in 2012, is still one of the cleanest cars on the market and at 79 g/km has the lowest emissions in the range.

**ŠKODA.** The ŠKODA Citigo CNG\* emits just 79 g CO<sub>2</sub>/km – normally, that is. Because depending on how the car is driven this figure can be substantially reduced. On a fuel-saver run from Italy to Sweden in the summer of 2013, this long-distance all-rounder consumed an average of 2.4 kg of natural gas per 100 km, which equates to just 65 g CO<sub>2</sub>/km. The CNG version of the ŠKODA Citigo\* features impressive efficiency. Its 3-cylinder 1-liter engine has an output of 68 PS. With average fuel consumption of just 2.9 kg of natural gas per 100 km, the Citigo\* ranks among the world's most fuel-efficient and cost-effective vehicles.

**EU NEW VEHICLE REGISTRATIONS 2013**

Emissions category	Proportion of total deliveries of Volkswagen Passenger Cars and Commercial Vehicles, Audi, SEAT and ŠKODA
≤ 95 g CO <sub>2</sub> /km	1.23%
≤ 100 g CO <sub>2</sub> /km	10.30%
≤ 120 g CO <sub>2</sub> /km	47.78%
≤ 130 g CO <sub>2</sub> /km	63.24%

**Natural-Gas Models 2013**

**Volkswagen.** The IAA Frankfurt Motor Show in September 2013 saw the world debut of the Golf TGI BlueMotion\* (the TGI badge is used to denote Volkswagen's natural-gas-capable models). Its 110-PS four-cylinder engine operates on both natural gas and on petrol. Natural gas is used as the default fuel, the system automatically switching to petrol when the CNG tank is empty. Natural-gas consumption is just 3.5 kg/100 km, with CO<sub>2</sub> emissions of 92 g/km for vehicles with DSG dual-clutch gearbox, and 94 g/km for vehicles with manual transmission. The Golf TGI BlueMotion\* is the seventh natural-gas vehicle in the Volkswagen line-up. It joins the eco up!\*, Touran TSI EcoFuel\*, Passat TSI EcoFuel\*, Passat Estate TSI EcoFuel\*, Caddy EcoFuel\* and Caddy Maxi Eco-Fuel\*.

**THE AUDI E-GAS PROJECT**

In June 2013, Audi became the world's first vehicle manufacturer to open its own power-to-gas plant – in Werlte, Germany. This project presents a solution to one of the big challenges facing Germany's "energy transition", by offering a way of storing renewable electricity independently of where it is generated, in large quantities and over long periods. The plant first of all splits water into its component oxygen and hydrogen atoms. The hydrogen is then reacted with waste CO<sub>2</sub> from a biogas plant to produce synthetic methane – Audi e-gas. This gas, which is virtually identical to fossil-based natural gas, is fed into the natural gas grid and distributed to CNG filling stations. The plant began supplying Audi e-gas to the grid in late 2013. Annual production of the Audi facility is expected to be in the region of 1,000 t of e-gas, absorbing 2,800 t of CO<sub>2</sub> in the process. The amount of e-gas produced in Werlte would enable 1,500 Audi A3 sportback g-tron\* models to travel 15,000 km a year in virtually carbon-neutral style. In parallel with the e-gas plant in Werlte, Audi is also operating a demonstration facility in Hobbs, New Mexico, USA, in collaboration with a partner, for the production of e-ethanol and e-diesel. At this facility, microorganisms use water (brackish, salt or wastewater), sunlight and carbon dioxide to produce high-purity fuels. Both these projects use CO<sub>2</sub> as a raw material for fuels.

### Hybrid Models 2013

**Volkswagen.** The XL1\* is the first “one-liter” car (100 km on 1 l of fuel) in the world. Volkswagen began building this limited-production model – 200 units will be built for customers plus 50 units which will remain with VW – in 2013. With emissions of 21 g CO<sub>2</sub>/km and fuel consumption of 0.9 l of diesel or 7.2 kWh of electricity per 100 km, the XL1\* is at the forefront of technology development at Volkswagen. No other plug-in hybrid based on an electric motor and diesel internal combustion engine is more fuel-efficient. In electric mode, the XL1\* can travel for up to 50 km with zero emissions. It represents the current automotive state of the art in terms of drive technology, electronics, battery technology, aerodynamics and lightweight design. The body of the XL1\* consists primarily of lightweight, strong carbon fiber-reinforced plastic (CFRP), giving the vehicle an unladen weight of just 795 kg. To get this vehicle into production, Volkswagen had to achieve the previously impos-

sible in terms of both technologies and production processes. The extensively CFRP-based XL1\* is built using an all-new process similar to hand-built production.

2013 also saw the market debut of the European version of the Jetta Hybrid\*. This vehicle is powered by a high-tech gasoline engine (TSI, 110 kW/150 PS) and a 20-kW electric motor. The standard-fitted transmission is an automatic seven-speed dual-clutch gearbox. With average fuel consumption of 4.1 l/100 km (95 g CO<sub>2</sub>/km), this sporty saloon offers 20% better economy than a comparably powered conventional-drive car. The Jetta Hybrid\* automatically switches to all-electric mode whenever possible. All-electric mode can also be selected manually, at the press of a button, providing zero-emission mobility over a distance of up to 2 km, at speeds up to 70 km/h.

### MARKET PENETRATION OF ECO-/EFFICIENCY MODELS, EU-28

Brand	Model	Unit sales eco-/efficiency models 2013, EU-28 <sup>1</sup>	Total unit sales 2013, EU-28 <sup>1</sup>
Volkswagen Passenger Cars	VWPC BlueMotion	16,918	
	+ BlueMotion Technology	841,361	
	BlueTDI models	4,567	
	EcoFuel models (CNG)	16,120	
	MultiFuel models (E85)	1,786	
	BiFuel models (LPG)	1,565	
	Hybrid	3,363	
	<b>Total eco-/efficiency models</b>	<b>885,680</b>	<b>1,399,956</b>
Volkswagen Commercial Vehicles	VWCV BlueMotion	1,051	
	+ BlueMotion Technology	66,035	
	CNG	3,750	
	LPG	480	
	<b>Total eco-/efficiency models</b>	<b>71,316</b>	<b>272,251</b>
Audi	e-models	25,394	
	Clean Diesel	8,237	
	FlexFuel	306	
	Hybrid	359	
	<b>Total eco-/efficiency models</b>	<b>34,296</b>	<b>663,521</b>
ŠKODA	ŠKODA GreenLine	11,710	
	+ Green tec packages	32,176	
	CNG models	1,302	
	<b>Total eco-/efficiency models</b>	<b>45,188</b>	<b>481,628</b>
SEAT	SEAT e-ecomotive	22,195	
	+ ecomotive packages	111,579	
	LPG models	1,645	
	<b>Total eco-/efficiency models</b>	<b>135,419</b>	<b>277,596</b>
<b>Volkswagen Group</b>	<b>Sum total</b>	<b>135,419</b>	<b>3,094,952</b>

Total unit sales in 2013 in the EU28<sup>1</sup> market as a whole (deliveries to customers): 11,828,530 vehicles.

<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).

**MAN.** The MAN Lion's City Hybrid city bus made its successful market debut in Munich in 2010. In the meantime it is already on line-service duty in Barcelona, Paris and many other cities. With its serial hybrid drive system, this low-floor bus offers up to 30% fuel savings, with a corresponding reduction in CO<sub>2</sub> emissions. It also stores braking energy and transforms it into power for its two electric drive motors. Electrical auxiliary consumers like the air-conditioning system are powered by the roof-mounted energy accumulator.

**Porsche.** In May 2013 the Shanghai Auto Show saw the world debut of the Porsche Panamera S E-Hybrid\*, the world's first plug-in hybrid in its class. The 95-PS electric motor is twice as powerful as on the predecessor model, contributing to a combined output of 416 PS. The energy for the electric motor is supplied by a newly developed lithium-ion battery with a capacity of 9.4 kWh, over five times that of the previous nickel-metal hydride battery. The battery can be recharged in two-and-a-half hours at an industrial power socket, and in less than four hours at a standard German household power socket. The fuel consumption of the Panamera S E-Hybrid\* is 3.1 l/100 km – an improvement of 4 l/100 km over the previous model. CO<sub>2</sub> emissions are 71 g/km. The real-world electric driving range is between 18 and 36 kilometers. The Panamera S E-Hybrid's\* top speed in all-electric mode is 135 km/h.

2013 also saw the launch of Porsche's first hybrid super sports car, the 918 Spyder\*. This model combines racetrack-derived technology with minimal fuel consumption – despite developing maximum output of 887 PS, the 918 Spyder\* returns fuel consumption of just 3.1 l/100 km, corresponding to CO<sub>2</sub> emissions of 72 g/km.

### Electric Vehicles 2013

**Volkswagen.** The e-up!\*, which has been on the market since November 2013, is Volkswagen's first production electric vehicle. Consuming just 11.7 kWh of electricity per 100 km, it offers world-class efficiency (efficiency class: A+). This four-seater small car is powered by a compact 82-PS electric motor, with floor-mounted lithium-ion battery pack and power electronics. The electric motor supplies its power to the front wheels via a single-speed transmission. All components, including the battery, were developed by Volkswagen. The average achievable driving range of the e-up!\*, which has a top speed of 130 km/h, is up to 160 km, depending on topography, driving style and payload. The exemplary fuel efficiency of the e-up!\* is down to excellent aerodynamics for a vehicle of this size, low rolling resistance and efficient powertrain components. Further factors are the highly efficient recuperation system, innovative equipment modules and a newly developed, particularly efficient climate control system.

In the second half of 2013, Volkswagen presented a further all-electric volume-production model – the e-Golf\*. This electric version of the best-selling Golf will be launched in early 2014. Consuming just 12.7 kWh/100 km, the e-Golf\* is the most economical electric vehicle in its class. Powered by an 85 kW/115 PS

electric motor, it boasts a driving range of up to 190 km (NEDC), a top speed of 140 km/h and a wide range of efficiency technologies including a recuperation system with a choice of settings, energy-saving LED headlights and an optional heat pump that reduces the energy consumption of the climate control system.

Via the Car-Net online services and the Car-Net website, e-up!\* and e-Golf\* customers can access further useful functions for optimized electric driving. These functions make it possible for them to display vehicle data and program a variety of settings irrespective of the current location of the vehicle. It is also possible to remote-control the charging process via Car-Net.

With a concept model presented by Volkswagen Commercial Vehicles at the Geneva Motor Show 2013, Volkswagen has also illustrated the potential for electric drive in the light commercial vehicle sector. The e-Co-Motion van, offering cargo capacity of 4.6 m<sup>3</sup>, is designed for carbon-neutral urban delivery work, while the e-load up! micro van – another concept – is designed to meet the needs of service engineers, courier services, delivery drivers and social services. The e-load up! is based on the e-up!\* model. The van version has a fold-up passenger seat and more than 1 m<sup>3</sup> of cargo capacity.

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### TURBINES TO USHER IN THE SHIFT TO RENEWABLES

The world's most powerful (100 MW) solar thermal power plant, the "Shams 1" facility in Abu Dhabi (shams = "sun" in Arabic), came on stream in March 2013. The electricity is generated by the largest steam turbine ever built for a solar thermal power station. This turbine, with a gross output of 125 MW, was supplied by MAN Diesel & Turbo. The plant uses a dry cooling system that significantly reduces water consumption – an important advantage in the desert conditions of Abu Dhabi. Shams 1 is the fifth solar power station to be powered by an MAN turbine. With its "BLUEFIRE" engines, meanwhile, MAN is catering to the trend towards distributed power generation, and to the need for gas engines and turbines which can supply electricity flexibly, on demand. This technology is used for example in the 35/44G gas engine, which has a mechanical output of 10.6 MW and electrical efficiency of 47.3%.

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## PRODUCTION

Over the next few years, the topic of resource efficiency is going to shift even further into the spotlight at the Volkswagen Group. That is because the sparing use of energy and raw materials makes a major and growing contribution to cost-effectiveness. The Volkswagen brand's production sites are already pooling their activities under the "Think Blue. Factory." program, which includes a raft of ambitious measures and ensures that managers and employees at the production plants never lose sight of the objectives. 54

Other Group brands are following their lead and have developed their own concepts to enhance energy and resource efficiency while building employee awareness of these issues (see page 97).

By 2018, the Volkswagen Group is aiming to have cut specific energy and water requirements, waste volume and CO<sub>2</sub> and solvent emissions (VOC) per vehicle by 25%, compared with the 2010 baseline. This goal applies across the board to all the Group's production sites, and builds on the general production process requirements defined in the Group's environmental principles. The overarching aim is to minimize the environmental impacts of production. By the end of 2013 we were already half-way to our goal, having cut the environmental impacts of production by 12.5%. This was broken down as follows:

- > energy consumption: -12.5%
- > CO<sub>2</sub> emissions: -19.5%
- > water consumption: -4.6%
- > solvent emissions: -12.3%
- > waste for disposal: -13.8%

## EUROPEAN EMISSIONS TRADING

In order to ensure that the Group is fully prepared for the third trading period from 2013, as required by the Data Collection Ordinance (DEV 2020), the Group has calculated and reported the demand for CO<sub>2</sub> emissions at its German sites and applied to the German Emissions Trading Office (DEHSt) for the allocation of corresponding certificates. Our production sites in other European Union countries have likewise been reviewed in line with the valid national legislation to ensure the timely submission of applications to the respective national authorities. As far as the Group is concerned, there have been no significant changes in the number of facilities and the associated quantity of tradable CO<sub>2</sub> emissions included in the European emissions trading system since 2013.

Under the "Think Blue. Factory." program, new production sites are built in accordance with strict environmental criteria. In existing plants, depending on the age of the production equipment, ecological objectives are met either by replacing or upgrading machinery or by redesigning production processes. The experts in Wolfsburg collaborate closely with each individual factory and

devise customized development plans for each site. The "Think Blue. Factory." toolkit contains various instruments for systematically reducing the ratios and optimizing consumption. A dedicated catalog of 140 guide measures for eco-friendly automobile factories is a key element of this toolkit and the appropriate actions are selected for each plant. This catalog is constantly evolving, because "Think Blue. Factory." is a dialogue-driven process in which best-practices are rolled out from individual plants to all sites. At the same time, production technology at the factories is also upgraded in line with the latest advances in manufacturing systems and processes. Through this sharing of local best practices, new options and opportunities are continuously being created. Of the 43 global production sites belonging to the Volkswagen brand, 27 participated in "Think Blue. Factory." in the reporting period. Between the program's launch in 2011 and the end of 2013, more than half of the 3,400 planned measures had already been implemented. Since 2010, this clearly defined approach has led to the following interim results for the Volkswagen brand: energy consumption is down 18.5%, CO<sub>2</sub> emissions have been reduced by 28.4%, waste volumes are down 30.2%, and water consumption has been cut back by 11.0%. Solvent emissions have increased by 2.7%.

## CORPORATE RESOURCE EFFICIENCY STEERING GROUP

We are constantly on the lookout for ways of enhancing material and resource efficiency at our production sites, throughout every phase of the value creation chain and at every stage of our products' life cycles. Every employee is encouraged to question everyday processes, and to leverage the full potential for ecological innovations and resource efficiency. The Corporate Resource Efficiency Steering Group has been tasked with collating best practices and making them accessible to all Group brands. In order to raise the public visibility of our commitment and create a basis for environmental policy debate, we have decided to publish our Group-wide measures in a separate brochure. 55

## Saving energy in production

In the reporting period, the intranet-based IT tool "Massnahmen@web" documented more than 1,260 measures across the Group to optimize processes in the fields of energy and environment. Energy savings of 381 gigawatt-hours (GWh) and CO<sub>2</sub> savings of around 229,000 t were achieved, which translates into cost savings of €28.6 million per annum. Noteworthy success was achieved by all brands in this respect.

**Volkswagen.** Efficiency measures to reduce energy requirements in production, coupled with local combined heat and power (CHP) plants powered by natural gas, are typical of the energy-saving measures used by the Volkswagen brand. In April 2013, construction work began on a new CHP plant and two boilers at the Braunschweig (Germany) factory. The new systems are driven by a natural gas engine from MAN Diesel & Turbo with around 84% efficiency. With a total output of 46 megawatts (MW), the CHP plant will reduce the Group's CO<sub>2</sub> balance sheet by 30,000 t. The CHP plant at the Zwickau (Germany) factory is already operational, and meets around 35% of the site's electricity requirements and 50% of its heat requirements, whilst simultaneously reducing the CO<sub>2</sub> load by 23,000 t per annum. At the Wolfsburg (Germany) site, the world's most technically advanced paintshop for plastic vehicle parts is now operational. It uses 50% less energy than the old paintshop, while cutting emissions by an impressive 90%. At the Emden plant (see page 14), the use of geothermal energy saves 12,000 MWh and therefore reduces CO<sub>2</sub> emissions by 1,660 t, while at the same time cutting the annual energy bill by €70,000. At the Bratislava (Slovakia) plant, a pilot project to analyze the use of energy in the paintshop culminated in savings of 49,000 MWh which equates to 9,800 t of CO<sub>2</sub>, and bringing cost savings of €700,000.

In 2013, Volkswagen was presented with a "Golden Peacock Environment Management Award" by the Indian Institute of Directors for its eco-friendly production at the Pune (India) plant. In March 2013 a state-of-the-art press shop came on stream at the Uitenhage plant in South Africa. The new facility forms the core of an extensive range of measures that have made Uitenhage one of the most eco-friendly production plants in the southern hemisphere. These include aspects such as the use of recycling-friendly materials, a lighting system equipped with presence detectors, and a stormwater retention basin. In 2012 this already led to us winning the title of "Greenest Manufacturer" from the South African Department of Economic Development, Environmental Affairs and Tourism.



