

VOLKSWAGEN

AKTIENGESELLSCHAFT

可持续性 održivost durabilité volhoubaarheid
持続可能性 fenntarthatóság duurzaamheid sostenibilità
hållbarhet bæredygtighed **sustainability** udržateľnosť
Nachhaltigkeit sostenibilidad **2012**
sustentabilidade südürülebilirlik zrównoważony rozwój

REPORT

About this report.

Content

This report contains information about the sustainability activities of the Volkswagen Group in 2012. Following an introductory chapter identifying the Group's basic strategic principles, the Economy, Society and Environment chapters illustrate the three central dimensions of sustainability. Each chapter outlines principles of sustainability at Volkswagen, using specific measures and projects initiated by the various Group brands to illustrate them. The key sustainability indicators are set out on page 134ff., while the Background chapter starting on page 155 includes information on reporting standards and their verification.

The reporting period extends from February 15, 2012, when the previous report went to press, to March 1, 2013. The key indicators, however, relate to the 2012 calendar year. Volkswagen has published its Sustainability Report on an annual basis since 2011. The next report will be published in the second quarter of 2014.

The report has been prepared in accordance with the standards of Germany's Institute for Ecological Economy Research (IÖW) and the Global Reporting Initiative (GRI). It has also been verified in line with the internationally recognised Stakeholder Engagement Standard AccountAbility 1000 AS (AA1000). This confirms the reliability of the reporting and the engagement of stakeholders in the reporting process (> p. 22). Certification to this effect can be found in the Background chapter.

Use of language

All the information in this report relates to the Volkswagen Group as a whole. If any information relates to individual Group brands only, this is expressly stated. See also the frame of reference on page 153.

Additional information

The content of this printed report is closely interlinked with the sustainability information presented by Volkswagen online. All the copy and graphics in the report, plus additional information, can be found on the microsite at www.sustainability-report2012.volkswagenag.com.

The symbol  in the body copy indicates where more in-depth content is available online. Select the number after the symbol to access this additional content directly. A list of all additional information can be found on the inside of the back cover.

In addition, the latest news on sustainability at Volkswagen can be found at www.volkswagenag.com/sustainability. Some Volkswagen Group brands also offer supplementary sustainability reporting, the relevant web links for which can be found on the microsite. In keeping with the growing importance of integrated reporting, sustainability information from Volkswagen is also included in the Volkswagen Group's Annual Report 2012.  1



The Sustainability Report 2012 on its own microsite.

SUSTAINABILITY ON A SMARTPHONE

Scan this QR code with your smartphone to access the microsite of the Volkswagen Sustainability Report 2012. Internet connection charges depend on your individual mobile network rates.





The Board of Management of Volkswagen Aktiengesellschaft

(from left to right)

PROF. DR. RER. POL. DR.-ING. E.H. JOCHEN HEIZMANN
China

PROF. DR. RER. POL. HORST NEUMANN
Human Resources and Organization

CHRISTIAN KLINGLER
Sales and Marketing

DR. H.C. LEIF ÖSTLING
Commercial Vehicles



DR. RER. POL. H.C. FRANCISCO JAVIER GARCIA SANZ
Procurement

PROF. DR. DR. H.C. MULT. MARTIN WINTERKORN
Chairman of the Board of Management of Volkswagen Aktiengesellschaft
Research and Development

HANS DIETER PÖTSCH
Finance and Controlling

PROF. RUPERT STADLER
Chairman of the Board of Management of AUDI AG

DR.-ING. E.H. MICHAEL MACHT
Production

CURRICULUM VITAE
www.volkswagenag.com > The Group > Senior Management

Sustainability works if all concerned
believe in dialogue and are
ready to assume joint responsibility.

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GOAL



LOCAL EXAMPLE



HIGHLIGHT



LOWLIGHT

Dear Reader,

Volkswagen can look back on a very successful fiscal year in 2012. Despite economic headwinds, our Group reported new record figures. With 9.3 million vehicles delivered, we were able to sell one million more vehicles than in the previous year while at the same time increasing our operating profit to €11.5 billion.

We at Volkswagen are proud of these successes. At the same time, however, they give rise to major responsibilities – for our employees and customers, for an intact environment and for balanced social development. As Europe's largest automobile manufacturer we take these responsibilities seriously – as we showed once again in 2012.

We are aligning the entire Group with the goals of maximum energy- and resource efficiency. In this way we will be able to cut the average CO₂ emissions of our entire European new car fleet to below 120 g/km by 2015. And we are making rapid progress towards our goal of ensuring that our production plants are 25 percent more environmentally compatible by 2018.

It is not in our nature, however, to rest on our laurels. Consequently, we recently set ourselves even more ambitious environmental targets. For example, the Volkswagen Group is sparing no effort to cut the average CO₂ emissions of its European new car fleet to 95 g/km by 2020. To this end we are working to optimise the entire spectrum of drivetrain options: internal combustion engines, natural gas engines, plug-in hybrids and electric drive. The XL1 model, which can cover 100 km on one litre of fuel, demonstrates that our Group with its 40,000 research and development engineers has the necessary capacity for innovation and the passion that it will take to master this challenge.

Launching innovative technologies does, however, call for a sound financial basis. With this in mind, for the Automotive Division alone, Volkswagen has put together a package of investments worth €50.2 billion for the period up to 2015. Two thirds of these funds will be flowed into

even more efficient vehicles and technologies, as well as into even more environmentally compatible production processes at our 100 plants around the world.

For Volkswagen, sustainability has an important social dimension. This includes, for example, shaping working conditions in line with the principles of "Decent Work", as well as respecting and enhancing minimum standards of working conditions. An important part here is played by co-determination. The fact that the Volkswagen Group's success is paying dividends in many respects is illustrated by the development of the workforce. Since 2007 we have created more than 100,000 additional new jobs, 30,000 of them in Germany. Today we have a total of 550,000 employees worldwide, including 16,000 young people in 16 countries who are learning a profession in line with Germany's dual model of vocational education and training.

This report provides information on our sustainability strategy and on the many different projects and measures in the economic, social and environmental fields. In the interests of maximum transparency, we have once again had our Sustainability Report certified in accordance with the AA1000AS standard. In addition, the Global Reporting Initiative (GRI) has again awarded this publication its highest rating "A+". Moreover, the report complies with the requirements of the German Sustainability Code. Our commitment to sustainable development is further documented by our inclusion in key international indices such as the Dow Jones Sustainability World Index and the FTSE4Good, as well as by our involvement in the Carbon Disclosure Project. Through its participation in the UN Global Compact, the world's largest initiative for businesses that support sustainability and responsibility, Volkswagen also makes a contribution to protecting human rights and combating corruption.

We invite you to form your own view of the sustainable development of our Company and hope you find that this report makes informative reading.

Prof. Dr. Martin Winterkorn
Chairman of the Board of Management of Volkswagen Aktiengesellschaft
Research and Development

Bernd Osterloh
Chairman of the General and Group Works Councils





Portrait of the Group.

The Volkswagen Group, based in Wolfsburg, is one of the world's leading automobile manufacturers and the largest automaker in Europe. In 2012 the Group increased the number of cars and commercial vehicles delivered to customers to 9,276,000 (2011: 8,265,000), which equates to 12.8 percent of the global passenger car market (2011: 12.3%). [21](#)

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. [23](#)

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.

Finance

The Group's sales revenue totalled €192,676 million in 2012 (2011: €159,337 million). Profit after tax in the 2012 fiscal year totalled €21,884 million (2011: €15,799 million). Other important financial data (> p. 136) can also be found at www.volkswagenag.com/ir. Volkswagen AG's subscribed capital totalled €1,190,995,446 at the end of the reporting year. The distribution of voting rights at the reporting date was as follows: Porsche Automobil Holding SE, Stuttgart held 50.73% of the voting rights. The second-largest shareholder was the

state of Lower Saxony with 20.0% of the voting rights. As third-largest shareholder, Qatar Holding LLC held 17.0%, while Porsche GmbH, Salzburg, held 2.37% of the voting rights. The remaining 9.9% of the 295,089,818 ordinary shares were held by other shareholders. Notifications of changes in voting rights in accordance with the Wertpapierhandelsgesetz (WpHG – German Securities Trading Act) are published on our website at www.volkswagenag.com/ir. 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. 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 and is part of the annual financial statements. [25](#)

Locations and employees

The Volkswagen Group operates 100 production facilities around the world (2011: 94). Europe remains the core of the Group's production activities with 67 vehicle and component plants. The significance of the Asia-Pacific region is increasing, reflected in the current total of 17 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 almost 550,000 employees produce approximately 37,749 vehicles per working day, provide vehicle-related services or work in other business areas. 410,427 people are employed in Europe, 68,704 in Asia, 63,193 in North and South America, 978 in Australia and 6,461 in Africa. Any changes in location or activities are set out in our current annual report under "Chronicle 2012". [24](#)

Markets

The Volkswagen Group sells its vehicles worldwide. In the reporting year the Group was able to grow its share of the passenger car market in all regions. In Western Europe,



the Group's market share reached 24.4 percent (2011: 23.0 percent), in Central and Eastern Europe 15.4 percent (13.9 percent), in North America 4.9 percent (4.3 percent), in South America 19.6 percent (18.9 percent) and in Asia-Pacific 12.2 percent (11.3 percent). The Group's worldwide market share totalled 12.8 percent (12.3 percent). Worldwide, for the manufacture of its products, the Group purchased goods and services to the value of €128.7 billion (2011: €110.2 billion). The largest procurement market is Europe, with a volume of around €88.1 billion, followed by the Asia-Pacific region with €26.4 billion.

Management

The Supervisory Board is responsible for monitoring the Management and approving important corporate decisions. Moreover, it appoints the Members of the Board of Management. Prof. Dr. Ferdinand K. Piëch is the Chairman of the Supervisory Board of Volkswagen AG. The Board of Management of Volkswagen AG comprises nine members. Each Board Member is responsible for one or more functions within the Volkswagen Group. Some Board Members are also responsible for a specific region. The Board of Management is chaired by Prof. Dr. Martin Winterkorn. The work of the Board of Management of Volkswagen AG is supported by the boards of the brands and regions as well as by the other Group companies and holdings.

VOLKSWAGEN GROUP

Volume Data	2012	2011
Vehicle sales (units) in '000	9,345	8,361
Production (units) in '000	9,255	8,494
Employees (yearly average) in '000	533	454
Proportion of female employees in %	15.2	14.7
Absences in % ¹	3.2	3.4
CO ₂ emissions European new car fleet in g/km	134	137
Direct CO ₂ emissions in kg/vehicle ²	425.13	476.89
Energy consumption in MWh/vehicle ²	1.79	1.83
Financial data (IFRS), € million	2012	2011
Sales revenue	192,676	159,337
Operating profit	11,510	11,271
Profit before tax	25,492	18,926
Profit after tax	21,884	15,799

Information on production and sales of the main Group products can be found in the Annual Report 2012 as well as in the "Key indicators" chapter of the present report. This chapter also contains revenue and profit figures broken down by brand and business field (> p. 137), as well as comments on the key sustainability indicators (> p. 136).

¹ Volkswagen Group production sites not including Scania, MAN and Porsche ² Passenger Cars and Light Commercial Vehicles



Group production plants.

When the new engine plant in Silao, Mexico, was opened in January 2013, it brought the total number of Volkswagen Group production facilities worldwide to 100. Additional production plants of the Group's various brands are already at the planning or construction stage in China, Hun-

gary, Russia and Mexico. This lays the operational foundations for the Group to reach its ambitious growth targets. By 2018, Volkswagen is aiming to sell more than 10 million vehicles a year, not least by increasing its share of the world's major growth markets.  6

Europe

Angers (F)	Crewe (UK)	Krakow (PL)	Nuremberg (D)	Salzgitter (D)	Velka Bites (CZ)
Ankara (TR)	Deggendorf (D)	Kvasiny (CZ)	Oberhausen (D)	Sant'Agata	Vienna (A)
Augsburg (D)	Dresden (D)	Leipzig (D)	Oskarshamn (SE)	Bolognese (I)	Vrchlabí (CZ)
Barcelona (ES)	Emden (D)	Luleå (SE)	Osnabrück (D)	Sarajevo (BA)	Winterthur (CH)
Berlin (D)	Frederikshavn (DK)	Martin (SK)	Pamplona (ES)	Setubal (PT)	Wolfsburg (D)
Borgo Panigale (I)	Györ (HUN)	Martorell (ES)	Plauen (D)	Slupsk (PL)	Zurich (CH)
Bratislava (SK)	Hamburg (D)	Meppel (NL)	Polkowice (PL)	Söderälje (SE)	Zwickau (D)
Braunschweig (D)	Hanover (D)	Mladá Boleslav (CZ)	Poznań (PL)	Starachowice (PL)	Zwolle (NL)
Brussels (B)	Ingolstadt (D)	Molsheim (F)	Prat (ES)	Steyr (A)	
Chemnitz (D)	Kaluga (RUS)	Munich (D)	Rheine (D)	Stuttgart-	
Copenhagen (DK)	Kassel (D)	Neckarsulm (D)	Saint-Nazaire (F)	Zuffenhausen (D)	

Some sites host several plants. An overview of environmentally certified sites is available online. [↗ 7](#)

Africa

Olifantsfontein (RSA)
Pinetown (RSA)
Uitenhage (RSA)

Asia

Amata City (TH)
Aurangabad (IN)
Changchun (CN)
Changzhou (CN)
Chengdu (CN)
Dalian (CN)
Nanjing (CN)
Pithampur (IN)
Pune (IN)
Shanghai (CN)
Yizheng (CN)





Strategy.



1

Strategy

SUSTAINABILITY AND RESPONSIBILITY //
STAKEHOLDER DIALOGUE // MATERIALITY MATRIX

For Volkswagen, growth is not an end in itself but underpins our stability as a company. Adopting a modern interpretation of corporate social responsibility, we shape sustainable growth.

1

Sustainability and responsibility

THE VOLKSWAGEN GROUP'S STRATEGY IS BASED ON A MODERN UNDERSTANDING OF CORPORATE RESPONSIBILITY. ON ITS WAY TO BECOMING THE MOST FASCINATING AND SUSTAINABLE AUTOMOBILE MANUFACTURER IN THE WORLD, THE GROUP IS PURSUING ITS ECONOMIC, ENVIRONMENTAL AND SOCIAL OBJECTIVES AS SET OUT IN OUR STRATEGY 2018.  8

With the growing prosperity of the emerging economies and developing countries, worldwide demand for individual mobility is on the increase. In the years ahead the number of cars worldwide is set to rise from roughly 1 billion at present to around 1.3 billion. As one of the world's leading automobile companies, the Volkswagen Group has a special responsibility here. With trendsetting technology and social competence, the Company is making its contribution to a sustainable development which will ensure that future generations have at least the same opportunities as the present generation.

Volkswagen's actions are based on a modern understanding of corporate responsibility. One characteristic of this is the application of sustainable management as a criterion along the entire value chain. In this way we succeed in combining the traditional values of corporate activity with the challenges of our time – responsibility and sustainability in a global perspective. As a group with global operations, Volkswagen supports social projects through worldwide commitment and donations. At the same time it integrates this concept into a modern vision built around the strategic anchoring of corporate social responsibility (CSR) and sustainability in the value chain. The challenges of the 21st century, especially resource conservation and climate protection and intra- and inter-generation equity, are brought together in our vision of responsibility and sustainability. Sustainability calls for a balance of economic, environmental and social objectives. Volkswagen's CSR and sustainability concept ensures that, at every stage in the value-added process, the Company avoids risks, identifies development opportunities at an early stage and continues to enhance its reputation. This balance thus makes a necessary contribution to safeguarding the Company's future and raising its value in the long term.  9

Thanks to this contribution, sustainability forms an integral part of our Strategy 2018. By 2018 Volkswagen aims to be not only the most profitable, but also the most fascinating and most sustainable automaker in the world. In practical terms, this means that Volkswagen will

- > deploy intelligent innovations and technologies to become a world leader in customer satisfaction and quality,
- > increase unit sales to over 10 million vehicles a year,
- > increase its return on sales before tax to at least 8 percent,
- > be the top employer across all brands, companies and regions,
- > reduce the energy consumption, waste output, solvent emissions, water consumption and CO₂ emissions by 25 percent per vehicle, compared with 2010.

One year after the most extensive ecological restructuring operation in the Group's history was announced at the Geneva Motor Show in spring 2012, it is time to take stock. By 2015, Volkswagen will reduce CO₂ emissions in its EU new car fleet to under 120 g/km.  10

The Company is pushing ahead with its high-end green technology all over the world, including in particular China, India and Brazil. Volkswagen is taking great strides towards its goal of making its factories 25 percent more environmentally compatible by 2018. In the past two years alone, energy and water consumption per vehicle have been cut by around 10 percent. But as Europe's largest automaker, Volkswagen is also paving the way for further resolute progress. With the full power of the Company and the entire spectrum of powertrain options, ranging from combustion engines via natural gas propulsion to plug-in hybrids and electric cars, Volkswagen is pursuing the goal of reducing the CO₂ emissions of its European new car fleet to 95 g/km by 2020. Important milestones in strategic environmental

protection include the focus on the entire life cycle of a vehicle and the recording of CO₂ emission data across all upstream and downstream areas in line with the Scope 3 Inventory (> p. 98, 143).

On the basis of our Strategy 2018, Volkswagen works with its stakeholders to identify those topics that are material to the company's long-term viability. In this analytical process, Volkswagen evaluates international sustainability studies and engages in active dialogue with its stakeholders. These include analysts, politicians and government agencies, academia, non-governmental organisations and – not least – its employees, customers and suppliers. At both brand and Group level, Volkswagen holds extensive discussions on major challenges for the Company and the automobile industry. Materiality analysis is an ongoing process in which internal bodies discuss and assess the relative importance of the topics identified. The result is the sustainability strategy roadmap: a matrix of the principal topics (> p. 27). **11, 12**

Sustainability management

The criteria for sustainability management of an enterprise that now has 12 brands are determined partly by growing global challenges such as climate change and resource conservation, respect for human rights and social involvement, and – as a result – partly by the increasing expectations of political and economic stakeholders and especially the customer, with regard to quality, transparency and governance.

Without abandoning the basic principles of a voluntary and hence competition-driven approach, it is increasingly a matter of establishing a systemic and strategic sustainability concept within the Company. In this spirit, CSR means “the responsibility of enterprises for their impacts on society”, as set out in the European Commission’s definition in the CSR Strategy 2011 – 2014.

To put this responsibility into practice, Volkswagen has established a clear structure. The Group’s Board of Manage-

CSR AND SUSTAINABILITY MANAGEMENT AT THE VOLKSWAGEN GROUP



ment is also the highest-ranking sustainability body in the Company (Sustainability Board). It is informed periodically about responsibility and sustainability issues by the Group CSR & Sustainability Steering Group. This includes top managers from central Group business areas, the Group Works Council and representatives of the brands and regions. The Steering Group approves the sustainability strategy that the Group is pursuing to achieve its goal of being the world's most sustainable automaker by 2018. Since 2006 the CSR Office has been coordinating all relevant activities within the Group and the brands, using standardised structures, processes and reporting. It ensures the strategic orientation of CSR activities and acts as a steering group for the internal management processes and the stakeholder dialogue. CSR project teams work on a cross-sectoral basis on topical issues such as sustainability in supplier relations.

Since 2009 there has been a regular international exchange of information between the CSR coordinators of all brands and regions. For Group-wide coordination of the activities of the environmental officers, there is also the Group Environmental Conference and the Corporate Environment and Energy Steering Group. The appointment of a Group Chief Officer for the Environment, Energy and New Business Areas paved the way for the ecological restructuring of the Volkswagen Group.

One important milestone in this restructuring process is the modular transverse matrix for the brands Volkswagen, Audi, SEAT and ŠKODA. This biggest development initiative in the history of the Volkswagen Group was successfully introduced in 2012: the modular transverse matrix was used as a basis for producing the new Golf, the Audi A3, the ŠKODA Octavia and the SEAT Leon. Across the Group, forty models based on the modular transverse matrix will go on sale in the next few years.  13, 14

One crucial factor in achieving the Group's ambitious economic and environmental objectives is the people who do their best for Volkswagen every day. With almost 550,000 employees, Volkswagen has a special responsibility. In a dialogue with its employees, the Volkswagen Group sets standards for good work, whether in vocational education and training, continuing professional development at home and abroad, pioneering remuneration policy or employee participation. Volkswagen does full justice to this responsibility (> p. 56 ff.).

With the establishment of the IT-based sustainability management system and the further integration of the indicator systems, Volkswagen has laid the foundations for full and timely CSR and sustainability reporting by the Group. Volkswagen responds to increasing shareholder expectations regarding up-to-date and differentiated presentation of the Company's CSR and sustainability performance with the aid of the increased control efficiency and transparency of the Key Performance Indicator system.

GROUP-WIDE INCLUSION OF HUMAN RIGHTS IN COMPLIANCE RISK ANALYSIS

The “Guiding Principles on Business and Human Rights: Implementing the United Nations ‘Protect, Respect and Remedy’ Framework” have led to the topic of human rights being included in the annual compliance risk analysis process and for the first time being assessed across the Group. Among other things, Volkswagen is monitoring the risks in respect of human rights in the context of sustainability in the supply chain.

Code of Conduct and policies

The Group-wide Code of Conduct provides Volkswagen employees with a guide to mastering the legal and ethical challenges of their daily work. These principles summarise the Group's values, i.e. closeness to the customer, superior performance, value creation, renewability, respect, responsibility and sustainability. Each individual bears equal responsibility for ensuring compliance with the Code.  15

Other important guidelines are provided by international conventions, laws and internal regulations. In the “Declaration on Social Rights and Industrial Relationships at Volkswagen” (Volkswagen Social Charter), the Charter on

STANDARDISED STRUCTURES AND REPORTING



Temporary Work and the Charter on Labour Relations, Volkswagen professes its commitment to fundamental social rights and principles. [16, 17](#)

With effect from November 2012, the World Group Works Council, the Group Board of Management and the International Metalworkers' Federation reaffirmed their commitment to the Social Charter that has been in force since 2002 thereby underlining its importance for the Volkswagen Group on the way to becoming the top employer. In the recently signed version, under the heading of Compensation and Benefits the wording was made more precise in order to clarify the existing ruling and ensure the unequivocal interpretation of the remuneration standard. The wording now runs: "The compensation and benefits paid or received for a normal work week correspond at least to the legally valid and guaranteed minimum. In case legal or collective bargaining regulations are not ex-

istent, branch specific tariff compensation and benefits are used as an orientation that are customary to the respective location and ensure an appropriate standard of living for the employees and their families." The Social Charter is available in twelve languages (> p. 69). [18](#)

Since 2002, Volkswagen has been committed to the world's largest and most important CSR initiative, the Global Compact. The 7,000 participating companies in over 135 countries work together to shape a more sustainable and equitable world economy. Volkswagen makes an important contribution here, and in 2012 it attained Global Compact Advanced Level status. [19](#)

Volkswagen also attaches great importance to ensuring that our corporate activities are in keeping with international conventions and guidelines. The main conventions of this kind are:



The new XL1 from Volkswagen made its debut at the Geneva Motor Show. With fuel consumption of 0.9l/100 km it is the world's most economical production model. With its plug-in hybrid powertrain, this two-seater can cover up to 50 km in all-electric mode with zero local emissions.

- > The Universal Declaration of Human Rights, dating from 1948 (UNO)
- > European Convention on Human Rights, 1950
- > International Covenant on Economic, Social and Cultural Rights, 1966
- > International Covenant on Civil and Political Rights, 1966
- > Tripartite Declaration on Principles Concerning Multinational Enterprises and Social Policy, ILO (International Labour Organisation), 1977
- > ILO Declaration on Fundamental Principles and Rights at Work, 1998 (especially the following topics: abolition of child labour, elimination of forced or compulsory labour, ban on discrimination, freedom of association and the right to collective bargaining)
- > OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions, 1997
- > "Agenda 21" on sustainable development (final document of the ground-breaking United Nations Conference on Environment and Development, Rio de Janeiro 1992)
- > Principles of the Global Compact for more social and more ecological globalisation, 1999
- > OECD Guidelines for Multinational Enterprises, 2000

Volkswagen in sustainability ratings and indexes

Because analysts and investors regard CSR and sustainability as leading indicators of forward-looking corporate leadership, they are increasingly basing their recommendations and decisions not just on companies' business performance but also on their CSR and sustainability profiles. In particular, they are using sustainability ratings to assess a company's environmental, social and economic performance. If a company achieves top scores in these ratings, this not only sends a clear signal to its stakeholders, but also makes the company more attractive as an employer and boosts its employees' motivation.

In 2012, as in previous years, Volkswagen once again succeeded in maintaining a leading position in its sector in the main international ratings and indexes. Volkswagen is one of only three automobile companies listed in the Dow Jones Sustainability World Index. MAN is the only German company in the mechanical engineering sector of the Dow Jones Sustainability World Index and the Dow Jones Sustainability Europe Index. Moreover, the Norwegian insurance company Storebrand has included Volkswagen in its new Trippel Smart and

SPP Global Topp 100 funds launched in 2012. This fund includes the 100 most sustainable companies in the world. Volkswagen leads the field in the “Social” category.

On 31 December 2012 Volkswagen was represented in the following sustainability indices: Advanced Sustainability Performance Index (ASPI), Dow Jones Sustainability World Index, ECPI Ethical Index Europe, ECPI Ethical Index EMU, ECPI Ethical Index Global, Ethibel Sustainability Indices (ESI) Excellence, FTSE4Good and STOXX Global ESG Leaders Indices (> p. 163).

Dealing with long-term mega-trends and short-term influences

In order to achieve its operational and strategic growth objectives and to stabilise its success on a sustainable basis, the Group implements a systematic planning and strategy process. The advantages of long-term planning are obvious: it permits proactive allocation of resources and allows the Company to make full use of savings – while maintaining a high degree of quality awareness.

However, long-term planning in the Volkswagen Group also needs to be flexible: the economy is subject to cyclical fluctuations, national markets are governed by legal regulations, and new customer needs can quickly emerge and become important. The main drivers of social change are the global mega-trends.

The mega-trends of relevance to the Group are progressive urbanisation, demographic change (ageing society) and the issue of resource depletion (fossil fuels, rare earths, etc.). These trends are increasingly producing changes in customer purchasing. The emerging middle class is demanding new products and innovative solutions – and at the same time the state is imposing new regulations that have a massive influence on day-to-day business.

Strategy and process

Within the Volkswagen Group several departments are constantly at work on long-term planning: observing social mega-trends, analysing overall economic framework conditions, tracking emerging customer trends and analysing

the competition, and merging all these aspects in a single process.

This process, known within the Group as the “planning round”, makes it possible to take important decisions on the development of production, procurement and sales structures within a 10-year time frame. However, to take adequate account of the increasing pace of change, every planning round is updated and adjusted as the year goes on until the next planning round starts in the autumn.

Outlook

Long-term planning is of paramount importance for a globally operating group like Volkswagen – but in view of real-world developments must remain capable of modification and adjustment. This is the only way to achieve our objective of sustainable growth. The Group is therefore continuously refining its forecast toolbox and – specifically in the field of market research – undertaking a fundamental redevelopment of these tools in response to the dynamic changes in the various markets.

Learning to understand each other: stakeholder dialogue.

VOLKSWAGEN IS COMMITTED TO DEVELOPING AND MANUFACTURING VEHICLES OF OUTSTANDING QUALITY THAT DELIGHT CUSTOMERS THE WORLD OVER. ALONG THE ENTIRE VALUE CHAIN OUR ACTIVITIES FOCUS ON SUSTAINABILITY AND RESPONSIBILITY IN RELATION TO OUR EMPLOYEES, SOCIETY AND THE ENVIRONMENT.

As a company with worldwide operations, Volkswagen is engaged in a permanent exchange of information with the various interest groups or stakeholders. As well as customers, employees and suppliers, these include actors from the political world, science and research, civil society and non-governmental organisations. They all have expectations, and they all express interests. Volkswagen in its turn takes note of their suggestions and learns from this exchange.

Stakeholder management

Exchange means give and take. Here Volkswagen follows a systematic and organised process. The Company basically believes in an open and constructive dialogue in which it can pursue its interests in a targeted way. The outcome of this process should be at least a mutual understanding of the different starting points and positions – and preferably agreement on the possible shape of a jointly addressed solution, which should ideally be supported by a joint project.

The stakeholder dialogue is backed up by a management approach that ensures documentation and plausibility. Within the limits of the Group approach, brands and regions act on an independent and decentralised basis. The

right methods for communication and the exchange platforms are selected jointly with the stakeholders. Whether it be workshops, symposia, public controversies or social media tools – what matters is making progress towards a solution. In our internal management, steering groups and project groups ensure that all necessary departments are involved in order to guarantee transparency and effectiveness. In 2013, stakeholder management in the Volkswagen Group will become even more systematic thanks to an IT-based “Issue and Stakeholder Module”, which will firmly establish it within the Company’s organisation.

In an ongoing process, Volkswagen conducts an employee opinion survey to appraise the views of the workforce and 350,000 employees took part in 2012. At several Volkswagen plants, Neighbourhood Forums have been set up to provide a platform for permanent dialogue with local residents and local government agencies. At brand and Group levels a variety of instruments are available with which to conduct stakeholder surveys and implement dialogue forums. And for customer communications there is also a standardised process which ensures that suggestions and complaints are dealt with promptly and without exception by the specialist departments responsible.



Prof. Dr. Ulf Schrader
Berlin University of Technology

“I’d like to see Volkswagen focusing more strongly on areas marked by conflicting objectives. Take electric mobility, for example: here, Volkswagen could present a comparison of stakeholder and customer wishes with what is currently technically feasible.”



Cornelia Heydenreich
Germanwatch e.V.

“I’d like to know exactly what Volkswagen has done to investigate the 12 cases in which suppliers are suspected of infringements. This is an area where Volkswagen is too superficial in its coverage.”

For Volkswagen, playing an active part in national and international business networks is a major element in its permanent dialogue with important groups and actors. Volkswagen contributes its technical and social capabilities here and supports numerous projects. The Group is represented on the board of the leading European business network for corporate social responsibility, CSR Europe. At a national level, Volkswagen is represented on the boards of econsense, the Forum for Sustainable Development of German Business and of the international Biodiversity in Good Company initiative. Along with numerous other companies, Volkswagen has signed the "Code of Responsible Conduct for Business" initiative.  20

Since 2002, Volkswagen has been committed to the world's largest and most important CSR initiative, the Global Compact. The 7,000 participating companies in over 135 countries work together to shape a more sustainable and equitable world economy. Volkswagen makes a significant contribution to this initiative. Ten principles under the headings of human rights, labour standards, environmental protection and anti-corruption describe the values of the Global Compact. In 2012 the Company once again reached "Global Compact Advanced Level", gearing its business activities to the principles of the Global Compact at all its locations. With its expertise, Volkswagen also helps other companies in the Global Compact to embrace their global responsibility. One example of this is our ongoing participation in the advisory board for the "Sustainable Supplier Chain" project. Volkswagen is also committed to the follow-up activities for the UN sustainability conference Rio+20, and to the activities of the World Business Council for Sustainable Development.  21

For twelve years now, Volkswagen and the German Nature and Biodiversity Conservation Union (NABU) – Germany's largest environmental protection organisation – have been engaged in a unique form of cooperation. It is based

on mutual respect for different interests. The cooperation consists of three components: consultation, dialogue and projects. Within this framework, Volkswagen and NABU raise public awareness of issues relating to sustainability and the environment, not least through the fuel-saver courses organised in conjunction with NABU.  22

The fleet management project with Volkswagen Leasing GmbH is a success story from both an environmental and an economic point of view. Using the most efficient vehicles reduces not only CO₂ emissions, but also fleet operators' costs. The project is also a particularly effective form of climate change mitigation, since it provides funds for protecting moorlands in Germany, which are major CO₂ sinks.  23

Volkswagen recently concluded a strategic partnership with the German Red Cross (DRK). The aim of the collaboration is to motivate people to embrace responsible conduct and engage in social welfare activities. Both parties are especially keen to foster a stronger ambulance service. In addition, Volkswagen pursues a series of dialogues at expert level – as described in the various chapters of this report.

Sustainability reporting

Volkswagen deliberately seeks a dialogue with certain stakeholders not least to obtain feedback about the relevance and quality of its sustainability reporting. For example, the reporting year marked the eighteenth consecutive year in which our reporting has been systematically improved through target-group surveys and active stakeholder dialogue. This dialogue continued with the evaluation of our 2011 Sustainability Report and the establishment of a Sustainability Panel. The aim here is to document positive and – in particular – negative feedback on the Volkswagen Sustainability Report and thereby identify concrete areas for improvement. The four statements at the bottom of these two pages, provided by way of example, reflect the wide range of opinions and the diversity of the dialogue.

Lars Mönch
Federal Environmental Agency



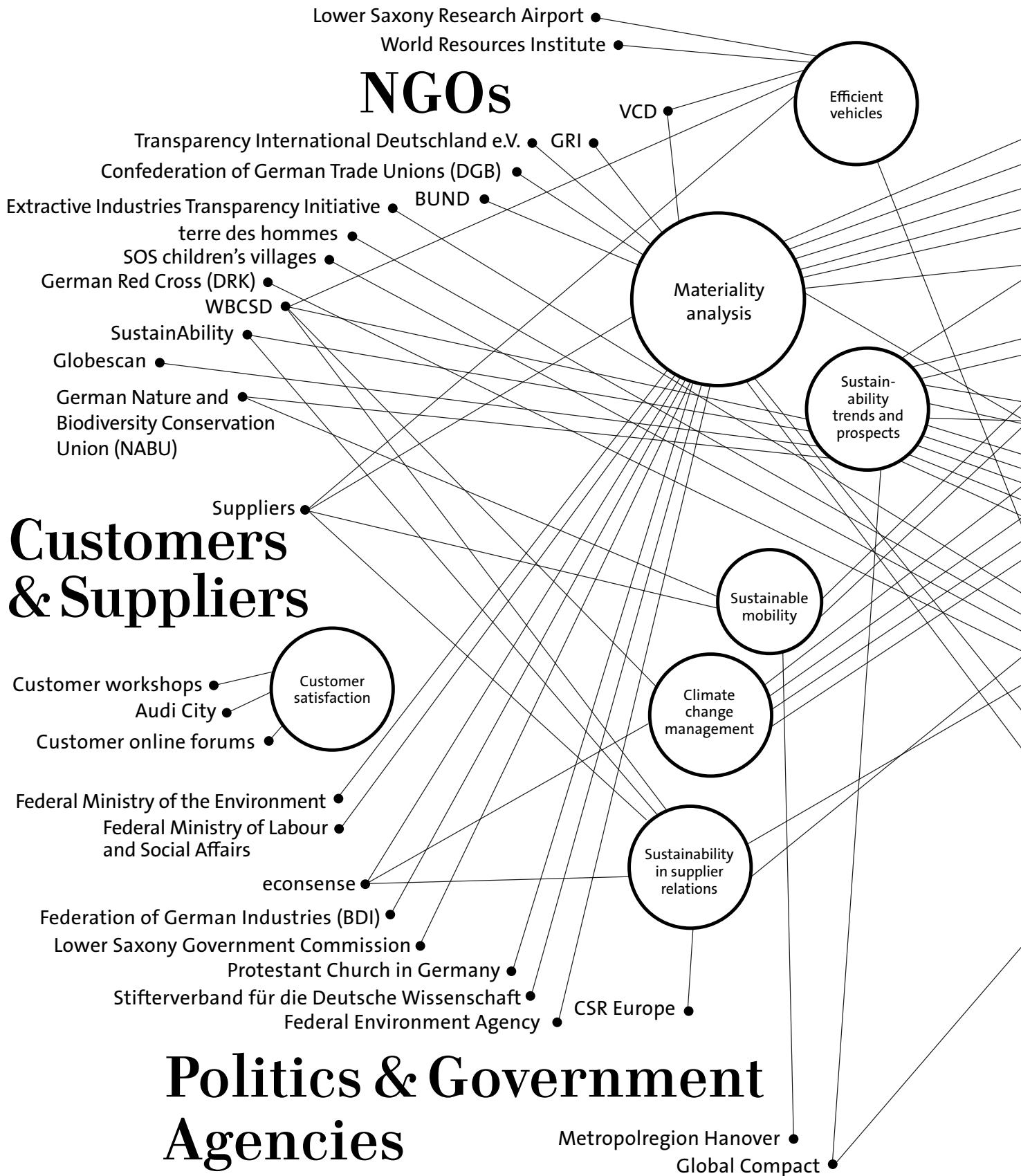
Prof. Dr. theol. Gerhard Wegner
Protestant Church in Germany



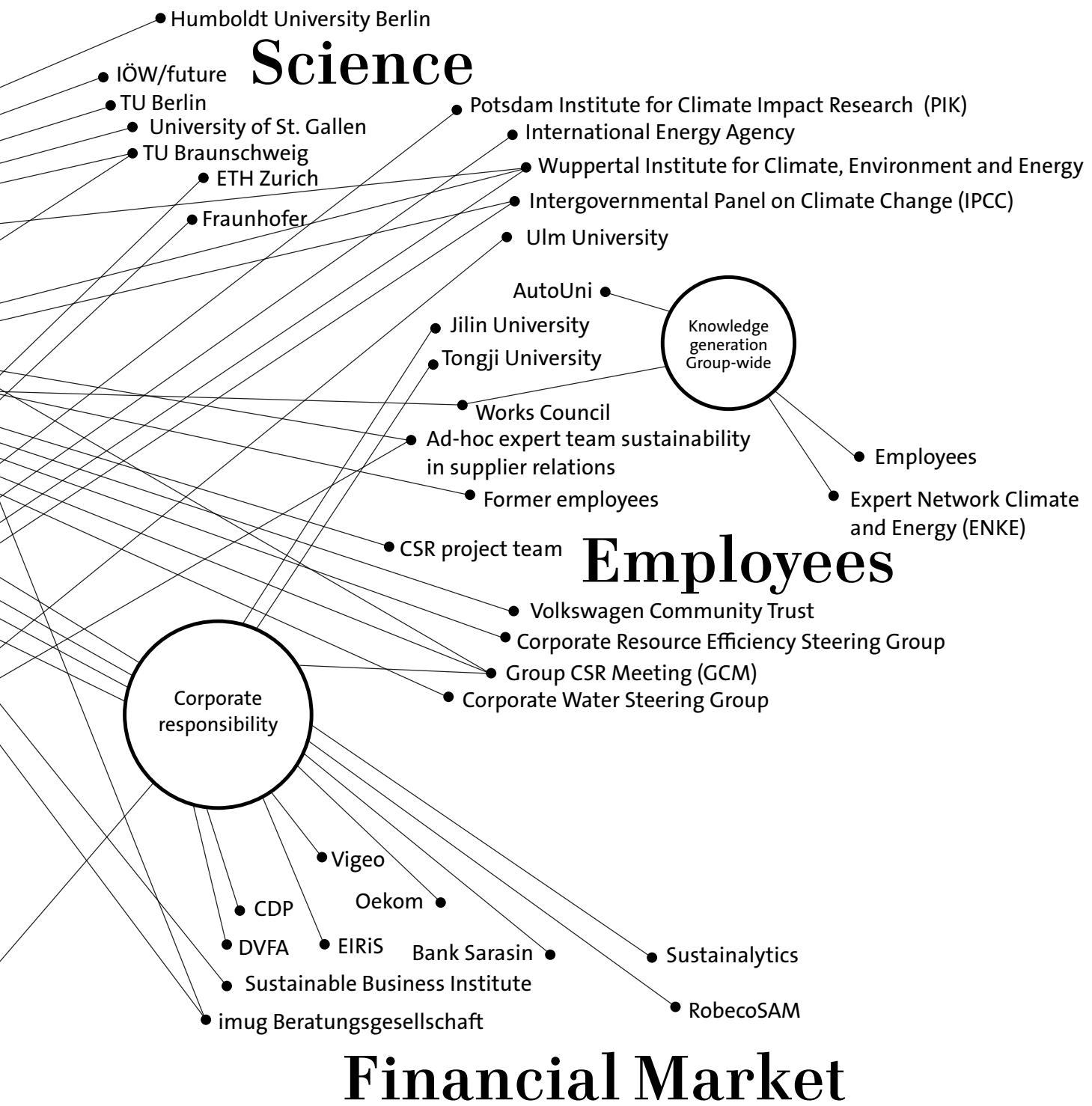
"Volkswagen is right to say that sustainable mobility must involve more than just cars. But how far has Volkswagen really progressed in this process? What risks does this involve for Volkswagen?"

"It's not enough to focus solely on the topic of efficiency. High unit sales ultimately lead to a rebound effect that Volkswagen ought to discuss."

The stakeholder universe.



A COMPREHENSIVE OVERVIEW OF STAKEHOLDER DIALOGUES
CAN BE FOUND ONLINE  11



Materiality matrix: from dialogue to action.

IN A PROCESS BASED ON IN-DEPTH ANALYSIS, VOLKSWAGEN DEFINES THE TOPICS TO BE USED AS CRITERIA FOR ITS SUSTAINABILITY STRATEGY.

From its dialogue with stakeholders and many other approaches and instruments – ranging from future research to internal environmental radar – Volkswagen gathers important findings about what society expects of the Company. These findings are analysed and assessed in a standardised multidimensional process, in terms of both their importance for our stakeholders and their significance with regard to Volkswagen's long-term viability. At the same time, the extent to which a topic can be influenced by the Company is also taken into account. The result is a matrix of the principal topics – the materiality matrix, a roadmap for the Volkswagen sustainability strategy.

Analysis

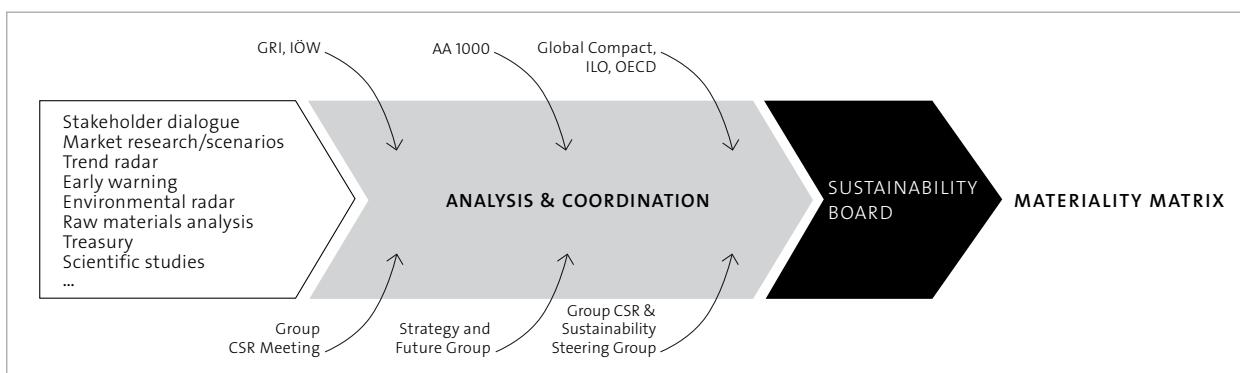
The wide-ranging topics and ambitions are registered and systematically assessed in the relevant sustainability management units at Group and brand level – including the office of the CSR & Sustainability Steering Group and the technical departments in the fields of Group external relations, environment, human resources and compliance/governance. This also includes coordination with the rules and conventions that Volkswagen is committed to, e.g. not only fundamental standards such as the UN Universal Declaration of Human Rights or the European Convention on Human Rights, but also the ILO Declaration on

Fundamental Principles and Rights at Work or the OECD Guidelines for Multinational Enterprises. Furthermore, potential topics are checked for compliance with the principles of the Global Compact and the internal Volkswagen standards – e.g. the Volkswagen Social Charter, the Charter on Labour Relations, the Charter on Temporary Work and the Volkswagen Environmental Principles. Recent scientific articles and studies are also taken into account when assessing the materiality of individual topics. Volkswagen Group Research is also closely involved in this work. The outcome of the materiality definition process is discussed in internal bodies – also in a standardised process with predefined communication paths. The final selection is made by the CSR & Sustainability Steering Group. [11, 12, 16, 17, 18, 19, 24, 25, 26, 27, 29](#)

Principles

Throughout the concentration process Volkswagen is guided by the principal requirements – Inclusivity, Materiality and Responsiveness – of the AA1000 AccountAbility Standard, a globally recognised standard for the verification of sustainability reporting. Compliance with these principles ensures that the Company pursues comprehensive, targeted and systematic integration of stakeholders in the process of selecting material topics,

DEFINING THE MATERIALITY MATRIX



responds systematically to stakeholder initiatives and draws up the materiality matrix taking due account of stakeholder expectations. Accordingly, Volkswagen not only carried on an intensive stakeholder dialogue in the reporting year (> p. 22 ff.), but also discussed the resulting materiality matrix with its stakeholders. As part of this process, Volkswagen engages in targeted research and analysis of negative ecological and social impacts of the Company's activities.

Outcome

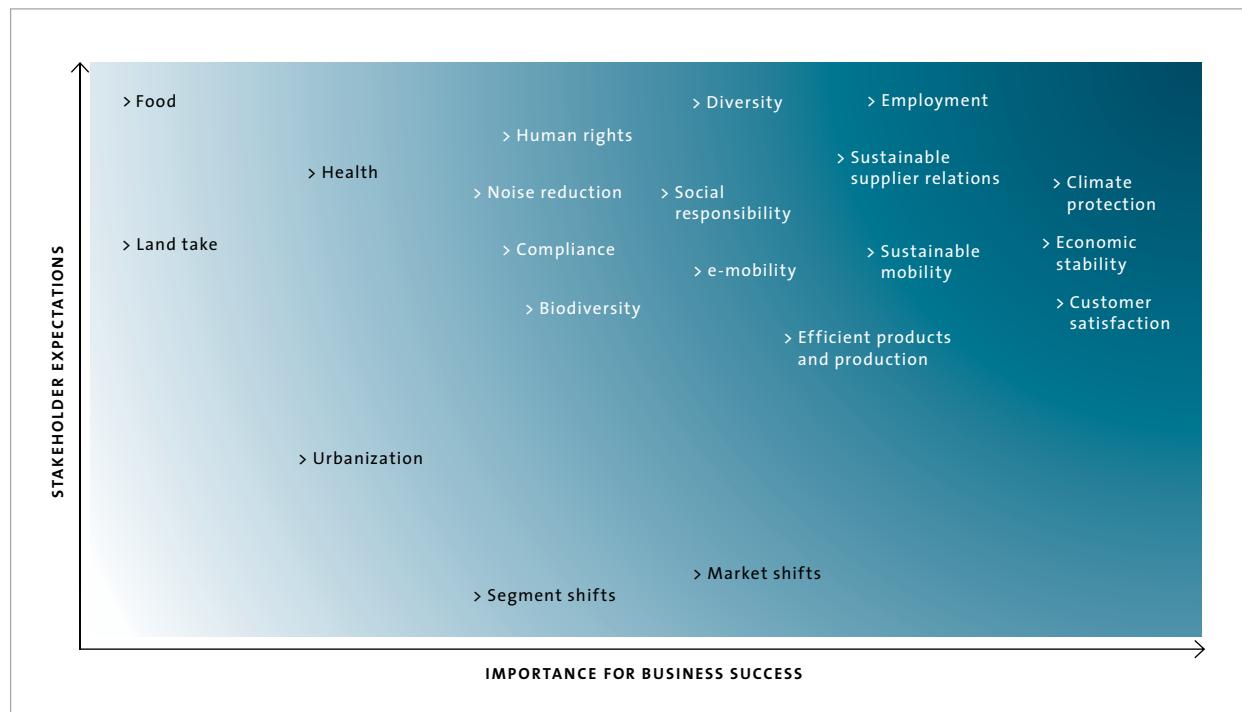
The materiality matrix 2012 shows how Volkswagen assesses different topics in the light of these factors. The further right a topic is located within the matrix, the greater is its importance for the future viability and success of the Company. The closer it is to the top of the matrix, the greater its importance for the stakeholders. At the same time, the matrix takes account of the extent to which a topic can be influenced by Volkswagen. While all topics in the matrix are important, special priority for the purposes of the sustainability strategy is assigned to those topics which Volkswagen can directly influence – in other words topics towards the top right of the matrix. Accordingly, these topics also determine the structure of this report, while other relevant topics, such as water, appear in an overall list pub-

lished on the Internet. This analysis of materiality ensures that Volkswagen reports on the key social and ecological impacts of its operations. Opportunities and risks in respect of the Company's performance and competitiveness are set out in the various chapters of the report and specific goals and actions derived from them.

Reporting time frame

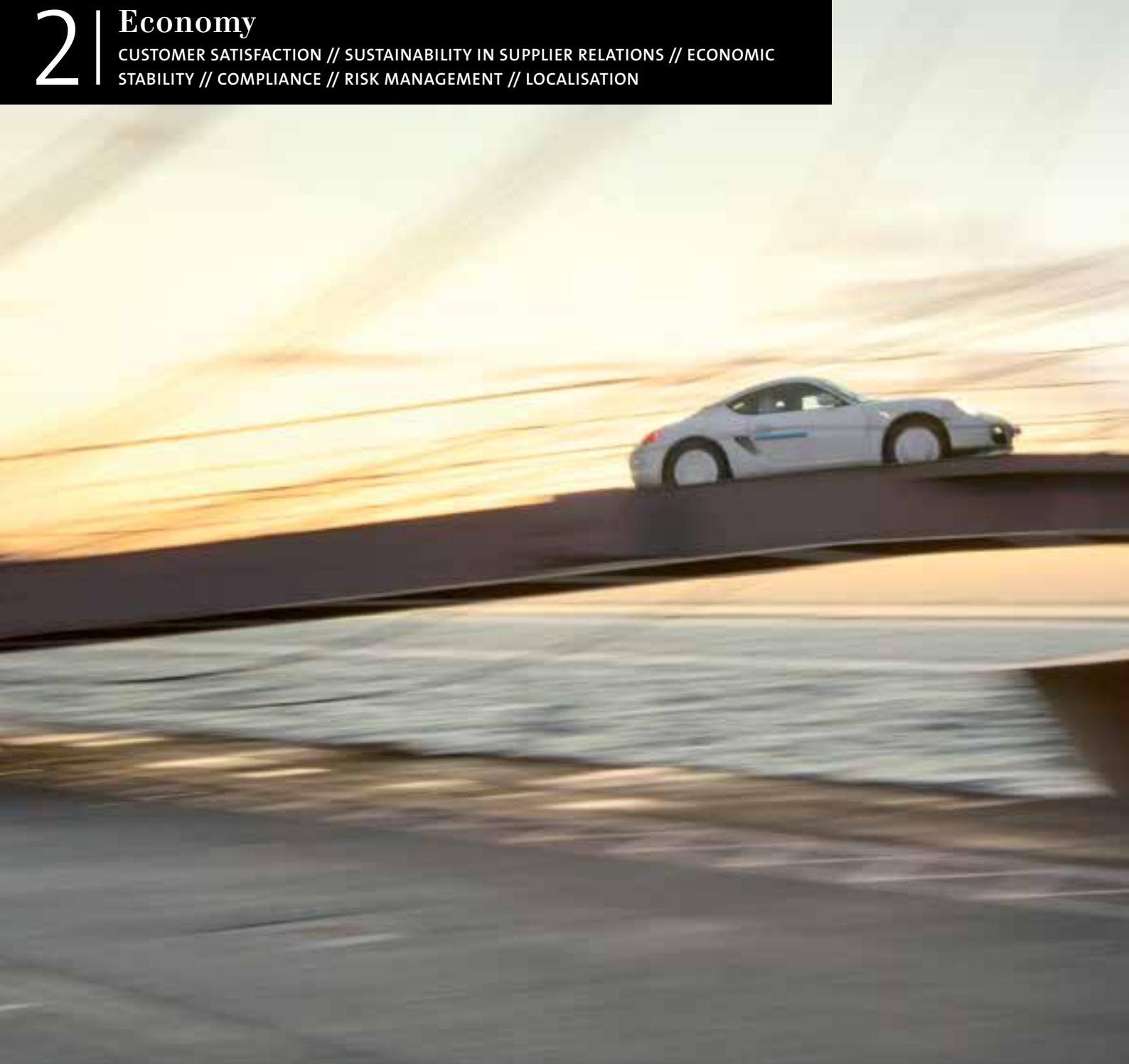
As a rule the analysis of important topics is completed by the end of the third quarter of a reporting year – though it must be remembered that the stakeholder dialogue is constantly generating new topics which have to be taken into account. Once the materiality matrix has been drawn up and discussed with strategic stakeholder partners, it is approved by the CSR & Sustainability Steering Group. On the basis of this matrix, the individual sectors are approached during the final quarter of the year and asked to supply facts and figures. A meticulously documented editorial process then prepares this material for sustainability reporting. Among other things, this observes the principles of the Global Reporting Initiative (GRI). External stakeholders and analytical and consulting companies are involved in the editorial process. The Sustainability Report itself – complete with the relevant online microsite – is then presented to the public at the Annual General Meeting.  30

KEY ISSUES (RESULTS OF THE MATERIALITY ANALYSIS)



2 | Economy

CUSTOMER SATISFACTION // SUSTAINABILITY IN SUPPLIER RELATIONS // ECONOMIC STABILITY // COMPLIANCE // RISK MANAGEMENT // LOCALISATION



Economy.



At the North German port of Emden, commercial success takes on tangible form. Every year, more than 1.2 million vehicles from almost all Volkswagen Group brands pass through the port, inbound and outbound. That's 800 shiploads... and rising.

Growing sustainably.

Higher vehicle sales, higher sales revenue and higher operating profit: in the reporting year the Volkswagen Group outperformed the record level of the previous year. As a result, the Group is firmly on course to reach its ambitious growth targets – and sustainably secure its long-term viability.

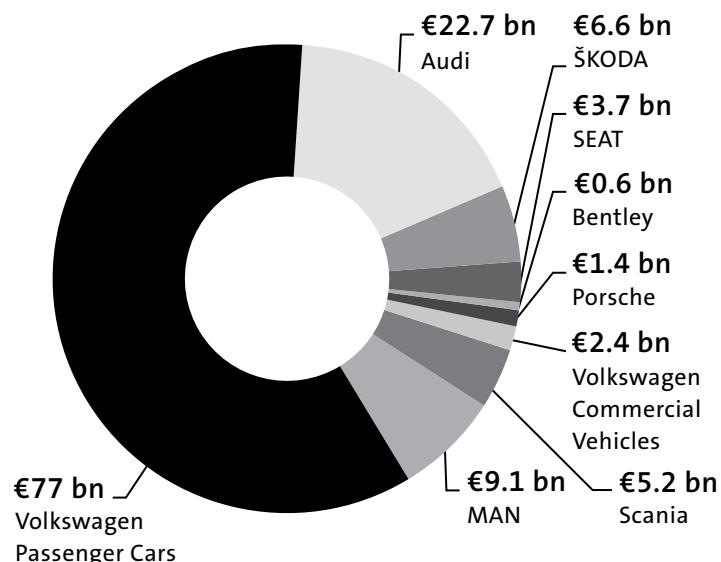
+38.5%

is the margin by which profit after tax increased in the reporting year, reaching €21,884 million. Sales revenues were also up by 20.9 percent to €192,676 million. And at €11.5 billion, operating profit exceeded the previous year's record level of €11.3 billion.

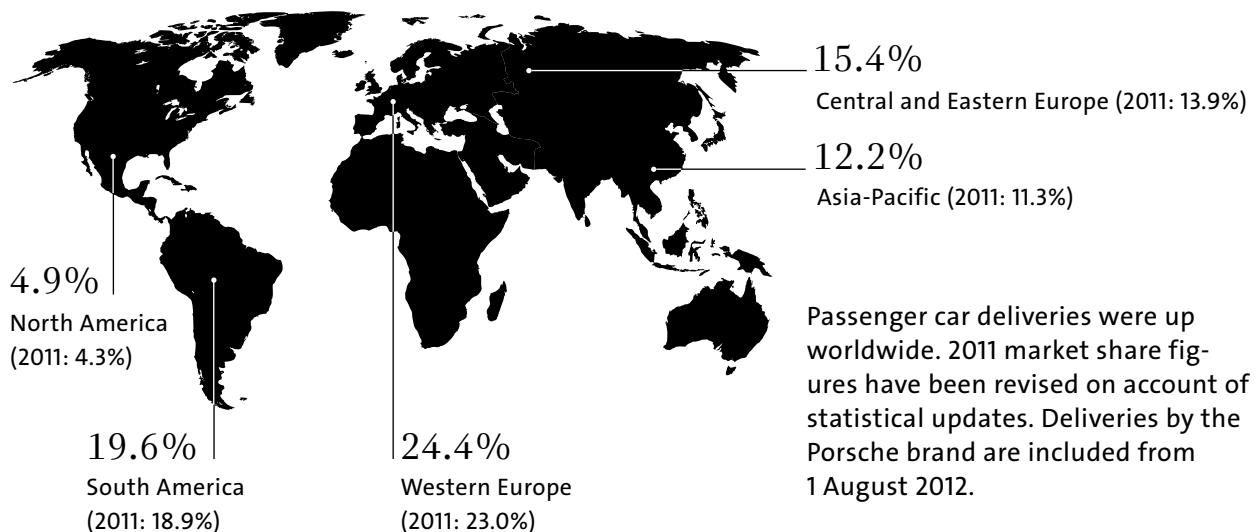
Procurement volume by brand.

The total procurement volume for the Volkswagen Group in the reporting year amounted to €128.7 billion. This represents an increase of 16.8 percent over the previous year.

The figures include the procurement volume for Porsche from August 2012 and for MAN from November 2011. The procurement volume for Audi includes the brands Lamborghini and Ducati (from August 2012).



Worldwide market shares, passenger cars.



Passenger car deliveries were up worldwide. 2011 market share figures have been revised on account of statistical updates. Deliveries by the Porsche brand are included from 1 August 2012.

Milestone.

The earnings reported by Volkswagen for 2012 marked a major milestone on the way to becoming the world's leading automobile group.

“It is only through sustainable development that Volkswagen has been able to make further progress towards becoming the world's top automaker.”

HANS DIETER PÖTSCH
'FINANCE AND CONTROLLING'



2

Successful – despite a difficult backdrop

VOLKSWAGEN HAS REACHED THE GOALS IT SET ITSELF. THANKS TO ITS HIGH FINANCIAL STRENGTH AND EARNINGS POWER, A BROAD-BASED MODEL RANGE, A WORLDWIDE PRESENCE AND AN ATTRACTIVE PACKAGE OF FINANCIAL SERVICES, VOLKSWAGEN IS WELL PLACED TO CONTINUE TO MAKE BETTER PROGRESS THAN THE COMPETITION IN FUTURE.

CUSTOMER SATISFACTION

Customer satisfaction – satisfaction with products, services and performance – is a cornerstone of Volkswagen's corporate strategy, laying the foundation for long-term, sustainable success. Knowing customers' needs and expectations, and learning more about them by maintaining an ongoing dialogue with customers, is a top priority for Volkswagen. In this respect, alongside excellent products and expert advice, personal contact with the customer is of critical importance. Particularly when it comes to the Group's new sustainability measures, customer satisfaction is a key indicator of how well product developments and model updates are responding to stakeholder needs. Consequently, customer satisfaction is a key component of the Group's Strategy 2018, and is reflected in the strategies of all the individual brands. And the Group sets itself the highest possible goals in this respect: Volkswagen aims to do more than just satisfy its customers – it aims to delight and inspire them. Reflecting this priority, the Board of Management receives updates on all customer-related activities as often as six times a year.

Individual Group brands conduct satisfaction surveys in their respective markets, placing special emphasis on customer satisfaction ratings related to products and services. For product satisfaction, the Porsche and Audi brands lead the rankings in their European core markets, compared with other Group brands and with their competitors. But in terms of overall satisfaction levels, the Group's other brands perform well, too, matching – or outperforming – their competitors. Overall, the surveys reveal that well over two thirds of all customers are very satisfied with the products of the Volkswagen Group brands. In the European core markets, Porsche and Audi rank among the top three brands. Volkswagen, ŠKODA and SEAT score satisfaction

ratings in excess of 90 percent – far above the market average. In the USA, Porsche and Audi lead the field, occupying the no. 1 and no. 2 positions. In China, Audi, ŠKODA and Volkswagen set the standards in terms of product satisfaction, scoring over 95 percent. Volkswagen and ŠKODA are also setting the pace for dealer satisfaction in China, ranking at no. 1. Volkswagen Group customers are loyal to the brands because they are satisfied with the products and services. Brand loyalty ratings, which are calculated on a regular basis, show how much customers trust the respective brands: the Volkswagen passenger car brand, for example, has maintained a high level of brand loyalty in its European core markets for several successive years now. ŠKODA's customers are very loyal, too: the brand has also maintained a leading ranking compared with its competitors for a number of years. ↗ 31

Volkswagen's market research evaluates customer satisfaction – in comparison with the Group's competitors – while at the same time gathering detailed information through to dealership level. Depending on the specific context for the research, various survey methods are used – both face-to-face and telephone interviews, and written and online surveys. For legal reasons, Volkswagen is not authorised to publish specific management-related external customer satisfaction data.

Methodically and systematically measuring the brands' performance in this key area provides a sound basis for continually improving the customer process. Yet Volkswagen has gone a stage further, too, introducing a unique initiative that actively includes the customer in the product process. Since 2011, the brand's target market has been invited to contribute to the product design process. The "People's Car Project" gives customers in China the opportunity to present their ideas for design, customisation and connectivity



Identifying and understanding customer wishes and needs holds the key to customer satisfaction. One positive example here is the People's Car Project in China, in which visitors to an online platform were asked to submit their car design ideas. With 33 million visitors and over 119,000 suggestions submitted, the project has exceeded all expectations. Three of the car and technology concepts put forward and taken up by Volkswagen were presented at the Auto China 2012 fair. Among them was the Music Car, which changes colour depending on the music that the driver selects.

via an online platform. The response has been phenomenal – the website has had more than 33 million Chinese visitors, and more than 119,000 ideas have been submitted. Originally scheduled to run for one year, the project has now been extended indefinitely. In other words Volkswagen is making cars not just for its customers but also with its customers, in a process that yields an in-depth insight into customers' needs and preferences. In this way, Volkswagen is aiming to ensure that it ranks as one of the world's top three automakers for customer satisfaction by 2018. **32**

Audi's Board of Management regularly discusses product and satisfaction requirements in its "Kundentisch" customer forum, with the aim of understanding background trends and influences, and optimising business processes.