The new press shop in Uitenhage meets the highest environmental standards.

#### EMPLOYEE IDEA CUTS ENERGY CONSUMPTION

Prompted by an employee suggestion, in 2013 the water temperature of the washing plant in the paintshop at our Wolfsburg (Germany) site was reduced from 50°C to room (or in this case, production shop) temperature (21°C). This simple modification reduced the site's CO<sub>2</sub> load by 1,500 t. Washing is an essential step to remove grinding residues and contaminants caused by upstream operations from the body-in-white, because the painting process itself requires a perfectly clean surface.

**ŠKODA.** In July 2013 ŠKODA brought a new combined heat and power (CHP) plant on stream at its production plant in Kvasiny (Czech Republic). The CHP plant will cut annual CO<sub>2</sub> emissions by 10% or 8,000 t. Power and heat are generated by a gas engine, with the heat being used to warm up the water for the heating system.

#### Green IT

The optimization of IT and telecommunications infrastructures and equipment offers great potential for improving resource and energy efficiency. One example here is the iDOMP global tender process for printers. This will gradually lead to a 32% improvement in energy efficiency across the printer fleet as a whole, compared to the printers replaced, resulting in annual energy savings of 2.18 GWh. At Audi the new data center which went live in November 2012 in Ingolstadt (Germany) is boosting the energy efficiency of the IT systems by one-third. An indirect outdoor cooling system uses outside air to cool the servers at ambient temperatures of up to 11°C. 🌱 56

*The Group already obtains around one third of its electricity from renewable sources.*

#### Renewables Drive Production

Between now and 2020, the Volkswagen Group is planning to invest some €600 million in widening its use of renewable energy resources: hydropower, wind power, biomass and photovoltaics. Around one third of our global electricity consumption already comes from regenerative sources, and a number of pioneering projects based on renewables are already up and running. The Volkswagen Emden plant is a showcase example implementing the "Think Blue. Factory." concept with a unique combination of renewables. Alongside the world's largest geothermal field, the site not only uses solar power, biomass, cogeneration and wind power, but is also one of the Group's first production sites to use innovative hydraulic energy storage. In January 2013 the Volkswagen brand brought on stream what was at the time the world's largest solar power plant. The Volkswagen Chattanooga

Solar Park generates a peak output of 9.5 MW and it remains the largest solar power plant operated by an automaker in the USA. Its approximately 33,600 solar panels are expected to yield around 13,100 MWh per annum, which would cover 13% of Chattanooga's electricity requirements at full production capacity.

The Group also meets its targets by purchasing green electricity: since the beginning of 2013, 100% of the electricity purchased by Volkswagen Slovakia has been from renewable sources, thereby reducing its indirect CO<sub>2</sub> emissions by 22%. In September 2013, Volkswagen de México signed an agreement with the power utility Mexico Power Group to purchase an annual average of 290,000 MWh of green power. This will be generated by the La Bufa wind farm in Zacatecas state, scheduled to go on stream in September 2014. This green electricity would cover around 60% of demand at the Puebla and Silao plants, and reduce the CO<sub>2</sub> balance sheet by 140,000 t each year.

The Polkowice (Poland) site converted to 100% hydro power back in 2011. Heat is supplied as district heating by an efficient gas and steam power plant. The remaining CO<sub>2</sub> emissions are completely compensated by the reforestation of land directly adjacent to the Motor Polska factory, which entailed the planting of 59,820 trees in 6.82 hectares of forest in cooperation with the local forestry commission.

"SEAT al Sol", currently the world's largest photovoltaic plant in the automotive sector, came on stream in November 2013. The plant comprises 52,827 solar panels with a maximum rated output of 10.6 MW, and covers an area of 276,000 m<sup>2</sup> on the roofs of six halls and four storage areas for finished vehicles. In its first year of operation, "SEAT al Sol" generated 17,629,086 kWh of energy at full capacity, exceeding its planned output by 18%. This in turn reduced CO<sub>2</sub> emissions by 7,000 t. SEAT has also signed a green energy supply contract with certificates guaranteeing that the energy will orig-



"SEAT al Sol" is the world's largest photovoltaic plant in the automobile industry.

inate from 100% renewable sources or high-efficiency cogeneration, helping to prevent emissions of CO<sub>2</sub> and other pollutants.

At its site in Crewe, Bentley Motors constructed the UK's largest rooftop photovoltaic plant in 2013. The 20,000 solar modules have a rated output of 5 MW, covering around 40% of the factory's power demand, and potentially saving 2,500 t of CO<sub>2</sub> emissions at the same time.

## Over 90% of water consumption happens in the upstream material production and supply processes.

### Focus on Water Management

As part of its mission to become the world's most eco-friendly manufacturer, the Group is aiming to reduce freshwater consumption at all its brands by 25% by 2018 (base year: 2010). The high volumes of cooling water used in automotive production offer scope for reduction. Based on the comprehensive data collated in our Life Cycle Assessments, we have undertaken a pioneering analysis of our water footprint, and identified the processes that consume the most water over the life cycle of representative Volkswagen brand models. Unlike CO<sub>2</sub>, detailed analysis of the water footprint reveals that the use phase plays only a minor role. 96% of water consumption is attributable to the production process, most of it upstream and a mere 10% in our own factories. Our scientific paper on this topic won an award from the Environmental Science & Technology Journal during the reporting period. We are currently refining our techniques to enable them to be used on a larger scale in future. Throughout every aspect of our water management strategy, we remain mindful of the fact that water resource availability varies significantly from one region to the next, and solutions must be adapted accordingly. In the current reporting period, for the first time the Volkswagen Group managed to compute the proportion of water recovered and reused. Given the large number of sites and the complex production processes, this was just the first step in a systematic inventory. 45 sites have already submitted data, and together they used 3.8 million cubic meters of recycled water, corresponding to 8% of their combined freshwater uptake.

## CEO WATER MANDATE OF THE UN GLOBAL COMPACT AND WDP

In October 2013, the Volkswagen Group became one of the first automakers in the world to support the CEO Water Mandate, a United Nations (UN) Global Compact platform to promote the sustainable use of water. Since 2011, we have also participated in the Water Disclosure Project (WDP), a non-profit organization which collates extensive data on companies' annual water management. We were the only German automobile manufacturer to agree to publication of the results from day one.

There is a limit to the extent that water use in production can be continuously reduced by technical means. So it is important to reuse water as often as possible, or to operate a closed cycle. This principle is already in use at many of the Group's sites worldwide. Our treatment plants employ innovative membrane or evaporator techniques, allowing the bulk of the process water to be reused. This way, more than 95% of the water remains in the cycle, or else is used for cooling, flushing toilets, and garden irrigation. As a result, we are very close to achieving our vision of a virtually wastewater-free factory at a number of sites.

The Salzgitter (Germany) site treats all its industrial wastewater and recycles it completely. The recycled water is used, for example, in the production of emulsions. Thus, in the engine plant, an evaporator system is used to extract most of the water from oily wastewater. Once separated, the condensate can be used in its entirety to produce new emulsions and detergents. The remaining oil concentrate is either used as lubricating oil, or thermally recycled in our own power plant. This has led to annual water savings of around 30,000 m<sup>3</sup>. At our Braunschweig (Germany) plant, a conductance-controlled water spray metering system in the paintshop saves 34,380 m<sup>3</sup> of water, reducing overall costs by around €232,000.

At our Pune (India) plant, more than 99% of all biodegradable materials are removed using state-of-the-art biological wastewater treatment technologies such as a membrane bio-reactor, allowing water to be reused on-site. Almost 100% of the wastewater is returned to the cycle. In 2013, Volkswagen India was awarded a Certificate of Appreciation by the Triveni Water Institute of the Confederation of Indian Industry. The Pune plant uses special taps which can reduce freshwater consumption by 75%; these have proven highly efficient. In Bratislava (Slovakia), in collaboration with Comenius University, we have established a crayfish farm which is supplied with treated wastewater from the Volkswagen plant. The farm provides optimum conditions for this endangered species.

In 2012, Bentley succeeded in reducing water consumption at its Crewe (England) site by an impressive 36% year-on-year, thanks to extensive water treatment programs, and in October 2013 was the first automaker to be awarded the "Carbon Trust Water Standard" certificate by the UK organization Carbon Trust in recognition of this achievement.

### Reducing Solvent Emissions

Our paintshops use innovative waste air treatment techniques. New application techniques also reduce the use of rinsing aids. In Pamplona (Spain), for example, the Volkswagen brand has reduced bonding agent waste to zero as part of the "Think Blue. Factory." program. The plastic parts paintshop, which began operation at the Wolfsburg plant in August 2013, has reduced energy consumption by up to 50% and emissions by an impressive 90%. Every day, the 120 employees paint up to 4,000 bumpers and other plastic parts.



The new plastics paintshop in Wolfsburg.

### Waste Prevention and Recycling

A successful waste strategy is in force throughout all Volkswagen plants, helping to reduce and prevent waste. At our Pamplona plant, as part of the "Think Blue. Factory." program, for example, research is underway to analyze waste-producing processes and devise new procedures. Adhesive residues, paint sludge and wastewater have already been successfully reduced. In this way, waste volumes at the site have been cut by more than 60% since 2010.

We are one of only a handful of manufacturers to incorporate the supply of spare parts into our sustainability strategy. For example, the Volkswagen brand's sites in Kassel (Germany) and Dalian (China) use a high-quality industrial process to remanufacture replacement parts such as engines and gearboxes, restoring them to as-new condition. Producing a remanufactured gearbox, for example, uses one third less primary energy than manufacturing a new one.

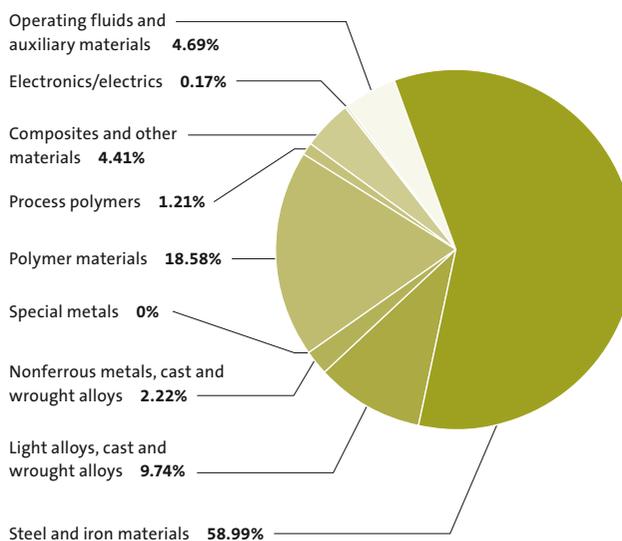
Since the Genuine Remanufactured Parts Program was launched in 1947, some 7.9 million engines, 2.9 million gearboxes and more than 78 million other vehicle components have been given a new lease of life. The benefit for customers is that genuine remanufactured parts are, on average, 40% cheaper than their new counterparts, yet offer the same quality, functionality and manufacturer’s warranty. As well as benefiting customers, this program is also good news for the environment: in the case of engines, for example, up to 70% of materials are reusable. So remanufacturing engines alone saves around 7,000 t of steel per annum.

### New Volkswagen vehicles contain around one third recycled material.

The Volkswagen brand views recycling as an integral part of vehicle development, with the outcome that 85% of each new vehicle can be recycled and 95% recovered. New Volkswagen vehicles currently contain around one third recycled material. Take the Golf 7, for example: a certified calculation method computes the share of recycled material at between 34 and 35%. In order to ensure that this resource is still viable at the end of a lengthy service life, the brand is committed to the development of cutting-edge recycling technologies for end-of-life vehicles and their parts. Examples include the patented, multiple award-winning VW SiCon technique for processing shredder residues, and the LithoRec research project on the recycling of lithium-ion batteries from electric vehicles. 57

Wherever possible, the Group’s brands use renewable raw materials and recycled materials in their automobile production. For example, Volkswagen do Brasil has collaborated with universities and suppliers to develop a technique for processing natural curaua fibers for use in the production of door trim and parcel shelves. Recycled PET can also be used as a plastic in vehicle production, for example in seat covers. 58, 59

#### MATERIAL COMPOSITION, VW GOLF



#### DISPOSAL SERVICE FOR WORKSHOPS

Since 1998, Volkswagen Original Teile Logistik (OTLG) has been offering a customized disposal program especially for car workshops. Nearly all workshops in the Volkswagen, Volkswagen Commercial Vehicles, Audi, SEAT and ŠKODA brands in Germany subscribe to this program. OTLG is designed to make life easier for dealerships and workshops, and ensure that all waste is professionally disposed of or recycled. Each year, some 50,000 t of waste is recovered from our partner workshops. Of this, around 4,000 t is liquids, 14,000 t packaging, 14,000 used tires, 17,000 t vehicle parts and 1,000 t waste from paintshops.

#### Optimizing Logistics

Intermodal transport links at least two modes of transport (road, rail, ship) together. This approach is used to transport materials because suppliers do not always have their own rail link. In intermodal transport, a crane traditionally transships containers from a truck onto a train and vice versa. New transshipment technology eliminates the need for a crane, allowing freight operators to

#### RETURN AND RECOVERY IN 2013

Waste fractions	Circulated	Return rate	Recovery rate
Paper, board, card	6,445 t	93.7%	84.3%
Plastics, total	1,035 t	98.8%	65.2%
Metals	99 t	164.7%	148.2%
Wood	543 t	35.9%	not surveyed

switch flexibly between modes of transport, regardless of location. The CargoBeamer pilot project aims to relocate a large proportion of the 1,000 or so truckloads heading for the Wolfsburg site each day from the roads onto the rails, and thereby significantly reduce CO<sub>2</sub> emissions from our logistical processes. In the reporting period, the cooperation partners Volkswagen AG and CargoBeamer AG received the 2013 eLogistics award from AKJ Automotive for construction of the CargoBeamer terminal. Some shipments of material for series production already use intermodal transport. Relocating from road to rail is expected to cut CO<sub>2</sub> emissions by 60% and energy consumption by 70%.

Audi is continuously refining its logistics to save energy and minimize CO<sub>2</sub> emissions, and that includes the transport of finished vehicles. Wherever financially viable and technically feasible, Audi is committed to the use of rail freight. Across the Audi Group, more than 60% of vehicles leave the factories by rail. For selected models from the brand's Ingolstadt plant, more than 70% are transported by rail, half of them on trains powered by renewable electricity. In 2010, Audi became the first company in Germany to sign up to the carbon-neutral "Eco Plus" rail freight service offered by DB Schenker. For this product, the German rail operator Deutsche Bahn purchases additional green power for its domestic routes. Technical inspectorate TÜV SÜD has analyzed the CO<sub>2</sub> neutrality of Eco Plus and confirmed that 100% of the energy supplied is used for rail shipment of Audi vehicles and has no negative impact on the green power mix of other rail customers.

#### ACCESSION TO THE CLEAN SHIPPING NETWORK

The Volkswagen Group has become the first German automaker to join the Clean Shipping Network, an association of cargo owners. From now on, Corporate Logistics at Volkswagen will use the Clean Shipping Index (CSI) to analyze and minimize the environmental impacts of its ocean shipping. The CSI data makes it easier to compare the ecological efficiency of such shipments. Members of the Clean Shipping Network can use the index to trace the emissions of individual vessels and specific routes, and thereby apply valid environmental criteria when selecting a carrier. Apart from chemicals and waste disposal, this also includes emissions of carbon dioxide (CO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>) and sulfur oxides (SO<sub>x</sub>).

2008 saw the inauguration of SEAT Autometro, a rail link between the brand's Martorell plant and the port of Barcelona (Spain). SEAT currently exports more than 40% of its vehicles by sea. At full capacity, the train can transport more than 105,000 vehicles a year to Barcelona. In 2009, Autometro was joined by Cargometro, linking the Martorell plant to the factory in the free port zone (Zona Franca). Together, the two rail links take around 57,000 truck journeys off the road each year, eliminating 2,600 t of CO<sub>2</sub> emissions.



SEAT Autometro connects the Martorell plant to the port of Barcelona.

#### Conserving Biological Diversity

Alongside climate change, the drastic loss of species, ecosystems and genetic diversity is one of the greatest challenges facing us today. At Volkswagen, protecting these natural assets is one of our declared aims – one that prompted us to become a founding member of the "Biodiversity in Good Company" initiative. 🌱 60

**In 2008, the Volkswagen Group published a Mission Statement *outlining its commitment to the conservation of biodiversity.***

Biodiversity management is complex, and affects the entire value chain. Our factories offer the greatest scope for direct influence. When building or extending its production facilities, the Group gives preference to brownfield sites to help minimize land sealing. Furthermore, since 2010 we have been analyzing the potential ecological risks at our sites and identifying adjacent land with a high biodiversity value. All production sites in Germany and Europe in the immediate vicinity of protected areas have been identified (see Environmental Indicators, page 137). During 2013, there were no known cases of Volkswagen's activities endangering the natural habitats of species on the Red List of the International Union for Conservation of Nature and Natural Resources (IUCN).

#### Collaboration for Biodiversity

For over a decade, we have been in dialogue with the German Nature and Biodiversity Conservation Union NABU, and have collaborated on joint nature conservation projects. In June 2013, we extended this partnership until 2015. Working closely with NABU, we are committed to using energy and resources more sparingly, and to protecting our moorlands. Because moorlands

store greenhouse gases, and are often home to endangered species, moorland conservation is an excellent example of combining nature conservation with climate protection.

NABU and Volkswagen Leasing have been campaigning for moorland protection in Germany since 2009. Volkswagen Leasing donated €1.6 million to help set up the German Moorland Protection Fund, created in 2011. August 2013 saw the completion of a project in the “Weißer Graben” nature conservation area in Lower Saxony (Germany). This was the first phase in a larger project for the rewetting of dried-out areas in the Lower Saxony Lichtenmoor moorlands.

Since 2006, Volkswagen de México has been funding scientific research into Mexico’s species diversity as well as a number of specific conservation projects, under the motto “Por Amor al Planeta” (For love of the planet). By 2013, €30,000 had been awarded to eight individual Mexican scientists in recognition of their services to species conservation in Mexico and to support their ongoing work. Each year, the same amount is awarded to a nature conservation project, sometimes extending over several years. Three such projects have been funded in this way since 2006, making Volkswagen de México the most important private donor to biodiversity issues in Mexico.

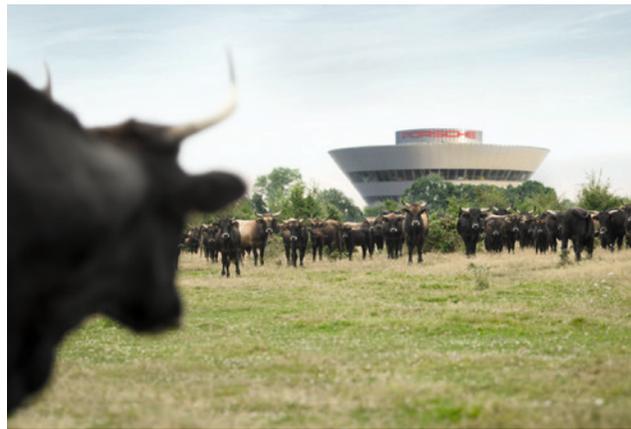
### Afforestation and Tree Planting

Forests are particularly important to biodiversity because of their function as CO<sub>2</sub> sinks and habitats. In 2013, Volkswagen supported NABU’s work to convert coniferous forest into species-rich mixed woodland in the Biesenthal Basin near Berlin. Ever since 2007, for every ŠKODA vehicle sold in the Czech Republic, the brand, assisted by its employees and their families, has planted a tree in the regions where it operates. In 2013 that meant almost 60,000 seedlings, bringing the overall total to 423,000 trees planted in cooperation with more than 50 local partners. Tree planting is also an opportunity to sensitize local employees to nature conservation issues. At the Kaluga factory of Volkswagen Group Rus, employees took part in a mass maple planting in May 2013, having planted 100 lime trees in the factory grounds the year before. In October 2013, employees and their families planted 200 willows along the banks of the River Aller in Wolfsburg, while in Zwickau, the children of employees planted trees in a biotope adjacent to the factory premises.

The Audi Environment Foundation, established in 2009, likewise focuses on nature conservation. Since January 2013, the Foundation has been supporting the Steigerwald Sustainability Center founded by the Bavarian government near Schweinfurt, Germany. Over the next five years, the Foundation has committed an initial sum of €100,000 to a number of its own projects.

### PROJECT AUROCHS

In 2002, Porsche in Leipzig launched a 65-hectare grazing project as a compensatory measure for its proving grounds. Safely fenced off from the off-road tracks, 20 wild horses and 75 aurochs serve as natural landscape protectors by helping to keep bushes and trees in check. The aim of this measure is to preserve the high nature conservation value of the land with extensive mixed grazing. Monitoring concluded that the grazing project has met or even exceeded its nature conservation targets in terms of protecting the numbers of bird species nesting on the site.



### VEHICLE OPERATION

Most CO<sub>2</sub> emissions are generated during vehicle operation and not at the production and recycling stages of its life cycle. So the most effective way to reduce mobility-related CO<sub>2</sub> emissions is to make vehicles more fuel-efficient. Our approach, however, goes even further. Because while the car will continue to play a key role in the mobility of the future, it will also be integrated more extensively than ever with other modes of transport.

Our philosophy of “intelligent mobility” combines meeting mobility needs with protection of the environment, and is based on achieving efficient synergies between people, infrastructures, technologies and the various modes of transport. In particular, the development of efficient vehicles and mobility-related services must be integrated into a diverse network of factors such as changes in vehicle usage, social and demographic trends and infrastructural and eco-logical challenges. The Volkswagen Group’s extensive range of mobility-related services therefore also includes eco-friendly driver training programs, environmentally compatible fleet management support, and car-sharing services.

## CO<sub>2</sub> EMISSIONS DURING VEHICLE OPERATION

In accordance with the Greenhouse Gas Protocol (GHG Protocol), our 2012 Sustainability Report for the first time reported on the Volkswagen Group's non-energy indirect emissions (Scope 3 emissions). A Scope 3 inventory comprises 15 different categories of emissions, including activities such as employee commuting, use of sold products, end-of-life treatment of sold products and various categories of upstream emissions. The bulk of our CO<sub>2</sub> emissions (approximately 76%) is accounted for by use of sold products (vehicles). We can tackle these emissions not only by producing more fuel-efficient vehicle models but also by offering new forms of vehicle use, fuel-economy training programs and information for customers. Emissions from upstream transportation and distribution, employee commuting and end-of-life treatment on the other hand make only a small contribution to total Scope 3 emissions, at well below 5%. Nevertheless, here too the cataloging of emissions has sharpened our focus on key action areas, given that we are aiming to set a good example in all areas, and to exploit all options open to us (figures: see page 133). [61](#)

### Carsharing Programs

In November 2011, Volkswagen Financial Services launched the "Quicar – Share a Volkswagen" carsharing project in Hanover. In the meantime the number of pick-up points in the city – specially designated parking places and car parks – where a fleet of 170 Volkswagen-brand vehicles are available for short or longer-term rental has increased to almost 100. Quicar provides high availability, with efficient vehicles and an attractive and flexible charging system. It is also easy and convenient to use. The Quicar fleet comprises mainly Golf BlueMotion\* models equipped with a 1.6-l TDI engine, offering average fuel consumption of just 3.8l/100 km and emissions of only 99 g CO<sub>2</sub>/km. In late 2013, Quicar had 10,119 registered customers. The average duration of a rental was 2.8 hours. In September 2012, Quicar came out "best in test", with an overall score of 1.8, when German consumer



Popular with the public: the Quicar carsharing project has more than 10,000 users in Hanover and the surrounding region.

institute Stiftung Warentest compared nine carsharing providers from Germany and the Netherlands. Booking, driving and online experience were among the categories where Quicar impressed the reviewers. [62](#)

## Quicar scored a best-in-test 1.8 from consumer organization Stiftung Warentest.

In April 2013, through its joint venture with Pon Holdings, Volkswagen Financial Services acquired a stake in Collect Car (Greenwheels) – the Dutch car-sharing market leader, whose European fleet comprises approximately 2,000 vehicles. The aim is to jointly develop the Greenwheels business model and to bring it to other European markets as well. With this investment Volkswagen Financial Services has taken the next step in its bid to become the world's leading automotive financial services provider by 2018. In a market in which new mobility products will take up their place alongside the traditional vehicle ownership model, the Volkswagen Financial Services AG subsidiaries are now catering to an even greater range of customer mobility requirements, with everything from leasing, long-term rental and car hire to carsharing products. [63](#)

"Audi mobility" is developing innovative, premium-oriented mobility services with an international focus, with market launch scheduled for 2014. Sustainability will be a hallmark of these services, for example through use of Audi e-tron\* und Audi g-tron\* vehicles and intelligent carsharing concepts.

### Solutions for Urban Mobility

By the year 2050, the United Nations predicts that the world's population will have grown to more than 9.5 billion people. It estimates that the global urban population will double, with more than two thirds of people living in cities. This will place increasing strain on urban mobility systems throughout the world. All urban stakeholders will therefore need to make more effective use of limited urban space.

The Mobility Research function at the Volkswagen Group has already systematically analyzed the strategic challenge of urban space shortage and developed technically feasible solutions capable of making a significant contribution to improved urban transport by 2030. These solutions have been showcased by Volkswagen in a film which depicts typical mobility situations for different types of urban user in the year 2030. The solutions presented range from new types of vehicle, new ways of driving and new forms of vehicle use through to multimodal transport solutions and the design of integrated urban transport hubs. The film demonstrates the broad-based approach being taken by Volkswagen and will also be used in communication with the general public. [64](#)

## THE CHALLENGE OF URBAN MOBILITY

In the study “What Cities Want”, published in May 2013, scientists from the Technical University of Munich were commissioned by MAN to investigate how 15 major cities – from Ahmedabad (India) and Los Angeles (USA) to Singapore – are preparing for the expected increase in their populations and how this will affect their urban development and traffic planning policies. One thing all these cities have in common is that they are giving top priority to expanding local public transport, by adding more routes, by providing more frequent services and by offering better customer service. 🚗 65

In 2010, Audi launched the Audi Urban Future Initiative, a think-tank that brings together creative thinkers from many different disciplines to analyze urban mobility issues. International architects, urban planners, sociologists and futurologists are all working with Audi to develop integrated urban mobility solutions. The Initiative includes an international award – the Audi Urban Future Award – which is presented every two years for particularly outstanding urban mobility visions. Audi is also working with leading universities to explore future urban mobility scenarios. For example it is working with Columbia University on the “Extreme Cities Project”, whose theme is megacities in the year 2050. Regular workshops with experts from a variety of disciplines, and the work of an inter-departmental think-tank – the Audi Insight Team – are also part of this initiative. 🚗 66

The Volkswagen Group is a partner in the “Morgenstadt – City Insights” innovation network, whose aim is to explore the best technologies and solutions for a sustainable redesign of the cities of tomorrow. The network is a neutral platform providing information about current aspects of the research and development of sustainable cities. As a long-standing member of the World Business Council for Sustainable Development (WBCSD), we are also working with other member companies on the “Sustainable Mobility 2.0” project, which was launched in 2013. The aim is to develop competent and professional solutions for the sustainable urban mobility of the future, which will be discussed with selected cities from around the world.

### Reducing Traffic Noise

Urban traffic often comes with a variety of human costs. As an issue which can sometimes significantly reduce the quality of life in cities, traffic noise is an increasingly important concern. How best to provide personal mobility while at the same time reducing its noise impact is a task for all stakeholders, in which the Volkswagen Group too is playing its part.

As an automaker, the Volkswagen brand is working intensively to further reduce noise at the level of the individual vehicle. Work on noise reduction at the Volkswagen Acoustics Center in Wolfsburg is focused on continuous optimization of all aspects of the powertrain, along with aerodynamic aspects and tire/road noise. For all vehicles of the Group, noise is a particularly important consideration when selecting original equipment tires.

To address the issue of traffic noise, the Volkswagen Group also goes a step further. In cooperation with Hamburger Lärmkontor GmbH (Germany), a noise level tool has been developed that evaluates noise reduction measures using noise modeling and mapping, and assesses the impact of such measures in terms of the numbers of people exposed to noise.

As demonstrated by the development of the noise level tool, which measures noise “immissions”, i.e. exposure, we are placing an important focus on how people are actually affected by noise. This is also illustrated by our ongoing dialogue with representatives of local authorities, that is to say those who work with these issues on a practical, day-to-day basis. A good example of this is our collaboration with the City of Wolfsburg, where noise reduction measures in 2013 included paving a city-center street with low-noise asphalt, which has substantially reduced noise levels for local residents.

The overall aim of the Group’s activities in the field of traffic noise is to gain a better understanding of the contribution of the car to traffic noise, as an objective yardstick for deciding which tasks should in future be the responsibility of automakers, like ourselves, and which tasks require a more broadly focused approach, involving dialogue with other stakeholders.

## Fuel-saver training helps drivers cut consumption by as much as 25%.

### More Fuel-Efficient Driving

For many years the Volkswagen brand and the German Nature and Biodiversity Conservation Union (NABU) have been organizing free-of-charge fuel-saver training courses throughout Germany under the motto “drive smart – save fuel”. The training is provided by local NABU teams, Volkswagen dealerships and a professional team of “Volkswagen driving experience” instructors. The course participants drive an identical route on public roads twice, once using their normal driving style and once with instructor guidance. Data from the two trips is interpreted and compared by a special on-board trip analyzer. Finally, at the end of the course, the participants are given a brochure with fuel-saver tips to take away with them. These courses enable drivers to take responsibility at the personal level for greener mobility. Drivers who have mastered the basic principles of a smart driving style can cut their fuel consumption by up to 25%, thereby reducing their carbon footprint and at the same time saving themselves money. Empirical monitoring of the training has shown that drivers are able to reduce their fuel consumption by an average of 13%. A fuel-efficient driving style also contributes to reductions in air pollution and noise emissions and makes for greater road safety. The Volkswagen brand supports the fuel-saver training courses by supplying vehicles and instructors free of charge. In 2013, approximately 300 drivers took part in these courses throughout Germany.

## Fleet Management

Fleet customers of Volkswagen Leasing who lease an eco-friendly Volkswagen Group vehicle with CO<sub>2</sub> emissions of less than 130 g/km automatically participate in the “Environmental Program for Sustainable Fleet Management”, organized by Volkswagen Leasing and the German Nature and Biodiversity Conservation Union (NABU). For each model leased, Volkswagen Leasing and the relevant Group brand make a donation to NABU, which the organization channels into conservation and climate projects. Since this cooperation began, the population of particularly eco-friendly cars in the Volkswagen Leasing portfolio has risen to 283,859 vehicles (per December 2013). Moreover, the past 4.5 years brought a 14% reduction in the average CO<sub>2</sub> emissions of all vehicle deliveries to Volkswagen Leasing’s major customers.

Further ways in which Volkswagen Leasing can help its customers make their fleet management operations more eco-friendly include advising them on a green company car policy which as well as covering eligibility also defines user groups and benchmark vehicles, specification levels, model configuration options and vehicle make.

The Environmental Program also includes ECO driver training, where participants learn how to save fuel and costs by changing their driving style. A brochure with eco-friendly driving tips is also available online. Following the successful introduction of this program in Germany, Volkswagen Financial Services plans to roll it out in other markets as well. [67](#)

## “GREEN FLEET” AWARD

In 2010, Volkswagen Financial Services and NABU created the annual “Green Fleet Award” for fleet customers. The awards for ecologically responsible fleet management are presented in three categories:

- > “Highest proportion of eco-friendly Volkswagen Group vehicles”
- > “Highest proportion of alternative Volkswagen Group powertrain technologies” and
- > “Fleet with the lowest average CO<sub>2</sub> emissions”.

89 fleet customers competed for the 2013 awards, which were presented at the IAA Frankfurt Motor Show in September 2013. Awards went to companies whose fleets (comprising at least ten vehicles from Volkswagen Group brands) made a significant contribution to reduced CO<sub>2</sub> emissions by the use of state-of-the-art vehicle technologies and innovative fleet solutions.

## Traffic and Transport Initiatives at the Plants

As part of our CO<sub>2</sub> emissions monitoring, we also monitor emissions from employee commuting. We disclose these emissions in our Scope 3 inventory (see page 133), while at the same time working on initiatives to reduce them. For example at the Wolfsburg site, the Volkswagen brand teamed up with the City of Wolfsburg,



Presentation of the “Green Fleet Award” 2013.

Wolfsburg AG and Autostadt in the “Transport Task Force”, whose aim is to improve traffic flow in the vicinity of the site. Since February 2012, representatives of the different departments and external partners have been meeting on an ongoing basis to identify and initiate appropriate traffic measures. Again the focus is not just on the car alone but on an intelligent mix of different transport modes. A variety of measures have been successfully implemented in the meantime. For example on public transport routes serving the plant additional buses have been laid on and timetables have been extended; an exit and entry lane on the A 39 motorway was widened; and several thousand parking spaces were created around the Wolfsburg plant. At the same time employees are being offered a special bus and rail pass for travel on services of the Braunschweig Transport Association.

As in previous years, in 2013 the Volkswagen brand again supported the Germany-wide “Stadtradeln” cycling campaign organized by the Klima-Bündnis alliance for climate protection, while in the USA, Volkswagen of America continued its sponsoring of the People for Bikes cycling lobby. Support for cycling is also the key pillar in the international sponsorship strategy of ŠKODA, which started out as a cycle manufacturer in 1895.

Individual sites and brands of the Volkswagen Group encourage their employees to use bikes for short trips. In Uitenhage (South Africa) office workers too can now often be seen using bikes rather than their company cars to get around the site. And in the UK, Bentley’s “Green Travel” program includes a bike-to-work scheme. Approximately 10% of the Bentley plant’s workforce commute by bike, far higher than the average for the United Kingdom.



# Strategy Economy People Environment Indicators

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Ongoing measurement and evaluation of our sustainability performance is critical to achieving our goals. The Volkswagen Group's sustainability indicators document progress in all three dimensions: economy, people and environment. For the second time we also include indirect CO<sub>2</sub> emissions in our reporting in line with Scope 3 of the Greenhouse Gas Protocol.