Audi City, an entirely new concept, was introduced in order to build even closer customer relationships, to showcase the full spectrum of products in a highly emotive way, and

to discover customer needs. This innovative space for interaction between brand, customer and product provides digital access to all the brand's models in life size and in real time. With its state-of-the-art technology, Audi City perfectly expresses the ethos of the Audi world, offering customers the live experience of a next-generation showroom. In 2012, Audi City showrooms were opened in London and Beijing; the brand plans to roll out the concept worldwide. **33**

Focusing on the customer, then, is not just the basis of the Volkswagen Group's actions, but a core element of its strategy. Because only products and services of outstanding quality that ensure a high level of customer satisfaction can guarantee long-term market success. One key factor here is meeting the specific needs of consumer groups, for example by producing special-purpose vehicles for the disabled. Superior vehicle safety and state-of-the-art driver assistance systems are also relevant considerations in this respect. **34, 35**

Another decisive aspect is fair pricing. Take ŠKODA for example: with the new Rapid, a locally produced version of which was launched on the Indian market in 2011, the ŠKODA brand presented a compact notchback saloon, specially designed for international growth markets like China and Russia, as well as price-sensitive customer segments in Europe. Like the up! at the Volkswagen brand, the four-door Citigo supplements the ŠKODA offering in the expanding small car segment.

in relations with business partners”, which are signed by the Group’s Procurement Director and the Group Chief Compliance Officer. The Volkswagen Group expects its business partners to observe these requirements and to require them from their own business partners. The requirements apply to all goods and services purchased. The Group rejects any behaviour that is corrupt or damaging to the Company in everyday transactions, and also any failure to comply with environmental and social standards. Compliance with competition and anti-trust legislation is expected and verified.  37

SUSTAINABILITY IN SUPPLIER RELATIONS

Against the backdrop of the ongoing growth and diversification of the supply chain, Volkswagen believes it has a responsibility to promote sustainability throughout the entire value-added process. The aim of the Volkswagen Group is to achieve globally stable, efficient and sustainable goods and supply chains that ensure security of supply. To this end, as long ago as 2006, Volkswagen developed and implemented the “Sustainability in supplier relations” concept. Since then the concept has been subject to ongoing external evaluation and improvement.

Concept

By implementing this concept, Volkswagen ensures that its business partners, too, observe environmental and social standards. In this context, Volkswagen attaches great importance to a fair and open dialogue in a spirit of partnership. The concept essentially rests on four pillars:

- 1) Sustainability requirements for suppliers that have to be acknowledged by all suppliers before submitting a quotation. No company can submit a quotation without acknowledging these requirements.
- 2) An early warning system for identifying and minimising risks along the value chain.
- 3) Integration into the procurement process.
- 4) Supplier monitoring and development.

Sustainability requirements

The “Sustainability in supplier relations” concept is based on the “Volkswagen Group requirements for sustainability

The “Volkswagen Group requirements for sustainability in relations with business partners” set out Volkswagen’s expectations concerning its business partners’ conduct with regard to central environmental and social standards. Among other things, the requirements are based on observance of internationally recognised human rights, the United Nations Global Compact, the International Chamber of Commerce Business Charter for Sustainable Development and the OECD guidelines for sustainable long-term development. Moreover, the relevant core labour standards of the International Labour Organisation ILO form the foundations of the Volkswagen sustainability requirements. These include observing the right to freedom of opinion, protection from arbitrary decisions, the ban on discrimination at work, the prohibition of forced labour and child labour, the fundamental right to freedom of association and the right to equal treatment and appropriate remuneration.

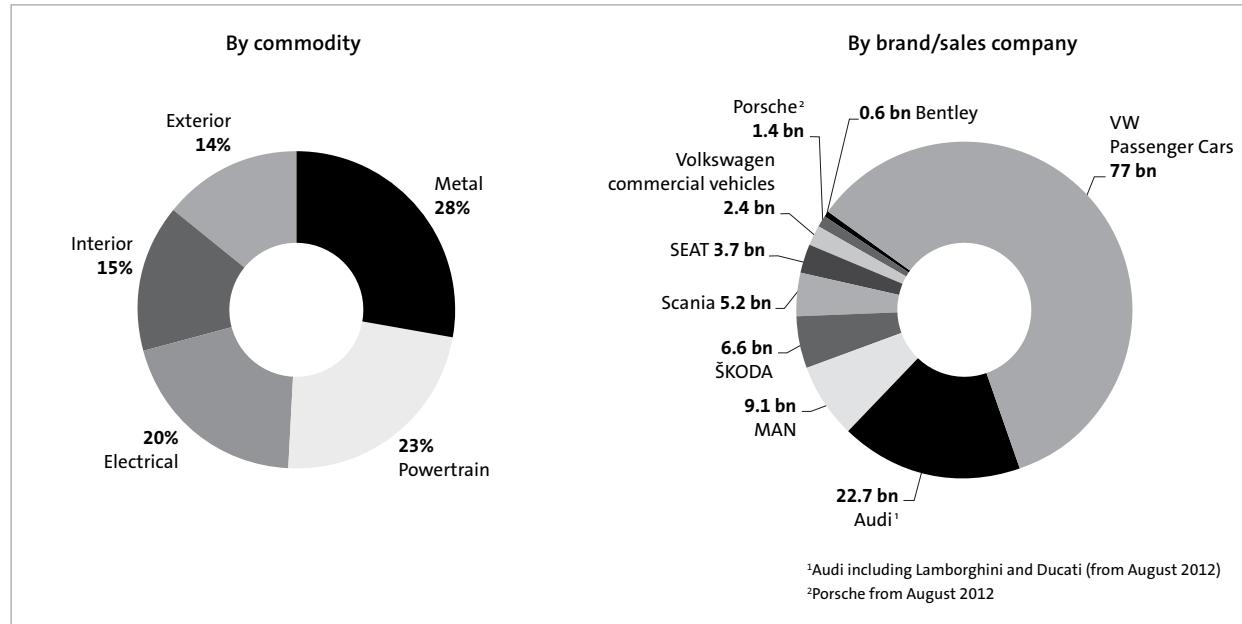
These principles are supplemented by Volkswagen’s environmental policy, the resulting environmental targets and requirements, the Group’s quality policy and the Volkswagen declaration on social rights. All suppliers are made aware of the binding requirement to implement a sustainability strategy. This is done in a variety of ways. Thus, for some years now we have been taking environmental targets as a basis for awarding contracts; this is done by making VW Norm 01155 and VW Norm 99000 parts of the contract and co-valid contractual documents. VW Norm 99000, for example, explicitly standardises requirements relating to environmental impact, recyclability and prohibited materials.

Furthermore, Volkswagen requires its major suppliers to have a certified environmental management system in

place in accordance with ISO 14001 and/or EMAS. This has been verified and documented for 30 percent of our major suppliers. As part of the environmental certification and auditing of the Volkswagen AG locations under EMAS and ISO 14001, regular checks are made on the environmentally relevant suppliers and service providers working on the factory sites. Furthermore, together with other automakers we meticulously audit the 250 waste management companies that work for the Volkswagen brand's German locations. The

waste management contractor first receives a fact-finding questionnaire and then has to furnish certificates and permits, e.g. a valid inspection by the technical inspectorate TÜV. A detailed checklist is then worked through in the course of an on-site inspection. Equipment is thoroughly inspected and documents scrutinised. The data is all collected in a multi-company portal which in future will also take account of Europe-wide standards. The Spanish Volkswagen location Navarra is already using the portal.  38

PROCUREMENT VOLUMES



In the reporting period, Volkswagen purchased goods and services from a total of 21,917 suppliers. Of this total, goods to the value of €67.6 billion from 7,125 suppliers were for the production sector. This does not include goods to the value of €35.4 billion from suppliers to the Lamborghini, Bugatti, Porsche, SCANIA and MAN brands or to ŠKODA India and the Chinese joint ventures. In the field of general procurement, goods to the value of €17.2 billion were delivered to Volkswagen by 14,792 suppliers. This does not include goods to the value of €8.9 billion from suppliers to the Lamborghini, Bugatti, Porsche, SCANIA and MAN brands or to ŠKODA India and the Chinese joint ventures. In 2012 there were 752 new suppliers for the production sector and Volkswagen purchased goods to the value of €1 billion from these suppliers. This does not include goods from suppliers to the Lamborghini, Bugatti, Porsche, SCANIA and MAN brands or to ŠKODA India and the Chinese joint ventures. In the general procurement sector there were 5,625 new suppliers, accounting for purchases totalling €4.4 billion. This does not include goods from suppliers to the Lamborghini, Bugatti, Porsche, SCANIA and MAN brands or to ŠKODA India and the Chinese joint ventures. Terms of payment are an important topic in our dialogue with suppliers. The great majority of payments are made on the 25th calendar day of the month following delivery.

Raising Company employees' awareness of sustainability aspects along the value chain is a factor of critical importance, particularly in the procurement sector. Volkswagen therefore runs training and information events to equip procurement staff with the necessary skills for the "Sustainability in supplier relations" concept. Thirteen training courses were held at various locations in 2012, e.g. for junior Volkswagen brand managers or at the ŠKODA Bratislava location. These information events supplement the training that all new procurement staff undergo in the course of the Company's knowledge transfer programme. All procurement staff also have access to the eLearning tool for suppliers; for more details see the section on "Supplier development" (> p. 39).

Risk analysis

The excellent reputation that the company enjoys in the business world and in society in general is a valuable asset for the Volkswagen Group. To avoid putting this at risk, Volkswagen runs an integrity check on new business partners. The aim of this process is to find out more about the potential business partner before entering into business relations, thereby reducing the risk of a relationship that could adversely affect the Group and its business. Before being taken on board the Group Business Platform, all new business partners are therefore subjected to the Business Partner Check (> p. 42).

In order to obtain information about the importance attached to sustainability in certain parts of the world even before making the first personal contacts with a potential new supplier, Volkswagen has performed a country risk analysis with the assistance of independent institutions. On the basis of this, Volkswagen sees an increased risk of non-compliance with its sustainability requirements in Brazil, India, China, Mexico and Russia.

Conflict minerals are another important issue: Volkswagen is concerned about reports of human rights violations such as forced labour and child labour, the use of force and destruction of the environment in the mining of minerals, including tin, tantalum (coltan), tungsten and gold, e.g. in the Democratic Republic of the Congo and neighbouring states.  39

Supplier scorecard

Volkswagen uses the supplier scorecard for effective and sustainable supply chain management. The scorecard summarises information on individual suppliers in the fields of Procurement, Technical Development, Quality Assurance and Logistics. This information makes it possible to perform a supplier analysis. In addition, the supplier scorecard also provides a basis for communication when developing and coordinating integrated supplier strategies. The documented sustainability criteria, e.g. records of company certification or information about the extent of compliance with the sustainability questionnaire, permit conclusions about a supplier's environmental and social standards.

Integration in the procurement process

The Group Business Platform is the central tool for interaction with suppliers. This is where the Volkswagen Group's central procurement applications are concentrated. In addition to its interactive functionality for day-to-day business, the Group Business Platform is also an information medium. Here suppliers can find out everything they need about the "Sustainability in supplier relations" concept. And this is where they can access all the sustainability guidelines named above.  40

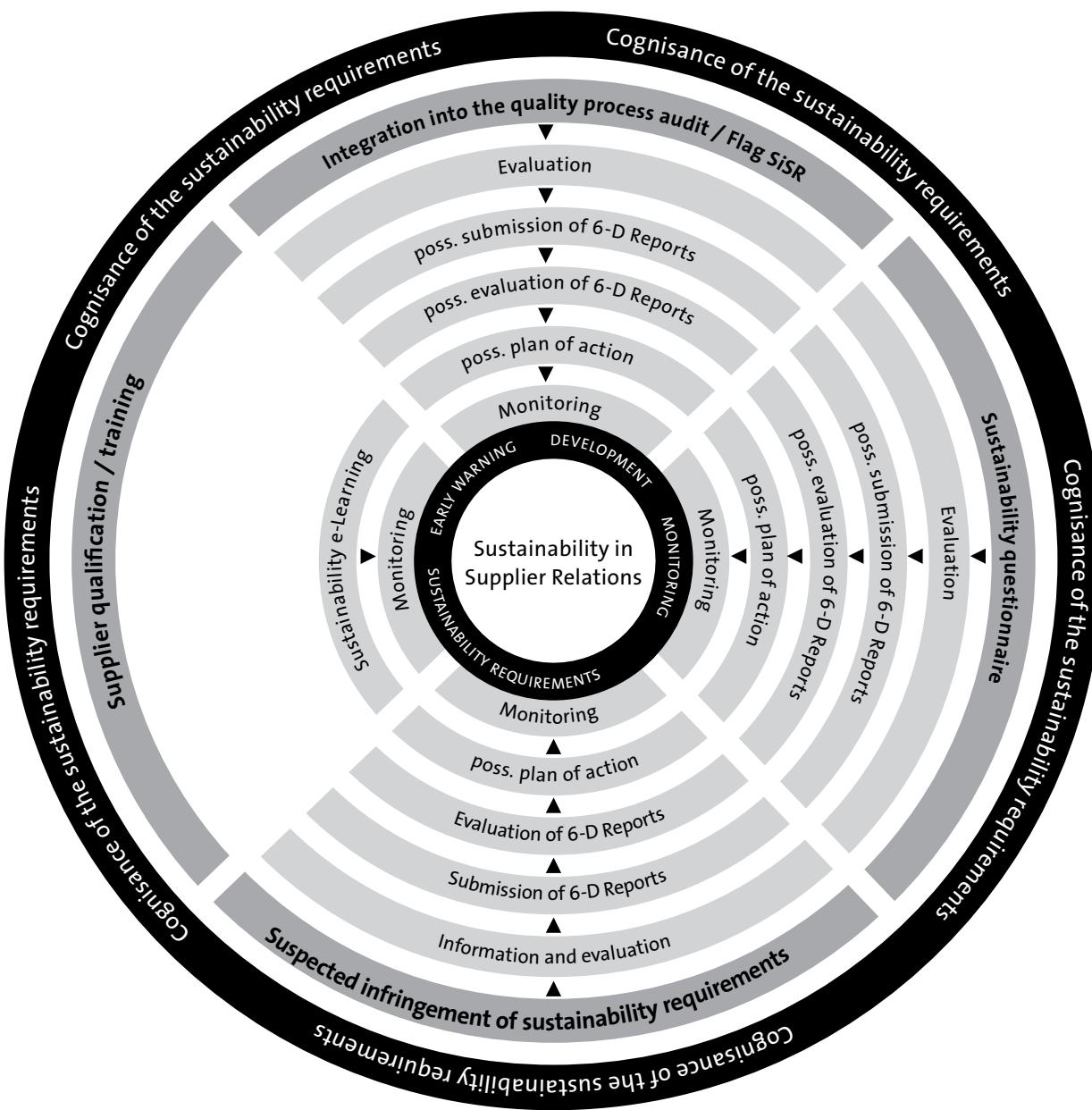
As already mentioned, all suppliers have to acknowledge the sustainability requirements when submitting their first quotation and at 12-month intervals thereafter. This process is integrated into the Group Business Platform.

Supplier monitoring

All suppliers are requested to complete the sustainability questionnaire. This is posted on the Group Business Platform as a To Do task. By 31 December 2012, 7,812 suppliers had answered the questionnaire. In cases where there are reasonable grounds for suspicion, possible deviations from Volkswagen's sustainability requirements or unsatisfactory answers, the supplier is contacted and asked for a written statement based on the "6D Report", which contains six points to be answered, enabling both the point at issue and the remedial measures to be described. This statement is then evaluated by experts in the relevant field. If the answer is not satisfactory, further steps are

IN THE INTERESTS OF SUSTAINABLE COLLABORATION

Compliance with the sustainability requirements of Volkswagen is coordinated and monitored through a strategically structured process.





Building a car takes thousands of parts, manufactured all over the world, assembled with extreme precision and in line with rigorous sustainability requirements – all of which would not be possible without binding standards. Volkswagen established these standards back in 2006 with its “Sustainability in Supplier Relations” concept.

taken. The measures to be initiated are coordinated by

- the ad hoc expert team in Wolfsburg and
- the expert teams in the relevant brands and regions for the suppliers in question. Where necessary, further measures are demanded and their implementation monitored.

All procurement regions are represented within the procurement sustainability network, ensuring regional coverage of the procurement regions and hence of the countries in which the suppliers are located. Where suspicions exist, ad hoc cases are dealt with in close consultation with the representatives of the brands and regions. They, after all,

are quickly on the spot, speak the local language and may already have had contact with the supplier in a different context. Depending on the situation, experts from specialist areas such as occupational safety and health or human resources are called in to handle such ad hoc cases and provide case-specific and specialist support for their colleagues in the procurement network. These ad hoc expert teams are maintained in every brand and region. They are supported by the ad hoc expert team based in Wolfsburg.

Internal quality process auditors help Procurement to implement monitoring of the “Sustainability in supplier relations” concept. To this end the auditors use a status in-

dicator (SiSR flag) to perform audits at the suppliers to establish whether the supplier has answered the sustainability questionnaire and understood the contents. In cases of non-compliance or if the sustainability requirements have not been understood, the procurement sustainability network contacts the supplier in question. If necessary, e.g. where deficits are detected, an escalation process is launched which includes the use of the 6D Report. The 6D Reports are also used to obtain an initial statement from the supplier in cases of suspicion arising independently of these processes. Here too the above-mentioned escalation process may be launched if the need arises. In 2012 there were a total of eleven ad hoc cases in which the dialogue with the supplier resulted in compliance with the sustainability requirements. Of these, nine were in the social field and two in the environmental sector. Six of the cases occurred in Europe, three in Asia and two in South America.

In all process steps and all measures, the focus is on supplier development, fair dialogue in a spirit of partnership, and ongoing cooperation with the supplier. The Volkswagen Group reserves the right to have compliance with the sustainability requirements verified by experts at the business partner's premises during regular business hours. The Volkswagen Group furthermore reserves the right to terminate business relations with suppliers on the grounds of non-compliance with the sustainability requirements, especially in cases where the supplier displays no visible interest in long-term improvement. During the reporting period there was one case in which the Volkswagen Group terminated its business relations with a supplier because of non-compliance with the sustainability requirements.

Supplier development

In the interests of an ongoing supplier development process, Volkswagen makes an eLearning module in nine languages available to its suppliers on the Group Business Platform, or invites them to work through it via the "To Do" function on the Platform. In the eLearning module the user first learns what requirements Volkswagen has with regard to environmental and social standards and what Volkswagen's sustainability requirements are based on.

The information provided is supplemented by references to further reading. After the eLearning course, the supplier has to perform a self-check. The learning module is not regarded as "passed" until this check is successfully completed. As of 31 December 2012, 2,420 supplier locations had completed the eLearning course.

Projects in 2012

To ensure worldwide integration of the "Sustainability in supplier relations" concept into all the Group's brands and regions, Volkswagen again held an international regional meeting in 2012. Some 30 representatives from the global procurement regions met in Wolfsburg, not least to share examples of best practice. Specific amendments to the concept were decided on the basis of this international dialogue.

All the concept's structures and modules are regularly reviewed – e.g. in exchanges with other organisations and companies, for example the Forum for Sustainable Development of German Business (econsense), the German Automobile Industry Association (VDA), the Extractive Industries Transparencies Initiative (EITI) or the European Automotive Working Group on Supply Chain Sustainability (CSR Europe).  36, 41, 42, 43

Goals 2013

One important goal is the integration of the Porsche, Scania, MAN and Ducati brands into the "Sustainability in supplier relations" concept. This process is to be completed in 2013. Volkswagen also plans to expand its supplier monitoring and supplier development activities. To this end the concept for systematic identification of sustainability risks in the supply chain will undergo further development in a doctoral thesis. This is to be used as a basis for more comprehensive identification and more detailed analysis of sustainability risks. A further goal is the introduction of more in-depth sustainability audits at suppliers. Moreover, special training courses are to be held in 2013 to raise supplier awareness of sustainability issues.

The aim is to work exclusively with suppliers who comply with all specific sustainability requirements.

ECONOMIC STABILITY

The global economy continued to grow in 2012, but with some loss of momentum. Once again, the driving force behind this development was the emerging economies, which displayed above-average economic growth. In some cases, however, growth rates fell short of the previous year's figures. In view of structural barriers, especially excessive pressures on national budgets and deficits in the competitive strength of some countries, the industrialised countries achieved only limited expansion.

This split in the development of the global economy will continue in 2013. The emerging markets in Asia are likely to maintain their role as growth drivers. By contrast, the situation in the industrialised countries is fraught with uncertainties. Depending on the success of the efforts to bring about political reforms, the situation could ease in the USA in particular, and also in parts of the Eurozone. While the favourable developments of recent weeks on the financial and currency markets indicate a certain potential for recovery, they are not yet sufficient to indicate that the crisis is drawing to a close.

Volkswagen will be faced with considerable challenges. These are due partly to global economic trends, and partly to the increasing competition in the automotive industry and the growing size and complexity of the Company.  44

Global economic trends

The relative shifts in the global economy will continue in the years ahead. This will be especially true if the traditional industrialised countries fail to overcome the structural problems of their economies and do not take full advantage of their already reduced growth potential. The BRIC countries in particular will become increasingly significant in both economic and political terms. Although the recent slight dip in the pace of growth, especially in Brazil, indicates a fundamental economic vulnerability, the prospects are that the BRIC countries will continue to make an above-average contribution to the growth of the global economy.

Furthermore, for some years now another group of emerging countries has been taking shape in Southeast

Asia and Latin America, characterised by dynamic growth in conjunction with relative political stability. Here too the Volkswagen Group sees substantial opportunities in terms of unit sales, thanks to the economic advancement of broad sections of the population and the associated increase in household incomes.

The shift in the centres of growth is giving rise to an increasingly multi-polar global economy with corresponding impacts on international trade, and also on finance flows and the energy and commodity markets. The countries in question are already exerting considerable influence on global politics in order to safeguard their economic and political interests.

In view of the lack of progress towards multilateral free-trade agreements, recent efforts to promote free trade between individual states and regions offer opportunities for market integration. They are helping to ensure that the global economy and global trade continue to grow.

Nevertheless, the risk of foreign exchange conflicts and of protectionist measures designed to improve national competitive positions in the short term has recently increased. There are also considerable risks arising from the structural deficits in numerous economies – especially with regard to public budgets, the continuing inadequate supervision and regulation of the international financial markets, and the impacts of political and social conflicts.

Increasing competition

Competition continues to intensify on the global automotive markets. Last year, Japanese manufacturers recovered from the natural disasters of 2011 and succeeded in recapturing lost market shares. The Korean manufacturers continued their worldwide expansion and increased their sales on the EU market, which showed an overall downturn. The presence of Chinese automakers on the car markets of Western Europe and North America remains insignificant, but they are becoming increasingly important in emerging economies.

Against this difficult background, the Volkswagen Group succeeded in topping its strong performance in the previ-

ous year, supplying more than 9 million vehicles for the first time ever. The successful integration of Porsche, MAN and Ducati also enlarged and strengthened the Group's product portfolio. The Volkswagen Group is therefore confident that it is firmly on course to achieve its targets. The increasing strength of new and old competitors provides additional motivation for resolutely pursuing our goal of becoming the number one global player among car manufacturers by 2018.

Emerging from the crisis with greater responsibilities

Volkswagen emerged from the global economic crisis faster than expected and in a stronger position than its competitors. It is only through responsible and sustainable management that the Company has succeeded in maintaining its progress towards global automotive leadership as mapped out in our Strategy 2018. As the Volkswagen Group grows in size and complexity, its responsibility for the Company and for its employees will continue to increase.

In the years gone by, Volkswagen has successfully stepped up its presence in important markets. In view of the global economic trends and risks already described, it will in future be increasingly important to improve the conditions for sustainable growth and to tap new potential.

A large measure of flexibility and financial independence is absolutely essential for dealing successfully with business downturns and economic crises. The crisis years have shown that sustained investment in product, process and personnel development pays off, and that this is a key factor in the long-term success of the Company. More flexible production processes make it possible to ensure a rapid response to market changes and prevent misallocation and surplus capacity. With the introduction of the modular transverse matrix last year, the Volkswagen Group took a major step towards making production more flexible and even more efficient.

The diversification of the product portfolio and a broad presence in the global markets help to improve the Company's resistance to crises. This can balance out sectoral and geographical risks and reduce their impact on the

Company. Localising valued-added processes to ensure accurate catering for customer needs at local level, and also to minimise risks arising from currency fluctuations and protectionism, must therefore form another central element of our corporate strategy. The opening of the Group's 100th factory at Silao in Mexico is a milestone in Volkswagen's localisation efforts.

Volkswagen's corporate management and culture, traditionally partnership-based, have proved their worth as important factors in absorbing the impacts of economic downturns. In particular, the functioning social partnership within the Group made a major contribution to successful countermeasures during the last crisis and formed the foundation for the Group's robustness and resilience. The willingness of employees and Group management to work together to safeguard the Company's future viability is the precondition for a sustainable business model.

Energy-intensive and resource-intensive industries in the international competitive arena are faced with the challenge of reducing emissions and energy consumption. The long-term measures to conserve resources and minimise Volkswagen's environmental footprint are an integral part of the Group's strategy. At the same time, Volkswagen regards the development of energy-efficient production processes and alternative drive systems as an opportunity to generate competitive advantages and sustainable growth.

Volkswagen will only achieve sustainable success by taking more and more responsibility for the environment and for social developments, particularly in emerging economies. Every single employee has a part to play here: through their skills and commitment they shoulder responsibility for the Group's ongoing development and future success.

COMPLIANCE

In the long term, a business can only succeed in operating sustainably and doing justice to its global and local responsibility if it acts with integrity. Among other things, this includes complying with national and international rules, dealing fairly with business partners and competitors, and acting in a responsible manner. But voluntary undertakings and ethical principles are also elements of Volkswagen's corporate culture – something that all employees and business partners are expected to respect.

In 2010 this claim was reaffirmed and set out in the Code of Conduct that applies across the Group. These principles are designed to provide guidance to all Group employees on how to behave responsibly in their day-to-day work. The Code of Conduct touches on many facets of corporate sustainable development, not only from an economic and environmental point of view, but also from a social angle: from avoiding conflicts of interests and dealing with business partners, via occupational safety and health, to practical protection of the environment. The individual chapters of this report take an in-depth look at these aspects.

Core values such as integrity and fairness are not only to be defined within the Volkswagen Group, but also deliberately practised. The purpose of the compliance organisation is to support this process. Prof. Dr. Martin Winterkorn, Chairman of the Board of Management, had this to say on the subject: "Compliance is an issue that plays a major role across all national boundaries and business sectors. Volkswagen's business is entirely clean and above board. This is a zero tolerance issue; after all, our reputation is at stake!"

The Volkswagen Group supports measures to combat corruption and other business crimes both inside and outside the Group. Since 2002 Volkswagen, as a member of the United Nations Global Compact, has been working with some 7,000 participating companies from more than 135 countries to make the global economy fairer and more sustainable.

A definition of compliance

For Volkswagen, compliance means acting in accordance with the rules. To this end Volkswagen pursues a preventive compliance approach, seeking to maintain and de-

velop a corporate culture that rules out potential infringements from the outset. To achieve this, steps are taken to explain existing rules to Volkswagen Group employees and raise awareness of them. This approach is based on the contents prescribed in the voluntary auditing standard of the Institute of Public Auditors in Germany (IDW) for the verification of compliance management systems (IDW PS 980).  45

On the basis of the German Corporate Governance Codex, Volkswagen again ensured that its compliance work kept pace with the growth of the Group in the reporting year. The work of the Group Chief Compliance Officer is supported by Chief Compliance Officers as the persons responsible at all the Group's brands. In the past year the number of Compliance Officers in the Group companies has risen by 35 to 100. At present more than 400 employees in 39 countries are working in the integrated governance, risk & compliance organisation.

As in previous years, the work of the compliance organisation was again supported in 2012 by supra-divisional and cross-brand bodies – including the top management "Compliance Council" and the "Compliance Core Team". Other compliance bodies are in place within the individual brands and companies.

The Volkswagen Compliance Management System

A standardised governance, risk & compliance (GRC) process established throughout the Group is used to identify, catalogue and assess potential risks to the Company. The special feature of this process is that it combines three aspects in one: risk management system, internal audit system and compliance management system. Among other things, this approach makes it possible to address compliance-relevant issues efficiently in a standardised risk management process and to use the resulting findings for the Group's compliance programme.

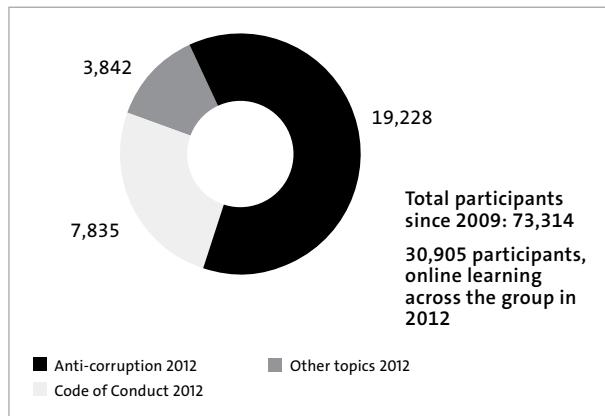
The effectiveness of key preventive measures for managing compliance risks is reviewed annually, which means they are subjected to a continuous improvement process. This includes taking account of detailed risk assessments performed by the responsible units throughout the Group. The

results are fed into the risk analyses undertaken by the Volkswagen Group and its brands and companies and are taken into account in the respective compliance programmes.

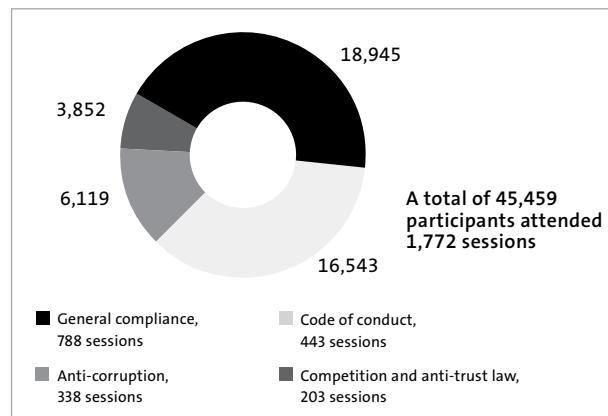
The focus topics of the Compliance Management Programme 2012 were:

- > Preventing active bribery. Here there was a special focus on strategically important markets such as Brazil, Russia, India, China, Malaysia, Argentina and Mexico.
- > Implementing an anti-corruption guide which was issued to all managers in Volkswagen AG. With the aid of practical examples, the guide raises the reader's awareness of the issue, provides checklists of corruption risks and indicates ways and means of successfully preventing corruption. It also includes an explicit ban on "facilitation payments" intended to speed up procedures. The guide was made available to the international Group brands in multiple languages and as a basis for adaptation, and distributed with a personal covering letter from the Chairman of the Board of Management and the Group Chief Compliance Officer.
- > The Code of Conduct. This is now established in all consolidated brands and enshrined in the Group's corporate culture as an essential element. Brochures about the Code of Conduct have been distributed to all employees and are also available online. The Code of Conduct is also integrated into operating processes. Since 2010, for example, new contracts of employment at Volkswagen AG have drawn attention to the Code of Conduct and the obligation to observe it. This also includes respecting internationally recognised human rights.  15
- > Competition and anti-trust legislation continued to be a focus of employee training.  46
- > The integrity check: the excellent reputation that the company enjoys in the business world and society in general is a valuable asset for the Volkswagen Group. To avoid putting it at risk, Volkswagen runs an integrity check on new business partners. The aim is to find out more about the potential business partner before entering into business relations, thereby reducing the risk of a relationship that could adversely affect the Group and its business.
- > Advisory services: In 2012 the compliance organisation stepped up its advisory services considerably. Today the brands and numerous companies offer their employees the opportunity to obtain personal advice, usually via the Compliance e-mail address. An IT-based information

NUMBER OF PARTICIPANTS, ONLINE TUTORIALS ACROSS THE GROUP IN 2012



NUMBER OF PERSONS ATTENDING TRAINING ACROSS THE GROUP IN 2012





Members of the compliance team regularly train different target groups on compliance issues.