## PRODUCTION-RELATED ENVIRONMENTAL PROTECTION

REDUCTION PER VEHICLE MANUFACTURED  
COMPARED WITH 2010



**-13.8%**

WASTE  
FOR DISPOSAL



**-19.5%**

CO<sub>2</sub> EMISSIONS



**-12.5%**

ENERGY  
CONSUMPTION

# Our indicators

**SCOPE 3  
EMISSIONS**

---

measured and reported for the  
second time in line with the  
Greenhouse Gas Protocol

**76%**

**OF CO<sub>2</sub> EMISSIONS**

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in the upstream and downstream stages  
of the value chain are accounted for by  
the use phase of the vehicle

**17,703**

---

apprentices,  
Group-wide

**+2.2%**

---

rise in sales revenue  
in 2013

**15.5%**

**PROPORTION OF WOMEN, GROUP-WIDE**

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show  
responsibility.

# VOLKSWAGEN COMMUNITY TRUST

Working together for the community

For the Volkswagen Group it is a fundamental conviction that everything we do should also create value for society as a whole. This belief drives us, together with our employees, to initiate and support social projects across all the continents of the world. The work of the Volkswagen Community Trust in South Africa shows how both sides benefit.

The Volkswagen plant in Uitenhage (South Africa) was built during the apartheid era. Today some 4,500 employees work here, building the Polo, Polo Vivo and Polo Stufe models as well as Vivo engines. The Volkswagen Group's presence in South Africa also includes the MAN plants at Pinetown and Olifantsfontein, producing trucks and bus chassis as well as city and intercity buses.



**High unemployment**, extreme poverty, the constant threat of violence: for many in Kabah, a majority-black township in the KwaLanga district of Uitenhage, South Africa, life is all about doing without. For young people growing up here the concept of a carefree childhood is a distant dream. And with a lack of suitable teaching resources and qualified staff, state schools cannot create a stimulating learning environment either.

So for this neighborhood the Ikhwezi Lomso Early Childhood Center is much more than a little “morning star” – which is what “Ikhwezi Lomso” means. This center, built in 2011 with funding from the Volkswagen Community Trust and donations from the Volkswagen workforce in South Africa, is making good education possible, opening up prospects for a brighter future ahead.

Around 100 five- and six-year-old children are prepared for starting school here by qualified teachers. Age-appropriate learning materials are used to develop memory and cognition skills. A soup kitchen provides for their physical welfare, and specialists are regularly on hand to provide psychological and medical support. The center also stays open after school hours for younger children from the district to attend the regular reading club. “Our goal is to stimulate the children’s curiosity and develop their sensory perception skills”, explains Vernon Naidoo, Manager of the Volkswagen Community Trust in Uitenhage, adding that: “We want to boost their emotional intelligence and their self-belief, so that they’re really well prepared for starting school.”

**Education is the solution** for many of South Africa’s social problems and the key to building the country’s economic prosperity. The earlier this education starts the more lasting its effect. Which is why supporting education – especially for preschoolers – is a priority for the Volkswagen Community Trust (VWCT). This charitable foundation spent around 80% of its total funding budget of ZAR 5 million (around €360,000) on education in 2012. Just keeping the Ikhwezi Lomso center running for a year accounted for nearly ZAR 1 million. Yet simply providing the building was not enough to guarantee a positive impact on the development of the wider community. “We want to establish proper management structures to safeguard the future of our center”, explains Naidoo. He is working closely with the local authorities to achieve this end.

The Volkswagen Community Trust – which was also founded back in the apartheid era, in the face of significant opposition – has initiated and carried out more than 300 projects to date. The guiding principle in all cases is helping people to help themselves. The workforce and management of the Volkswagen plant in Uitenhage, along with representatives of the unions and the authorities in nearby communities, work together to decide which projects will be supported. The key factor here is whether the proposed project will help the community as a whole. This process leads to cooperation with different types of organization – authorities, schools, churches and NGOs.

Working together for the community is an integral component of the Volkswagen culture – in South Africa as in other locations worldwide. The desire to give something back to society has been taken on board by employees across the Group – as is clearly evidenced by the enduring success of international workforce-led initiatives. One example is “A Chance to Play”, the campaign launched in 2008 in the run-up to the football World Cup in South Africa. Sports facilities and regular training sessions were provided in conjunction with the charity “terre des hommes” – reaching out to more than 50,000 children. Now this campaign, renamed “A Chance to Play – O direito de brincar”, has been carried over to the next World Cup in Brazil. A total of 14 projects have been launched – among them a crèche and anti-violence training in disadvantaged neighborhoods.

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**80% of the Volkswagen Community Trust’s funding budget is invested in educational projects for children and adolescents.**

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**Yet this social commitment** also takes the form of active participation in social and ecological projects – volunteering is a core element of the Volkswagen Group ethos. A survey conducted in 2010 in the provinces of Eastern Cape and Gauteng showed that 83% of Volkswagen South Africa employees were “not afraid to get their hands dirty” in community service work. This strong desire to get involved led to the creation of the employee volunteering program “Great Show of Hands”. Founded in 2011, this initiative is today an established long-term volunteer program. To date over 1,000 employees have been involved in the redecoration, maintenance or renovation of primary schools, a children’s hospital, a home for the disabled and many other facilities belonging to non-profit organizations.

A prime example here is the work undertaken by Volkswagen employees in South Africa on behalf of Nonkqubela Pre-Primary School in KwaNobuhle, Uitenhage. As part of “Great Show of Hands”, this team of volunteers laid 1,000 m<sup>2</sup> of lawn, planted 70 trees, created a playground and installed water tanks – all in the space of a few hours. All the necessary materials were provided by the Community Trust. “Many of our employees are also keen to get involved as trainers for sports activities”, says trust manager Naidoo. No doubt their enthusiasm is further boosted by the public recognition accorded to the engagement of Volkswagen employees. In its 2013 “Drivers of Change” competition, the Southern Africa Trust named “Great Show of Hands” among the finalists in the Corporate Volunteering category.



1 – The Ikhwezi Lomso Early Childhood Center gives many children the chance of an education.

2 – The earlier education at the Center starts, the more lasting its effect.

3 – Vernon Naidoo, Manager of the Volkswagen Community Trust in Uitenhage.

# MEASURE. MANAGE. IMPROVE.

**Transparency with regard to environmental and social performance and sustainable governance is fundamental to any form of management, and society expects as much from companies. With its Strategy 2018 the Volkswagen Group is pursuing clear goals. Ongoing measurement and evaluation is critical to achieving these goals.**

## OUR APPROACH

The principles of sustainability management in the Volkswagen Group are described in the Strategy chapter of this report (see page 18), along with our goals and actions in pursuit of continuous improvement. Further details on the goals and actions can be found at the end of this chapter (see page 139). In recent years we have focused on establishing uniform standards and procedures at all Group brands. This process is not quite complete. An overview of the principles, agreements and procedures that apply across the Group is provided by the table on page 123. These lay the foundations for a common Group-wide understanding of sustainability and for measuring, managing and improving our sustainability performance.

### Management by Key Indicators

In order to manage its sustainability performance, the Volkswagen Group records 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). We know that our shareholders and investors are increasingly also asking about our ESG performance, which is why we are providing the following overview of our economic, environmental and social performance in quantitative terms.

**Measurement of Scope 3 emissions in line with the Greenhouse Gas Protocol continued.**

### Changes to Methodology and Measurement Methods

The indicators presented are a continuation of those from previous years. There have been no changes in reporting and measurement methods. The Group has, however, grown by a further six production facilities over the past year and consequently seen the workforce grow by over 20,000 employees. We state which units each of the individual indicators relates to and will in the coming years endeavor to include all sites and companies. As for measurement methods, our last report was the first time emissions had been reported according to Scope 3 of the Greenhouse Gas (GHG) protocol, something we have continued in this report. This puts us ahead of the field in our sector.

### Frame of Reference

The indicators invariably relate to the entire Group and include companies in which our equity interest exceeds 50%. For our joint ventures in China, we report HR (social) indicators “at equity”, in other words 50%, but include 100% of the environmentally relevant data. However, due to differing definitions or recording methods, it is not yet possible in all areas to consolidate data reported by the brands and regions, which means that there are still numerous exceptions. We point these exceptions out and indicate precisely which units the data relate to. In the coming years, we will endeavor to provide uniform data collection for all sites and companies.

**Stakeholder Engagement Standard AA1000 targets the systematic consideration of stakeholder interests.**

### Auditing and Standards

The Volkswagen Group Sustainability Report 2013 has been audited by PricewaterhouseCoopers AG Wirtschaftsprüfungsgesellschaft (PwC) taking account of the Stakeholder Engagement Standard AccountAbility 1000 (AA1000AS) 2008 and with complementary consideration of the International Standard on Assurance Engagements (ISAE) 3000. In the course of their assurance engagement, PwC carried out the following activities: interviews with management; interviews with employees responsible for reporting sustainability information; recording the processes used to acquire, calculate and report sustainability information. The quantitative data for the 2013 reporting year that were audited by PwC are marked in the Indicators chapter with the following symbol: ✓

Further information can be found in the Independent Assurance Report on page 150.

### Further Reporting within the Group

More detailed insight into our environmental management is provided by the Environmental Statements which numerous sites compile as part of their voluntary participation in the European EMAS (Eco-Management and Audit Scheme) system.

The sustainability reports of the Audi, MAN, Scania and ŠKODA brands are also indicative of the Group's commitment to sustainability. This year Porsche will also issue a sustainability report in line with GRI standards.

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

	Introduced	Coverage 2013
<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 2009 to 2013 period. The indica-

tors for the 2013 calendar year which have been audited by PricewaterhouseCoopers in the context of the 2013 Annual Report of Volkswagen AG (Management Report) are marked with the following symbol ✓.

VOLUME DATA ✓<sup>1</sup>

in thousands

	2013	2012 <sup>2</sup>	2011	2010	2009
<b>Vehicle sales (units)</b>	<b>9,728</b>	<b>9,345</b>	<b>8,361</b>	<b>7,278</b>	<b>6,310</b>
Germany	1,187	1,207	1,211	1,059	1,288
Abroad	8,541	8,137	7,150	6,219	5,022
<b>Production (units)</b>	<b>9,728</b>	<b>9,255</b>	<b>8,494</b>	<b>7,358</b>	<b>6,055</b>
Germany	2,458	2,321	2,640	2,115	1,938
Abroad	7,270	6,934	5,854	5,243	4,117
<b>Employees (yearly average)</b>	<b>563</b>	<b>533</b>	<b>454</b>	<b>389</b>	<b>367</b>
Germany	255	237	196	178	173
Abroad	308	296	258	210	194

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

<sup>2</sup> Prior-year figures adjusted to reflect application of IAS 19R.

FINANCIAL DATA ✓<sup>1</sup>

in million €

Volkswagen Group	2013	2012 <sup>2</sup>	2011	2010	2009
Sales revenue	197,007	192,676	159,337	126,875	105,187
Operating profit	11,671	11,498	11,271	7,141	1,855
Profit before tax	12,428	25,487	18,926	8,994	1,261
Profit after tax	9,145	21,881	15,799	7,226	911
Profit attributable to Volkswagen AG shareholders	9,066	21,712	15,409	6,835	960
Cost of materials	127,089	122,450	104,648	79,394	67,925
Personnel expenses	31,747	29,504	23,854	19,027	16,027
Pension provisions	21,774	23,939	16,787	15,432	13,936
<b>Autotive Division<sup>3</sup></b>					
Cash flows from operating activities <sup>4</sup>	20,612	16,232	17,109	13,930	12,815
Cash flows from investing activities attributable to operating activities <sup>5</sup>	16,199	16,455	15,998	9,095	10,252
Net liquidity at Dec. 31	16,869	10,573	16,951	18,639	10,636

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

<sup>2</sup> Prior-year adjusted to reflect application of IAS 19R.

<sup>3</sup> Including allocation of consolidation adjustments between the Automotive and Financial Services divisions.

<sup>4</sup> Before consolidation of intragroup transactions: €21,270 million (€17,029 million).

<sup>5</sup> Excluding acquisition and disposal of equity investments: €14,497 million (€12,528 million).

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

in million €

Source of funds	2013	2012 <sup>2</sup>	2011	2010	2009
Sales revenue	197,007	192,676	159,337	126,875	105,187
Other income	13,994	24,642	13,125	10,787	9,401
Cost of materials	-127,089	-122,450	-104,648	-79,394	-67,925
Depreciation and amortization	-14,686	-13,135	-10,346	-10,097	-8,877
Other upfront expenditures	-21,027	-22,070	-9,759	-15,250	-15,767
<b>Value added</b>	<b>48,198</b>	<b>59,663</b>	<b>47,709</b>	<b>32,922</b>	<b>22,019</b>

Appropriation of funds in € million	2013	%	2012 <sup>2</sup>	%	2011	%	2010	%	2009	%
to shareholders (dividend)	1,871	3.9	1,639	2.8	1,406	2.9	1,034	3.1	647	2.9
to employees (wages, salaries, benefits)	31,747	65.9	29,504	49.5	23,854	50.0	19,027	57.8	16,027	72.8
to the state (taxes, duties)	3,865	8.0	4,322	7.2	4,525	9.5	3,105	9.5	1,152	5.2
to creditors (interest expense)	3,442	7.1	3,957	6.6	3,530	7.4	3,563	10.8	3,928	17.8
to the Company (reserves)	7,274	15.1	20,242	33.9	14,393	30.2	6,193	18.8	265	1.2
<b>Value added</b>	<b>48,198</b>		<b>59,663</b>		<b>47,709</b>		<b>32,922</b>		<b>22,019</b>	

<sup>1</sup> These figures were audited by PricewaterhouseCoopers in the context of the 2013 Annual Report of Volkswagen AG (Management Report).<sup>2</sup> Prior-year adjusted to reflect application of IAS 19R.**KEY FIGURES BY BRAND AND BUSINESS FIELD** <sup>1</sup> <sup>2</sup>

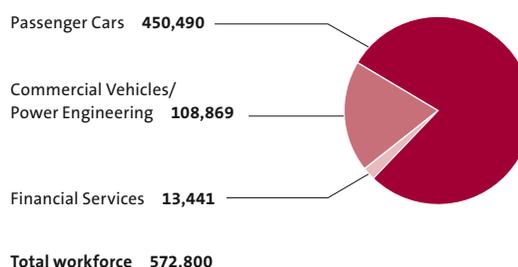
Thousand vehicles/€ million	Vehicle sales		Sales revenue		Sales to third parties		Operating profit	
	2013	2012	2013	2012	2013	2012	2013	2012 <sup>3</sup>
Volkswagen Passenger Cars	4,704	4,850	99,397	103,942	71,426	77,110	2,894	3,643
Audi	1,349	1,299	49,880	48,771	34,560	33,461	5,030	5,365
ŠKODA	719	727	10,324	10,438	5,379	5,633	522	712
SEAT	459	429	6,874	6,485	3,044	2,785	-152	-156
Bentley	11	9	1,679	1,453	1,122	1,274	168	100
Porsche <sup>4</sup>	155	62	14,326	5,879	13,175	5,442	2,579	943
Volkswagen Commercial Vehicles	436	437	9,370	9,450	4,651	4,920	448	421
Scania <sup>4</sup>	80	67	10,360	9,314	10,360	9,314	974	930
MAN <sup>4</sup>	140	134	15,861	15,999	15,744	15,900	319	813
Volkswagen China <sup>5</sup>	3,038	2,609	-	-	-	-	-	-
Other	-1,364	-1,279	-40,047	-36,929	20,227	20,516	-2,725 <sup>6</sup>	-2,682 <sup>6</sup>
Volkswagen Financial Services	-	-	18,983	17,872	17,319	16,322	1,614	1,408
<b>Volkswagen Group</b>	<b>9,728</b>	<b>9,345</b>	<b>197,007</b>	<b>192,676</b>	<b>197,007</b>	<b>192,676</b>	<b>11,671</b>	<b>11,498</b>
Automotive Division	9,728	9,345	175,003	172,822	176,914	174,525	9,807	9,913
of which: Passenger Cars business area <sup>7</sup>	9,071	8,706	140,077	138,571	147,107	145,122	9,013	8,968
Commercial Vehicles/ Power Engineering business area <sup>7</sup>	657	639	34,927	34,251	29,808	29,403	794	945
Financial Services Division	-	-	22,004	19,854	20,093	18,151	1,863	1,585

<sup>1</sup> All figures shown are rounded, so minor discrepancies may arise from addition of these amounts.<sup>2</sup> These figures were audited by PricewaterhouseCoopers in the context of the 2013 Annual Report of Volkswagen AG (Management Report).<sup>3</sup> Prior-year figures adjusted to reflect application of IAS 19R.<sup>4</sup> Including financial services; Porsche as from August 1, 2012.<sup>5</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 €4,296 million (€3,678 million).<sup>6</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>7</sup> Volkswagen Commercial Vehicles has been reported within the Automotive Division under Commercial Vehicles since January 1, 2013; the prior-year figures have been adjusted.

## PERSONNEL INDICATORS

As at December 31, 2013 the Volkswagen Group, including the Chinese joint ventures, had 572,800 employees, 4.2% more than at the end of the 2012 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 unchanged over the past year: as at the end of 2012, 45.4% of employees worked in Germany on the balance-sheet date.

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



### TOTAL WORKFORCE OF THE VOLKSWAGEN GROUP

2013	572,800
2012	549,763
2011	501,956
2010	399,381
2009	368,500

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

	2013	2012	2011	2010	2009
Production workers	265,474	258,685	246,071	207,391	187,966
Non-production workers	289,623	274,364	240,864	181,445	170,688
Apprentices	17,703	16,714	15,021	10,545	9,846
<b>Total workforce</b>	<b>572,800</b>	<b>549,763</b>	<b>501,956</b>	<b>399,381</b>	<b>368,500</b>
of whom active employees	545,596	525,245	482,447	384,058	351,584
of whom in passive phased retirement	9,501	7,804	4,488	4,778	7,070

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

	2013	2012	2011	2010	2009
Europe	424,964	410,427	378,030	290,159	278,779
The Americas	61,796	63,193	58,072	54,571	48,529
Africa	6,356	6,461	6,602	6,546	5,608
Asia	78,672	68,704	58,540	47,607	35,123
Australia	1,012	978	712	498	461
<b>Total</b>	<b>572,800</b>	<b>549,763</b>	<b>501,956</b>	<b>399,381</b>	<b>368,500</b>
of whom temporary staff	17,419	24,914	28,342	21,119	12,396
of whom permanent staff	555,381	524,849	473,614	378,262	356,104

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

in %



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

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

in %

	2013	2012
Total apprentices	27.4	26.8
Industrial apprentices	21.4	20.9
Commercial apprentices	53.2	52.3
Students on "dual system" courses	31.4	31.3
Total management	9.8	9.3
University graduates recruited**	35.3	29.2

\* Excl. Scania, MAN and Porsche.  
\*\* Volkswagen AG.

One of the Company's goals is to continue to increase the proportion of women from 15.5% 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 7.9%

among senior management and 11.2% in management (at year end, excl. Scania, MAN and Porsche), while among top management, the proportion fell from 5.5% in 2012 to 4.8% in the reporting year (at year end, excl. Scania, MAN and Porsche).

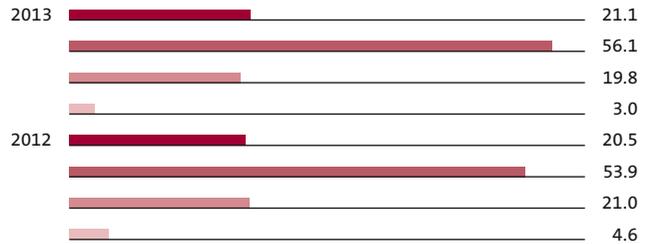
**APPRENTICES IN THE VOLKSWAGEN GROUP IN GERMANY** ✓

in %



**LEVEL OF QUALIFICATIONS IN THE VOLKSWAGEN GROUP IN GERMANY** ✓

in %



■ Higher education ■ Vocational education and training  
■ Secondary education ■ Other

\* Excl. Scania and 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 

	2013	2012	2011	2010	2009
Women	38.3	38.0	37.8	37.9	37.7
Men	43.7	43.4	43.1	43.2	43.1
<b>Total Volkswagen AG</b>	<b>42.9</b>	<b>42.6</b>	<b>42.3</b>	<b>42.4</b>	<b>42.2</b>

Since 2009, the average age at Volkswagen AG has been relatively constant, which is a sign of a healthy balance between recruitment

of employees on completion of their vocational education and training and retirement of long-serving employees.

## VOLKSWAGEN AG: EMPLOYEE TURNOVER (NEW FROM 2013: BY GENDER)\*

in %

	2013	2012	2011	2010	2009
<b>Total </b>	<b>0.4</b>	<b>0.4</b>	<b>0.4</b>	<b>0.5</b>	<b>0.4</b>
Women	0.3	0.2	0.4	0.4	0.3
Men	0.4	0.4	0.4	0.5	0.4

\* 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 graph shows,

there is a very high level of stability in Volkswagen's workforce.

VOLKSWAGEN AG: AVERAGE PERIOD OF EMPLOYMENT  
(NEW FROM 2013)

2013	19.0
2012	19.1
2011	19.0
2010	19.5
2009	19.8

ABSENTEEISM – CUMULATIVE VALUES\* 

in %

2013	3.3
2012	3.2
2011	3.4
2010	3.3
2009	2.5

\* Production sites from 1,000 employees excl. Scania, MAN, Ducati and Porsche.

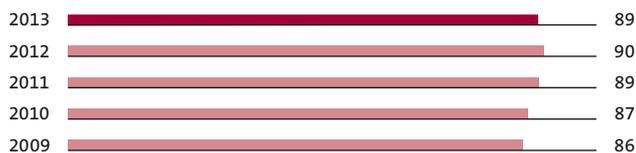
Low absenteeism calls for increased availability of diagnostic and screening measures. Absenteeism is calculated using the formula: number of days lost due to illness or accident multiplied by 100, divided by total possible days' attendance in the relevant period.

**VOLKSWAGEN AG: PARENTAL LEAVE (NEW FROM 2013)**

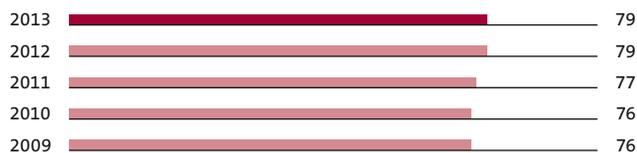
	2013	2012	2011	2010	2009
Total	1,822	1,586	1,367	1,150	975
Women	537	472	406	351	367
Men	1,285	1,114	961	799	608

**EMPLOYEE OPINION SURVEY IN THE VOLKSWAGEN GROUP  
LEVEL OF PARTICIPATION**

in %



**EMPLOYEE OPINION SURVEY IN THE VOLKSWAGEN GROUP  
EMPLOYEE SATISFACTION INDEX**

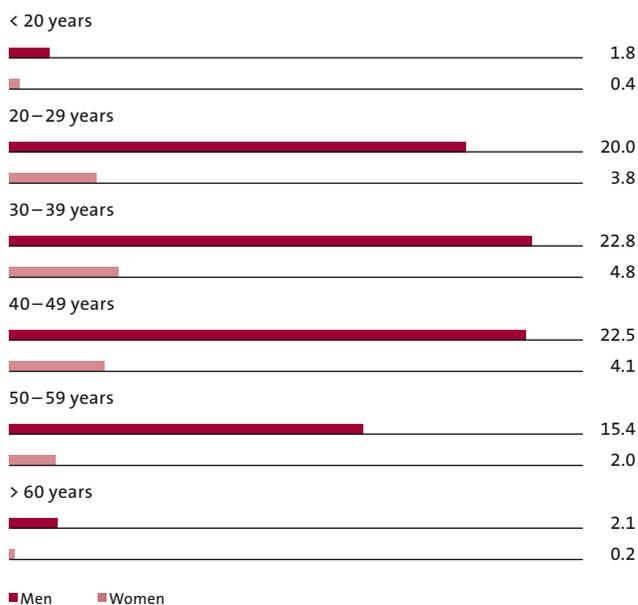


The annual employee opinion survey, introduced in 2008, is an established standardized Group-wide tool designed to assess employee satisfaction, eliminate errors and improve work pro-

cesses. Its acceptance and level of participation are at a constant high level.

**AGE STRUCTURE OF THE VOLKSWAGEN GROUP**

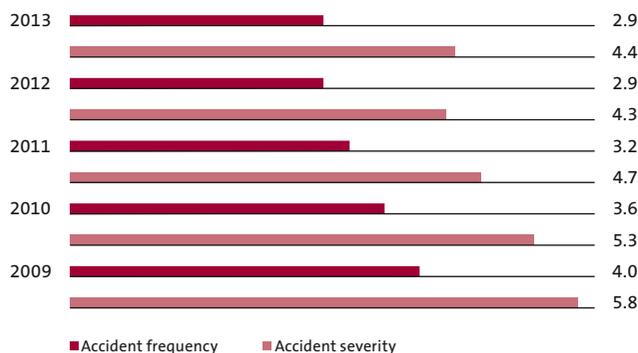
in %\*



\* Excl. Scania and MAN.

## INDICATORS AND GOALS

### ACCIDENT INDEXES GROUP\* ✓



### ACCIDENT SEVERITY GROUP\* ✓



\* Production sites excl. Scania and MAN, from 2013 incl. Porsche, coverage of production sites of other Group companies in 2013: 85.3%.

\* Production sites excl. Scania and MAN, from 2013 incl. Porsche, coverage of production sites of other Group companies in 2013: 85.3%.

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 has risen slightly. The accident frequency index has remained at the preceding year's low level. The severity of accidents in the Volkswagen Group has risen slightly for the first time since 2006. This is primarily attributable to the integration of new sites and companies. Since then, only one Volkswagen AG employee has died, in 2011, as the result of an occupational accident.

The greatest improvements in terms of accident frequency were achieved at Volkswagen Osnabrück, Audi Brussels, Volkswagen Commercial Vehicles in Hanover, Volkswagen Sachsen Chemnitz, Volkswagen AG Braunschweig and at Volkswagen Group Rus's Kaluga plant.

### APPRENTICES WITHIN THE VOLKSWAGEN GROUP

December 2013	Total	Germany	International
Volkswagen Passenger Cars	6,338	5,259	1,079
Audi	2,576	2,504	72
ŠKODA	867	8	859
Porsche	537	521	16
SEAT	166	0	166
Bentley	62	0	62
Others	2,060	1,159	901
<b>Automotive Division</b>	<b>12,606</b>	<b>9,451</b>	<b>3,155</b>
MAN	3,277	2,285	992
Scania	688	0	688
Volkswagen Commercial Vehicles	956	729	227
<b>Commercial Vehicles/Power Engineering Division</b>	<b>4,921</b>	<b>3,014</b>	<b>1,907</b>
Financial Services Division	176	146	30
<b>Group</b>	<b>17,703</b>	<b>12,611</b>	<b>5,092</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 sites in line with an internal standard (VW standard 98 000). In order to improve the accuracy and consistency of the resultant information, the recording 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 integration of new Group brands and sites into environmental data recording calls for adjustments to past data already reported. For instance, 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.

All in all, environmental data were collected from production sites with a workforce of around 467,000 (as at December 31, 2013). The 2013 figures include for the first time Ducati Motor Holding S.p.A. as a further brand, the Chinese production sites Volkswagen FAW Engine Co. Ltd. in Changchun and Volkswagen FAW Platform Company Ltd. in Chengdu and the new Silao plant in Mexico.

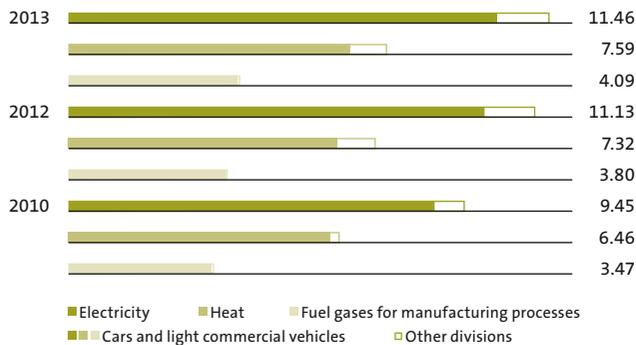
Production at the Foshan, Ningbo and Urumqi plants in China only started in late 2013 and these plants are not yet included in environmental data recording.

The data in the “car and light commercial vehicle” category for the years 2010, 2012 and 2013 are recorded as in the Volkswagen 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, both categories include all Group production sites and the power stations and boiler plants operated by Volkswagen AG at the Wolfsburg, Kassel and Hanover sites in Germany.

The Volkswagen Group is essentially an automobile manufacturer that produces cars and light commercial vehicles as well as heavy-duty commercial vehicles and buses. However, the addition of MAN SE has meant that marine engines and power station components are now also part of the product portfolio. The entirety of the environmental impact thus cannot simply be related to the number of vehicles produced. Relative key indicators are therefore recorded only for the “car and light commercial vehicle” category. The number of vehicles produced in 2013 totaled 9,503,783 cars and light commercial vehicles and 224,065 heavy-duty commercial vehicles.

#### ENERGY CONSUMPTION\* ✓

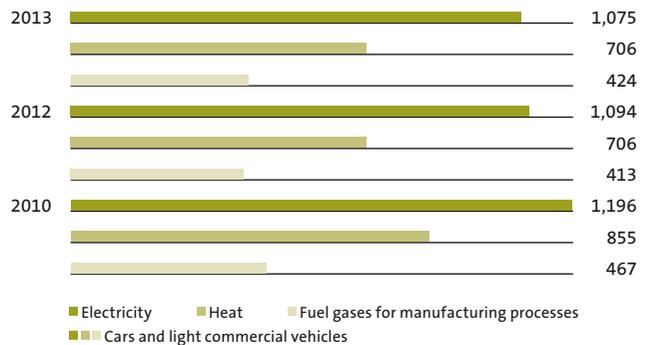
in million MWh/year



\* Group production sites.

#### ENERGY CONSUMPTION\* ✓

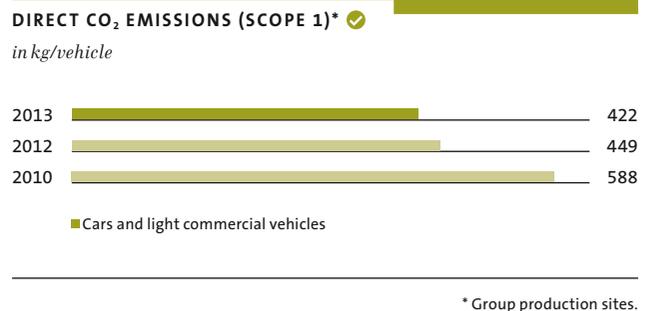
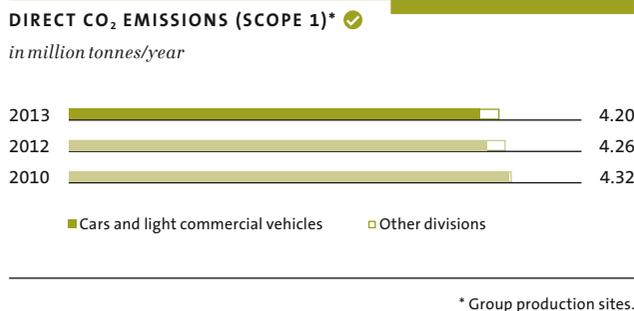
in kWh/vehicle



\* Group production sites.

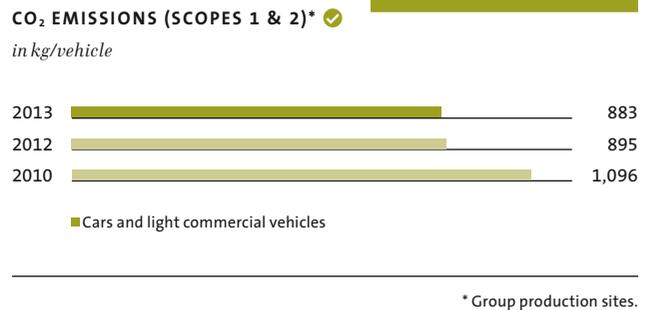
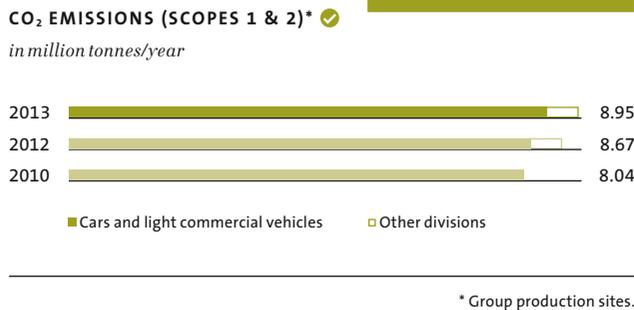
Increased consumption of electricity and heat and of fuel gases for manufacturing processes is associated with the continuous increase in production over the reporting period. Consumption of

space heat and industrial heat is subject to variation due to climatic and manufacturing conditions.



Despite increased production volumes and the inclusion of new production sites, with a consequent increase in energy consumption, direct CO<sub>2</sub> emissions (Scope 1) have been falling

since 2010. Resource-optimized manufacturing processes and efficient power generation plants have played a part in this.



Increased consumption of electrical energy, heat and fuel gases led to a rise in total – direct and indirect – CO<sub>2</sub> emissions. However, the increase was restricted by the growing use of energy from

renewable resources. Over the full reporting period, CO<sub>2</sub> emissions per vehicle manufactured were reduced.

**DEFINITIONS: SCOPE 1, 2 AND 3**

Scope 1: Greenhouse gas emissions in CO<sub>2</sub> equivalents from sources directly attributable to the Company (also known as direct emissions): primary energy consumption by Company-owned plant and equipment for manufacturing and energy generation, fuel consumption by Company-owned vehicles, as well as other possible sources such as own landfills and wastewater treatment plants.

Scope 2: Greenhouse gas emissions in CO<sub>2</sub> equivalents created during the generation of purchased energy (electricity, heat or steam).

Scope 3: Greenhouse gas emissions in CO<sub>2</sub> equivalents from sources not directly belonging to but closely associated with the Company, such as employee commuting, emissions generated during the use phase of products or upstream, for instance during the extraction of raw materials or transport-related activities.