All the key facts on compliance at your fingertips: the internal Volkswagen compliance app for smartphones.

and advisory tool was introduced in 2012 and supported by extensive publicity. To date it has resulted in some 12,000 retrievals of articles.

> 2012 also saw the continued development of a money laundering prevention strategy. This instrument is based on a risk analysis and is structured by business fields. It caters for the new requirements of the German Money Laundering Act which came into force during the reporting year.

Training courses and online learning programmes

To ensure sensitive and informed handling of compliance issues, employees need to be familiar with the Group's rules and values. Information events for employees at all levels in the hierarchy are therefore of central importance in the context of compliance work. In the course of 2012 a total of some 45,000 employees throughout the Group attended events at which they received training in issues relating to compliance, code of conduct, competition and anti-trust law, and anti-corruption.

Online learning programmes are also an integral part of our employee training. In 2012 some 20,000 employees successfully completed the online learning programme on preventing corruption and avoiding conflicts of inter-

ests. One new module introduced in 2012 was the online learning programme on the Group's Code of Conduct. Participation in this has been compulsory for all new employees of Volkswagen AG since 1 July 2012. Since the online learning programmes on compliance were set up, more than 70,000 employees have already taken part, benefiting from this opportunity for continuing professional development (> p. 43).

Communication of compliance activities

Compliance issues are communicated to employees not only through traditional communication channels (employee magazines of the brands, companies and locations), but also via electronic media such as intranet portals, apps, blogs, audio-podcasts and online newsletters. The spectrum is rounded off by information stands at works meetings and other employee meetings.

Compliance communication activities at Volkswagen meet with positive responses both in-house and externally. In the course of the reporting year, several of the Group's cross-media communications campaigns and media won awards. A consistent and appealing campaign based on a series of films made by Volkswagen on the topic of compliance using a prominent actor to convey the message harvested to a strong and positive echo. In the three days that

followed a works meeting at which a compliance film including statements from the Board of Management was shown, the compliance site on the Volkswagen portal was called up over 17,000 times.

The compliance site on the internal Volkswagen portal contains a wide range of information for employees. Among other things, visitors to the site can call up all the guidelines and internal publications on the topic. Also available are the key messages from the Chairman of the Board of Management. In 2012, this online offering, which is also available in English, was called up some 90,000 times. Further intensive communications support for compliance activities is planned for 2013.

Lobbying

Automobile manufacturers operate in a highly complex and tightly regulated environment. It is both necessary and legitimate for a company like Volkswagen, which bears responsibility for prosperity and employment in many countries around the world, to be actively involved in creating the framework for business activities. In this context, the aim and role of the Group function ‘External Relations and Government Relations’ is to widen the Company’s scope for action.

Within the Company, ‘External Relations’ promotes a culture of openness and dialogue and helps to facilitate communication with the world of policy-making and other business sectors. This Division operates like an early warning system, identifying and gathering information, analysing its policy and technical relevance, and formulating differentiated strategies for the Group’s Board of Management. It also supports the managers responsible for lobbying by making its contacts and knowledge of policy-making processes available to them.

The Group’s ‘External Relations’ function is an intermediary between the Company and policy-makers, including governments, parliaments and administrative agencies but also political parties and associations, non-governmental organisations, and other sectors of industry. It ensures that the Company’s views and expertise are brought into the legislative and administrative decision-making

process by openly providing comprehensive information and reliable, competent advice based on credibility and professionalism.

In line with the Group’s commitment to social responsibility, ‘External Relations’ also provides input into sustainable policy-making in the areas of industrial, transport, environmental and social policy and appropriate focusing of public investment strategies. This confident dialogue with stakeholders in society helps to enhance the Company’s profile, boost its reputation, forge new alliances, and build on existing goodwill. The aim is to create and maintain stable relationships with all key Company stakeholders.  47, 48

Infringements

In keeping with the Company’s holistic compliance management system, the ‘Compliance’ function is closely coordinated with other functions within the Group. ‘Group Internal Audit’ and ‘Group Security’ lead on investigative work, while ‘Human Resources’ and ‘Legal Affairs’ adopt a reactive approach that complements the Group’s proactive, preventive approach to compliance.

The Group has had an ombudsman system since 2006, which can be used to notify actual or suspected infringements – in particular in relation to corruption – to the Group’s two independent ombudsmen, Frankfurt-based lawyers Dr. Rainer Buchert and Thomas Rohrbach. In 2012, the two independent ombudsmen forwarded 46 notifications to the Anti-Corruption Officer of the Volkswagen Group while preserving the anonymity of the original notifier. A further 64 notifications were made direct to the Anti-Corruption Officer or to the Head of Group Internal Audit. Each one of these notifications was investigated.

Action was taken against 24 employees in 2012 following investigations prompted by notifications. In 13 of these cases, the employee’s contract was terminated. Any breach of the law or of internal guidelines attracts an appropriate sanction, up to and including dismissal. Moreover, during the reporting year, a small number of contracts with business partners were terminated or not renewed because of infringements related to corruption.

External scrutiny

During the reporting year, the Company commissioned a university to audit Volkswagen AG's compliance management systems. One of the auditors was a senior academic who holds a chair in criminal law and criminology and is therefore a recognised expert in this area. The auditors concluded that Volkswagen has "an effective and efficient compliance management system."

Outlook: the compliance programme in 2013

On the basis of the Group's risk analysis, the focus of compliance activities in 2013 will be on strengthening existing structures, on expanding the compliance organisation within the Volkswagen Group, and on anti-corruption measures in China.

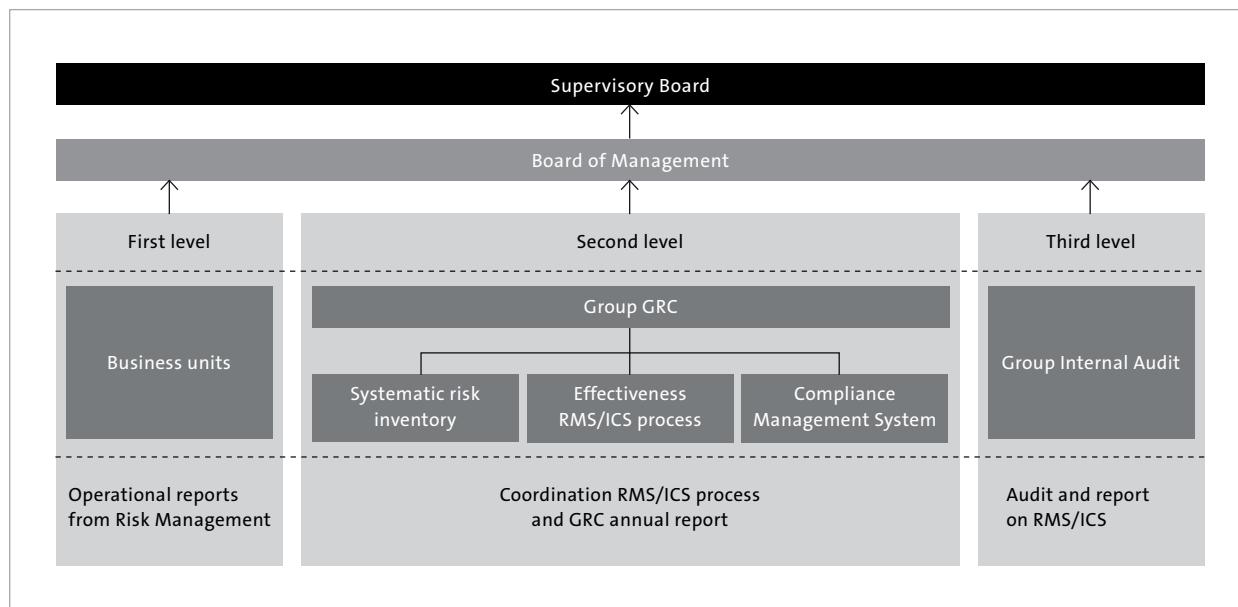
RISK MANAGEMENT

The Group's risk management system (RMS) is designed to identify potential risks at an early stage so that suitable checks and countermeasures can be initiated to avert the threat of loss to the Company, and so that any risks that might jeopardise its continued existence can be ruled out. In this context, risk is used to denote the danger of failing to achieve a corporate or divisional target. **249**

Transparent and appropriate risk management is based on uniform principles for the entire Group. These include:

- > Fostering an open risk culture,
- > Gearing risk management to corporate objectives,
- > Compliance (>p. 42),
- > Ensuring that risk management is appropriate to the nature, extent, complexity and risk content of the specific business activity and business environment, and
- > Regularly monitoring the effectiveness and efficiency of risk management.

THE "THREE LINES OF DEFENCE" APPROACH



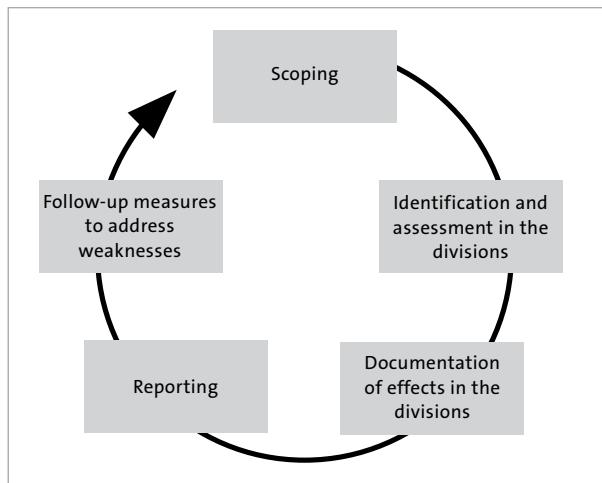
From an organisational point of view, the design of the risk management system at Volkswagen AG is based on the internationally recognised COSO enterprise risk management framework. In this connection, Volkswagen AG has adopted a unified and integrated governance, risk & compliance (GRC) approach: this integrates risk management system, internal audit system and compliance management system aspects into a unified management approach. One advantage of this is that it permits efficient addressing of compliance-relevant issues in a single risk management process and enables the resulting findings to be used for the benefit of the Group's compliance programme.

The risk management system is an integral part of the Volkswagen Group's structure and workflows, and is embedded in its day-to-day business processes. It follows the "three lines of defence" approach.

Implementing and ensuring the effectiveness of the RMS at operational level ("first level") is a fundamental task of the divisions and companies. Interim risk management reports from the business units provide the Board of Management with an up-to-date picture of the Group's current risk situation at all times. Events that entail a risk are identified and assessed on a decentralised basis in the divisions and at the investees. Countermeasures are introduced immediately, and assessment of their effects is followed by timely incorporation of the information into the planning process. The results of the risk management process are used to provide ongoing support for budget planning and controlling. Targets agreed in the budget planning rounds are continually verified in revolving planning reviews. At the same time, the results of risk mitigation measures that have already been taken are speedily incorporated into the monthly business development forecasts. This means that the Board of Management always has access to an overall picture of the current risk situation through the documented reporting channels. Significant risks are set out in the Annual Report. Volkswagen is prepared to enter into transparent risks that are commensurate with the benefits expected from the business.  49

Every year the Group's Governance, Risk & Compliance (GRC) Department ("second level") sends standardised

STANDARDISED ANNUAL RISK ASSESSMENT PROCESS



The diagram above shows a schematic representation of the annual risk management process.

inquiries about the risk situation and RMS effectiveness to the GRC officers in the individual functional areas and to all major investees worldwide. In the light of the feedback about several thousand risks, the department then updates the overall picture of the potential risk situation and assesses the effectiveness of the RMS as a whole.

For every significant risk identified, GRC determines the expected probability of occurrence and the expected scale of the loss, and documents the risk management and control measures taken at management level. Risks arising from potential infringements of rules (compliance risks) are integrated in this process, as are strategic, operating and reporting risks. The effectiveness of important risk management and control measures is tested, and any deficits identified are reported and remedied.

The Group's Internal Audit Department ("third level") helps the Board of Management to monitor the various functional areas and business units within the Group. The risk early warning system and the structure and implementation of the risk management system are regularly checked by the Internal Audit Department in the course of its independent audit activities, and also by the Group's external auditors.

LOCALISATION

Localisation is a central element of corporate responsibility, because through localisation a company ensures that its value creation takes place at its individual plants and in their business environment. Suppliers relocate to the area and new jobs are created locally. As a result, Volkswagen's commitment to the concept of localisation allows it to offer people around the world the chance to participate in economic prosperity.

Localisation also has economic benefits for Volkswagen, reducing the Company's logistics costs and, on the purchasing front, ensuring prices in line with local market conditions – with no additional costs for transport or customs duties. Currency risks are also reduced. Localisation therefore represents a win-win situation, with economic, ecological and social advantages for both Volkswagen and the regions in which the Company's plants are located.

A current example is the Volkswagen brand's new gearbox factory in Tianjin, China, where 1,500 new jobs will be created and modern educational institutions put in place. Plus, Volkswagen will be working with the best local technical colleges to build a machining centre of excellence in Tianjin where teachers can be trained to cover the medium-term demand for technically qualified experts in particular fields.

Volkswagen witnessed a similar positive development in Pune, India. Since the Company set up its production plant there, 67 new supplier operations have sprung up in Pune, creating some 13,000 new indirect jobs. Also, at the Chattanooga plant in the USA, 17 new supplier facilities have created 1,700 new jobs in the vicinity of the new Volkswagen factory. In the long term, Volkswagen will be able to provide work here for 10,000 people.

In 2012 Volkswagen concluded agreements covering construction of a new engine plant in Kaluga, Russia. Production of the new EA211 generation of engines at the plant is scheduled to reach 150,000 units in 2015, creating substantial value at local level. That means the promise of not only new jobs but also a healthy economic upturn for the region. Added to which, the new plant allows the Group to meet the targets agreed with the Russian government un-

der the terms of Decree 166. This stipulates that at least 30 percent of the vehicles produced in Russia should be fitted with locally built engines.

In the period up to 2018 Volkswagen is planning to invest around €1 billion in Russia in the ongoing localisation of production, the new engine plant at Kaluga and the development of new products geared to local market requirements. The sourcing process for the Volkswagen Jetta and ŠKODA Yeti, Octavia and Rapid projects in 2012 saw the number of active suppliers in the country rise from 39 to 58. The majority of orders were placed with new suppliers, which meant a large number of new jobs were created in the regions where these firms are located.

Volkswagen has fuelled a particularly strong economic upturn in the Nizhniy Novgorod region, where the Volkswagen Jetta and ŠKODA Yeti and Octavia are produced by Volkswagen's local contract manufacturer, GAZ Group. 2,200 people are employed by GAZ Group to this end in Nizhniy Novgorod alone.  50

Confirmation that Volkswagen is also adopting the concept of localisation in Germany can be found at Volkswagen Osnabrück. The purchase of the company in 2009 following the insolvency of Wilhelm Karmann GmbH provided a shot in the arm for growth in the region. The start of series production of the Porsche Boxster in 2012 has since seen the plant establish itself as a centre of excellence for cabriolet and small-series models. Instead of concentrating solely on the assembly of finished parts, the plant actually produces the rear module and side sections of the car, increasing local value creation. That, in turn, safeguards the jobs of the around 1,800 employees at the plant and opens up new prospects for the region as a whole.

Volkswagen is also focusing on regional development at Group headquarters in Wolfsburg, as the example of Wolfsburg AG shows. This joint venture between the city of Wolfsburg and Volkswagen AG has been a boon to the long-term economic and employment outlook of the local area. To this end, business and scientific activities in the fields of mobility, leisure and tourism, health management, energy and environment, and education have been



MODERN EDUCATIONAL FACILITIES AND
1,500 NEW JOBS AT NEW GEARBOX PLANT
IN TIANJIN (CHINA)



2,200 JOBS AT CONTRACT MANUFACTURER
GAZ GROUP IN NIZHNIY NOVGOROD (RUSSIA)



One example of the impetus for new growth being provided by Volkswagen can be found at its Kaluga plant in Russia. In 2012 Volkswagen laid the cornerstone here for a new engine plant. At the signing ceremony for the agreements governing the new plant: Prof. Dr. Martin Winterkorn, Chairman of the Board of Management of Volkswagen AG, accompanied by Dr. Michael Macht (right), Member of the Board of Management of Volkswagen AG responsible for 'Group Production', and Anatoly Artamov, Governor of Kaluga Oblast.

networked. A whole array of projects bears witness to the vitality of this public-private partnership.

How just the decision to build a new facility can give an entire region a boost, is illustrated by the start of planning for a new Audi plant in San José Chiapa, in the Mexican state of Puebla, in 2012. In addition to the allocation of the building plot, the focus is currently on the infrastructure devel-

opment in the area around the plant. For example, the local authorities are expanding the arterial road and rail networks near the plant and connecting the town to two motorways. There are also plans to establish key utilities and educational institutions. A new training centre has been included in one of the first stages of construction, with the aim of commencing training for future Audi employees at an early stage.



42.7%

INCREASE IN SALES REVENUE
YEAR-ON-YEAR

NORTH AMERICA

With a 32.2% increase in unit sales to 0.9 million units, the Group again outperformed the market as a whole in North America. Volume improvements, the integration of Porsche and favorable exchange rates lifted sales revenue by 42.7% to €25.0 billion.  51

13.9%

RISE IN UNIT SALES COMPARED
TO 2011

SOUTH AMERICA

In South America, sales rose by 13.9% to 1.1 million vehicles. As a result of volume-related and exchange rate factors, sales revenue was up 22.8% to €18.3 billion. The inclusion in full of MAN as from November 9, 2011 should be taken into account when comparing the previous year's figures.  51



Globally local.

ANYONE WHO WANTS TO BRING PERSONAL MOBILITY TO PEOPLE ACROSS THE GLOBE MUST FIRST UNDERSTAND THEM. THROUGH ITS WORLDWIDE PRESENCE AND DIVERSIFIED STRUCTURE, THE VOLKSWAGEN GROUP IS WELL PLACED TO DO JUST THAT.

Uniting numerous brands and companies with all their individual characteristics and strategic focuses is a demanding task. Demanding not least because we are keen to ensure that, within the Volkswagen Group, they all retain their own identities. That is the key to enabling all the

brands and companies to act as important pillars for the Group as a whole by playing their part in the shared value creation process. With this in mind, in the reporting year all the regions and brands made an important contribution to the positive overall performance of the Group.



11.1%

SALES REVENUE GROWTH IN
THE REPORTING YEAR

EUROPE/REMAINING MARKETS

In the Europe/Remaining markets region, Group unit sales increased by 2.8% to 4.2 million vehicles in the reporting period. Sales revenue increased by 11.1% to €115.4 billion, primarily due to volume-related factors and the consolidation of Porsche and MAN. ↗ 51

3.2

MILLION VEHICLES SOLD
IN 2012

ASIA-PACIFIC

Demand for Group models remained strong on the markets in the Asia-Pacific region. Including the Chinese joint ventures, we sold a total of 3.2 million vehicles in this area in the period from January to December 2012, 19.5% more than in 2011. ↗ 51

ŠKODA

ŠKODA



The ŠKODA brand delivered 939 thousand vehicles to customers in the reporting period, surpassing the prior-year figure by 6.8%. The brand recorded gratifying growth rates in Russia (+33.7%), India (+14.2%) and China (+7.1%) in particular. [↗ 51](#)

www.skoda-auto.com



LAMBORGHINI



With its network of over 120 dealers, Automobili Lamborghini is engaged in expanding its successful series of dynamic and elegant super sports cars. The portfolio already includes such automotive legends as the 350 GT Countach and the Murciélagos, as well as the latest open-topped version, the LP 570-4 Spyder Performante.

www.lamborghini.com

BUGATTI



Within the Volkswagen Group, the Bugatti brand stands for masterpieces of automotive engineering – the ideal synthesis of craftsmanship and technology. With the world's only 16-cylinder direct injection petrol engine and the use of aluminium, magnesium and carbon fibre for the bodywork and chassis, the studies presented at the key motor shows have set new standards.

www.bugatti.com



MAN



MAN was faced with a difficult economic environment for the commercial vehicles industry in fiscal year 2012. The brand generated sales revenue of €16.0 billion, roughly a quarter of which was attributable to the Power Engineering segment. Operating profit amounted to €808 million; the operating return on sales was 5.0%. 51

www.man.eu



SCANIA



The slump in demand in the European truck markets had a negative impact on the Scania brand: declining volumes led to a 7.4% reduction in the Scania brand's sales revenue to €9.3 billion. Operating profit declined by €442 million to €930 million. This was due to increased competition, lower capacity utilization and increased costs as well as lower volumes. 51

www.scania.com

DUCATI



The essence of Italian styling is reflected in the lines of each and every Ducati model. Curvaceous, slender and seductive shapes produce a timeless style that sets a matchless benchmark. Superbike, Monster, Street-fighter, Hypermotard, Multistrada and the new Diavel embody the true biker's dream in over 60 countries around the world.

www.ducati.com





PORSCHE



PORSCHE

During the consolidation period (August 1 – December 31, 2012) sales revenue reached €5.9 billion. Operating profit amounted to €946 million, while the operating return on sales was 16.1%. The Porsche brand delivered 60,000 sports cars to customers. The USA remained the largest single market, with 16,000 customers choosing a Porsche model. ↗ 51

www.porsche.com

VOLKSWAGEN COMMERCIAL VEHICLES Nutzfahrzeuge



At 550 thousand vehicle deliveries worldwide, Volkswagen Commercial Vehicles surpassed its prior-year record figure by 4.1%. The brand recorded significant growth in Central and Eastern Europe, South America and the Asia-Pacific region. Volkswagen Commercial Vehicles increased its sales revenue by 5.2% year-on-year to €9.5 billion. ↗ 51

www.volksvagen-commercial-vehicles.com



BENTLEY



The Bentley brand increased deliveries to customers by 21.5% year-on-year to 8,510 vehicles, defending its position as one of the world's leading producers of luxury vehicles. The US market, which increased by 23.3%, remained Bentley's largest market, closely followed by China with an increase of 23.5%. ↗ 51

www.bentleymotors.com

VOLKSWAGEN



The Volkswagen Passenger Cars brand ended 2012 with deliveries at a new all-time high: at 5.7 million vehicles, it delivered 12.7% more cars than in 2011. The brand recorded particularly high growth rates in Russia (+39.6%), the USA (+35.1%) and China (+24.8%). **51**

www.volkswagen.com



AUDI



The Audi brand delivered 1.5 million vehicles to customers worldwide in the reporting period, exceeding the record prior-year level by 11.7%. The rise was mainly due to strong increases in Asia (+28.1%) and North America (+18.5%). Up-and-coming growth markets such as South Korea, South Africa and India are gaining in significance for the brand. **51**

www.audi.com

SEAT



The SEAT brand delivered 321 thousand vehicles to customers in fiscal year 2012, down 8.3% on the prior-year figure. The brand was hard hit by the difficult market conditions in Western and Southern Europe. The markets in Spain, Italy and France in particular saw significant declines in demand as against 2011. By contrast, the markets in Germany, the United Kingdom and Mexico recorded encouraging increases. **51** www.seat.com



3 | Society

EMPLOYMENT // DEMOGRAPHIC CHANGE // ADVANCING WOMEN AND
PROMOTING DIVERSITY // SOCIAL RESPONSIBILITY // CSR



Society.

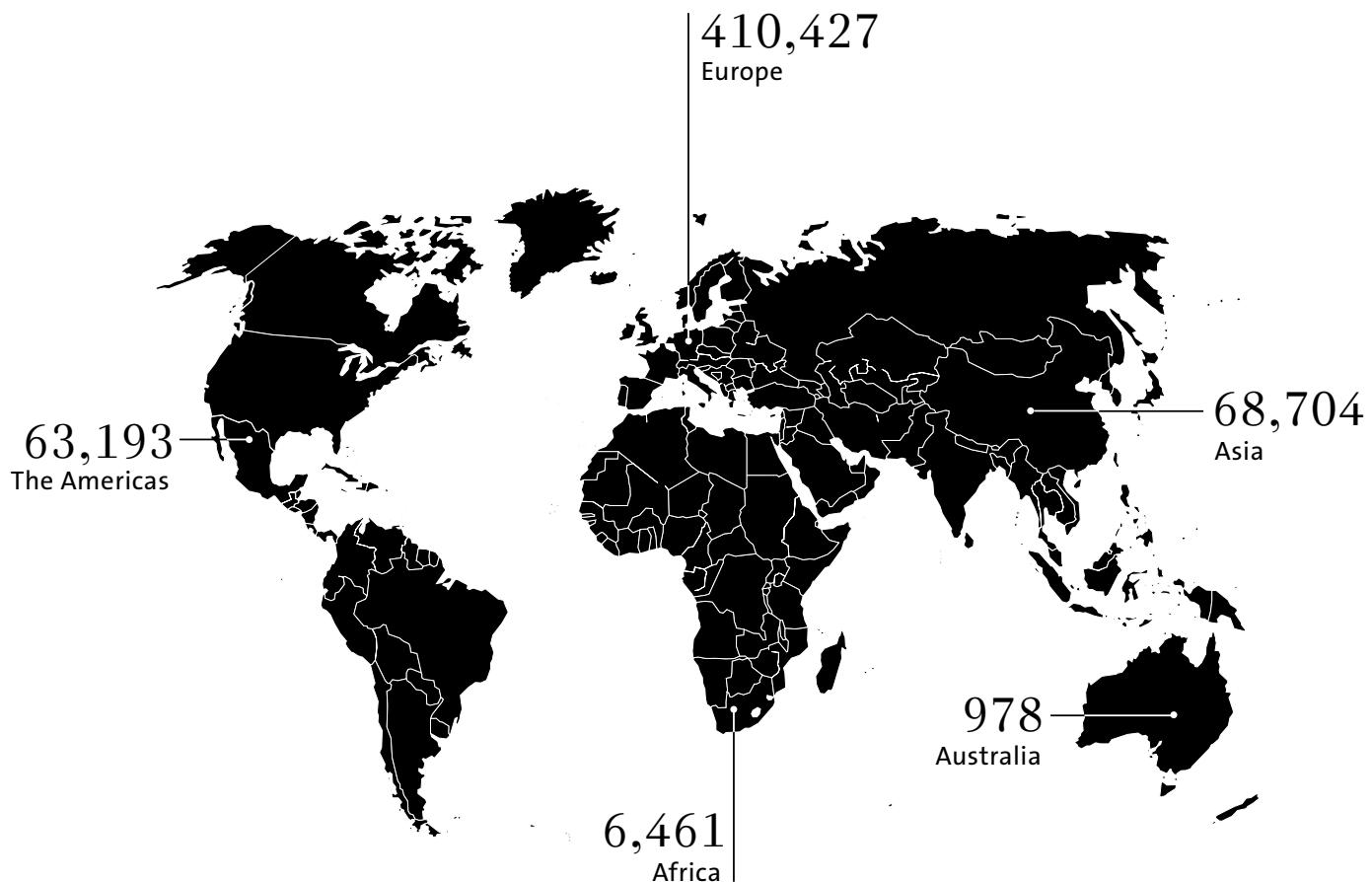


Not everyone can eat with chopsticks. But for these children of German Volkswagen employees in China it's only natural to want to try. The children learn from one another, discovering as they do so what makes their parents' jobs so attractive.

A top team

From vocational training to skills development at home and abroad, and from a forward-looking pay policy to employee involvement, the Volkswagen Group is working with its employees to set high standards right across its operations.

549,763 employees around
the world



Boosting skills development

Individual HR development in the Company includes cultivating employees and giving them the opportunity to acquire and enhance new skills. Volkswagen offers every employee this opportunity within “Berufsfamilien” (vocational groups).

16,714 apprentices were employed across the Volkswagen Group at the end of 2012

26.8 percent of apprentices in the Volkswagen Group in Germany are female

110,624 employees attended skills development courses organised by Volkswagen Coaching in 2012

Involving employees

The employee opinion survey was conducted for the fifth time in 2012. It covered 102 corporate sites and companies in 32 countries, and over 342,000 employees took part out of a possible total of more than 378,000.

“The strength of the Volkswagen Group
relies crucially on employees’ high skill
levels, the company’s capacity for
innovation and the principle of
employee participation.”

DR. HORST NEUMANN
'HUMAN RESOURCES AND ORGANISATION'



3

Everyone counts.

549,763 PEOPLE NOW WORK FOR THE VOLKSWAGEN GROUP. THAT MEANS 549,763 INDIVIDUAL CONTRIBUTIONS TO ITS DAY-TO-DAY SUCCESS AND 549,763 INDIVIDUAL SETS OF TALENTS. AND WE FOSTER EACH ONE OF THEM. IT'S A RESPONSIBILITY WE TAKE SERIOUSLY BY FOCUSSING ON OUR EMPLOYEES' HEALTH, SKILLS AND COMMITMENT. AND WE ARE AWARE THAT OUR RESPONSIBILITY IS GROWING – FOR OURSELVES AS A COMPANY AND FOR EACH INDIVIDUAL WITHIN IT.

EMPLOYMENT

The Volkswagen Group's Strategy 2018 sets out how it intends to achieve its goal of becoming the car industry's global market leader in terms of unit sales and topping the rankings for customer satisfaction and profitability. On top of that, Volkswagen also wants to be the most attractive employer in the automotive sector by 2018. The Group's business strategy is a multidimensional stakeholder strategy that balances the interests of customers, shareholders, employees and other stakeholders. Volkswagen has continued to record sound growth in 2012 and is now more global and more complex than at any time in its history. As the Volkswagen Group grows, so does its responsibility – for customers and society, for products and the environment, for every employee, and for the entire Company. However, it can only meet present and future challenges if its employees – from apprentices to top managers – consistently turn in an outstanding performance to ensure that innovation and product quality remain at the very highest level in the long term.

Securing outstanding performance, generating success and giving employees a share in the profits are central to Volkswagen's HR strategy. Securing the outstanding performance required to assure Volkswagen of pole position in the international automobile industry means having a top team, an HR principle that applies across the Group's global operations. Including the Chinese joint ventures, the Volkswagen Group employed a total of 549,763 people on December 31, 2012 – 9.5 percent more than one year earlier (501,956 employees).

In 2011, Volkswagen AG, Volkswagen Sachsen GmbH, AUDI AG and Volkswagen Financial Services AG alone put

a total of 3,301 temporary external personnel on permanent contracts. During 2012, they made a further 1,591 temporary external personnel permanent.

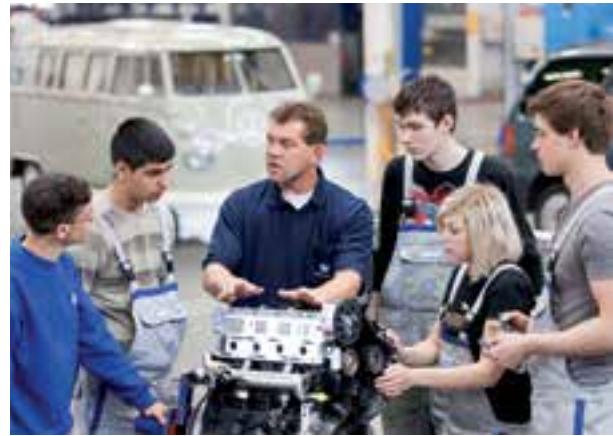
Volkswagen fulfils its responsibility for its employees with personnel management that promotes the health, skills and dedication of every individual. Ensuring that all employees can develop their full potential and use their talents in a manner that creates value means responsible leadership, individual HR development, and training.

Vocational education and training at Volkswagen

Volkswagen sets great store by being a learning and teaching organisation to ensure that outstanding skill levels are maintained despite growth. Vocational education and training is crucial to developing a top team at Volkswagen. In recent years, the Company has strengthened its commitment to the German dual model of vocational training and brought further sites into its vocational training system. In December 2012, the number of employees in vocational education and training with the Group totalled 16,714 worldwide, including 11,913 in Germany.

On December 31, 2012, Volkswagen AG was training 4,838 apprentices and students in 32 professions and 26 courses at its six German sites (Wolfsburg, Hanover, Braunschweig, Kassel, Emden and Salzgitter). There were 125 more training places than in 2011, with a further 50 places created at Volkswagen Sachsen GmbH, Automobilmanufaktur Dresden GmbH, and Volkswagen Osnabrück GmbH.

AUDI AG employed a total of 2,459 apprentices at the end of 2012 in 23 professions, 2,200 in industrial or technical pro-



Vocational education and training is crucial to developing a top team.

fessions and 259 in commercial professions. MAN and Porsche in Germany employed a further 2,212 and 453 apprentices respectively at year-end.

The German dual model of vocational education and training has now been adopted at many sites outside Germany, while others are developing the system. For example, Volkswagen Group Rus's Kaluga plant put its third cohort into this training system in 2012. The Company added the role of specialist for warehouse logistics to its existing training professions (motor vehicle mechatronic technician, construction and production mechanic, automotive painter and general mechatronic technician).

At Volkswagen in Chattanooga, USA, the third cohort of apprentices embarked on training as motor vehicle mechatronic technicians in 2012 in a programme run jointly with local partners, the Tennessee Technology Center and the Chattanooga State Community College.

In April 2012, meanwhile, Volkswagen Navarra in Pamplona opened a modern training centre with classrooms and a workshop offering personal learning areas for apprentices in industrial or technical professions. In 2012, 18 apprentices began their vocational education and training here, following Germany's dual model of vocational training. An agreement with the German Chamber of Foreign Trade in Spain means that apprentices who successfully

complete the training programme can obtain a German vocational qualification. Building this training centre and Volkswagen's commitment to training are recognised in this part of Spain as a major contribution by the Company to social responsibility.

Every year, the Group Board of Management and the Group Global Works Council present the "Best Apprentice Award" to the top apprentices worldwide. The twelfth awards ceremony was held in Munich in late November 2012, and 29 former apprentices from 13 countries received awards. The 2012 ceremony saw MAN represented for the first time by its two top former apprentices.

Volkswagen is also nurturing particularly talented vocational trainees in talent groups for young specialists. These groups are an invaluable tool to support technically and intellectually gifted employees as they make the transition from vocational education and training to professional work. Talent groups have been in place at all Volkswagen AG sites and at Volkswagen Financial Services AG since late 2010. In December 2012, 232 talented young employees were taking part in this two-year development and skills training programme, and 163 have so far completed it.

The focus of Volkswagen's vocational education and training is to develop technical skills, but apprentices also ben-

efit from a wide range of additional training programmes and events. In Germany, these include cooperation between Volkswagen's vocational and educational training division and "Jugend gründet", a nationwide online business/high-tech competition offering a prize for the best product or business idea. The Company also organises the "ProTalent" and "ProMechaniker" competitions. In cooperation with Porsche Inter Auto GmbH & Co. KG in Salzburg and Volkswagen Slovakia a. s. in Bratislava, Volkswagen AG apprentices can now build on their existing skills and knowledge and enhance their occupational mobility and flexibility by spending time working outside Germany. AUDI AG also provides early opportunities for its young employees to gain international experience: for the past five years, 25 apprentices a year from all areas of the Company's operations – industrial, technical or commercial – have had the chance to develop their intercultural skills at a Group site elsewhere in Europe.  52

For over 20 years, Volkswagen apprentices have been involved in the Auschwitz Memorial and Museum. Volkswagen sends at least four groups of apprentices to Auschwitz each year to spend two weeks working with young Poles at the Memorial and Museum. The groups are briefed and supervised by the International Auschwitz Committee and our subsidiary, Volkswagen Coaching GmbH. Over 2,100 young Germans and Poles have so far taken part in this programme. Volkswagen AG's sustainable pedagogical and political commitment to the scheme is recognised across the world.

At the General Works Council's suggestion, Volkswagen substantially broadened its involvement in the Memorial and the International Youth Meeting Centre in Auschwitz in 2008. As a result, four groups of managers, management trainees and "Meister" (foremen and group leaders) now take part in a four-day seminar there each year, also overseen by the International Auschwitz Council. Since 2012, the opportunity to be involved with the Auschwitz Memorial has been extended to apprentices in further Volkswagen Group subsidiaries and associated companies.  53

Since 2006, young people at the start of their career have also had the opportunity, on completion of their training,

to take part in the "Wanderjahre" (years abroad) programme; the name alludes to the tradition among newly-qualified craftsmen of travelling the world and gaining experience. The programme enables the Volkswagen Group to boost its younger employees' intercultural mobility and experience. A total of 32 Volkswagen Group companies in 17 countries are now involved in the programme, and from 2013, Volkswagen Group of America will take the total to 33. So far, over 320 young employees of the Volkswagen Group have taken up this opportunity to gain their initial work experience outside their home country. In 2012, 46 participants from Germany and 10 from a further four countries took advantage of the programme to spend their 'year abroad' in a Volkswagen Group company.

Developing graduates

Volkswagen develops young graduates through a scheme involving two distinct programmes, the Student Talent Bank and the Academic Talent Pool. Volkswagen has been using the Student Talent Bank since 1998 to bring on particularly able students in workplace-related and cross-functional areas. Some 2,100 students who have demonstrated outstanding technical and personal abilities during their internship at Volkswagen have 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, talented students are then moved into the Academic Talent Pool. This new recruitment tool provides the Company with a way to identify individuals with potential for graduate-level entry into a specialised area.

In 2008, Volkswagen launched the StartUp Direct programme to give university students a head start in the Company. Over a two-year period, participants in the programme not only work in their own department and familiarise themselves with the Company but also have an opportunity to attend supplementary training seminars. The programme also includes placements of a few weeks in production and sales as well as an optional foreign placement. University graduates with an international focus



Innovation underpins success in the automotive sector, so bringing on a new generation of highly skilled employees is vital to securing the Company's future.

may opt for the StartUp Cross programme instead. This 18-month international programme includes a three-month international placement. Over 2,000 trainees have acquired their initial experience with Volkswagen on one of these two programmes since they were launched. In 2012 alone, Volkswagen AG recruited a total of 681 graduates, of whom 29 percent were women.

In order to recruit talented employees from outside Germany, meanwhile the Volkswagen Group launched "Start-Up Europe" in 2012. Aimed at young engineers from southern Europe, this is a trainee programme offering participants an opportunity to gain international experience. Initially, the main target group is graduates from Spain and Portugal, who 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 programme, they may be offered permanent employment. This opportunity is proving very attractive: when the scheme was launched, more than 3,600 young graduates applied for the 104 places available. **54**

The Student Talent Bank, the Academic Talent Pool, the StartUp programmes and a range of further, linked measures make Volkswagen very attractive to young graduates: more than 340,000 graduates in engineering, IT and business studies from 24 European countries voted the Volkswagen Group "Most Attractive Employer" in the automobile sector in a survey by the Trendence research institute. In Germany, AUDI AG won its third consecutive double victory in the Trendence employer rankings, scooping "Most Attractive Employer" nominations from both engineering and business studies graduates. In the Czech Republic, ŠKODA took third place in the "Most Attractive Employer" rankings and topped the table among engineering and IT graduates in the "Best Human Resources Advertising", "Best Recruiter" and "Best Careers Fair Presence" categories. In the "Great Place to Work" awards, Volkswagen Financial Services AG emerged as the top German employer.

Training and developing every employee

Individual HR development includes cultivating employees and giving them the opportunity to acquire and enhance

new skills. Volkswagen offers every employee this opportunity within "Berufsfamilien" (vocational groups – the singular form is "Berufsfamilie"). 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 experienced employees offering their expertise within the framework of both tried-and-tested and innovative training formats. This ensures that learning processes are more geared to the specific processes and technical skills requirements of a particular Berufsfamilie than in conventional training programmes and enables knowledge to be transferred in the most efficient and tailored way.

This joint approach to learning is being steadily developed and extended within Volkswagen: more and more divisions are setting up Berufsfamilien that have their own Academies, in which skills development is organised. From the beginning, employees acquire practical knowledge of the topics relevant to their Berufsfamilie. The creation and development of Berufsfamilie Academies means that sites outside Germany are increasingly involved in this skills development model, for example via the "Procurement Academy", "Quality Assurance Academy" and "Product Academy".

The "Group IT Academy", launched in spring 2012, is the Group's first non-brand-specific Berufsfamilie Academy and provides shared learning and teaching within the information technology Berufsfamilie for employees of Volkswagen, Audi, Porsche, and Volkswagen Financial Services.

The Volkswagen Group is currently restructuring its training activities and launched the "Volkswagen Group Academy" in January 2013. The Academy is the new umbrella body incorporating all the Academies within the Group and is a joint venture by AutoUni Wolfsburg, Volkswagen Coaching GmbH and its subsidiaries. The reorganisation creates a skills network spanning initial vocational training to academic in-service training that exploits synergies to ensure high skills levels and quality standards across the Group.

In 2012, the Volkswagen Group welcomed more than 500 new recruits across all its companies in the Human Re-

sources and Sales and Marketing Berufsfamilien alone. "Welcome Days" offer participants an opportunity to find out more about the Company's strategic orientation and the challenges it faces and to exchange views with the experts from the relevant Berufsfamilien.  55

Initial and in-service training of Meister is a particular priority for the Volkswagen Group. Meister qualifications are currently being adapted to uniform worldwide standards and rolled out around the world: the basic foreman/group leader qualification prepares future Meister for their leadership role. During the reporting year, a total of 364 Meister were trained across Volkswagen, 140 of them outside Germany.

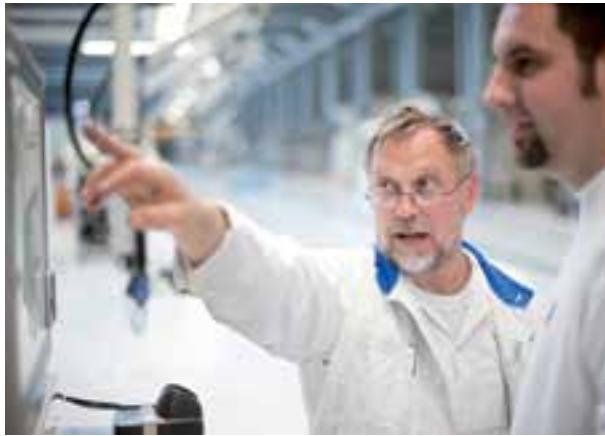
Volkswagen prepares its future supervisors for their leadership role by means of Basic Leadership Qualification training, followed by an examination. Both elements are being rolled out across all Group companies.

Employees' development for management roles is supported by the management selection process: in a comparative discussion with the relevant specialist department, candidates are selected on the basis of their technical competencies, while their entrepreneurial skills are assessed in a Company-wide Management Assessment Center. This system enables the specialised departments to take a high level of responsibility for selecting their own management trainees within a Company-wide selection process. In 2012, the Management Assessment Center was successfully rolled out in India, Russia, China and the USA.

Managers and management trainees receive systematic skills training in relevant areas, including business administration and leadership, technology, the environment and the globalisation and strategy of the Volkswagen Group.

The Group also has a broad range of tailored skills development opportunities for other professions. Volkswagen Coaching GmbH is Volkswagen AG's central in-service training provider and offers employees a wide range of training measures, including HR development programmes, crossfunctional seminars and courses, as well as specialised training programmes geared to the spe-





Training and developing every employee: HR development at Volkswagen includes cultivating employees and giving them the opportunity to acquire and enhance new skills.

cific requirements of individual Berufsfamilien. This ensures that each employee is able to develop his or her skills on an individual and tailored basis. The systematic development of the workforce is also promoted in relation to the goals set by the Company and its specialised departments.

During 2012, more than 110,620 participants benefited from in-service training in 9,193 seminars organised by Volkswagen Coaching GmbH, a total of 269,128 participant-days. In the area of specialist skills development (e.g. factory automation, robotics and applications engineering or management), 70,382 participants attended 7,027 seminars over 162,869 participant-days. Meanwhile, in the field of “crossfunctional skills development” (which includes leadership skills and personal development), 40,242 participants attended 2,166 training courses, representing 106,259 participant-days. 324 new programmes and courses were developed over the course of the reporting year to ensure that the Company’s in-service training provision continues to meet its needs.

In-service academic training: the AutoUni

The AutoUni ensures that the Group has access to specialist knowledge and research expertise. It works in conjunction with individual departments within the Group

and partner universities to offer in-service training tailored to the needs of the Berufsfamilien. The AutoUni comprises eight institutes, which between them offer a wide range of lectures, conferences, seminars and cooperative study modules at university level. These cooperative study modules cover technical subjects in detail, and participants take a final examination at the end of each module. Over the past few years, the work of the AutoUni, which is based in Wolfsburg, has been extended around the world, and in 2012, over 15,000 individuals took part in 273 AutoUni courses. Around a quarter of all courses took place outside the Company’s Wolfsburg headquarters. As part of Volkswagen’s regional outreach, about 40 percent of the events were open to the general public. In 2012, there was a particular emphasis on future trends in mobility, with work focusing on innovative drive systems and the comfort, accessibility and sustainability of transport systems.

The Automotive Research Centre Niedersachsen (NFF) focuses on the key future areas for automotive research. The NFF was set up in 2007 as an interdisciplinary research centre with the support of the federal state government of Lower Saxony and Volkswagen AG, and brings together research activities around the issues of vehicles and mobility. It also created a platform for collaboration between industry and higher education: cut-

ting-edge research and discoveries feed directly into AutoUni courses, especially in the areas of electric traction and vehicle engineering. In addition to the existing AutoUni site on the MobileLife Campus in Wolfsburg, a new site is currently being developed at Braunschweig's Research Airport.

Over and above this, the AutoUni is intensively involved in the Group's doctoral student programme, in which over 440 doctoral students were supervised in 2012 by the various companies within the Volkswagen Group in Germany. The doctoral students undertake research into ambitious PhD thesis topics with relevance for the Company. To this end they work closely with their own department in the Group, which also appoints a supervisor from within the Company. Completed theses may be published as part of the AutoUni's publication series.

Current and past Volkswagen doctoral students meet regularly under the auspices of the doctoral programme for colloquia and presentations as well as for sports and other events. These activities are managed and run by the doctoral students themselves.

Promoting performance and sharing profits

The Volkswagen Group sees in-service training and skills development as a key part of building a top team. The systematic fostering and recognition of good performance is another vital element in our strategy, along with redesigning our pay systems 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 each employee's monthly salary.
- > An entitlement to profit-sharing, which is laid down by collective agreement.
- > A performance-related component in operation since early 2011, which represents an additional reward for individual performance.

Payment is job-related and based on the work systems and activity descriptions laid down by collective agreement. Men and women enjoy equal pay.

As part of the introduction of a performance-related pay component, Volkswagen AG and its unions have agreed that each employee should have an individual annual appraisal with their line manager. This appraisal has two elements: performance assessment and development planning. Each employee is given feedback on his or her performance and clear guidance on career prospects. Recognising and valuing good performance is just as important in this context as individual potential or any specific further training needs.

The number of appraisals has continued to rise since the appraisal system was introduced in 2011. Volkswagen AG supervisors showed enormous commitment in carrying out 83,895 appraisals in 2012, with a further 4,358 appraisals using the same criteria carried out within Volkswagen Financial Services AG and Volkswagen Immobilien Service GmbH. In 2012, over 88,000 employees received an individualised performance-related pay component with their salary.

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. In 2012, more than 80 Volkswagen Group companies carried out management appraisals, with 3,062 individual appraisals conducted at Volkswagen AG alone.

From 2013, all temporary external personnel employed at Volkswagen AG will also benefit from the principle of a performance-related pay component. Temporary external personnel will be entitled to a performance-related pay component from their second year with Volkswagen onwards. The process by which this is determined will be similar to the individual annual appraisal process at Volkswagen AG.

At the beginning of 2010, the Company and the German metalworkers' union IG Metall agreed that the collective agreement on sustainable site retention and employment



Since 2011, every Volkswagen AG employee has had an individual annual appraisal with their line manager, which includes performance assessment and development planning.

protection would remain in force until at least the end of 2014, giving all Volkswagen AG employees employment security until that date. 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. Since 2007, Innovation Fund I has helped to further develop existing skills areas at the various Volkswagen sites. Innovation Fund II, by contrast, began operating in 2011 and was set up to develop new areas of business closely related to the automotive value production chain. The fund's major emphasis is on sustainability, with a view to long-term employment protection and creation. Its funding is focused on promising projects, such as the recycling of testing equipment or the use of gravity-based conveyor systems.

To ensure competitiveness and safeguard jobs both within and outside Germany, the Volkswagen Group sets great store by maintaining and increasing flexibility. The creation of "working time accounts" in particular is mostly governed by collective bargaining. With a wide range of flexibility tools, in 2012 the Group again succeeded in reacting flexibly to changes in the economic backdrop and, for example, in securing jobs for the core workforce in India and Portugal.

Until at least the end of 2014, Volkswagen AG is committed to not reducing the recruitment of apprentices and, sub-

ject to performance, apprentices will be taken on permanently on completion of their training. The decision is based on the model used to assess Volkswagen apprentices and on their performance in the examination run by Germany's chambers of industry and commerce. Former apprentices who meet specific performance criteria will be given permanent employment with Volkswagen AG. Former apprentices who do not meet these criteria will initially be 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. The standard criteria for performance assessment create clarity and consistency for every employee in his or her professional development.

Management employees also earn part of their salary in the form of a personal performance bonus, which rewards individual performance. The Company bonus enables management staff to share in the success of their own part of the Company. Since 2010, the Long Term Incentive (LTI) has been available in addition to other bonus components. The LTI is calculated over a four-year period, making it a long-term management remuneration tool that reflects the positive and sustainable development of the Company. This means that it complies with the aims of the 2009 legislation on remuneration of Board



THREE-STAGE REMUNERATION SYSTEM INCLUDES BASIC PAY, PROFIT-SHARING AND A PERFORMANCE-RELATED COMPONENT

COMPANY BENEFITS

Volkswagen AG has a collective accident insurance policy that covers all employees against accidents resulting in death or invalidity. In exceptional cases of economic hardship – for example, as the result of severe long-term illness – employees may apply for a short-term, interest-free loan from the Company.

The Volkswagen Group also offers its employees the opportunity to obtain a vehicle from at least one Group brand on favourable terms. The terms of this benefit must be affordable for the employees and commercially viable for the Company. Apprentices at Volkswagen AG, for example, enjoy special concessions on the purchase or leasing of a vehicle. In 2012, new Group brands including MAN were included in the existing scheme. Working in cooperation with the sales departments and Volkswagen

Financial Services AG, companies outside Germany have also been included in similar innovative schemes, such as a programme for second-hand car leasing at Volkswagen Autoeuropa in Portugal.

Employees of Group companies around the world saw their range of benefits extended. These benefits vary from site to site and may include subsidised transport and meals, low-cost accommodation, special payments on the birth of a child, monthly childcare allowances, and discounts on selected leisure activities. A number of sites also offer health care benefits or additional pension insurance. For example, Volkswagen in Poznań introduced a voluntary company pension scheme open to the entire workforce in 2012, with the full cost of the monthly contributions met by the Company.

of Management members but is applied more widely, to the whole of Volkswagen's management worldwide. The Long Term Incentive is linked directly to the goals set out in the Group's Strategy 2018 and rewards Volkswagen management for their contribution to implementing the Strategy's goals of attaining top employer status and leading the field in terms of customer satisfaction, sales and profitability. In this way, it helps ensure that Volkswagen management consistently pursues the multidimensional and sustainable goals set out in the Company's stakeholder strategy.

The pay system, which now includes a performance-related component, has proved effective in enabling employees to share in Volkswagen AG's success. It also helps to reward individual performance while preserving competitiveness.

The three components of the remuneration system are increasingly being applied across the Group. The principle is that compensation and benefits paid or received for a

normal working week correspond at least to the legally valid and guaranteed minimum. Locally adequate payments help to ensure an appropriate standard of living for employees and their families.  18

Participation and co-determination

Employee participation and co-determination rights for employee representatives are important success factors for the Volkswagen Group. Performance and participation provide the basis for job security and competitiveness. In 2012, existing declarations, including the Declaration on Social Rights and Industrial Relations at Volkswagen, and agreements such as the Charter on Labour Relations were substantially enhanced and expanded at Volkswagen. The Charter on Temporary Work, signed in November 2012, represents agreement by the Group Board of Management, the European Group Works Council and the Group Global Works Council on the principles by which temporary work is managed within the Volkswagen Group.

In 2012, at more than 35 sites both in Germany and elsewhere, collective bargaining was carried out. In all cases, bargaining was underpinned by a proactive information and communication process. For example, Volkswagen Group Rus concluded its first ever collective agreement. At just one new Group site, strike action preceded the opening of the plant. Following democratic negotiations, the parties reached agreement, bringing the action to an end.

Charter on Labour relations

The International Charter on Labour Relations first came into force in autumn 2009. It links increased participation rights with shared responsibility, requiring a high level of skill and responsibility from employees. The Charter applies globally and provides for phased rights to information, consultation and co-determination for employee representatives of the brands, companies and sites represented on the Group Global Works Council.  17

Since then, many sites have begun to bring the Charter to life with declarations of intent and outline implementation arrangements agreed between management and employee representatives. In 2012, the plant-level co-determination rights laid down in the Charter were developed and enhanced, with the first-ever general Company meetings and symposia being held in many sites outside Germany. In some cases, the work of local employee representatives is now being coordinated or developed within special committees, ensuring that the participation rights set out in the Charter are made more effective.  56

Both the Group Global Works Council and the Company itself regularly monitor implementation of the Charter on Labour Relations in individual Group companies. At the twice-yearly meetings of the international co-determination bodies (the European Group Works Council and the Group Global Works Council), representatives from the various sites report back with examples of best practice.

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Support to help them fulfil this role is offered in the form of skills training and information material. For example, the Group Global Works Council ran workshops for the newly-elected plant union committee at Volkswagen de México, focusing on Volkswagen's co-determination culture, the work of works councils and trade unions, and quality and process optimisation. At the suggestion of the Group Global Works Council, the Mexican plant in Puebla organised the "Quality Olympics in Production" to raise awareness of quality. The initiative proved popular with employees, who participated enthusiastically.

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 Volkswagen. This Committee has held an annual conference since 2009.

In September 2012, the Group Global Works Council founded 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.

Charter on Temporary Work

The underlying aim of the Charter on Temporary Work is to ensure that temporary external personnel receive 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. Temporary work is a key flexibility tool.
- > Implementation of equal pay and equal treatment. As a matter of principle, temporary external personnel should receive the standard basic salary for their role. Temporary external personnel enjoy parity of employment conditions with the permanent workforce.

> Skills training provision for temporary external personnel. Temporary external personnel are entitled to benefit from relevant skills training on the same basis as permanent employees.

This Charter offers all temporary external personnel the chance to be moved 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 HR strategy for supplementing its core workforce. 

Employee opinion survey

The employee opinion survey is a proven and extensively used tool to involve employees actively in what is going on in the Company. Employee satisfaction is measured each year using the Volkswagen Group's employee opinion survey, or "Stimmungsbarometer", which is standardised and covers the entire Group workforce. Once the survey is complete, the findings are jointly discussed by supervisors and employees, a process that raises complaints and problems on the one hand and suggestions for improvements to work processes on the other. Improvements agreed upon are then implemented before the next year's survey. The employee opinion survey was conducted for the fifth time in 2012. It covered 102 corporate sites and companies in 32 countries, and over 342,000 employees took part out of a possible total of more than 378,000. The reporting year saw employees of Porsche Holding Salzburg, Volkswagen Osnabrück GmbH and Volkswagen Group Japan K. K. take part for the first time. Employee interest in the opinion survey has risen steadily over recent years. During the reporting year, a twelfth statement was added to the survey in all German sites, seeking employees' views on the implementation of corporate strategy. 

Alongside the employee response rate, the key indicator generated by the employee opinion survey is the employee satisfaction index. This indicator also improved over the past year. 



The employee opinion survey asks employees to indicate their level of agreement with 12 statements. Once the survey is complete, the findings are jointly discussed by supervisors and employees, and improvements agreed upon are implemented before the next year's survey.

The “Volkswagen Way”

The “Volkswagen Way” is another tool that relies on the commitment of the workforce for its success. It has been an integral part of the way Volkswagen operates for five years, and its aim is to secure competitiveness and employment. The core of the “Volkswagen Way” is a process of continuous improvement (German abbreviation: KVP) which aims permanently to develop productivity and efficiency as well as quality, ergonomics, leadership and teamwork. In the “Volkswagen Way” the Company has established a tool that consistently applies high standards to solve problems systematically and sustainably in all areas and drive improvement. The involvement of every employee makes it possible continuously to improve jobs, processes and structures across the Company. ↗ 59

In process optimisation, processes are considered in relation to improvements in customer satisfaction and quality, employee satisfaction and commitment, and productivity and costs. Particular emphasis is placed on processes that straddle a number of areas, making the “Volkswagen Way” a key corporate strategy tool. In November 2012, the Wolfsburg plant topped the “Lean Transformation” category of the Automotive Lean Production Awards, run by the trade journal Automobil Produktion and the consultancy firm Agamus Consult for its successful implementation of the “Volkswagen Way”. ↗ 60

The other brands within the Volkswagen Group have similar programmes for boosting efficiency. For example, all brands across the Group are now using a standardised production system. Using the KVP cascade system – a tiered approach to change – standardised methods are being used to optimise processes and structures both in production and non-production areas right across the operation and across all sites.

Ideas management

Volkswagen sets great store by enabling its employees to come up with ideas and make suggestions for improving work organisation and production processes. Employees' suggestions and ideas are considered and assessed centrally in the Volkswagen “Ideenmanagement” unit, which is represented at all the German sites. The first suggestion scheme at Volkswagen was introduced as early as 1949, and employee commitment to improving products and processes has since become a key measure of the workforce's creativity, expertise and motivation. Volkswagen also offers training and skills development to systematically promote a culture of ideas within the Company. This makes ideas management a vital management and motivational tool for line managers across the Company. Over the course of the reporting year, there was a steady expansion in the networking of Volkswagen sites around the world.

In 2012, Volkswagen employees across the Group submitted a total of 536,532 suggestions for improvements, 12.9 percent more than in 2011 (475,073). Adopting 380,475 of these suggestions over the reporting period helped substantially to drive up the quality of our products and the efficiency of our processes, reducing costs in the Group by a total of €358.1 million. Bonuses worth some €34.1 million were awarded to staff whose ideas were adopted in acknowledgement of their creativity and involvement in the life of the Company.  61

Ideas management is also recognised outside the Company: in 2012, Volkswagen won the “German Ideas Prize” of the German Institute of Business Administration (dib) and DEKRA, the international technical inspectorate, for the best environmental idea. The German Institute for Ideas and Innovation Management also named the head of tool making for the Volkswagen brand “Best Manager” in Germany’s automobile sector and an outstanding promoter of ideas management.

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 suggestions adopted are generating continuous improvements in occupational health and safety, and in 2012, 5,845 suggestions for improvement related solely to safety at work, of which 2,384 were adopted.

DEMOGRAPHIC CHANGE

In 2012, Volkswagen continued to tackle demographic change with a wide range of measures for ergonomic improvement; since 2011, this work has formed part of the Holistic Ergonomics Strategy, also known by its German abbreviation, GES. Ergonomic improvements across the entire product development process 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 aim is to draw on research and scientific knowledge to combine state-of-the-art ergonomic workplaces with innovative working processes. In cooperation with the manufacturing plants, integrated approaches to good ergonomic workplace design and working processes are being developed. Examples of good practice are being adopted in other sites.

Switching to the new Golf model has provided an opportunity to work with employees to make sustainable improvements in workplace ergonomics. The holistic approach of Volkswagen’s ergonomic strategy is also reflected in further improvements in the methodology used to assess workplace stress and strain. So in future not only assembly work but also other tasks can be assessed in this way.

At the Volkswagen brand’s “Ergonomics Day”, held in Wolfsburg early in 2012, experts reported on the many initiatives already in place and presented ergonomic innovations from Volkswagen sites around the world. For example, the Kassel plant has been holding regular forums on the impact of demographic change. The third such forum, held in October 2012, focused on combating mental stress at the workplace, raising awareness of the issues and identifying practical approaches to combating inappropriate mental stress.

A number of Volkswagen AG plants took an important step towards reducing the impact on health of shift work by re-organising shift patterns. The reorganisation has drawn particularly on research findings relating to shift design and adapted these to the needs of the automotive industry. Medical experts favour forward-rotating shift patterns with frequent changes, because short-cycle patterns facilitate the body’s transition from one set of working

hours to another: the forward-rotating shift pattern mimics gradually lengthening days and so is more in line with human biorhythms than a pattern that mimics shortening days.

Employee surveys show that the revised shift patterns impose less stress on employees' health. In Wolfsburg, employees were surveyed both before and after their shift plans were changed, and the findings show that the measures taken in 2011 to reduce the impact of shift working on health and wellbeing had improved respondents' general level of health. The improvement was particularly marked in their perceptions of fitness.

A two-shift pattern is now in operation for some employees, particularly those with performance impairment. These employees now work an early and a late shift in alternate weeks and are no longer required to work night shifts.

Volkswagen AG is particularly committed to helping employees with reduced capacity or disabilities. People with disabilities made up 7.22 percent of the total workforce of Volkswagen AG in 2012, once again well above the statutory quota. 55 percent of all employees with severe disabilities worked in production and 45 percent in the non-production sector.

As part of the German government's national action plan to implement the United Nations Convention on the Rights of Persons with Disabilities, Volkswagen in Germany has been focusing on the inclusion of employees with disabilities. The aim is not only to create accessible workstations, staff canteens, toilets and washrooms, but also to make managers aware of the issues and train them to provide the best possible support to employees with disabilities.

Volkswagen is also helping to boost employment for people with severe disabilities outside the Company: during the reporting year alone, it placed orders worth more than €22 million with workshops employing people with disabilities. In addition, over recent decades, Volkswagen mobility aids have also helped to give people with disabilities greater independence and autonomy. The Company directly supplies a comprehensive range of driving aids for its vehicles including rotating and swivel seats, manually operated accelerator and brake controls, an EDAG automatic wheelchair loading device, and the FRANZ hands-free driving system.

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

Examples of good practice in ergonomic workplace and work process design are adopted in other sites.



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 and Social Affairs, 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.

During the reporting year, the ŠKODA brand was recognised in the “Most Responsible Company in the Czech Republic” awards for its Seniority Programme, while the European Commission acknowledged its exemplary treatment of older employees, awarding ŠKODA second prize in the “Workplaces for People of All Ages” category as part of a European project. For many years now, ŠKODA has been focusing its “Seniority Programme” on targeted health promotion measures for older employees.  62

Work2Work is a key programme across all our sites and creates new job opportunities for employees with performance impairment. It focuses on achieving an optimal fit between the requirements of the workplace and employees’ existing potential, enabling them to make a major contribution to creating value despite their performance impairment. Over recent years, some 1,700 employees have benefited from the scheme, and around 700 people are now employed in Wolfsburg in 92 different fields of activity that have been adapted to their specific capacity. One of Work2Work’s aims is to reintegrate employees who have suffered illness or injury into Volkswagen’s production and specialist departments, and since 2005, it has had some 200 successes to its credit. The Company knows that many performance-impaired employees have talents and expertise that can be developed with targeted support. Once these skills are identified, it is often possible to move the employees concerned to a different, but high-quality, job within the Company. Work2Work is based on three principles – personal responsibility, independent initiative and solidarity – and the Company intends to continue and continuously improve this success story.