**GROUP GHG EMISSIONS (SCOPE 3) (CARS AND LIGHT COMMERCIAL VEHICLES)**

No.	Category	2012 <sup>2</sup>		2013 <sup>2</sup>	
		tonnes CO <sub>2</sub>	%	tonnes CO <sub>2</sub>	%
1	Purchased goods and services ✓	54,871,485	16.9	56,435,510	17.6
2	Capital goods	8,866,872	2.7	10,018,369	3.1
3	Fuel/energy	1,234,636	0.4	1,338,497	0.4
4	Upstream transportation and distribution	3,341,432	1.0	3,341,432 <sup>1</sup>	1.0
5	Waste generated in operations	1,783,630	0.6	1,943,160	0.6
6	Business travel	593,744	0.2	618,624	0.2
7	Employee commuting	846,358	0.3	881,823	0.3
8	Upstream leased assets	Not reported	0.0	Not reported	0.0
9	Downstream transportation and distribution	Not reported	0.0	Not reported	0.0
10	Processing of sold products	5,223	0.002	6,926	0.002
11	Use phase (150,000 km) <sup>3</sup> ✓	250,481,613	77.0	243,015,544	75.6
12	End-of-life treatment	1,355,869	0.4	1,375,646	0.4
13	Downstream leased assets	565,000	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>325,495,862</b>	<b>100</b>	<b>321,272,063</b>	<b>100</b>

<sup>1</sup> 2012 value – the 2013 value will be used for 2014 CDP reporting.

<sup>2</sup> Individual figures are rounded. This can lead to minor discrepancies in the sum total.

<sup>3</sup> Well-to-wheel.

In line with the Scope 3 standard published by the World Business Council for Sustainable Development and the World Resources Institute in 2011, Volkswagen is reporting 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. Calculation of the CO<sub>2</sub> emissions for the use phase is based on a Group fleet value representing the global vehicle population in the four major regions (EU28, USA, Brazil, China).

In view of the relevance of the two above-named 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 FROM THE VOLKSWAGEN GROUP'S EUROPEAN (EU28) NEW CAR FLEET\* ✓**

in g/km

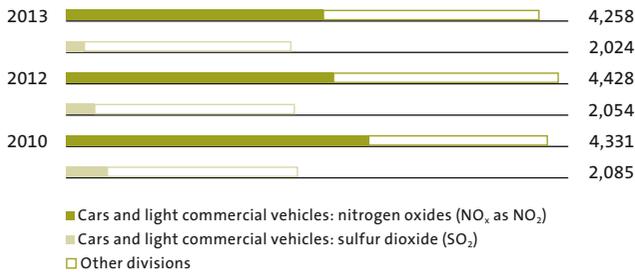
2013	128
2012	134
2011	137
2010	144
2009	151

\* 2013 basis: EU28 including Croatia from July 1, 2013.

INDICATORS AND GOALS

**DIRECT NO<sub>x</sub> AND SO<sub>2</sub> EMISSIONS\*** ✓

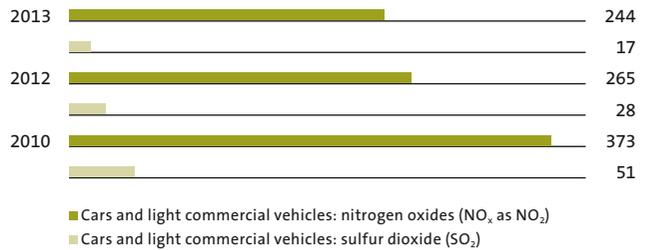
in tonnes/year



\* Group production sites.

**DIRECT NO<sub>x</sub> AND SO<sub>2</sub> EMISSIONS\*** ✓

in g/vehicle

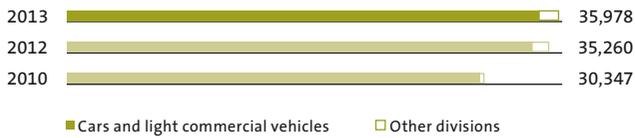


\* Group production sites.

There was a downwards trend in emissions over the 2010 to 2013 period, this decline also occurring in the specific values per vehicle.

**VOC EMISSIONS\*** ✓

in tonnes/year



\* Group production sites.

**VOC EMISSIONS\*** ✓

in kg/vehicle



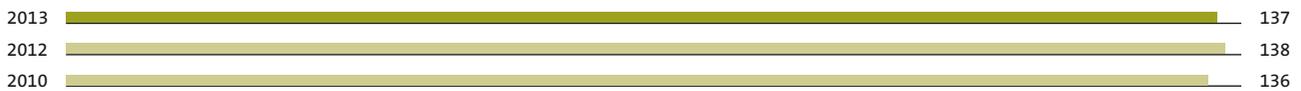
\* Group production sites.

Increased vehicle production is also associated with higher paint consumption, leading to an increase in VOC emissions in

absolute terms. Modern coating processes did, however, assist in reducing specific emissions per vehicle produced.

**VOLKSWAGEN AG GERMANY PARTICULATE EMISSIONS (TOTAL DUST)**

in tonnes/year



**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>** ✓

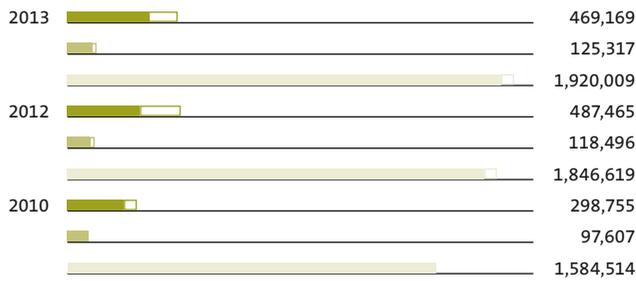
in kg/vehicle



- 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>** ✓

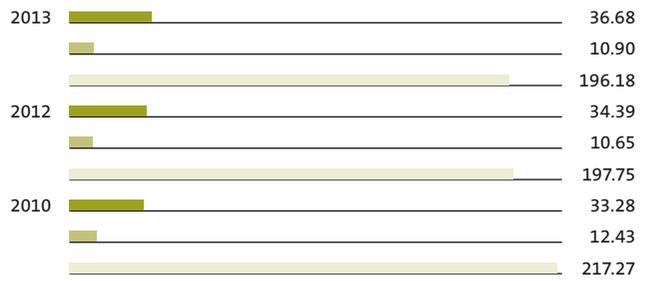
in tonnes/year



- 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

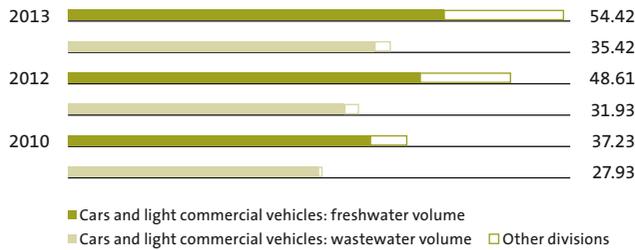
<sup>1</sup> In the bars showing "Non-hazardous waste for recycling", as well as "Hazardous waste for recycling" and "Metallic waste", the share accounted for by other Group divisions is shown. This is not depicted separately for the other fractions, however, on account of the low proportions.  
<sup>2</sup> Group production sites

The volume 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 across the Volkswagen Group and the introduction of new models. In specific terms, however, the volume of this kind of waste per vehicle has fallen due to improved material utilization and resource-optimized manufacturing processes.

The recycling rate for non-hazardous and hazardous waste has undergone continuous improvement to around 70% over the reporting period. This also had a positive impact on the volume of waste for disposal per vehicle.

**FRESHWATER AND WASTEWATER\*** ✓

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

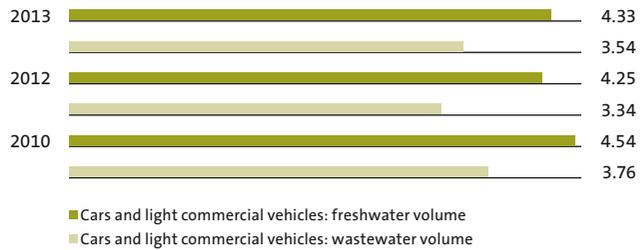


\* Group production sites.

Due to the increase in production volumes at new and existing production sites, both water consumption and wastewater volumes have risen.

**FRESHWATER AND WASTEWATER\*** ✓

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

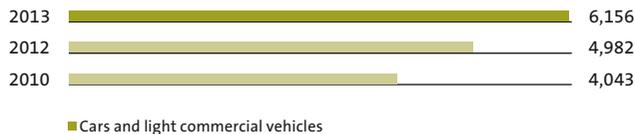


\* Group production sites.

Values per vehicle rose slightly in the reporting year 2013.

**CHEMICAL OXYGEN DEMAND (COD)\*** ✓

in tonnes/year



\* 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. A distinction is drawn between sites which, as indirect dischargers, discharge wastewater into municipal sewers for further purification, and those sites which, as direct dischargers, operate an in-house waste-

**CHEMICAL OXYGEN DEMAND (COD)\*** ✓

in g/vehicle

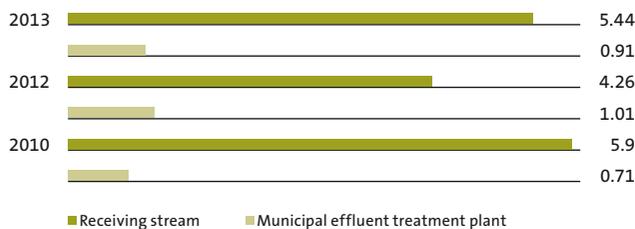


\* Group production sites.

water treatment plant and discharge the purified wastewater directly into a body of water. In the reporting year 2013, indirectly discharging sites accounted for 92% (2010: 91%; 2012: 90%) of the Group's total wastewater volumes (excluding MAN and Scania).

**WASTEWATER DISCHARGES**

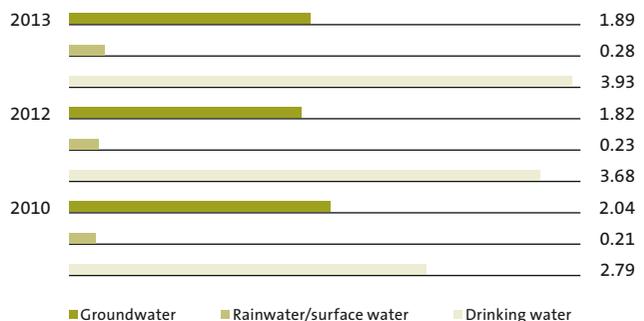
in million m<sup>3</sup>/year



Figures for sites of Volkswagen AG, Volkswagen Sachsen GmbH, Volkswagen Osnabrück GmbH (since 2012).

**WATER WITHDRAWAL BY SOURCE**

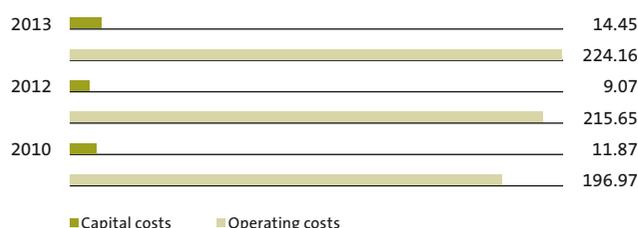
in million m<sup>3</sup>/year



Figures for sites of Volkswagen AG, Volkswagen Sachsen GmbH, Volkswagen Osnabrück GmbH (since 2012).

**ENVIRONMENTAL PROTECTION COSTS\*** ✓

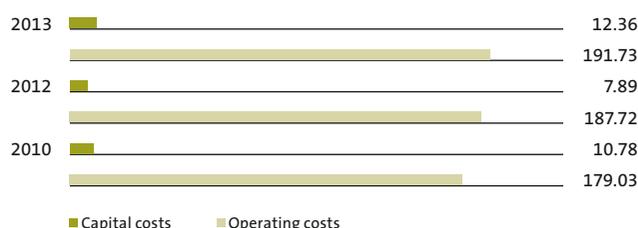
in € million/year



\* German production sites Volkswagen AG.

**ENVIRONMENTAL PROTECTION COSTS\*** ✓

in €/vehicle



\* German production sites Volkswagen AG

The environmental protection costs of Volkswagen AG's German sites 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 vehicle produced.

**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	Vrchlabi, 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): Fuldata	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	Győr, 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 plants stated here are the Volkswagen brand's production sites 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).

INDICATORS AND GOALS

CONSUMPTION AND EMISSION DATA

Model	Output kW (PS)	Fuel consumption (l/100 km)			CO <sub>2</sub> emissions (g/km)
		urban	extra-urban	combined	combined
Audi A3 1.6 TDI ultra	81 (110)	3.8	3.0	3.2	85
Audi A3 sportback 2.0l TDI	110 (150)	5.0	3.7	4.2	108
Audi A3 sportback g-tron	81 (110)	4.4–4.1 kg	2.7 kg	3.3–3.2 kg	92–88
SEAT Leon 1.6 TDI CR 110 CV Ecomotive	77 (105)	5.1	3.7	4.2	85
SEAT Mii 1.0 MPI Ecofuel Ecomotive	50 (68)	5.5 m <sup>3</sup> (3.6 kg)	3.8 m <sup>3</sup> (2.5 kg)	4.4 m <sup>3</sup> (2.9 kg)	79
ŠKODA Fabia Greenline 1.2l TDI Combi	55 (75)	4.1	3.0	3.4	88
ŠKODA Citigo CNG	50 (68)	5.5 m <sup>3</sup> (3.6 kg)	3.8 m <sup>3</sup> (2.5 kg)	4.4 m <sup>3</sup> (2.9 kg)	79
Volkswagen Caddy 1.6l TDI	75 (102)	5.4	4.1	4.6	119
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 TGI Blue motion 1.4l	81 (110)	6.8 m <sup>3</sup> (4.5 kg)– 6.7 m <sup>3</sup> (4.4 kg)	4.4 m <sup>3</sup> (2.9 kg)– 4.3 m <sup>3</sup> (2.8 kg)	5.3 m <sup>3</sup> (3.5 kg)– 5.2 m <sup>3</sup> (3.4 kg)	94–92
Volkswagen Golf TDI Blue motion 1.6l	81 (110)	3.8	3.0	3.2	85
Volkswagen Jetta Hybrid	110 (150)	4.4	3.9	4.1	95
Volkswagen Passat Estate 2.0l TDI	103 (140)	5.6	4.0	4.6	120
Volkswagen Tiguan 2.0l TDI	103 (140)	6.2	4.7	5.3	138
Volkswagen Touran 1.4 TSI EcoFuel (CNG)	110 (150)	9.5 m <sup>3</sup> (6.2 kg)	5.8 m <sup>3</sup> (3.8 kg)	7.2 m <sup>3</sup> (4.7 kg)	128
Volkswagen Touareg V6 TSI Hybrid	279 (380)	8.7	7.9	8.2	193
Volkswagen up! 1.0l	44 (66)	5.0	3.6	4.1	95
Volkswagen up! 1.0l	55 (75)	5.1	3.7	4.2	98

Model	Fuel consumption (l/100 km)	CO <sub>2</sub> emissions (g/km)	Model	Fuel consumption (l/100 km)	CO <sub>2</sub> emissions (g/km)
	combined	combined		combined	combined
Audi A3 e-tron	1.5	35	Volkswagen Caddy EcoFuel	8.7 m <sup>3</sup> (5.7 kg)	156
Audi A6 ultra	4.6–4.4	119–114	Volkswagen Caddy Maxi EcoFuel	8.8 m <sup>3</sup> (5.8 kg)	157
Bentley Flying Spur	14.7	343	Volkswagen eco up!	4.4 m <sup>3</sup> (2.9 kg)	79
Bugatti Veyron	24.9	596	Volkswagen Golf GTE Plug-in-Hybrid	1.5	35
Lamborghini Aventador	16.0	370	Volkswagen Golf Sportsvan	5.6–4.9	130–114
Porsche Boxster/Cayman	9.0–7.9	211–183	Volkswagen e-Golf	12.7 kWh	0
Porsche Panamera S E-Hybrid	3.1	71	Volkswagen e-up!	11.7 kWh	0
Porsche 918 Spyder	3.1	71	Volkswagen Passat TSI EcoFuel	6.7 m <sup>3</sup> (4.5 kg–4.4 kg)	123
ŠKODA Octavia Combi	6.7–3.8	156–99	Volkswagen Passat Estate TSI EcoFuel	6.7 m <sup>3</sup> (4.5 kg–4.4 kg)	119
ŠKODA Octavia CNG	3.5 kg	97	Volkswagen Commercial Vehicles Amarok	8.5–6.8	224–179
SEAT Alhambra Ecomotive	5.5	143	Volkswagen XL1	0.9	21
SEAT Altea Ecomotive	4.5	111			
SEAT Altea XL Ecomotive	4.5	111			
SEAT Leon VERDE	1.6	36			
SEAT Ibiza Ecomotive	3.4	88			
SEAT Ibiza ST Ecomotive	5.1	88			

## GOALS AND ACTIONS

This sustainability roadmap relates primarily to the Volkswagen Group. It indicates the core goals that we are pursuing in the three dimensions of Economy, People and Environment as well as through our overarching sustainability management, in order to reach our corporate goals for 2018. Most of the Group brands and companies have set up detailed sustainability roadmaps of their own, aligned with the corporate goals.