The Company is also particularly committed to its performance-impaired employees outside Germany. One prime

example here is the six sheltered workshops that employ over 200 people with disabilities at the ŠKODA production plants in the Czech Republic. Working closely with OS KOVO, the local trade union, ŠKODA continues to use these facilities to create new employment prospects for employees whose health is impaired.

Staying fit, healthy and safe

Healthy, capable and competent employees are crucial to top performance and to enabling Volkswagen to boost its market position and competitiveness. Protecting and promoting good health is therefore not just a social responsibility and part of Volkswagen’s corporate culture but also vital to the Company’s ongoing economic health and viability. Health management at Volkswagen is a key part of corporate policy and goes well beyond traditional preventive healthcare and health and safety at work. Volkswagen’s long-established integrated approach to health management also includes aspects such as work organisation, ergonomics, leadership style, and prospects for each individual. Arrangements are continually being developed and expanded.

To this end, Volkswagen is represented on a number of national and international bodies and maintains close links and exchanges with the worlds of higher education and politics. In May 2012, Volkswagen collaborated with Germany’s Federal Institute for Occupational Safety and Health and DLR, the German Aerospace Center, to host a national conference entitled “Health as a Success Factor: Health in a Changing Employment Context”. The conference, held in Wolfsburg, was the eighth such event run jointly by the three organisations.  63

The Volkswagen Checkup, a high-quality, comprehensive medical examination and advice session available to all employees, was introduced in 2010. The Checkup is now available across all Volkswagen AG plants and helps maintain and improve the health, fitness and performance of all employees. Employees across the board value the Checkup’s high diagnostic quality: more than 42,000 Volkswagen Checkups have been carried out so far.

The Audi Checkup has been running since 2006, with more than 51,000 Checkups carried out to date, including

some 9,300 follow-up measures. In 2012 alone, over 7,300 employees took an Audi Checkup.

Following the successful introduction of the Checkup in sites in Germany, the Company's priority in 2012 was again to broaden the range of both internal and external preventive health measures linked to the scheme. The rollout of the Volkswagen Checkup also continued across many Group sites abroad. At Volkswagen de México, the Checkup was introduced in the Puebla plant during the reporting year, and more than 4,000 employees have already taken up the opportunity for a free health check. Other Group companies have been bringing existing screening and preventive health programmes into line with the Group-wide standards represented by the Checkup. Across the Volkswagen Group, the integrated approach to health management also includes healthy eating campaigns and a wide variety of sports and leisure activities, ranging from a Company 'fitness factory' at Volkswagen in Wolfsburg to corporate running events, also open to the public, at Volkswagen Autoeuropa in Portugal.

2012 also saw Volkswagen continue its international commitment to combating infectious diseases, for example

through measures to combat HIV/AIDS and tuberculosis. At its South African site in Uitenhage, Volkswagen has invested in building a youth centre run by the HIV prevention initiative LoveLife. The centre offers AIDS testing and advice, healthy lifestyle information, sports and leisure activities, academic support, and careers advice. The commitment of Volkswagen of South Africa (Pty) Ltd. is also recognised internationally: in 2012, the Company won a Global Business Coalition on Health award for its holistic health programme, following on from the 2011 award for its pioneering work in the area of HIV prevention. **64**

Assistance and mentoring opportunities for employees with mental health or psychosomatic problems and help with rehabilitation are being constantly expanded. Among other measures, employees with health problems have access to psychological support and specific consultation arrangements for psychosomatic diseases. A tailored rehabilitation programme has been developed to reintegrate employees after serious and/or long-term illness, offering early intervention and job-related support. Evaluation of the arrangements by medical experts has endorsed the contribution this scheme makes to reintegrating employees into the working process. Efforts also

The Volkswagen Checkup, a high-quality, comprehensive medical examination and advice session available to all employees, was introduced in 2010. A wide variety of sports activities is also available.



continue to improve ergonomics in all workplaces. Deploying ergotherapists to production lines means that employees can access advice and guidance in situ on how to do their jobs more ergonomically. Further improvements to the workplace management system have made it a tool that helps workplace profiles to be reconciled with the deployment options of individual employees, taking health and strain factors into account.

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, while the expert audit is currently being developed. This system helps not only with standardisation but also with knowledge management, quality improvement, and the maximisation of synergies.

As part of management development, supervisors in the Company are being made aware of the need to take great-

er account in the way they do their job as managers of the links between leadership and employees' health.

In addition, since early 2012, compulsory skills modules on occupational safety have been organised for all future supervisors. On the basis of these skills modules, the skills training building blocks for future Meister are being standardised in 2013 and will be made an integral and mandatory element in the programme for developing the next generation of Meister. Occupational safety officers at all German sites have been receiving skills training since 2009, creating a consistent basis for occupational safety at all Volkswagen brand sites in Germany.  65, 66

On the basis of the Group's occupational safety management system (KAMS), which was introduced in 2010, all the relevant Group brands and companies have carried out a comprehensive analysis of their occupational safety structures and processes. The findings are now available across the Group via a central database, and examples of good practice

COMPANY PENSION PLAN

Volkswagen AG, all its brands and all its subsidiaries run Company pension schemes to ensure that former employees have a source of income in retirement. In Germany, these are direct pension commitments. At Volkswagen AG, the arrangements comprise a basic pension and contributory pensions I and II. The basic pension and contributory pension I are employer-funded, while contributory pension II offers employees an opportunity to convert part of their pre-tax salary into pension contributions.

Since 2001, payments to Volkswagen AG's Company pension scheme have been invested in the capital markets by the scheme, which is administered in trust by the Volkswagen Pension Trust e.V. At the end of 2012, 22 other Group companies in Germany were also using these arrangements. At year-end 2012, the Company's pension fund had total assets of €3,009 million for employees' retirement and disability pensions and lifelong annuity benefits 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 €1,329 million.



Volkswagen is keen to attract talented women. The "Woman Experience Day" targets female students and graduates in engineering disciplines. Hands-on experience days give young women a practical insight into careers in the automotive industry.

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. This audit took place at the first two sites in the reporting year. In addition, the Group's occupational safety management system at the Osnabrück and Uitenhage sites was audited and certified by independent auditors. Within the Group, 2012 saw the 27th annual Occupational Safety Cup competition for Volkswagen plants in Europe; the cup for "Best Plant" was awarded to the Bratislava plant in June. **67**

The wide range of occupational safety measures continues to help reduce the frequency of accidents and the stress they cause. 2012 brought further success in reducing the number and severity of occupational accidents.

ADVANCING WOMEN AND PROMOTING DIVERSITY

Volkswagen considers both career and family life extremely important. For Volkswagen, family-friendly HR policies are a key factor in becoming a top employer. This commitment has a long track record: in 1989, Volkswagen was the first major German company to formulate guidelines on advancing women, underpinned by tailored programmes. As early as 2007, Volkswagen AG had set specific targets for increasing the proportion of women in the Company. In spring 2011, the Volkswagen Group set differentiated targets within the framework of voluntary undertakings to achieve sustainable growth in the proportion of women working for the Company in Germany. With this differentiated approach, Volkswagen is on course to promote equality of opportunity in a way that is realistic and makes business sense.

Recruiting and developing talented women

One pioneering measure is setting quotas for graduate recruitment. Volkswagen recruits the best graduates in their cohort in the skills area it needs and develops them systematically. As its starting point here, Volkswagen takes the proportion of female graduates in each discipline, so that, for example, around 10 percent of all the mechanical engi-

neers it recruits should be women. For electrical engineering, the proportion is also 10 percent, rising to 50 percent in business areas. When all the disciplines relevant to Volkswagen's work are averaged out, differentiated quotas produce a recruitment target of at least 30 percent female graduates.

Volkswagen forges links with female students early in their academic careers to persuade them of the attractions of the engineering professions with the Company. In 2012, Volkswagen began working with universities to offer a six-month internship for female students with the Abitur, Germany's school-leaving examination. Known as the "Technikum", this internship is designed to encourage young women to take up courses in such areas as mechanical engineering, electrical engineering, vehicle technology and mechatronics. **68**

Since 2004, the Company has been running the "Woman DrivING Award", aimed at the top female engineers from these disciplines. 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. **69**

The "Woman Experience Day", introduced in 2012, targets female students and graduates in engineering disciplines. Participants spend a day and a half with Volkswagen and are able to talk to experienced female engineers and HR experts. The Company has so far run five "Woman Experience Days", offering more than 70 young women an insight into the wide variety of career opportunities the Company can offer them. **70**

Having a higher proportion of skilled women joining the Company is helping to secure a steady increase in the proportion of women managers at various levels of management over the next few years. The Volkswagen Group in Germany is targeting an increase in the percentage of women at all management levels to 30 percent in the long term.

Since 1998, Volkswagen has offered a mentoring programme aimed at increasing the proportion of women in management positions. Having been through 21 cycles with

a total of almost 400 participants, this is a recognised development programme in the Group. 41 women took part in the Volkswagen AG mentoring programme in 2012.

Volkswagen is also aiming to increase the proportion of female skilled workers and Meister to 10 percent. To help it achieve this goal, the Company has for over six years been supporting talented female skilled workers with a tailored mentoring programme designed to help them to progress to Meister grade. In 2012, 31 women within Volkswagen AG benefited from this programme.

Women accounted for 26.8 percent of all apprentices in 2012 and for 20.9 percent of all apprentices in industrial or technical areas. 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 nearer 30 percent, 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 the past twelve years, the Company has taken part in a national initiative, "Girls' Day", and during the reporting year, it offered around 2,000 female school students a practical insight into the careers offered by the automotive industry. **71**

AUDI AG ran its tenth "Girls' Day" at its Ingolstadt site in April 2012, attracting around 300 female students from across the region. Since 2007, the Association of Bavarian Business's training arm, "Bildungswerk der Bayerischen Wirtschaft eV", has joined forces with AUDI AG and Ingolstadt University of Applied Sciences to organise a "Female Researchers" camp, and in summer 2012, twelve students spent a week experiencing first-hand what female engineers do in their day-to-day work. The camp has a solid academic footing but also gives the girls a real insight into everyday practice. **72**

Combining work and family

The Volkswagen Group's Strategy 2018 sets the goal of becoming the most attractive employer – which also means the most family-friendly employer, because the Company





Volkswagen is working continually to improve employees' opportunities to combine work and family responsibilities. One example here is the ongoing expansion of tailored childcare provision.

cannot do without dedicated and well-qualified mothers and fathers in any area of its activities.

Volkswagen is working continually to improve employees' opportunities to combine work and family responsibilities, offering substantial flexibility, an extensive range of part-time and shift-working arrangements, a return to work at the same level after parental leave, and childcare provision either within or near the Company. Teleworking and new information and communications technology are also helping employees to find the solution for 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. For more than 15 years, 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, the statutory provisions and Com-

pany arrangements for parental leave and returning to work are explained to them.

A further step on the way to becoming a family-friendly employer is the ongoing expansion of tailored childcare provision. At the Wolfsburg site, employees have been able since 2010 to call on "Kaleo – SOS Childcare" which provides childcare when unforeseen circumstances arise. AUDI AG has been offering employees flexible short-term childcare since September 2012.

During the reporting year, five Volkswagen AG sites offered provision for childcare during school holidays, catering for children aged between 6 and 12. From 2013, this provision will be rolled out to all Volkswagen AG sites. Volkswagen Osnabrück GmbH and Porsche AG are also planning holiday childcare provision from 2013, following Volkswagen Financial Services AG and AUDI AG, which have been running such programmes since 2008 and 2011 respectively.

The Volkswagen Group has so far found it beneficial to establish childcare facilities within or near the Company. For example, Volkswagen Financial Services AG opened the "Frech Daxe" nursery in Braunschweig in 2008, which has capacity for up to 180 children up to six years of age, making it one of Germany's largest company nurser-

ies. In 2011, Volkswagen in Kassel and MAN Diesel & Turbo SE in Augsburg both opened childcare day centres near their premises, while the Volkswagen Group of America has been offering childcare provision at its Chattanooga plant since January 2012. Working with a regional health service provider, it has set up modern facilities offering round-the-clock care seven days a week for up to 200 children. The care centre is also open to the local community, but Volkswagen employees enjoy discounted fees. As well as full-day care for babies and children from six weeks to five years of age, the centre also offers half-day care for schoolchildren aged up to 13.

Volkswagen Motor Polska in Poland won a prize in the national “Mothers at Work” competition in 2012 for its commitment to the family, while Volkswagen Motor Polska and Volkswagen Poznan’s “Mother-to-be” programme allows women to work flexible hours or to reduce their hours without loss of pay during pregnancy. Women also benefit from additional arrangements such as rest rooms for pregnant and breast-feeding women, dedicated parking spaces near the workplace, and special medical check-ups from the Company medical service. Since the programme was launched at Volkswagen Motor Polska in 2006 and at Volkswagen Poznan in 2008, more than 100 mothers-to-be have benefited from these arrangements.

Volkswagen AG has a wide range of provision for time off to help its employees to care for close family members. Employees have a right to 10 working days’ leave at short notice to organise appropriate care or to make other arrangements. They may also take up to six months’ part-time or full-time leave to fulfil their caring responsibilities.

Volkswagen is particularly flexible in its commitment to re-employing workers who take extended leave. For the past 20 years or so, employees have been able to request up to eight years’ leave of absence without having to give reasons and have the right to re-employment on their former terms and conditions.

Diversity and Equality

The Volkswagen Group is a complex global undertaking with 99 manufacturing plants across Europe, America,

Asia and Africa. Volkswagen vehicles are sold in 153 countries, and in 2012, Volkswagen AG alone employed nationals of 107 countries. The Company is deeply committed to promoting peaceful cooperation between diverse traditions and cultures.

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 colour, gender, disability, ideology, faith, nationality, sexual orientation, social background or political conviction provided this is based on democratic principles and tolerance towards those of contradictory convictions. 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.  15

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 organised 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.

These rights and obligations have been firmly established in the works agreement “Co-operative Conduct at the Workplace” for Volkswagen AG employees and sites since 1996. This works agreement was revised in 2007, and every new employee receives a copy or instruction when they are appointed. To provide deeper insight, Volkswagen also regularly holds seminars on fair behaviour at the workplace,

seminars for line managers, and briefings on labour law for those in an advisory role. There are also plans to introduce an online learning programme to complement the Company's current skills training provision.

SOCIAL RESPONSIBILITY

Corporate social responsibility also means being committed to local well-being beyond the factory gates – for example, through promoting regional growth initiatives. Wolfsburg AG, a public-private partnership between the Company and the town of Wolfsburg set up in 1999, takes a leading role here. Since 2009, it has been partnering with another organisation to form the “Allianz für die Region” or Regional Alliance; its partner, the “Region Braunschweig GmbH” project, takes in the towns of Wolfsburg, Braunschweig and Salzgitter and the surrounding rural areas, as well as regional businesses. The aim of the Alliance is to develop this region as a national beacon for employment and quality of life. To this end, partners from the private sector, higher education, government and society have joined forces to share skills and resources at local, regional and supra-regional level. In addition to a broad range of measures to promote business, the initiative also contributes towards educational, health, leisure and energy goals. By improving local facilities for residents and businesses, the Alliance is boosting a sense of well-being and identity and making the area more attractive to skilled workers and as a business location.

Pioneering approaches to sustainable regional development have already been launched in many areas. For example, what is known as the “Metropolitan Region of Hanover, Braunschweig, Göttingen and Wolfsburg” hosts one of Germany's four electric mobility showcases. Wolfenbüttel, an administrative district involved in piloting the “Health in the Future Regions” project overseen by the federal state of Lower Saxony, has launched a mobile doctor's surgery to provide the best possible healthcare to those living in rural areas and housebound patients. Cooperation within the Regional Alliance is also being stepped up from 2013.

At the initiative of Volkswagen AG, Wolfsburg AG is coordinating cooperation between Volkswagen, the Volkswagen

Works Council, the town of Wolfsburg, Wolfsburg AG, Autostadt GmbH, and public transport providers in Wolfsburg. The partners have been working together since early 2012 to develop coordinated models for sustainable improvement in the traffic conditions around the Wolfsburg site. The first results came on stream during the reporting year and included a plant shuttle bus service, new parking provision, and dedicated parking areas for car-sharers.  73

In addition to these infrastructure projects, Volkswagen is also actively involved in education in the region. The “Neue Schule Wolfsburg” project, an initiative designed to set up a new school in Wolfsburg in partnership with the town and local businesses, opened its doors in August 2009. The primary and secondary school, which is open to all children from the town of Wolfsburg and the surrounding region, designs its curriculum around five key themes: a strong international focus, science and technology, business, the arts, and the promotion of talent. The school's mission was developed by an international panel of experts and is delivered by 64 committed teachers who work closely with business and educational experts and a wide range of extramural institutions. In the current (2012/2013) school year, the school has more than 500 students in years 1 to 4 and 5 to 8 (those aged between 6 and 9 and between 10 and 13). The steady stream of interested visitors from German towns and cities and administrative districts shows that our efforts in this area have created new impetus in the education sector.

In addition to school projects, many Group sites have launched their own education initiatives in the area of road safety. Porsche AG, for example, collaborated with a partner to set up a “Kids' Driving School”. A longer-running initiative is the “Parque Polo”, an area for road safety training through play for children aged 5 to 15 in the grounds of the Volkswagen Navarra plant in Spain. The park was opened in 1999 as a community project run by Volkswagen Navarra, the Navarra savings bank, and the regional government. 4,227 school-age children visited the park in its first year, and by 2012, visitor numbers had almost doubled, to 8,019.  74

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 on the ŠKODA website.  75

Volkswagen Group China, meanwhile, has been building on the success of its road safety television programme “Family Road Safety” in 2012 to launch a fifth series, which targets the whole family with tips and advice for safe travel.

But Volkswagen aims to support the older members of society as well as the youngest. The Company’s HR policy is to support older workers as they make the transition from employment to retirement. About two years before they are due to retire, older employees take part in events facilitated by HR staff to help them move smoothly into this new phase in their lives. They are briefed on volunteering opportunities, including working in schools to help children with reading or as learning support assistants. A Group-wide “Senior Expert” scheme was established to provide this service across all sites, and retired employees are offered the opportunity to pass on their skills and experience to others, whether at regional, national or international level, for example by teaching technology and maths in schools or by helping to train specialists and management staff. Since the project began in September 2010, some 250 retirees have signed up with this scheme.

Volkswagen takes enormous pride in its commitment to volunteering. Current employees are also very keen to take up and carry out voluntary roles, and the Company supports them in their efforts. The “Volkswagen Pro Ehrenamt” (Volkswagen Supports Volunteering) initiative is a highly successful clearing house, linking community initiatives looking for volunteers with Volkswagen staff wanting to help in a social capacity. “Volkswagen Pro Ehrenamt” works not only within Volkswagen AG sites but also in the surrounding regions in partnership with some 700 organisations and bodies. The core aim is to boost the profile of volunteering in the public perception, and support for volunteering has become firmly embedded in the Group’s sustainability strategy over the past few years.

In 2012 alone, line managers held more than 800 debriefings with volunteers that highlighted the value of social responsibility and skills development outside narrowly defined technical areas. Since the project was set up in late 2008, it has registered over 3,000 volunteer openings and placed some 1,500 volunteers. Other companies in the Group have developed similar models, including AUDI AG and ŠKODA Auto a. s.

Volkswagen also supports employees who volunteer as fire-fighters by funding, organising and carrying out the necessary medical tests on those trained to use breathing equipment. Volunteer fire-fighters are able to access these preventive tests at all German sites as part of the employee preventive healthcare programme. This enables the Company to reduce the amount of time volunteers spend on such procedures and, by meeting the cost, also to relieve the financial burden on local communities. The scheme, which was launched by “Volkswagen pro Ehrenamt”, has been running since 2011.

The Volkswagen Group also supports the voluntary commitments of its employees outside Germany. The “Great Show of Hands” programme that operates in and around Johannesburg and Port Elizabeth is just one example. The programme was launched at the initiative of Volkswagen employees in South Africa who wanted to play an active part in the extensive support offered by the Company to local communities. The “Great Show of Hands” programme focuses on education, support for young people, healthcare and community welfare, and its projects are supported by Volkswagen of South Africa (Pty.) Ltd. More than 300 Volkswagen employees took part in a range of voluntary activities in 2012.

As well as giving their time and talents, Volkswagen employees show sustainable commitment to charitable giving. For several decades, the Company has operated an employee donation scheme initiated by the General Works Council to benefit those in need in the areas in which it operates, and employees and Company alike have supported it generously. In Wolfsburg alone, about €410,000 was raised in 2012 to support social welfare organisations.

The Company also demonstrates its social responsibility through its recently-created foundation, the “Volkswagen



Taking pride in volunteering. The “Great Show of Hands” programme was launched at the initiative of Volkswagen employees in South Africa.

Belegschaftsstiftung” (Volkswagen Employees’ Foundation). This body, set up by Volkswagen AG in 2011, supports social projects benefiting socially disadvantaged children and young people across all Group sites, with a particular emphasis on vocational education and training. The Board of Management and the Board of Trustees took up office in 2011. They have decided, in conjunction with the Volkswagen Belegschaftsstiftung’s cooperation partner – the children’s and adolescents’ charity “terre des Hommes” – to build a vocational education and training centre for socially disadvantaged young people in India. Training began in mid-2012 and is being provided on alternative premises until the centre is built.

The Company supports organisations and events worldwide through sponsoring and donations. Charitable giving is a key way in which Volkswagen channels its commitment to social responsibility. The Company has a Group-wide Code of Conduct governing donations and sponsoring and donates both money and equipment for science and education, culture, sport and social concerns.

For example, Volkswagen has for many years collaborated with the Peter Maffay Foundation. Set up in 2000, the Foundation mainly provides therapeutic activity holidays for disadvantaged and traumatised children and young

people. Volkswagen has been working with singer and songwriter Peter Maffay since 2007 in a cooperative “Alliance for Children”, which supports joint charitable projects for vulnerable and needy children.  76

Since 2009, Volkswagen has also been providing vehicle support to the Hanover-based “Netzwerk für die Versorgung schwerkranker Kinder und Jugendlicher e. V.”, a network supporting children and young people with serious health problems. Mobility is vital to the network, and in August 2012, Volkswagen donated two vehicles to support its research, coordination and training activities across Lower Saxony.

Fairtrade

At the suggestion of the General Works Council, Volkswagen 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: an increasingly wide range of products is available, and new sales stands and product information help raise awareness and boost sales. In 2012, for example, total consumption of Fairtrade coffee was 46.5 tonnes,

close to the record consumption of 51 tonnes in 2011. Over the reporting year, Service Factory Office Management extended its range of fairly traded products to include craft items for the first time. Small workshops in Madagascar have been using recycled cans to produce

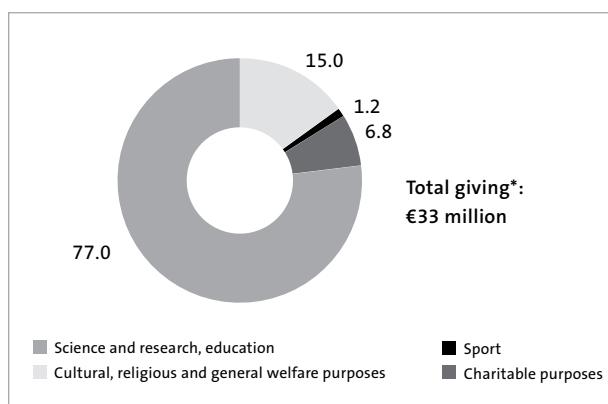
model vehicles based on the iconic VW Beetle and VW Transporter T2. More than 1,500 models have been sold within Volkswagen since they were introduced in May 2012, enabling two new craft businesses in Madagascar to be recruited as suppliers.

Company donations

Volkswagen supports organisations and events around the world with sponsoring and donations in areas including:

- > Science and research, education
- > Charitable purposes
- > Sport
- > Culture
- > General welfare and other purposes
- > Churches, religious bodies and learned bodies

**VOLKSWAGEN AG:
COMPANY DONATIONS IN % 2012**



The total value of giving in 2012 does not include the "Volkswagen Belegschaftsstiftung" (Volkswagen Employees' Foundation). Volkswagen made no donations to political parties, party-affiliated foundations or representatives of the political arena.

*The figure given does not include cause-related marketing, sponsoring or projects and activities conducted by Volkswagen as part of its social and cultural commitment.

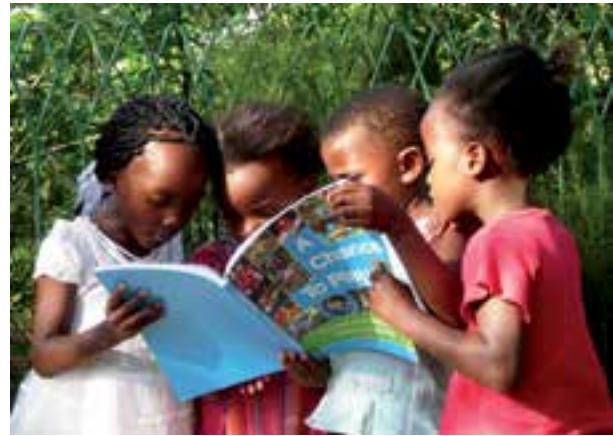
Volkswagen only grants donations to organisations recognised to be non-profit or that are authorised by special provisions to accept donations. The awarding of donations must be transparent; the purpose, the recipient of the donation, and the receipt for the donation from the recipient are documented and can be verified.

For example, in April 2012, Volkswagen and its dealers donated a total of €349,000 to the cooperative "Alliance for Children". The Company has been working with Peter Maffay since 2007 to support charitable projects targeting children in need. In 2012, Volkswagen donated a total of €33 million, more than twice as much as in the previous year.

Volkswagen also recognises its corporate responsibility to support political parties in their work. The Company is very careful to avoid any influence on the exercise of democracy. Volkswagen does not make donations to political parties.

Workforce donations

Workforce donations for people in need have a long tradition at Volkswagen: in 2012, employees of Volkswagen AG alone gave more than €2 million to good causes. Workforce donations represent a major contribution by Volkswagen AG companies and their employees to those in need in locations where Volkswagen AG operates. In 2012, some €490,000 went into supporting regional social projects, including the "Starthilfe" (Getting Started) project devoted to combating the growing problem of child poverty in the Wolfsburg region. "Starthilfe" uses donations to launch, promote and focus projects and measures to alleviate child poverty. In the "One hour for the future"



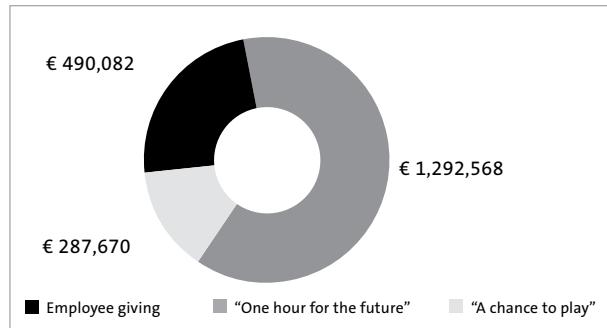
The special project "A chance to play" was launched to mark the 2010 World Cup in South Africa. The programme now moves to Brazil and has been renamed "A chance to play – o direito de brincar".

campaign, Volkswagen and Audi employees donate an hour's pay to help street children, and in 2012, Volkswagen AG employees alone raised over €1.3 million for aid projects in Mexico, Brazil, Argentina, South Africa, India and Germany. Since 2003, this initiative has also included the collection of "spare cents": employees donate the odd cents included on their monthly pay slip.

To mark the 2010 football World Cup, hosted by South Africa, the Group Global Works Council launched a special

project, "A chance to play", now renamed "A chance to play – o direito de brincar" and carried over to the next World Cup, which will be held in Brazil. The bodies involved include the "Football and Development Foundation", which works across South America to coordinate the huge interest in street football. Volkswagen AG employees gave €287,670 to this special project during the reporting year.  77

VOLKSWAGEN AG: WORKFORCE DONATIONS IN 2012



Commitment to social projects around the world: Volkswagen AG employees alone gave more than €2 million.

Acting on our convictions.

FOR VOLKSWAGEN, CORPORATE RESPONSIBILITY DOES NOT END AT THE FACTORY GATES. THE GROUP SUPPORTS AID PROJECTS AND SOCIAL AND ENVIRONMENTAL INITIATIVES AROUND THE GLOBE.

Volkswagen is motivated by a sense of responsibility to help meet the key challenges of the 21st century – in particular resource conservation, climate protection, and striking a fair balance within and between generations around the world. For a global corporate group like Volkswagen, this responsibility grows in parallel with its commercial success, at the same time boosting the intensity with which the Group pursues its Corporate Social Responsibility (CSR) projects. Volkswagen supported a multitude of initiatives in 2012 – helping not only with concepts and planning, but also by providing funding and material assets such as vehicle loans.  78

In selecting projects, the Group is guided by a philosophy and fundamental conviction comprising two core elements: continuity rather than chasing trends; and a commitment to sustainable structural development in the locations where we operate, with the goal of driving socioeconomic growth and creating opportunities for local people. In concrete terms, this means that all CSR projects initiated

or supported by Volkswagen around the world comply with the following principles:

- > They align with our corporate mission while addressing a specific local or regional issue.
- > They are an expression of the diversity within the Group and the social environment where the projects are carried out.
- > They are developed in close dialogue with local stakeholders, who are also involved in the implementation phase.
- > They are managed locally under the responsibility of the Group units that operate in that region.

This modern understanding of CSR makes the projects an important building block of sustainability at Volkswagen: the economic, environmental and social aspects are not conflicting objectives, but are mutually dependent and drive each other forward. At Volkswagen, this approach enjoys a long tradition. Long before CSR was incorporated as a strategic aspect of its corporate policies, Volkswagen pursued a

commitment to social responsibility that invariably combined the promotion of its own business interests with serving philanthropic motives. Projects carried out in Brazil and South Africa in the 1970s reflect this conviction.

Since 2009, Volkswagen has been holding regular Group CSR Meetings to build effective internal networks between projects and continue expanding its worldwide engagement. Wolfsburg played host to this Group-wide communication and information forum in 2012. At the two-day conference, CSR coordinators representing each region and brand presented new projects and ideas. 2012 also saw the development of a comprehensive CSR publication which provides concrete examples and interesting background information on individual Volkswagen CSR projects.

To support social and ecological projects, Volkswagen set up "Fundação Volkswagen" in Brazil. Over the past ten years, this foundation has reached out to help more than a million schoolchildren and students.





CSR projects around the world.