### STRATEGY & COORDINATION

Strategic areas	Goals and actions	Deadline	2013 implementation
Management	Ensure similar management of sustainability in the Group and in the brands and companies	2015	Organizational structure introduced in Porsche and Financial Services
Transparency	Establish IT-based sustainability management system at Group, brand and company level	2016	Group-wide provision of data for the 2013 Sustainability Report
	Group Sustainability Reporting Guideline	2014	New
Stakeholder dialogue	Establish IT-based stakeholder management system at Group, brand and company level	2016	New

### ECONOMY

Strategic areas	Goals and actions	Deadline	2013 implementation
Customer satisfaction	Top customer satisfaction with purchase, product and last workshop visit in the core markets	2018	Satisfaction measured in 35 markets; high target achievement level for the premium brands
Product responsibility	Strengthen innovation and technology leadership	2015	2013 – 2015 investment program: more than two thirds of total investment of €50.2 billion earmarked for more efficient vehicles, new technologies and environmentally responsible production
	Strengthen innovation and technology leadership	2018	2014 – 2018 investment program: more than two thirds of total investment of €84.2 billion earmarked for increasingly efficient vehicles, powertrain systems, technologies and environmentally responsible production
	Environmental offensive in China	2015	2013 – 2015 investment program: more than two thirds of €9.8 billion total investment in China earmarked for low-consumption models and sustainable production

GOALS AND ACTIONS

Strategic areas	Goals and actions	Deadline	2013 implementation
Compliance	Strengthen networking of compliance organization and activities	ongoing	All Group brands involved in exchange of experience in Governance, Risk & Compliance (GRC) in Braunschweig and GRC Conference in Berlin 2013. Regional network meetings and launch of GRC wiki as information and exchange platform for GRC organization
	Firmly embed compliance culture and improve knowledge of relevant compliance values and principles in the work-force	ongoing	Information supplied to specific target groups via different media at various brands and companies
	Continuous optimization of Compliance Management System (CMS)	ongoing	Further development of CMS, taking account of international legislation and Group benchmarks
	Ongoing optimization of integrity checking of business partners (Business Partner Check)	ongoing	Further development and roll-out in new companies
	Carry out and enhance Group-wide compliance training for various target groups	ongoing	Risk-based approach in classroom and online training courses
	Prevent money laundering	2013	Structures and training courses developed and extended
	Include human rights in compliance risk analysis and complete integration into GRC control process	2013	Human rights were part of compliance risk analysis in 2013
	Extend compliance activities in China	2013	China Compliance Conference 2013 held in Beijing, follow-up activities defined and implemented
Risk Management and Internal Control System (RMS/ICS)	Operate and further develop risk management and internal audit system in operating business units	ongoing	RMS/ICS guideline updated Practical guide compiled
	Standardize and further develop risk management methods and processes to safeguard the future viability of the Volkswagen Group	ongoing	GRC IT system introduced 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 management	Integrate Porsche, Scania, MAN and Ducati brands into "Sustainability in Supplier Relations" concept	2013	Integration successfully completed subject to implementation of individual elements
	Integrate sustainability requirements into all Group contracts	2014	Contractual part of all newly concluded General Procurement agreements
	Extend E-Learning tool and sustainability questionnaire	ongoing	In terms of procurement volume, 50% coverage for E-Learning tool and 82% for sustainability questionnaire
	Introduce in-depth sustainability audits and training courses	ongoing	Various regional sustainability training courses and workshops carried out; first pilot audits on CSR carried out

**PEOPLE**

Strategic areas	Goals and actions	Deadline	2013 implementation
Qualification	Strengthen vocational education and training internationally and introduce Meister (group leader) qualification worldwide: specialist and Meister qualification to same standard throughout the world	2018	More than three quarters of all apprentices in the Volkswagen Group learn their profession through the dual system. In 2013, a total of 322 Meister were qualified at Volkswagen, 84 outside Germany
	Develop university graduates into top experts: excellent qualification within all the Berufsfamilien (professional families)	ongoing	Qualification within Berufsfamilien has been introduced at Volkswagen in 75% of all Berufsfamilien; preparatory work has already been done in the remaining 25%
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	90,556 annual appraisals took place in Volkswagen AG, Volkswagen Financial Services AG and Volkswagen Immobilien Service GmbH in 2013. Since the introduction of an annual performance appraisal for temporary external personnel in 2013, 7,285 appraisals have been carried out
Health	Promote health, fitness and ergonomics: extension of the Volkswagen Checkup and follow-up screening programs	ongoing	The Volkswagen Checkup has been carried out almost 61,000 times since its introduction in 2010. In the reporting year alone, almost 16,000 Volkswagen Checkups were carried out. Existing screening programs have been brought into line with the Group-wide standards represented by the Checkup, for instance at SKODA, where over 15,000 SKODA Checkups have already been carried out
	Promote health, fitness and ergonomics: continuous improvement in ergonomics	ongoing	Volkswagen has trained 143 employees as ergonomics specialists. They will in future be involved in analyzing and improving working conditions and procedures on the basis of internal ergonomic standards
Occupational safety	Improve Group occupational safety management system at all production sites	ongoing	An audit of the Group occupational safety management system was carried out successfully during 2013 at the Volkswagen sites: Anchieta (Brazil), Puebla (Mexico), Poznań (Poland) and Osnabrück (Germany)
Advancing women	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 at least 30% of graduate recruitment in the Volkswagen Group in Germany	ongoing	The proportion of female graduates recruited rose to around 30% in 2013. In the medium term this will raise the proportion of women in management roles in the Volkswagen Group in Germany. Thus the proportion of women in management at the Volkswagen Group in Germany was increased from 9.3% in 2012 to 9.8% in 2013
Social responsibility	Introduce Group-wide analysis of the effectiveness of Corporate Citizenship activities and incorporate into sustainability management system	2015	Exchanges between the local project managers and development of common criteria encouraged
	Guidelines for developing and carrying out CSR projects at the Group, brand and company level	2015	Group networking platform for local project managers launched in 2013
	Foster volunteering by Volkswagen Group employees	ongoing	Pro Ehrenamt: over 600 projects in 2013 Cooperation between Volkswagen Financial Services and My Finance Coach: 151 Finance Coaches trained / 13 cooperative projects with schools / 36 classroom visits

GOALS AND ACTIONS

ENVIRONMENT

Strategic areas	Goals and actions	Deadline	2013 implementation
Environmental strategy	Implement Group Environmental Strategy	ongoing	Adopted by Board of Management in 2013
	Review brand environmental strategies	2015	“Ecomotive Factory” (SEAT) “Green Future” (SKODA) “ultra-Strategie” (Audi) “Think.Blue. Engineering.” (Volkswagen brand Research & Development)
	Establish “Think Blue.” as the Volkswagen brand’s mindset on environmental sustainability	ongoing	Third international fuel-saver driving championship “Think Blue. World Championship 2013.” with 17 countries taking part. Continuous involvement of employees worldwide on topics of environmental relevance, by using a monthly newsletter, publication on intranet or in employee magazine
	Increase efficiency in the Volkswagen brand’s German dealerships by cutting CO <sub>2</sub> emissions by 25% by 2020 (baseline: 2014)	2020	New
Environmentally compatible production	Reduce energy and water consumption, waste and emissions per unit produced across the Group by 25% (baseline: 2010)	2018	12.5% reduction achieved by 2013 (cars and light commercial vehicles)
	Reduce specific greenhouse gas emissions from energy consumption in Germany by 40% (baseline: 2010)	2020	Kassel: new combined cycle power plant for generating hot steam (2,000 kW), Zwickau: 1st of 3 gas-fired CHP cogeneration plants started up (1 engine: 4,100 kW, total: 12 MW electric, 12 MW thermal), Braunschweig: ground broken for new CHP plant (-30,000 t CO <sub>2</sub> /year), Emden: decision taken to build on-site wind farm

Strategic areas	Goals and actions	Deadline	2013 implementation
Environmentally compatible products	Cut CO <sub>2</sub> emissions by European new car fleet 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 2013: 128 g/km
	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 2013: 128 g/km
	Top places in selected product rankings, ratings and awards	ongoing	Eco-up! <sup>®</sup> , Citigo CNG <sup>®</sup> and Mii Ecofuel <sup>®</sup> overall winners in the 2013/14 VCD “Cars and the Environment” table; Golf TGI BlueMotion <sup>®</sup> , 2nd place in “compact class” in the 2013/14 VCD “Cars and the Environment” table
	Every replacement model to have better environmental characteristics over its entire life cycle than its predecessor	ongoing	Systematic implementation of Group Environmental Principles Product; documented in 2013 not least by Environmental Commendations for Golf, eco-up! <sup>®</sup> , e-up! <sup>®</sup>
	Every new model generation to be 10-15% more efficient than its predecessor	ongoing	Systematic implementation of Group Environmental Principles Product, latest proof: Golf 7 around 14%
	Extend availability of alternative powertrain systems as an integral part of the CO <sub>2</sub> mitigation strategy	ongoing	Systematic implementation of Group Powertrain and Fuel Strategy. Technologies/models: VW Commercial Vehicles: field testing with 7 E-Caddy vans (2013); SEAT: Green Lion project (2014); Audi: introduction of 5 plug-in hybrid models (A4, A6, A3, Q7, A8, from 2014); Porsche: introduction of 918 Spyder <sup>®</sup> and Panamera plug-in hybrid <sup>®</sup> (2013), Porsche Cayenne plug-in hybrid (from 2014); Volkswagen: introduction of Jetta Hybrid <sup>®</sup> , e-up! <sup>®</sup> and XL-1 <sup>®</sup> (limited series) in 2013. Introduction of Golf Estate TGI BlueMotion <sup>®</sup> , e-Golf <sup>®</sup> , Golf GTE plug-in hybrid <sup>®</sup> and Passat plug-in hybrid <sup>®</sup> (from 2014)
Intelligent mobility	Extend range of available products and services	ongoing	Preparation for full-scale start of Quicar-electric Equity interest in Greenwheels Car-Net
	Forecast and analyze mobility trends, derive challenges and approaches for future mobility	ongoing	Presented and discussed in internal Group and brand Steering Groups
	Carry out or participate in research projects	ongoing	Selection: 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; “What Cities Want” study (MAN)
Biodiversity	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	Participation in working groups and support of studies into the development of management tools/ indicators; cooperation/projects with NABU

## GRI INDEX

The present Sustainability Report takes full account of the third edition of the reporting guidelines of the Global Reporting Initiative (GRI 3.0). In what follows we show how the individual indicators are implemented and the degree to which they are reported. 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 including the supplementary indicators is available on the microsite. [🔗 5](#)

Disclosure of G3 Core Indicators	Reference	Level of reporting	UN GC	GSC
<b>1. Strategy and Analysis</b>				
1.1 Statement from the most senior decision-maker	2	●		1
1.2 Key impacts, risks	2, 19, 21-23, 38, 90-91	●		2
<b>2. Organizational Profile</b>				
2.1 Name of the organization	4	●		
2.2 Brands, products and/or services	4, AR 21-46	●		
2.3 Operational structure	4, AR 21-46	●		
2.4 Headquarter location	4	●		
2.5 Countries in operation	4-6	●		
2.6 Nature of ownership	5, AR 52-53	●		
2.7 Markets served	4, AR 21-46	●		
2.8 Scale of the organization	4, AR 21-46	●		
2.9 Significant changes regarding size, structure or ownership	AR 52-53	●		
2.10 Awards received	40, 49, 60, 74, 88, 93, 113	●		
<b>3. Reporting Parameters</b>				
3.1 Reporting period	C7	●		
3.2 Date of most recent previous report	C7	●		
3.3 Reporting cycle	C7	●		
3.4 Contact point for questions	152	●		
3.5 Process for defining report content	122-123	●		
3.6 Boundary of the report	4-7, C7	●		
3.7 Limitations on the scope or boundary of the report	4-7, C7	●		
3.8 Joint ventures, subsidiaries, and outsourced operations	122-123	●		
3.9 Data measurement techniques	122-123, 124-137	●		
3.10 Effects of re-statement or information provided in earlier reports	122	●		
3.11 Significant changes in the scope, boundary or measurement methods	122	●		
3.12 GRI Content Index	144-146	●		
3.13 External assurance	122-123, 150-151	●		

Disclosure of G3 Core Indicators		Reference	Level of reporting	UN GC	GSC
<b>4. Governance, Commitments, and Engagement</b>					
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4.2	Indication whether chairperson is also executive officer	AR 56, 65-68	●	1-10	
4.3	Independent members at the board	AR 54-59	●	1-10	
4.4	Mechanisms for shareholders and employees to provide recommendations to the board	AR 70, 88, 90	●	1-10	
4.5	Linkage between executive compensation and organization's performance	AR 60-64	●	1-10	8
4.6	Processes to avoid conflicts of interest at the board	AR 9, 56	●	1-10	
4.7	Expertise of board members on sustainability topics	AR 8, 56, 79	●	1-10	
4.8	Statements of mission, codes of conduct, and principles	123	●	1-10	5
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4.10	Processes for evaluation of the board's sustainability performance	AR 60-64	●		7, 8
4.11	Precautionary approach	21-23; AR 151-163	●	7	
4.12	External charters, principles, or other initiatives	2, 18, 23, 26, 27	●	1-10	3
4.13	Memberships in associations	23, MS 12	●		1-10
4.14	Stakeholder groups	23-25, MS 12, MS 14	●		9
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4.16	Approaches to stakeholder engagement	23-25, MS 12, MS 14	●		9
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<b>Economic Performance Indicators</b>					
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<b>Environmental Performance Indicators</b>					
	Disclosure on management approach	37, 90-93, 109-110	●	7, 8, 9	
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EN2	Recycled materials	108; MS 58	●	8, 9	12
EN3	Direct primary energy consumption	105-106, 131, D	●	8	12
EN4	Indirect primary energy consumption	105-106, 131	●	8	12
EN8	Total water withdrawal	136	●	8	12
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EN12	Impacts on biodiversity	109-110; MS 60	●	8	
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EN17	Other greenhouse gas emissions	133; D	●	8	13
EN19	Emissions of ozone-depleting substances	D	●	8	
EN20	NOx, SOx, and other air emissions	134	●	8	
EN21	Water discharge	136	●	8	
EN22	Waste by type and disposal method	135	●	8	12
EN23	Significant spills	D	●	8	
EN26	Initiatives to mitigate environmental impacts	98-103, 112, 133	●	7, 8, 9	10
EN27	Packaging materials	108	●	8, 9	
EN28	Sanctions for non-compliance with environmental regulations	D	●	8	

## BACKGROUND

Disclosure of G3 Core Indicators		Reference	Level of reporting	UN GC	GSC
<b>Social Performance Indicators: Labor Practices and Decent Work</b>					
	Disclosure on management approach	58-59	●	1, 3, 6	
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LA2	Employee turnover	128	●	6	
LA4	Employees with collective bargaining agreements	18, 123	●	1, 3	
LA5	Minimum notice period(s) regarding operational changes	66-67; AR 70; MS 26	●	3	
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LA14	Gender pay disparity	64-66; MS 25, MS 26	●	1, 6	
<b>Human Rights</b>					
	Disclosure on management approach	36-38, 43-46, 58-59, MS 25	●	1-6	
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HR2	Supplier screening on human rights	43-46	●	1-6	17
HR4	Incidents of discrimination	48, 74-75	●	1, 2, 6	16, 17
HR5	Freedom of association and collective bargaining	6, 37, 43-46, 58	●	1-3	
HR6	Child labor	6, 37, 43-46, 58	●	1, 2, 5	17
HR7	Forced labor	6, 37, 43-46, 58	●	1, 2, 4	17
<b>Society</b>					
	Disclosure on management approach	36-38; AR 112	●	10	
SO1	Impacts on communities	6, 25, 41-42	●		18
SO2	Corruption risks	48	●	10	
SO3	Anti-corruption training	47-48	●	10	
SO4	Actions taken in response to incidents of corruption	48	●	10	20
SO5	Lobbying	23	●	1-10	
SO8	Sanctions for non-compliance with laws and regulations	AR 161	●		20
<b>Product Responsibility</b>					
	Disclosure on management approach	38-41; AR 158-159	●	1, 8	
PR1	Health and safety impacts along product life cycle	37, 39-40	●	1	
PR3	Product information	41, 99-100	●	8	
PR6	Marketing communication standards	41, 47-48	●		
PR9	Sanctions for non-compliance with product and service related regulations	AR 161	●		

**Level of reporting:**

- = fully reported
- = partially reported
- = not reported

**Key:**

- AR = 2013 Annual Report
- MS = 2013 Sustainability Report Microsite
- UNGC = United Nations Global Compact
- GSC = German Sustainability Code
- D = Direct Answer (online-index)



## Statement GRI Application Level Check

GRI hereby states that **Volkswagen Group** has presented its report “Sustainability Report 2013” to GRI’s Report Services which have concluded that the report fulfills the requirement of Application Level A+.

GRI Application Levels communicate the extent to which the content of the G3 Guidelines has been used in the submitted sustainability reporting. The Check confirms that the required set and number of disclosures for that Application Level have been addressed in the reporting and that the GRI Content Index demonstrates a valid representation of the required disclosures, as described in the GRI G3 Guidelines. For methodology, see [www.globalreporting.org/SiteCollectionDocuments/ALC-Methodology.pdf](http://www.globalreporting.org/SiteCollectionDocuments/ALC-Methodology.pdf)

Application Levels do not provide an opinion on the sustainability performance of the reporter nor the quality of the information in the report.

Amsterdam, 7 April 2014

Ásthildur Hjaltadóttir  
Director Services  
Global Reporting Initiative



The “+” has been added to this Application Level because Volkswagen Group has submitted (part of) this report for external assurance. GRI accepts the reporter’s own criteria for choosing the relevant assurance

*The Global Reporting Initiative (GRI) is a network-based organization that has pioneered the development of the world’s most widely used sustainability reporting framework and is committed to its continuous improvement and application worldwide. The GRI Guidelines set out the principles and indicators that organizations can use to measure and report their economic, environmental, and social performance. [www.globalreporting.org](http://www.globalreporting.org)*

**Disclaimer:** Where the relevant sustainability reporting includes external links, including to audio visual material, this statement only concerns material submitted to GRI at the time of the Check on 21 February 2014. GRI explicitly excludes the statement being applied to any later changes to such material.

## SUPPLEMENTARY INFORMATION

The Volkswagen Sustainability Report 2013 microsite provides access to all links at [www.sustainabilityreport2013.volkswagenag.com](http://www.sustainabilityreport2013.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 their sustainability reports and information.

Topic	Content	Type of information	Number
<b>GENERAL INFORMATION</b>			
	Online Annual Report	Link	1
Group development 2013	Volkswagen SRI presentation	Presentation	2
	Volkswagen online brand portal	Link	3
Brands and companies	Associated companies	Link	4
Reporting in line with GRI	Supplementary GRI indicators	Table	5
<b>STRATEGY</b>			
	Group values	Document	6
	Model of Sustainable Development	Document	7
Principles	Code of Conduct	Document	8
Risk management	Risks in the management report	Link	9
	Volkswagen in the Transparency Register	Link	10
	Positions in dialogue with politics	Additional text	11
	Group memberships	Table	12
	Stakeholder panel and report evaluation	Additional text	13
Stakeholder management	Stakeholder dialogue	Table	14
Reporting	Materiality analysis	Graphic	15
<b>ECONOMY</b>			
	Volkswagen Group requirements regarding sustainability in its relationships with business partners	Document	16
	The Modular Transverse Matrix	Document	17
Principles	“Go West” strategy	Additional text	18
	Vehicle safety	Additional text	19
	Driver assistance systems	Additional text	20
Product responsibility	Road safety at ŠKODA	Link	21
Supply chain	“Sustainability in Supplier Relations” brochure	Brochure	22
	Guiding Principles to Enhance Sustainability Performance in the Supply Chain	Document	23
Compliance	Litigation (Annual Report)	Link	24
<b>PEOPLE</b>			
	Social Charter	Document	25
	Charter on Labour Relations	Document	26
	Charter on Temporary Work	Document	27
Principles	Occupational Safety Policy	Document	28
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Topic	Content	Type of information	Number
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<b>ENVIRONMENT</b>			
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	Environmental Goals of Technical Development	Document	43
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"Think Blue."	One Young World Cooperation	Link	50
	Tree planting campaign	Document	51
	"The Life Cycle of a Car" brochure	Document	52
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	"Resource Efficiency" brochure	Document	55
	Green IT	Additional text	56
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	Renewable raw materials	Document	59
Production	Engagement for biodiversity	Additional text	60
	Scope 3 inventory in line with GHG	Additional text	61
	Quicar website	Link	62
	Greenwheels website	Link	63
	"Urban Mobility" research film	Film	64
	MAN study "What Cities Want"	Document	65
	Audi Urban Future Initiative	Link	66
Vehicle use phase	"Know More, Consume Less" brochure	Document	67

## INDEPENDENT ASSURANCE REPORT

To Volkswagen Aktiengesellschaft, Wolfsburg

We have been engaged by Volkswagen Aktiengesellschaft, to perform an independent assurance engagement to attain moderate assurance<sup>1</sup> in respect of observing the AA1000 AccountAbility principles and of selected sustainability information set out in the Sustainability Report of Volkswagen AG, Wolfsburg, (the “Company”) for the business year from 1st January to 31st December 2013 (the “Sustainability Report”). Our independent assurance engagement refers to qualitative information set out in the printed version of the Sustainability Report and on selected quantitative sustainability information. The quantitative sustainability information selected by the Company and evaluated by us is marked separately with the symbols  and .

### Management’s Responsibility

Company’s Board of Managing Directors is responsible for the compliance of the sustainability management with the principles of inclusivity, materiality and responsiveness as defines in the AccountAbility Principles Standard (2008) and the preparation of the Sustainability Report in accordance with the criteria stated in the Sustainability Reporting Guidelines Vol. 3.1 (pages 7 to 17) of the Global Reporting Initiative (GRI):

- › Materiality, › Clarity,
- › Stakeholder Inclusiveness, › Accuracy,
- › Sustainability Context, › Timeliness,
- › Completeness, › Comparability and
- › Balance, › Reliability.

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 sustainability report and for ensuring compliance with the AA1000 AccountAbility principles.

### Responsibility of the auditor

Our responsibility is to form an opinion, based on our assurance procedures, on whether facts have come to our attention which would lead us to assume that in all material respects

- › the systems and processes installed by the Company are not appropriate for compliance with the AA1000 AccountAbility Principles; or
- › qualitative sustainability information set out in the Sustainability Report has not been prepared in compliance with the criteria set out in den Sustainability Reporting Guidelines Vol. 3.1 (pages 7 to 17) der Global Reporting Initiative (GRI); or
- › the selected quantitative sustainability information marked with a symbol and set out in the Sustainability Report has not been prepared in compliance with the criteria set out in den Sustainability Reporting Guidelines Vol. 3.1 (pages 7 to 17) of the Global Reporting Initiative (GRI).

Within the scope of our independent assurance engagement we did not perform any evidence-gathering procedures on quantitative sustainability information that were not marked with the symbols  and  separately.

We also have been engaged to provide recommendations concerning the further development of sustainability management and sustainability reporting based on the results of our independent assurance engagement.

We conducted our independent assurance engagement in accordance with AA1000 Assurance Standard (AA1000AS) 2008 and also in accordance with International Standard on Assurance Engagements (ISAE) 3000. These standards require that we comply with ethical requirements and plan and perform the assurance engagement, under consideration of materiality, to provide our conclusion with moderate assurance<sup>1</sup>, which is the degree of assurance that was required by the Company. We are independent as defined by Section 3.2 of AA1000AS (2008). Due to our expertise and experience with the evaluation of non-financial information, sustainability management as well as social and ecological issues, we have the competencies required to conduct this independent assurance engagement.

An independent assurance engagement performed to obtain moderate assurance<sup>1</sup> is less substantial in scope than an independent assurance engagement performed to obtain high assurance<sup>2</sup>, with the result that a corresponding lower level of assurance is obtained. The audit activities to be performed are selected by the auditor after a due assessment of the circumstances.

We conducted our evidence-gathering procedures at the level of the headquarters located in Wolfsburg as well as on the level of selected companies:

- › Audi AG, Ingolstadt, Germany
- › Dr. Ing. h.c. F. Porsche AG, Stuttgart, Germany
- › Scania AB, Södertälje, Sweden
- › Volkswagen Financial Services AG, Braunschweig, Germany
- › Shanghai-Volkswagen Automotive Company Ltd., Shanghai, China

With regard to compliance with the AA1000 AccountAbility Principles, our examination procedures included the following:

- › Interview with relevant contact persons of the competences „Stakeholder Engagement & Stakeholder Dialogue” and “Corporate Responsibility”;
- › Collecting and evaluating the relevant documentation for the stakeholder dialogues, additional communication with stakeholders and participatory formats at the level of headquarters and at the level of selected national companies;
- › Obtaining an understanding of the relevant documentation for the identification and prioritization of sustainability issues and CR fields of action and identified stakeholder expectations at the level of headquarters and at the level of selected national companies.

<sup>1</sup> “Moderate assurance” as specified by AA1000AS (2008) is equivalent to “limited assurance” as specified by ISAE 3000.

<sup>2</sup> “High assurance” as specified by AA1000AS (2008) is equivalent to “reasonable assurance” as specified by ISAE 3000.

With regard to the qualitative and with a symbol marked quantitative sustainability information in the Sustainability Report our work included the following examination procedures:

- › Interview with employees of departments responsible for the preparation of the Sustainability Report about the process of sustainability reporting and the related internal control system;
- › Inspection of documents regarding the documentation of the sustainability strategy and understanding of the sustainability organization structure, the stakeholder dialogue and the development process for the sustainability program of the Company;
- › Interview with employees of operating departments who are responsible for single chapters of the Sustainability Report;
- › Examination of the documentation of the systems and processes for collecting, analyzing, clarifying and aggregating of sustainability data and their random testing;
- › Performance of site visits as part of the inspection of processes for collecting, analyzing and aggregating selected data at
  - › Audi AG, Ingolstadt, Germany
  - › Dr. Ing. h.c. F. Porsche AG, Stuttgart, Germany
  - › Scania AB, Södertälje, Sweden
  - › Volkswagen Financial Services AG, Braunschweig, Germany
  - › Volkswagen Kraftwerke GmbH, Wolfsburg, Germany
  - › Volkswagen AG, Werk Wolfsburg, Wolfsburg, Germany
  - › Shanghai-Volkswagen Automotive Company Ltd., Shanghai, China
- › Analytical procedures on sustainability data of the sustainability report;
- › Comparison of selected data with corresponding data in the Company's Annual Report 2013;
- › Gathering evidence on selected data of the sustainability report by inspecting internal documents, contracts and invoices/reports from external service providers.

### Material findings and judgments

**Findings with regard to the AA1000 AccountAbility Principle of inclusivity:** The identification, integration and the active exchange with internal and external stakeholders is carried out by the Company. The involvement of management in the results of the stakeholder management is established. The Company has identified and prioritized their relevant stakeholders. The national stakeholders of the international national affiliates are not yet fully involved in stakeholder management. Formal requirements for stakeholder management are not yet companywide consistently defined.

**Findings with regard to the AA1000 AccountAbility Principle of materiality:** Prior to the sustainability reporting the Company used the extensive external stakeholder discussions of single brands to identify the main sustainability issues of the Group. The identification of the materiality of the issues is based on appropriate criteria and is established. The rated issues are prioritized in the Sustainability Report of the Company and according to their belonging shown in the identified fields of actions.

**Findings with regard to the AA1000 AccountAbility Principle of responsiveness:** The Company has established a coordinated and quality assured process for responding to stakeholder requests. The Company has established systematic stakeholder dialogues with selected relevant stakeholders.

On the basis of our moderate assurance engagement to obtain moderate degree of assurance, nothing has come to our attention that causes us to believe that, in all material respects the systems and processes implemented by the Company are not suitable for observing the AccountAbility Principles of inclusivity, materiality and responsiveness. Furthermore, nothing has come to our attention that causes us to believe that

- › qualitative sustainability information set out in the Sustainability Report has not been prepared in compliance with the criteria set out in den Sustainability Reporting Guidelines Vol. 3.1 (pages 7 to 17) der Global Reporting Initiative (GRI); or
- › the selected quantitative sustainability information marked with a symbol and set out in the Sustainability Report has not been prepared in compliance with the criteria set out in den Sustainability Reporting Guidelines Vol. 3.1 (pages 7 to 17) of the Global Reporting Initiative (GRI).

### Emphasis of Matter – Recommendations

Without qualifying our conclusions stated above, we make the following recommendations concerning the further development of the Company's sustainability management and sustainability reporting:

- › Further development of the stakeholder management by introducing a Group-wide framework, which defines the main requirements to deal with various aspects of stakeholder management;
- › Increase of efforts to standardize Group-wide definitions of key figures;
- › Increased formalization of processes and controls of the data collection, especially in the field of occupational safety;
- › Precise differentiation between Volkswagen Group and brand in the reporting;
- › Increase coverage ratio of the key figures for illustrating the Group-perspective;
- › Increased formalization of the reporting process;
- › Advanced description of sustainability goal conflicts and dilemmas.

Hanover, April 22, 2014

**PricewaterhouseCoopers  
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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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## 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 2013 financial year (January 1 to December 31, 2013). The editorial deadline for the report, which is available in German and English, was January 31, 2014. The next Group Sustainability Report will be published in the second quarter of 2015.

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 122.

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. Four Group companies – Audi, MAN, Scania and ŠKODA – already publish their own sustainability reports, either annually or at two-year intervals. 2013 will be the first year covered by a sustainability report from Porsche.

### FUNDAMENTALS

This report was drawn up in accordance with the G3 Guidelines of the Global Reporting Initiative (GRI). For the first time this involved the use of an IT system that in future will be expanded 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 and had this verified by a firm of auditors.

To identify material topics 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 materiality matrix (see page 27) was validated by the Group 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 page 24), but also of the advice of the auditors who verified the 2012 Group Sustainability Report.

### STANDARDS

This report has been approved by the Board of Management of Volkswagen Aktiengesellschaft and verified by a firm of auditors (see page 150). It complies with the highest level of GRI reporting (GRI A+) as confirmed by a GRI Level Check (see page 147).

Compliance with the GRI indicators is shown in the GRI Content Index on page 144, 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 [www.sustainabilityreport2013.volkswagenag.com](http://www.sustainabilityreport2013.volkswagenag.com) where all the copy and graphics in this report plus additional documents can be found (see page 148 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 2013 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:

[www.sustainabilityreport2013.volkswagenag.com](http://www.sustainabilityreport2013.volkswagenag.com)

## 2013: THE YEAR AT A GLANCE

### JANUARY

Official opening of the Silao engine plant in Mexico – the Volkswagen Group's 100th production plant around the globe.

The Volkswagen brand opens the world's largest solar park at the Chattanooga site in the USA. Peak output is 9.5 megawatts.



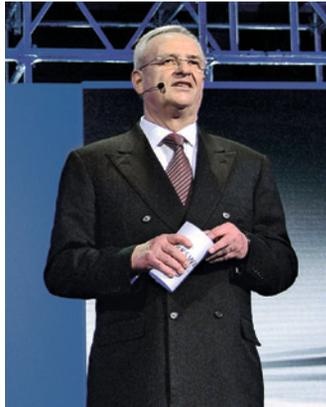
### FEBRUARY

The Supervisory Board votes to revise bonus payments for the members of the eight-strong Group Board of Management. A lower and an upper threshold are introduced.

Production of the XL1\*, which can cover 100 km on 1 liter of fuel, begins at Volkswagen's Osnabrück plant in Germany. A drag coefficient of Cd 0.189 makes it the most aerodynamic series-produced vehicle of all time.

### MARCH

At the Geneva Motor Show, Group Chairman Dr. Martin Winterkorn announces that the average fuel consumption of the Group's new car fleet would be reduced to an even lower level than previously planned and endorses the European Union's average vehicle CO<sub>2</sub> emissions target of 95 g/km by 2020.



### MAY

Volkswagen is crowned the world's most innovative automotive group. The Group topped four categories in the Automotive INNOVATIONS Awards 2013 initiated by the Center of Automotive Management (CAM) and PricewaterhouseCoopers (PwC).

After a tornado strikes the US state of Oklahoma, the Volkswagen Group of America Foundation assists relief organizations with a donation totaling USD 250,000.

### JUNE

Audi Hungaria starts production at its new car plant in Győr. The A3 saloon is the first Audi car to be built entirely in Hungary.

The Volkswagen Group commends its best suppliers with the Group Award 2013. The 21 Volkswagen partners chosen from around the world have impressed with their overall performance.



Germany is hit by floods. The Group and the Volkswagen, Audi and MAN brands respond with donations totaling over €3 million for the victims.

### JULY

The control and profit and loss transfer agreement between Truck & Bus GmbH, a wholly owned subsidiary of Volkswagen AG based in Wolfsburg, and MAN SE is entered in the commercial register.

## AUGUST

ŠKODA begins production of the new Octavia\* at the Aurangabad plant in India.

At an event staged at Berlin's Schloss Bellevue as part of the "Pro Ehrenamt" volunteering initiative, German President Joachim Gauck thanks Volkswagen employees for their voluntary activities.



## SEPTEMBER

The Porsche 918 Spyder\* with plug-in hybrid drive and the Golf estate TGI\*, which can run on both natural gas and petrol, celebrate their world premieres at the International Motor Show in Frankfurt.

FAW-Volkswagen opens a new production plant in Foshan, China.

With 89 points out of 100, the Volkswagen Group is Sector Leader in the Dow Jones Sustainability Index, the world's best-known sustainability index.

## OCTOBER

The Volkswagen brand is a partner in the "One Young World" sustainability conference in Johannesburg, South Africa. 1,300 young people come together for discussions with leading figures such as former UN Secretary General Kofi Annan on the environment, business and education.

Volkswagen opens a new factory in Ningbo, south-eastern China. It is the Group's 105th production plant worldwide and its 16th in China.



Volkswagen is commended in the "Major Corporations" category of the Inklusionspreis 2013 award for its exemplary work in integration management and implementation of the UN Convention on the Rights of Persons with Disabilities.

Production of the new A3 Cabriolet gets underway in Győr, Hungary.

The Volkswagen Group is one of ten German companies represented in the new Global Compact 100 share index, which lists 100 companies from around the world with especially responsible management.

The EU Court of Justice rejects a challenge from the European Commission and rules that the "VW law", which grants the German state of Lower Saxony – a Volkswagen shareholder – a blocking minority, does not contravene EU law.

## NOVEMBER

The Volkswagen brand recalls 800,000 Tiguan vehicles in what is the largest recall of its kind in the history of the Company.

The world premiere of the Porsche Macan SUV in Los Angeles officially signals the brand's advance into a new vehicle segment.

The Volkswagen Group scores 99 points out of 100 in the Carbon Disclosure Transparency Index and is commended by the Carbon Disclosure Project.

The Volkswagen Group wins the Deutscher Investorenpreis für verantwortliches Wirtschaften (German investor award for responsible management).



## DECEMBER

The Volkswagen brand hands over the first Golf TGI BlueMotion\* to its owner. It has a bi-fuel drive system which allows it to run on natural gas and petrol.

Various Group companies in Germany together integrate over 5,000 temporary external personnel into their regular workforce in 2013.

The Group closes its books on 2013 with record unit sales of over 9.7 million vehicles; on average just under 5% more vehicles were sold across the Group's brands than in the previous year.

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