Antarctica

- 1 Princess Elisabeth Antarctic Station (not on map)

Argentina

- 2 Grupo de Voluntarios
 - 3 Ferdinand Porsche Institute
 - 4 Global Compact
 - 5 Water biotope

Australia

- ## 6 Fuel-saver courses

Ethiopia

- ## 7 Education initiatives

Brazil

- 8 Sustainable Life programme
 - 9 "Fundação Volkswagen"
 - 10 Hydroelectric power plants
 - 11 Sewing the Future
 - 12 Nature and species conservation projects
 - 13 Water pump project
 - 14 Ten Trees per Car
 - 15 Wastewater treatment
 - 16 Water purification
 - 17 Industrial water treatment
 - 18 A Chance to Play
 - 19 Donating used computers
 - 20 Small hydropower stations
 - 21 Pro-Educate Brazil
 - 22 Volkswagen in the Community
 - 23 HIV/AIDS programme
 - 24 Quality of Life
 - 25 Fitness Index
 - 26 Regional school programme
 - 27 Fitness competition
 - 28 Drug abuse prevention

29 Infant care

- 30 Home care
 - 31 Environmental performance
 - 32 Protecting plant biodiversity

China

- 33 Volkswagen Road Safety TV
 - 34 Green Future Environmental Education Initiative
 - 35 Accident research
 - 36 China river oases
 - 37 Intercultural dialogue

Germany

- 38 Work2Work integration project
 - 39 Centers of Competence e.V.
 - 40 Volkswagen pro Ehrenamt
 - 41 Senior experts
 - 42 Eco-friendly use of resources
 - 43 Helping children in Braunschweig
 - 44 Neighbourhood Dialogue
 - 45 Nature and species conservation projects

46 Audi 24-hour race

- ④ Audi E-Tron race
 - ⑦ A Heart for Hamsters
 - ⑧ Renaturation of Aller River biotope
 - ⑨ Support for NABU's German Wildlife Corridor Network project
 - ⑩ Water usage at Audi
 - ⑪ FleetCompetence eCO₂
 - ⑫ Protecting moorland near Gifhorn
 - ⑬ Recycling centre
 - ⑭ Young drivers
 - ⑮ Oak forests store CO₂
 - ⑯ New Responsibility Foundation
 - ⑰ Museum Bus
 - ⑱ Urban Future

United Kingdom

- ## United Kingdom

India

- 62 Volkswagen India Academy

Israel

- ## 63 Bilateral training

Italy

- 64 Solar power plant
 - 65 Oak forest research project

Japan

- 66 Biodiversity

Netherlands Antilles

- ## ⑥⁷ Wind-diesel power plant

**Mali**

- 68 Assistance for Tuareg people
- 69 Development assistance for Tuareg people

Mexico

- 70 Izta Popo Project
- 71 A Day for the Future
- 72 Volkswagen Award

Poland

- 73 Children and Career
- 74 Mini Handball Cup

Portugal

- 75 ATEC training centre

Russia

- 76 Dual vocational education
- 77 Sports sponsorship

Sweden

- 78 Fun Theory
- 79 Scania Drivers Competition

Slovakia

- 80 Inventory in Paradise

Spain

- 81 "Life" electromobility initiative
- 82 SEAT in the Sun

South Africa

- 83 Volkswagen Community Trust
- 84 Great Show of Hands
- 85 AIDS Care
- 86 Rally to Read

Czech Republic

- 87 One Tree per Car
- 88 Na Karmeli
- 89 Festival of cultures
- 90 Laughter is the best medicine
- 91 ŠKODA Auto Museum
- 92 Sheltered Workshops
- 93 ŠKODA Auto Brass Band

Turkey

- 94 Road safety awareness

Hungary

- 95 Audi Kreativity
- 96 Oak forests store CO₂

USA

- 97 Partners in Education
- 98 MoMA Partnership
- 99 VSA Arts
- 100 Green factory in Chattanooga
- 101 Battery research

Venezuela

- 102 All for One

Zimbabwe

- 103 Junior Masters



In a new publication, Volkswagen shows how it advocates ecological and social sustainability around the world.



Environment.



4

Environment

MANAGEMENT APPROACH // CLIMATE PROTECTION // LIFE CYCLE ASSESSMENTS // EFFICIENT VEHICLES //
EFFICIENT PRODUCTION // SUSTAINABLE MOBILITY // TRAFFIC NOISE // GREEN LOGISTICS // GREEN IT //
RESOURCE EFFICIENCY // WATER // BIODIVERSITY // AWARDS // THINK BLUE. FACTORY.

The commitment of our employees leads to superior environmentally compatible technology. Active Cylinder Management (ACT), for example, shuts down two of the four cylinders when the engine is in the low-load range. For the environment that means 9 grams less CO₂. Every kilometre.

Clean credentials.

On its way to becoming the world's most sustainable automaker, Volkswagen passed further key milestones during the past year, and continues to set its sights on ambitious goals.

Environmental impacts

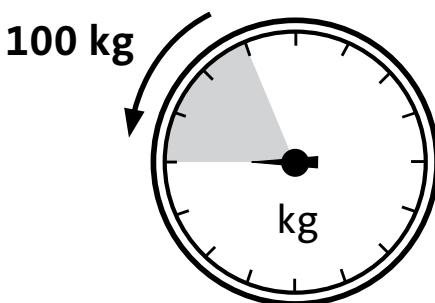


25%

Volkswagen is aiming to achieve a 25 percent reduction in environmental impacts from its production operations by 2018.

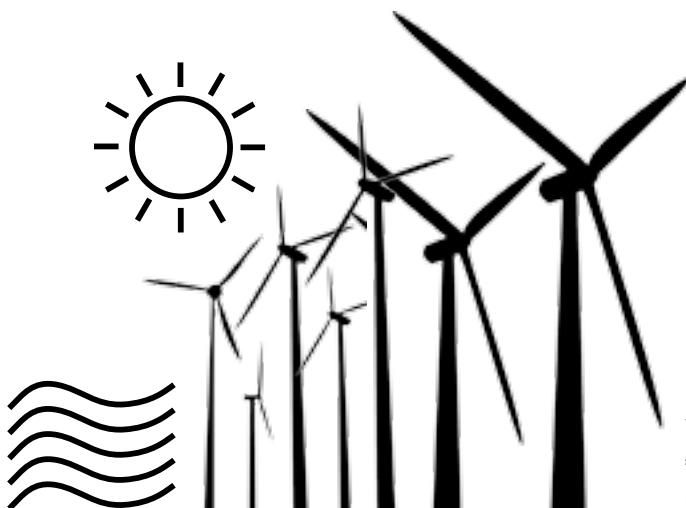
Energy consumption

Volkswagen aims to reduce its production-related energy consumption by 25 percent by 2018 versus 2010 levels. Since that baseline year, energy consumption for passenger car and light commercial vehicle production has already been reduced by around 13 percent per vehicle.



Lightweight design

The weight of the new Golf has been reduced by up to 100 kg, despite further improvements in comfort and safety. And depending on the engine version, fuel consumption has been reduced by up to 23 percent. In the European market alone, that represents potential savings of 119,000 tonnes of CO₂ per year.

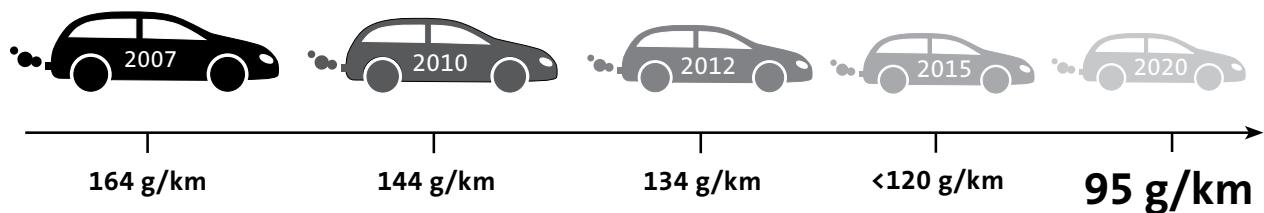


Renewable energy

Volkswagen will invest some €600 million in the expansion of renewable energies by 2016.

CO₂ emissions

At present, Volkswagen offers 245 models with CO₂ emissions of less than 120 g/km. By 2020, the company will reduce the average CO₂ emissions of its European new car fleet to 95 g/km.



“With our sights set on ambitious goals, across all our sites, we are on our way to becoming the world’s most sustainable manufacturer.”

DR.-ING. E. H. MICHAEL MACHT
‘GROUP PRODUCTION’



4

A commitment driven by responsibility

THE ECOLOGICAL ASPECTS OF SUSTAINABILITY FORM AN INTEGRAL PART OF THE CORPORATE CULTURE AT VOLKSWAGEN. THROUGH FAR-SIGHTED STRATEGIES AND IN DIALOGUE WITH ITS STAKEHOLDERS, THE COMPANY DEVELOPS NOT ONLY EFFICIENT AND ENVIRONMENTALLY COMPATIBLE PRODUCTS BUT ALSO SOLUTIONS THAT ADDRESS OVERARCHING CHALLENGES SUCH AS CLIMATE CHANGE.

MANAGEMENT APPROACH

The Group's environmental management is responsible for ensuring that the ecological aspects of sustainability are firmly anchored in our product development and production strategy at all sites. For Volkswagen, the priorities here include the efficient handling of resources such as energy and water, efficient use of materials, minimising emissions of noise and pollutants, waste and wastewater, and preserving and promoting biodiversity.

Ambitious objectives

Volkswagen has set itself the goal of becoming the global number one in the automotive sector in ecological terms by 2018, and is aiming to improve the eco-friendliness of its production by 25 percent. To this end, energy and water consumption, together with emissions and waste, are all to be cut by 25 percent over 2010 levels. Additionally, in Germany the Group is committed to reducing its greenhouse gas emissions from energy supplies by 40 percent between 2010 and 2020. To meet these ambitious targets, the Group will channel over two thirds of its €50.2 billion investment programme directly or indirectly into the development of increasingly efficient and safer vehicles, new drive systems and environmentally compatible production processes at its plants around the world.  80

Around €600 million worth of investment has been earmarked specifically for renewable energy expansion. Volkswagen has also set itself clear targets regarding the ecological performance of its products. For example, it is aiming to reduce the CO₂ emissions of its European new vehicle fleet by 30 percent by 2015 compared with a 2006 baseline. Volkswagen has adopted 95 g CO₂/km as its 2020 target for European new car fleet-average emissions. This

makes the Volkswagen Group the first carmaker to commit to this ambitious goal. This emissions figure corresponds to fuel consumption of less than 4 litres/100 km – across all vehicle segments and classes.

Volkswagen has already achieved some notable improvements en route to its aspired environmental leadership. For example, between 2010 and 2012, emissions of CO₂ from the production process were cut by approximately 129 kilograms per vehicle produced (passenger cars and light commercial vehicles), while metallic production waste was reduced by more than 28 kilograms per vehicle. Over the same period, the Volkswagen Group also reduced its output of wastewater per vehicle produced by around 440 litres. Between 2008 and 2012, European fleet-average CO₂ emissions were reduced from 159 g CO₂/km to 134 g CO₂/km. That equates to a reduction of approximately 15.7 percent.

Group-wide environmental management

The corporate environmental management system provides the organisational basis for meeting the Group's environmental targets. It also ensures Group-wide compliance with all relevant legislation. We are not aware of any significant violations of environmental legislation during the reporting year.

November 2011 saw the appointment of a Group Chief Officer for the Environment, Energy and New Business Areas, who reports directly to the Board Member for Production at Volkswagen AG. This newly created role will combine and reinforce all global activities relating to implementation of the Volkswagen Group environmental management and energy strategy, and the development of new

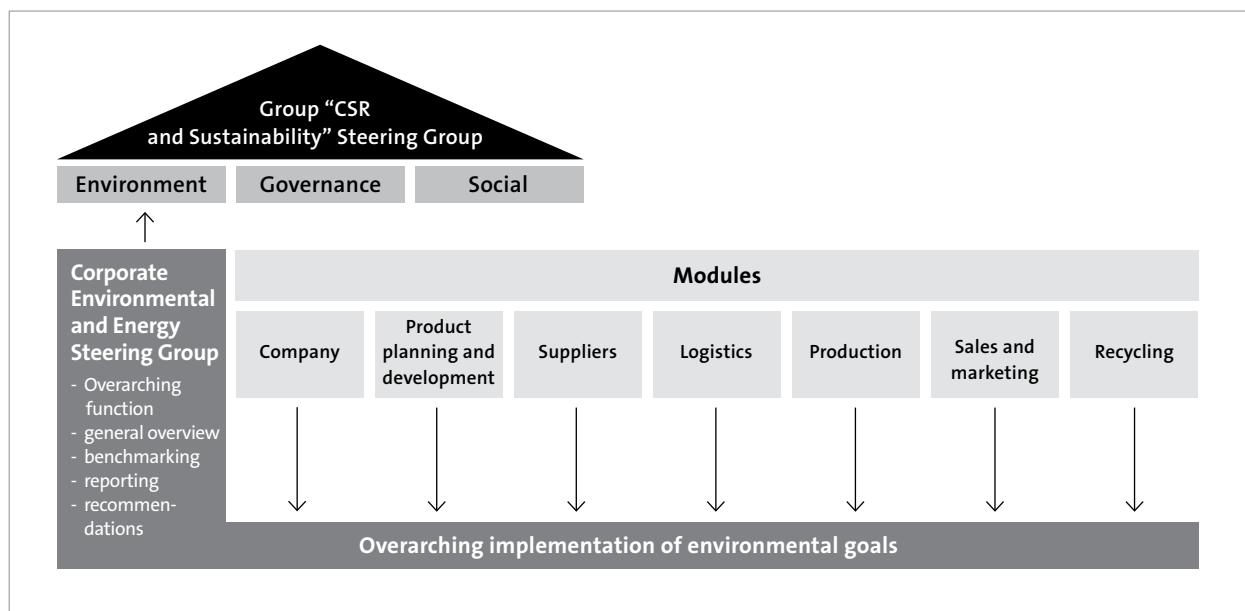
business areas. Important duties will include inter-brand coordination on environmental and energy strategies and ensuring implementation of these strategies across all brands. Within the context of the Collective Agreement for the Future, in 2011 an Innovation Fund II was set up at the Works Council's initiative. This fund will promote the development of new business areas above and beyond our existing portfolio of products and services, with a particular focus on energy-related and environmental aspects. Innovation Fund II will contain around €20 million per annum of funding for Volkswagen projects across the entire automotive value chain, and will have the effect of safeguarding jobs in the long term. Under one project launched with the help of Innovation Fund II, gravity-based conveyors have been developed which are now handling doors on the Golf 7 production lines in Wolfsburg, achieving energy savings of up to 80 percent. The doors slide slowly down the roof-mounted conveyors to their correct destination on the production line under the action of gravity. The same system could also be used to handle wheels, bodies, engines and many other types of

component. Group-wide deployment of this technology could potentially create up to 50 jobs.

The Corporate Environmental and Energy Steering Group helps to safeguard the long-term value of the Company and avert potential environmental threats. The Steering Group plays an overarching role in the pursuit of environmental goals and is subdivided into seven modules to address measures at each stage of the process chain. All decisions made by the Steering Group are directly incorporated into the Volkswagen Group's management processes. Their implementation falls partly within the remit of the plant environmental officers, who meet several times a year to discuss projects, goals and measures.

In order to ensure that all Volkswagen cars launched on the market are environmentally superior to their predecessors, environmental "mentors" are consulted from the outset of any vehicle project, and their expertise is incorporated into the vehicle development process.

CORPORATE ENVIRONMENTAL AND ENERGY STEERING GROUP



Energy management is also firmly anchored in the Volkswagen organisation. A Corporate Energy Working Group was set up back in 2002, with representatives (“Energy Officers”) from every plant. The Working Group regularly debates a range of issues including energy procurement, planning, invoicing and controlling, and develops standards. It is also in charge of energy reporting, energy audits and energy campaigns. The Working Group has drawn up a list of around 200 individual energy efficiency measures for the technical and organisational sectors. The Working Group devises training concepts for energy officers in all production segments and at all locations. To date, more than 270 energy officers have successfully completed their training.

A corporate energy management system was developed in 2008. At its heart is a global intranet portal, linking all offices across the Group that are working to boost energy efficiency. The portal showcases best practice examples and facilitates direct contact with those responsible for their implementation, to ensure a seamless exchange of ideas. It also outlines basic regulations and energy-saving tips, including some generated by the central idea management system. An interactive program, “The Energy Adviser”, provides another invaluable source of information on energy efficiency measures in the production sector.

Principles and certification

Volkswagen boasts a long tradition of environmental management and certification. In 1995, Volkswagen was the first automaker to voluntarily participate in the EU Eco-Audit at its German plants, while its sites worldwide participated in the environmental certification process to international standard ISO 14001. The Group Environmental Principles governing our products and production operations are the mainstays of Volkswagen’s environmental policy. The Environmental Principles, Product focus on the aspects of climate, resources and health, and stipulate that over its entire life cycle, every new vehicle model should exhibit superior environmental properties to its predecessor.

The Environmental Principles, Production are devoted to the aspects of production processes and infrastructure. Both these sets of Environmental Principles are based on interna-

tional environmental and energy management systems as defined by EMAS and ISO 14001. All responsible individuals in the corporate functions and at the various sites are required to uphold the Group Environmental Principles in every decision they make. Since 1996, this standard has also applied to the environmental management system of the Volkswagen Technical Development department, which has additionally held DIN ISO/TR 14062 certification since 2009. Recertifications and monitoring audits confirmed Volkswagen’s leading position during the reporting year.  7

Training and sensitisation

The 1995 Factory Agreement on Environmental Protection motivates all employees to integrate the principles of environmental protection into their everyday work. Volkswagen also arranges training courses for employees to ensure that environmental management objectives and measures are upheld in practice across all its global production sites. In 2012, a variety of training courses were held, and attended by a total of 519 employees. Topics included environmental protection for supervisors and energy efficiency awareness training for planning staff.  24, 25, 81, 82, 83

Additionally, dedicated training is given to environmental protection specialists at all Volkswagen locations in Germany, and also (from 2013) at Audi in Neckarsulm. Training courses are held at a central location to encourage networking and learning from one another. The environmental protection specialists assist the environmental officers and help to anchor environmental protection in the wider consciousness of the workforce. Additionally, Works Council members at all Volkswagen sites in Germany receive training in energy and environmental issues to equip them for their vital role as multipliers when recommending specific practices for greater sustainability. Four such events were held in 2012, and attended by a total of 58 participants. The Volkswagen brand’s annual “Think Blue. Factory”-Award is another important management tool for engaging, incentivizing and motivating all employees. With effect from 2013, the Volkswagen “Think Blue. Engineering”-Award will also be presented at product level.  84

The “Sustainability in Supplier Relations” concept helps to ensure that Volkswagen’s environment-related targets

and measures are observed at every stage of the supply chain (> p. 34).

Regional and international environmental conferences

Volkswagen holds regular environmental conferences at regional and Group levels. The Regional Environmental Conferences follow a clear five-point plan, with the opening address followed by international audit workshops, after which environmental action plans are drawn up. The Regional Conference debates and aligns these plans with the corporate objectives, then adopts them if applicable, with due regard for regional feasibility. The aim of these Regional Conferences is to synchronise the environmental efforts of all plants worldwide, and the next one is scheduled for May 2013 in China.

The 4th Group Environmental Conference was held at the AutoUni in Wolfsburg in July 2012, and attended by more than 400 experts from sites around the world. Entitled “Heading for pole position – both economically and ecologically”, the Conference brought together the environmental

officers from the plants, planning and products, as well as those responsible for implementation in the various departments. On the agenda were environmental requirements in the individual regions, powertrains of the future, as well as sustainable materials. A “Marketplace of Opportunities” was set up, showcasing a range of implementation strategies, tools and projects. Details of various projects and implementation examples can be found in the following chapter.  84, 85

CLIMATE PROTECTION

With efficient vehicles built using efficient production processes, and with its Powertrain and Fuel Strategy as a roadmap, Volkswagen is making an important contribution to the fight against climate change (> p. 99).

The Board of Management embeds climate change and the resulting opportunities and risks into its strategic decision-making processes. It is assisted in this by the CSR & Sustainability Steering Group and the CO₂ Steering Group,



The Volkswagen Chattanooga Solar Park has a peak output of 9.5 megawatts and is the largest solar facility operated by any carmaker in the USA. This eco-friendly power will be used in production of the Passat.



which are made up of sustainability experts and decision-makers from all the relevant business units. Internally developed management and analysis tools such as the CO₂ Registry are among the information sources used. This tool permits analysis of the CO₂ emissions of every vehicle project at the Group over the entire product creation process. The requirements for CO₂ savings are also laid down in the Volkswagen Group Environmental Principles. Product Climate protection is also a component in the process of setting employee performance targets at Volkswagen.

Risks related to climate change

Climate change presents significant risks for Volkswagen. These risks are therefore an integral focus of the Volkswagen Group's risk management strategy. All risks are quantitatively and qualitatively evaluated against eight criteria, and assigned a rating. The results of the risk evaluation process are reported to the Board of Management, and the process itself is reviewed, on an annual basis. This wide-ranging evaluation of risks and opportunities is at the heart of Volkswagen's climate protection strategy, which takes into account the following factors:

- > regulatory aspects, in particular EU penalties for failing to meet fleet-average emissions targets,
- > market-related requirements, resulting in particular from increased public awareness of climate issues,
- > physical aspects, such as potential supply chain or production disruption, for example due to worsening droughts or extreme precipitation caused by climate change. Water shortages pose a significant risk to Volks-

wagen's operations, particularly in light of the Company's plans for new production facilities in Asia, Africa and Central and South America. The various risk factors were taken into account in formulating the Group's environmental goals.

For the first time ever, the Volkswagen Group has published a Scope 3 inventory for CO₂ emissions. The calculations revealed that the "use phase" emission category accounts for over 70% of all Scope 3 emissions. Against this backdrop, Volkswagen offers:

- > A product portfolio that makes increased use of fuel-saving, low-emission technologies, but with no resulting loss of diversity or customer choice. At the present time the Group brands offer a total of 245 models with CO₂ emissions of less than 120 g CO₂/km, including 36 which already emit less than 100 g CO₂/km.
- > Product communication which uses "efficiency badging" to highlight extra-efficient, low-CO₂ vehicles and technologies.  87
- > Customer information which encourages drivers to adopt an efficient, eco-friendly driving style in order to reduce CO₂ emissions throughout the life cycle of the vehicle.  2, 25, 88, 89, 90

Opportunities related to climate change

At the same time, climate change and the associated changes in customer requirements are also opening up new opportunities. Volkswagen is developing ever more new technologies, products and services whose goal is to offer so-

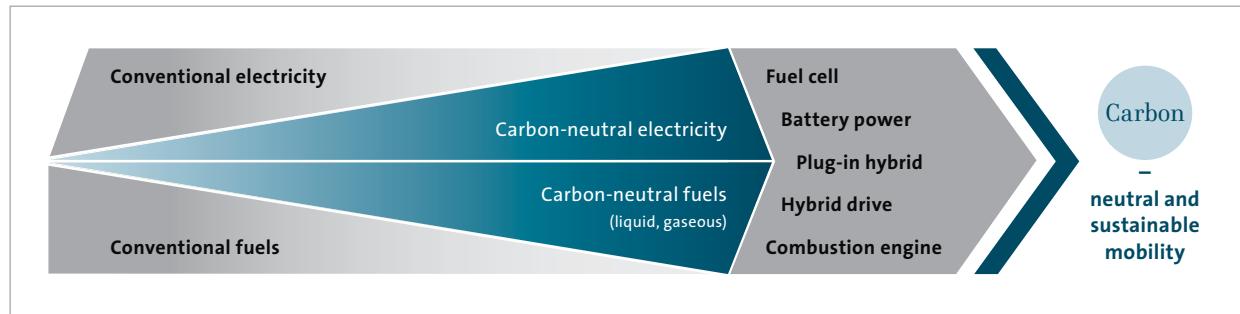
SCOPE 3 INVENTORY

With the publication of the 2012 Group Sustainability Report, the Volkswagen Group has for the first time simultaneously published a Scope 3 Inventory for CO₂ Emissions. In accordance with the WBSCD/WRI Scope 3 reporting standards published in 2011, Volkswagen is reporting CO₂ emissions in 12 of the 15 Scope 3 categories. Calculations showed that more than 90 percent of total

Scope 3 emissions fell under the categories "Purchased goods and services" and "Use of sold products". The information provided in these inventory categories was therefore validated and verified in accordance with international standard ISO 14064-3 by external auditors from the TÜV NORD technical inspectorate. (> p. 143)

 86

THE ROAD TO CARBON-NEUTRAL MOBILITY



Climate protection in practice: The Volkswagen Powertrain and Fuel Strategy points the way to carbon-neutral and sustainable mobility.

lutions to the challenges of climate change. Examples include efficient, environmentally friendly vehicles, backed up by mobility services and fuel-saver courses, as well as energy-related products for use outside the mobility sector. Moreover, climate legislation and statutory targets provide a further incentive to develop innovative, efficient technologies for products and production processes.

Climate protection in the production sector

Many production plants in all parts of the world, and all Group brands, have launched measures to implement the Group's climate protection goals. The Efficient Production section of this report presents a number of examples (> p. III). Examples of further projects can be found online.  91

Among other things, Volkswagen's climate goals include a commitment to reducing the greenhouse gas emissions associated with production-related energy supplies. In Germany the aim is to cut these emissions by 40 percent by 2020 versus 2010 levels. This will only be possible through increased use of renewable energy, based on further diversification of the energy-generating mix. In the coming years Volkswagen will therefore be investing around €600 million in the expansion of renewable energies such as solar, wind and hydroelectric power.

Volkswagen has put in place uniform standards of efficient production. In one example of the implementation of these standards, in 2012 Volkswagen do Brasil received the first

ever external certification of its greenhouse gas emissions inventory. Certification confirms that the underlying process complies with ISO 14064 and the GHG Protocol. Since 2010, Volkswagen do Brasil has reduced its CO₂ emissions per vehicle produced by 4.8 percent, and has increased its waste recycling rate to over 95 percent.

In the reporting year, the Volkswagen Group brands implemented a wide range of initiatives and actions at their sites to combat climate change. At Scania, for example, climate-impacting emissions of carbon dioxide from internal goods transportation have been reduced by around 70 percent by switching from diesel fuel to bioethanol. Scania also participated in Earth Hour, switching off the lights for an hour at its production facilities in Europe and South America.

Climate protection through efficient products

Volkswagen's most effective lever in the development of more environmentally compatible mobility is its vehicles themselves. In 2012, global fleet-average new-car CO₂ emissions of the Volkswagen Group stood at 134 g CO₂/km – 25 g less than in 2008.

Volkswagen's long-term approach to emissions reduction will focus mainly on powertrain electrification, since electric cars are emission-free at the point of use. In the mid-term, by 2015, Volkswagen will have reduced the average CO₂ emissions of its European new-car fleet by approximately 30 percent compared to 2006 levels, bringing its fleet-average emis-

sions down below the 120 g CO₂/km mark for the first time. The goal of the development departments is to make each new model generation between 10 and 15 percent more efficient than its predecessor. At the same time it should be noted that the Volkswagen Group's vehicles already offer impressive CO₂ performance (> p. 103).

The legislative backdrop

The EU new-car fleet-average emissions target of 130 g CO₂/km is being introduced in four stages, starting in 2012. In 2012, 65 percent compliance was required, rising to 100 percent in 2015. A further significant reduction in the EU average fleet emissions target, to 95 g CO₂/km by 2020, has also already been agreed, although the modalities for compliance have still to be determined in an ongoing review by the EU Commission, which is expected to be completed by mid-2013. Volkswagen has adopted 95 g CO₂/km as its 2020 target for European new car fleet-average emissions. This makes the Volkswagen Group the first carmaker to commit to this ambitious goal.

Other important EU regulations affecting the automotive industry include:

- > EU Directive 2009/33/EC on the promotion of clean and energy-efficient road transport vehicles ("Green Procurement" Directive)
- > Energy Labelling Directive 1999/94/EC
- > Fuel Quality Directive 2009/30/EC, amending fuel quality specifications and establishing energy efficiency requirements for fuel production
- > Renewable Energy Directive 2009/28/EC, establishing sustainability criteria
- > Revision of Energy Taxation Directive 2003/96/EC, amending minimum tax rates for all energy products and electricity.

In order to be optimally prepared for the third emissions trading period starting in 2013, Volkswagen calculated and reported the CO₂ emissions to be reported for our German plants in accordance with the Datenerhebungsvorordnung (DEV 2020 – German Data Collection Regulation). Volkswagen submitted the appropriate applications for the allocation of certificates to the Deutsche Emissionshandelsstelle (DEHSt – German Emissions Trading Authority) for all the affected plants. The other Volkswagen

plants in the European Union were also checked in accordance with the national laws in force at those locations and action was taken to ensure that applications were submitted to the relevant national authorities in good time.  93

The changes to the Emissions Trading Directive and their transposition into German law have been completed. From a current perspective, the number of plants included in the European emissions trading system from 2013 onwards and the related amount of CO₂ emissions requiring to be traded will not increase significantly.

The allocation of the necessary emissions certificates will change fundamentally as of 2013. They will no longer be allocated mostly free of charge through national allocation plans. Instead, a steadily falling number of certificates, for heat generation using natural gas for example, will be allocated free of charge. Companies will have to purchase any additional certificates they require at auction. Unlike before, CO₂ emissions certificates for power generation will have to be purchased in full. Estimates to date indicate that the energy costs incurred by the Volkswagen Group's European sites will increase as a result of purchasing the emission allowances required for the operation of proprietary power plants and heating facilities. The amount of the additional costs will depend essentially on the price at which the certificates are traded.

The European Commission is currently giving detailed consideration to intervening in EU emissions trading in order to boost it. The Commission is currently in favour of withdrawing a defined number of freely allocated certificates at the beginning of the third trading period and not allocating them until the end of the trading period. This artificial shortage of certificates at the beginning of the trading period may cause certificate prices to rise.

The future political direction of global climate protection agreements remains unclear. There is currently no sound long-term prospect of specific reduction targets, responsibilities and funding arrangements or more stringent climate protection requirements based on them. At the UN, a new climate protection agreement for 2020 onwards is to be negotiated by 2015 at the latest.  94

Strategic dialogue

Continuous dialogue with stakeholders provides Volkswagen with a broader basis for assessing the opportunities and risks of climate change and for developing appropriate strategies and solutions. For many years, Volkswagen has been taking part in a dialogue with government representatives, ministries, NGOs, multinational initiatives, other companies, associations and public authorities. These stakeholders include the German Ministry of the Environment, Conservation and Reactor Safety's "National Platform for Electric Mobility", the International Energy Agency (IEA), the United Nations Intergovernmental Panel on Climate Change (IPCC) and the World Business Council for Sustainable Development (WBCSD). 

At the annual EUCAR conference in Brussels, Volkswagen presented an internal combustion engine developed in the framework of the EU research project POWERFUL (Powertrain for Future Light-duty vehicles). In combination with new aftertreatment systems, this engine can achieve significant reductions in CO₂ emissions. Along with Volkswagen, other vehicle manufacturers, suppliers and leading research institutes are also participating in this syndicate project. The four-year project is part of the seventh EU Commission Research Programme and will be concluded in December 2013.

The Volkswagen Group is committed to intensive stakeholder dialogue at local government level, too. For example at its Neckarsulm site, Audi has kept local authorities and environmental organisations informed about its progress towards carbon-neutral mobility.

LIFE CYCLE ASSESSMENTS

To minimise the environmental impacts from its vehicles, Volkswagen looks at the whole life cycle of the vehicle. Using Life Cycle Assessments (LCA), we calculate which life cycle processes generate the biggest environmental impacts. The LCA results also highlight improvement potential which can be targeted in future development work.

Focus on lifelong environmental impacts

Using LCAs, Volkswagen analyses the life cycle of new vehicles, components and materials from the first design sketches, through the manufacturing and use phases to final disposal. After all, a vehicle begins to generate environmental impacts long before it takes to the road. At every stage in the life cycle of the vehicle, resources and energy are consumed, and emissions are released. The Life Cycle Assessment shows that there are marked quantitative variations in environmental impacts between the different phases in the life cycle. For example, whereas CO₂ emissions are relatively high during the use phase, they are virtually negligible in the recycling phase. For water on the other hand, the picture is quite different, with relatively low consumption and low environmental impacts in the use phase and very high impacts further upstream. From these findings, Volkswagen can then determine which actions, targeted in which areas, will be most effective in delivering environmentally compatible mobility.

The four steps of a Life Cycle Assessment

The first stage in the Life Cycle Assessment is the Life Cycle Inventory, in which data is collected on every single component and process in the life cycle. Volkswagen extracts this information from sources such as vehicle parts lists, the Volkswagen Material Information System (MISS) and the processing-related GABI database. The next step is to calculate how much raw materials and energy each of these components and processes consumes over the course of the life cycle. The use phase too, based on an assumed useful life of 150,000 kilometres, is analysed in detail. Fuel consumption and CO₂ emissions are computed using the statutory New European Driving Cycle. In addition, we also calculate the amount of energy consumed in end-of-life dismantling and recycling of vehicle components. Together, these calculations enable us to compute all airborne and water-borne emissions, all emissions released into the soil and all waste and wastewater generated during the life cycle of the vehicle.

The second stage in the Life Cycle Assessment is the Life Cycle Impact Assessment, which calculates the potential environmental impacts of the vehicle. The various material flows from the manufacturing, use and recycling phases are classified into five environmental impact categories: global



The new Golf is up to 100 kg lighter than its predecessor, despite increased comfort and safety.

warming potential, photochemical ozone creation potential, acidification potential, ozone depletion potential and eutrophication potential. This process involves defining an indicator substance for each environmental impact category. Carbon dioxide (CO₂), for example, is the indicator substance for the impact category "global warming potential". All other substances that also contribute to global warming are then expressed in terms of this category indicator – as "CO₂ equivalents".

In the third stage, a materials composition analysis shows the constituent materials of which a given vehicle is composed. From this analysis, it can be seen how much primary energy is consumed over the complete life of the vehicle, and also how much CO₂, carbon monoxide, sulphur dioxide, nitrogen oxides, hydrocarbons and methane the vehicle emits.

The final stage in a comparative Life Cycle Assessment is certification. The requirements for this process are defined in ISO 14040. Volkswagen arranges for external auditors, such as the TÜV NORD technical inspectorate, to verify its compliance with this standard. Following validation, Volkswagen provides a transparent presentation of the LCA

results in an Environmental Commendation. A recent example, published during the reporting period, is the Environmental Commendation for the new Golf. 95, 96

EFFICIENT VEHICLES

In order to become the most sustainable automobile manufacturer in the world by 2018, Volkswagen has defined the following product-related goals:

- > To offer the most efficient and environmentally compatible model in every segment and vehicle class in which Volkswagen is represented
- > To reduce CO₂ emissions from its European new-car fleet by 30 percent between 2006 and 2015
- > To ensure that every new vehicle generation is on average 10 to 15 percent more efficient than its predecessor
- > To offer efficiency technologies such as start-stop and recuperation systems as standard equipment on all new models
- > To ensure that newly launched models always offer better life cycle environmental performance than their predecessors.

Eco-compatible products

In 2012, Volkswagen launched a raft of new models which set new standards in efficiency. One highlight was the launch of the Volkswagen brand's new Golf. Despite the improved comfort and safety of this model, its DIN unladen weight has been reduced by up to 80 kilograms. This increases to as much as 100 kilograms if frequently specified optional equipment – for example: four doors, or air conditioning – is taken into account. Fuel-saving technologies such as automatic start-stop and braking energy recuperation systems are fitted as standard equipment, i.e. at no additional cost. **87,97**

The technologies now incorporated in the Golf have achieved the following results:

- > The CO₂ emissions of the entry-level petrol model have been reduced by 36 g CO₂/km (23 percent) compared with the previous model.
- > The most popular petrol model, with 63 kW 1.2-litre TSI engine, is around 12 percent more efficient than its predecessor. Its CO₂ emissions have been reduced from 129 to 113 g/km. This also brings an improved efficiency rating, from "C" to "B".
- > The most popular diesel model, with 77 kW 1.6-litre TDI engine, is a full 17 percent more efficient than its predecessor. Its CO₂ emissions have been reduced from 119 to 99 g CO₂/km and as a result its efficiency rating has improved from "B" to "A".

> The newly developed ACT Active Cylinder Management system reduces fuel consumption by 0.5 l/100 km, and CO₂ emissions by 9 g CO₂/km (calculations based on the 103 kW TSI engine). Across the engine range as a whole, the new Volkswagen Golf achieves an average 14 percent improvement in CO₂ emissions. Due to its popularity and large market share, the Golf has the leverage to make a significant contribution in terms of reducing transport-related CO₂ emissions. Based on the current sales figures, the new Golf has the potential to reduce CO₂ emissions by 119,000 tonnes annually, in the European market alone. **98**

Efficient vehicles launched during the reporting year also included the eco up! With emissions of 79 g CO₂/km, the eco up! has the lowest CO₂ emissions of any internal combustion-engined vehicle in the world. From 2013 onwards, further efficient models are due to be launched. As well as the third-generation Golf TDI BlueMotion, with fuel consumption of 3.2 l/100 km, and CO₂ emissions of 85 g CO₂/km, the first CNG version of the Golf TGI BlueMotion, a production version of the e-Golf electric model and the first Golf TSI twinDRIVE are also planned. **99**

At the Geneva Motor Show, the debut of the new A3 from the Audi brand marked a milestone in sustainable mobility. Thanks partly to the use of warm-formed steel, this car weighs just 1,175 kilograms – up to 80 kilograms less than



At the 2012 IAA Commercial Vehicle Show, MAN showed how rigorous aerodynamic design can lead to big fuel savings.



*In 2012, two eco up! models were supplied to the first customer, the municipal utility company in Neumünster, Germany. **104***



The Green E Line version of the new ŠKODA Octavia Generation will be the most fuel-efficient Octavia ever – with fuel consumption of just 3.4 l/100 km and maximum CO₂ emissions of 89 g/km. ↗ 106

the previous model. The Audi A3 also incorporates a range of efficiency technologies including direct injection, turbocharging, thermal management and the start-stop function. As a result, the average fuel consumption of the new A3 has been reduced by 12 percent compared with its predecessor. Audi will expand the engine line-up for this model step by step. In the pipeline are high-efficiency, low-emission versions including a 1.4-litre TFSI engine with automatic cylinder deactivation, a CNG version and a 1.6-litre TDI engine that achieves fuel consumption of just 3.8 l/100 kilometres, and emits just 99 g CO₂/km. ↗ 100

The SEAT Leon, too, has shed weight. The new model is up to 100 kilograms lighter than its predecessor. The most efficient engine version, featuring start-stop system and recuperation, has CO₂ emissions of just 99 g CO₂/km. Elsewhere in the Group, the ŠKODA brand's ŠKODA Rapid made its debut in 2012. The 1.6 l TDI GreenTec version has average fuel consumption of just 4.0 litres and emissions of 106 g CO₂/km. Also in 2012, the Volkswagen brand's new Gol 6 and Voyage 6 models for the South American market, with the Tecnologia para Economia (TEC) energy-saving package, were presented.

Many further recent examples show just how serious Volkswagen is about its mission to become the most sustainable automaker in the world by 2018. The Group brand Lamborghini for example is working to reduce its new models' emissions by 35 percent. And Volkswagen Commercial Vehicles presented its Caddy blue-e-motion electric research vehicle. The eT! concept model too – an electrically powered van with many intelligent extras – was widely acclaimed in 2012, winning an Ökoglobe award. At the 2012 IAA International Commercial Vehicle Show, MAN's Concept S truck demonstrated the potential for significant reductions in the fuel consumption – and CO₂ emissions – of trucks. Thanks to its revolutionary aerodynamic design, the concept model's drag coefficient is on a par with that of a car. Scania meanwhile presented its first Euro 6 engines back in 2011. The Scania R 480 Euro 6 was rated the most eco-compatible heavy-duty semitrailer tractor on the market in 2012 and was voted “Green Truck 2012” by trade magazines. ↗ 101

Volkswagen Leasing GmbH and the German Nature and Biodiversity Conservation Union (NABU) continued their “Green Fleet Award” scheme in 2012, for key account and



NEW, EFFICIENT GOL 6 AND VOYAGE 6 MODELS
FOR THE SOUTH AMERICAN MARKET



NEW GREEN FLEET RECORD: 680,000 LITRES
OF FUEL SAVED

fleet customers, achieving even better results than in the previous year. 94 participating organisations saved around 1,785 tonnes of CO₂ and around 680,000 litres of fuel, with around 12,000 vehicles. In all, this environmental initiative covers 216,000 vehicles. But as vehicles in commercial fleets are on average roughly two thirds younger and cover three times the mileage of privately owned vehicles on average, the fleet vehicles exert almost ten times as much leverage in terms of climate-compatible mobility.

Zero emissions, 100% emotion: electric mobility

In 2013, the Volkswagen Group will launch its first production electric vehicles (EV). ŠKODA will launch the Octavia Green E Line. Also starting in 2013, the Volkswagen brand, which is aiming to play the leading role in electric mobility by 2018, will be launching the all-electric e-Up! and e-Golf, along with a limited-production XL1 plug-in diesel hybrid. **102, 103**

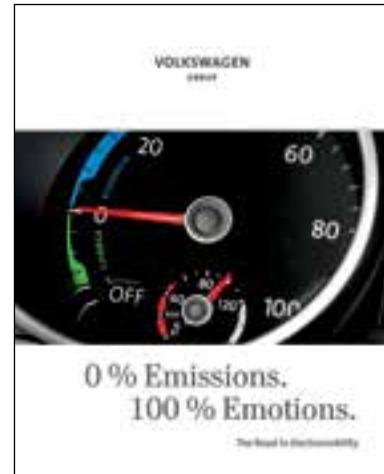
In the first six months of 2012, the e-Golf took part in extensive road testing. The total mileage recorded was equivalent to driving more than ten times round the world. For 180 days, a number of vehicles were field-tested by private and commercial drivers, under real-world driving conditions. NABU too is testing the e-Golf, which is emission-free at the point of use. Further urban fleet testing also took place in France, Austria, Belgium, Japan and the USA. **105**

At other Group brands too, electric models are currently undergoing everyday field testing. For example Audi is trialling the A1 e-tron and ŠKODA is testing the Octavia Green E Line. The latter has a range of 150 kilometres, sufficient to meet the needs of most European commuters.

Ahead of the actual market launch of its electric vehicles, in the reporting year the Volkswagen brand took further measures to get the service network up to speed. It provided special training for service staff and outfitted workshops with all the necessary tools and equipment, such as the new VAS 6558A high-voltage diagnostic and measuring system, launched in 2012. This means Volkswagen dealerships are already in a position to perform all relevant maintenance and repair work on Volkswagen electric vehicles. At many dealerships, selected workshop employees have

The new electric mobility brochure signposts the way to a new age of mobility.

103



been trained as "electrically skilled personnel". Work on high-voltage vehicle systems is performed by certified high-voltage technicians. Worldwide, some 43,000 electrically skilled personnel are already employed at Volkswagen dealerships. A further 1,700 high-voltage technicians are based at 890 special high-voltage centres, while another 110 high-voltage specialists are employed in the importers' organisations.

At the plants too, Volkswagen is now all set for the start of production of electric vehicles. Employees working on standard vehicle assembly processes, involving exclusively non-technical activities, have undergone general EV product training. Other employees meanwhile have undergone training to work on specialised vehicle finishing technologies and are now competent and qualified to perform defined electrical engineering tasks.

However, all-electric powertrains are only one side of the coin. The concept of electric mobility also includes hybrid technology, in which an electric motor is combined with another propulsion system, such as an internal combustion engine. For example, the Detroit Auto Show 2012 saw the debut of the new Jetta Hybrid, which is powered by a combination of a 1.4-litre TSI engine and an electric motor. Following the Touareg Hybrid, the new Jetta Hybrid is the second Volkswagen model with hybrid petrol-electric drive. Pre-ordering for German customers began in December 2012. **107**



In 2012, the new SEAT Leon made its debut. All models in the new LEON range are powered by state-of-the-art TDI and TSI engines, and all rank among the best-in-class on fuel consumption and emissions. The highlight is the Leon 1.6 TDI, with start/stop system, which returns combined fuel consumption of 3.8 l/100 km, with CO₂ emissions of 99 g/km.  115

Major progress is still required to bring the electric car out of its niche and into the mass market – progress in terms of the battery and of the charging infrastructure. And ultimately, each electric car is only as climate-friendly as the electricity that drives it.

Plug-in hybrids are emerging as a particularly promising powertrain solution. This type of powertrain comprises an internal combustion engine and an electric motor, the battery for which can be charged from a standard electrical power socket. Plug-in hybrids combine quiet, zero-emission operation in town with mid- and long-distance range capability and easy and convenient charging. In 2012, the Volkswagen Group pressed on with preparations for a major product offensive. For example, the Porsche brand can launch plug-in hybrid versions of the Panamera and the 918 Spyder. Plug-in hybrid versions of the Golf and Passat from Volkswagen will follow. Audi too will then enter the plug-in hybrid age with the launch of the Audi A3 and Audi Q7, to be followed shortly afterwards by the Audi A6 and Audi A8. Numerous plug-in hybrid models from other Group brands will follow.

Clear information builds trust

Volkswagen believes it has a duty to inform its customers as fully as possible about the options for achieving sustainable mobility during the use phase of the product. Communication starts with the purchase of the vehicle, where efficiency badging identifies the most environmentally friendly models and provides clear orientation for customers. At the Volkswagen brand for example, vehicles with the BlueMotion label are in each case the most fuel-efficient Volkswagen models in their class. And the BlueMotion Technology label denotes a range of efficiency packages including technologies such as the automatic start-stop function and braking energy recuperation. In future, BlueMotion Technology will be offered as standard on all new-model vehicles in Europe. Bi-fuel natural gas/petrol vehicles offered under the efficiency badge TSI EcoFuel emit around a quarter less CO₂ than similar petrol-only models. And the Blue TDI label denotes vehicles which, thanks to exhaust aftertreatment, present very low nitrogen oxide emissions. At ŠKODA, extra-fuel-efficient models bear the GreenLine and GreenLine Technology badges, while SEAT uses the labels ecomotive and E-Eco-

motive. Audi equips its models with fuel-efficient technologies as standard. **108, 109**

A further important source of information for customers of the Volkswagen brand is the Environmental Commendation. In 2012 the Volkswagen brand once again used this communication medium to report on improvements in life cycle environmental performance achieved by new vehicles and technologies over their predecessors or reference models. Environmental Commendations provide information for customers, shareholders and stakeholders about the improved environmental design of vehicles, components and processes. In all cases, the Environmental Commendation is based on a Life Cycle Assessment, which provides full data on the energy consumption, emissions and all other environmental impacts associated with a vehicle throughout its life cycle. The Life Cycle Assessments are verified and certified by TÜV NORD. They list product inputs in the form of types and quantities of raw materials and energy used during the manufacturing, use and recycling phases, along with outputs in the form of emissions. Summarised environmental data

for all Volkswagen models is also provided in the "Environmental Descriptions" on the Internet.

In 2012, the Environmental Commendation for the new Golf was certified by TÜV NORD, confirming that the new model offers significantly better environmental performance than its predecessor, based on an ISO 14040/14044-compliant Life Cycle Assessment. Specifically, its life cycle CO₂ emissions have been reduced by 11 percent for the petrol models and by 13 percent for the diesel models. A 12 percent improvement in raw materials efficiency results in substantially reduced resource consumption.

As a communication measure to raise customer awareness of sustainable driving techniques, the Volkswagen Group also provides information on ways of reducing fuel consumption, along with fuel-saver courses. In the case of the Volkswagen brand, the courses have been offered for many years under the label "Volkswagen Driving Experience". More than 140,000 drivers have already taken part. In 2012, fuel-saver courses were also offered by Volkswagen Commercial Vehicles. 34 free-of-charge events, open to all cus-

EFFICIENCY BADGES IN THE VOLKSWAGEN GROUP



BLUEMOTION



GreenLine



Audi



ESTATE

Volkswagen: 77 models
emit less than 120 g CO₂/km
Most efficient model: eco up!
1.0 MPI CNG, 79 g CO₂/km



ŠKODA: 68 models
emit less than 120 g CO₂/km
Most efficient model: Citigo
1.0 MPI CNG, 79 g CO₂/km



Audi: 52 models
emit less than 120 g CO₂/km
Most efficient model: A1/A3
1.6 TDI, 99 g CO₂/km



SEAT: 48 models
emit less than 120 g CO₂/km
Most efficient model: Mii 1.0
MPI CNG, 79 g CO₂/km



Efficiency badges denote vehicles with the lowest fuel consumption and CO₂ emissions and provide clear orientation for customers. The Group offers 36 models that emit less than 100 g CO₂/km, and 245 models that emit less than 120 g/km.

tomers and prospective customers, were organised for the Volkswagen Crafter. SEAT too provides fuel-saver tips for its customers, on a special website.  110

In addition to these communication measures, Volkswagen vehicles also feature a wide range of intelligent technologies designed to support a fuel-saving driving style. On the new Golf, these include a tyre pressure monitoring system, a visual gear change recommendation, an expanded start-stop display and the optional ECO driving mode, which programs the engine management, air-conditioning and other auxiliary units for optimal fuel efficiency.  111

Creating incentives

Positive news about fuel-efficient driving can also motivate other drivers to adopt an eco-compatible driving style. Volkswagen therefore reports regularly on its latest successes in fuel-saving competitions and efficiency tests. For example, in 2012, the ŠKODA Citigo triumphed in the 31st ŠKODA Economy Run, recording average fuel consumption of just 2.97 l/100 km (and emissions of just 70.6 g CO₂/km), on the 288.4-kilometre course. On behalf of the Volkswagen brand, the Polo BlueMotion too delivered a stunning performance in a fuel-saver challenge: in a competition, participants were invited to guess how far the Polo BlueMotion could travel on just one tankful of fuel. Most people did not expect the vehicle to go anything like as far as the actual recorded distance of 1,564 kilometres, which works out at an average consumption of just 2.9 litres/100 km.

Today, extensive use is also made of online media in product communication regarding sustainability. All Group brands have set up attractive and in some cases interactive Internet platforms for this purpose. The new, interactive version of the environmental magazine “dialoge” (“dialogues”) from Audi, launched in 2012, is just one example.  112

Customer dialogue at Volkswagen also includes the online social networks and mobile devices. Volkswagen is an active player in these areas, not least with fuel-saver eGames.  113

For 2012, Volkswagen is once again not aware of any cases in which its dialogue with customers and other stakehold-

ers, on any of the various platforms, failed to comply with legal requirements. All forms of product communication also conformed to ethical guidelines. Responsibility for meeting such requirements and guidelines lies with the individual brands. All publications of the Volkswagen Group are checked by the Communications department’s clearing centre to ensure full compliance with ethical and legal guidelines. In 2012, no cases of non-compliance with these rules were identified. Nor were any cases reported of Volkswagen products being sold in markets where their sale was prohibited. As a result, during the period under review Volkswagen incurred no fines due to infringement of legal requirements regarding the supply and use of products and services. Needless to say, Volkswagen’s products are always in the spotlight of debate and critical analysis by stakeholders and the public (> pp. 22, 157).

ŠKODA GreenFuture

GreenFuture is based on three pillars: GreenProduct, GreenFactory and GreenRetail. The aim of this programme is to further improve sustainability at ŠKODA, focusing on efficient vehicles and more efficient resource use throughout the company. By 2018, ŠKODA is aiming to reduce its energy and water consumption by 25 percent, to reduce emissions and to further increase its recycling performance. With these measures, the Czech manufacturer will also contribute to achieving the environmental goals of the Volkswagen Group as a whole for 2018. The “GreenFuture” principles are part of the 2018 ŠKODA growth strategy, whose aim is to combine improved economic performance with reduced environmental impacts. All ŠKODA’s environmental activities to further reduce resource consumption are now being integrated into, and coordinated through, the “GreenFuture” project. An expert team has been formed to ensure that these activities are managed even more effectively. The “GreenFuture” team reports directly to the ŠKODA Board of Management.  118

MORE THAN AN UMBRELLA BRAND: THE “THINK BLUE.” MINDSET

Volkswagen Passenger Cars has set itself the ambitious goal of becoming the most sustainable car brand in the world by 2018. All its activities in the field of environmental sustainability have now been integrated into a single philosophy: “Think Blue.” “Think Blue.” was launched three years ago, in a bid to make the brand’s environmental strategy internationally visible, transparent and above all accessible.  114

“Think Blue.” aims to inspire new thinking and new approaches, both within the Company and in Volkswagen’s external communications. “Think Blue.” is a holistic philosophy with three main themes: to develop and supply efficient products and technologies, to engage in an active dialogue to help people become more environmentally aware, and to support environmental projects and initiatives worldwide. Within the Company, “Think Blue.” has steadily developed and taken root in business units throughout the value chain. It all starts with the application of ever more ambitious standards of sustainability in the planning and design of the vehicles. Here the Technical Development department has drawn up ambitious environmental goals, designed to ensure that significant environmental aspects in the areas of climate protection, resource conservation and health protection are taken into account at every stage in the life cycle, and are integrated in the development of all Volkswagen Passenger Car models. The Volkswagen Passenger Cars brand refers to this strategy as “Think Blue. Engineering.”  81

On the production side too, clear objectives have been formulated through the international “Think Blue.” Factory. initiative. This programme’s exemplary integration of environmental and economic goals earned Volkswagen Passenger Cars the “Sustainability Award 2012”, presented by the German business magazine *Wirtschafts-Woche* and the Altran Foundation for Innovation.  116

To involve as many people as possible, “Think Blue.” has a clear and simple message: environmental protection is fun and doesn’t require sacrifices. Also, everybody can contribute in some way, as they go about their everyday lives. For Volkswagen, as an automaker, fuel consumption plays a key part in this thinking, particularly since an eco-friendly driving style can reduce fuel consumption by up to 25 percent. The international fuel-saving championship “Think Blue. World Championship 2012.” is intended to raise awareness of fuel-saving driving

techniques and to demonstrate the important influence of driver behaviour on fuel consumption. With this event Volkswagen Passenger Cars also shows that it is easy to get better mileage than the manufacturer’s official figures – even when, as in this event, challenges have deliberately been put in the drivers’ way. The 2012 championship was contested by the winning teams from 18 national qualifying competitions. The logistics, catering and accommodation arrangements for the “Think Blue. World Championship 2012.” were meticulously planned to minimise environmental impacts. As a final step, to make the event fully carbon-neutral, all emissions which could not be avoided were compensated through a Gold Standard-certified carbon offsetting project in Ceará, Brazil.

By the end of 2012, “Think Blue.” had been rolled out in more than 30 markets, and more will follow. Many projects have already been implemented, often in partnership with environmental organisations. In each market, the idea is that activities should focus on the most urgent sustainability challenges in that particular country. Further encouragement, and confirmation that Volkswagen’s “Think Blue.” strategy is on the right track, came recently from the well-known independent branding consultancy “Interbrand”. In the Interbrand report “Best Global Green Brands 2012”, Volkswagen improved its ranking to fourth and emerged as the greenest German brand.  117

The “Think Blue.” philosophy is also to be rolled out to Volkswagen dealerships. A range of modules are available for Volkswagen dealers looking to improve their eco-friendliness. For example, the Volkswagen Dealer Buildings Consultancy can provide eco-friendly design tips for dealer premises. The consultants provide free-of-charge basic advice up front to identify improvement potential and, if such potential is found, can also offer more detailed energy-saving advice, which includes suggestions for improvements or structural alterations to premises, tips on possible dealership upgrading and remodelling options, complete with cost estimates, and suggestions on energy awareness training for personnel. Other ideas dealers can adopt, and offer to their customers, include “Clever Repair” solutions for the workshop, whereby parts are repaired rather than replaced, products such as efficient engine oils and low-rolling-resistance tyres, and services such as the BlueMotion safety check. In Germany, in collaboration with the German Nature Conservation and Biodiversity Union (NABU), dealers can also offer fuel-saver courses.

EFFICIENT PRODUCTION

Although the biggest share of the vehicle's total life cycle impact is generated during the use phase or "service life", the production phase too offers enormous potential for improving environmental sustainability.

A closer look at energy consumption makes this clear. In 2012, an average of 2.21 MWh of energy was consumed for every Volkswagen Group vehicle produced – a reduction of 0.32 MWh compared with 2010. At first glance such improvements may seem small, but when multiplied by the total number of vehicles produced, they actually represent an important lever for improving sustainable production.

Volkswagen's goal of reducing the environmental impact of its production operations by 25 percent by 2018 is being systematically followed up at all currently participating sites. For example, at many Volkswagen brand plants, workshops have already been held to produce detailed roadmaps for the necessary ecological measures, complete with a timeline for their phased implementation through 2018. **119, 121**

Broadly speaking, the individual Group brands are each responsible for improving the efficiency of their own production processes. Brand-level initiatives have been developed to identify improvement potential, develop strategies and solutions and implement action plans. These include the Green Future initiative at ŠKODA, Ecomotive at SEAT and "Think Blue." Factory at the Volkswagen brand (> p. 130). At Volkswagen Group level, an important landmark in the quest for improved production efficiency was the launch of the modular transverse matrix (MQB) for the Volkswagen, Audi, ŠKODA and SEAT brands. **13**

To achieve further improvements in production efficiency, detailed analyses are carried out to systematically identify potential. At the Volkswagen brand, one example is the analysis of "LCA hotspots in the vehicle production phase". This analysis identifies the most environmentally significant components and processes in the manufacture of the Polo, Golf and Passat. It has shown that in absolute terms, the upstream supply chains for sheet steel and blanks have the biggest impact on CO₂ emissions at the production stage. It also established that offcut waste

(38 percent of raw material input) offers significant improvement potential, and that platinum-group metals (PGM) in catalytic converters, along with electronic components and magnesium, make significant contributions relative to their weight. By carrying out analyses of this type, the Volkswagen Group brands can identify the most effective ways to make their production processes more efficient, thereby reducing energy consumption, emissions and consumption of valuable resources such as water and raw materials. **122**

Saving energy and using renewables

The following real-life examples from the reporting period illustrate some of the steps being taken by Volkswagen Group factories to make their production processes more energy-efficient. For the Volkswagen brand, since 2012 the Chattanooga plant in the USA has been using variably controllable compressed air generating equipment in the manufacture of its vehicles. That is to say, the amount of compressed air generated is always matched to the amount required, at any given time. Baseload and intermediate demand is met by turbo-compressors. At peak load periods, variable-speed-drive screw compressors also come on stream. The two variable speed drive compressors are rated for an operating pressure of six bar and can be controlled in tandem and on demand. The overall result of these measures is a 15 percent reduction in energy consumption. **85**

In a further example, at the Volkswagen plant in Kaluga, Russia, hot exhaust gases from a natural-gas-fired boiler house at the plant are passed through a heat exchanger to recover heat. This is then used in the hot water system, substantially reducing energy consumption. In addition, the water temperature is now controllable over a wider range (110/60 °C instead of 110/90 °C). The overall result is an improvement of up to 5 percent in energy efficiency. If such a system were implemented at other sites as well, it can be assumed that the annual savings for a boiler house of 20 MW capacity would be in the order of 1,000 MWh of energy, and 485 tonnes of CO₂. **85**

With its environmental principles and goals for the production plants, the Volkswagen Group ensures efficient

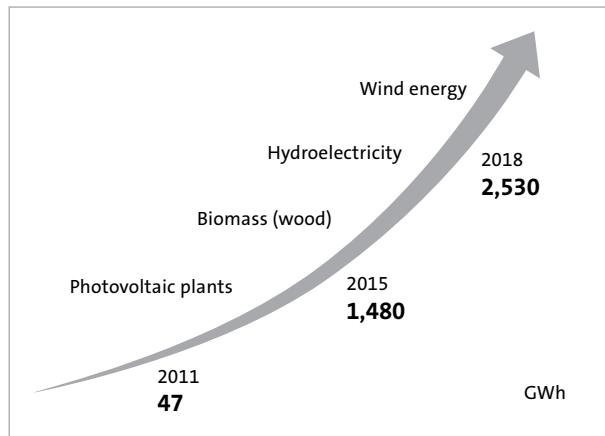
energy use at all Group sites. One current example is the start-up of an energy-efficient PXL servo press line at the Mladá Boleslav plant in the Czech Republic. An important innovation here is the use of decentralized servo motors. In place of one large motor driving the entire line as before, 14 significantly more efficient servo motors are now used. This design also allows extremely flexible adaptation of individual processes on the PXL line. **85**

In order to reduce purchasing of primary energy from external suppliers, many Volkswagen sites are also looking to produce their own renewable energy. One example is the solar panel system on the roof of the Audi A3 body shop in Ingolstadt, which is capable of generating around 460 MWh of electricity a year. Similar installations also came on stream at other plants during the reporting period, including the Braunschweig (420 MWh/a) and Hanover (420 MWh/a) plants. Early in 2013, a further solar facility comprising over 33,000 modules will be installed at the Volkswagen brand's Chattanooga plant. And a new solar system installed by Group brand Lamborghini at its Sant' Agata Bolognese plant brought a marked reduction in CO₂ emissions in the reporting period. With 17,000 square metres of solar panels, this facility is the largest solar panel installation in the region. Further measures are now under consideration with a view to further reducing this plant's CO₂ emissions by as much as 50 percent. In Switzerland meanwhile, Volkswagen has leased a low-head (run-of-river) power plant on the River Aare, with an installed capacity of 28.5 MW. Since late August 2011, this facility has been supplying power to the six Volkswagen plants in Germany. **85**

In mid-2012, an eco-friendly combined-cycle gas-and-steam power plant was installed at the Volkswagen plant in Kassel. This facility supplements the existing CHP plant. Combined generation of heat and power achieves high average annual efficiency of up to 75 percent. A similar system is also planned for the Wolfsburg plant. **85**

In 2012, a new energy efficiency project was launched at the Volkswagen brand's Emden plant. A new body shop at this plant uses approximately 3,500 of the building's 5,000 foundation piles as energy piles. These piles, which are driven 20 metres into the ground, extract geothermal

GENERATING ENERGY FROM RENEWABLES

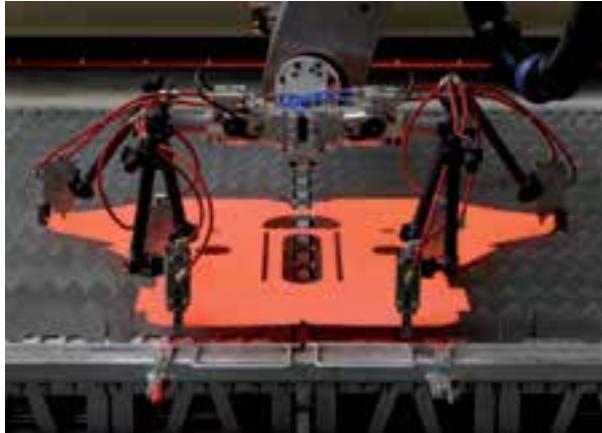


Continuous expansion: by 2018, Volkswagen is looking to generate more than 2.5 GWh of energy from renewable sources. **120**

cooling energy, which is used to provide cooling in the welding shops. This solution dispenses with the need to evaporate water in conventional cooling towers, thereby reducing freshwater consumption by 25,000 cubic metres annually. In summer, the near-surface geothermal energy is also used to provide cooling in the production shop. In winter, as required, the production shop can be heated with the aid of a heat exchanger, which extracts stored heat. **123**

Sometimes, it is first necessary to actually increase energy consumption before the savings are achieved. Warm forming of sheet steel is a good example. The warm forming process simultaneously forms and tempers the steel by cooling it from 950°C to around 175°C in a matter of seconds. The yield strength of warm-formed steel is up to six times that of conventional deep-drawn steel, making it possible to produce thinner and lighter components. Although the energy consumed during warm forming is initially higher, the total life cycle energy consumption of the vehicle is reduced significantly, due to its lower weight. The new Golf provides a good illustration. Weight savings of up to 100 kg mean that fuel consumption is reduced by as much as 23 percent, with a corresponding reduction in CO₂ emissions. Warm forming is therefore an important





The warm forming process produces high-density steel with high strength and high crash safety. These qualities pave the way for efficient lightweight design and thus reduced fuel consumption.



At the Audi plant in Ingolstadt, electrically-powered mini-trucks are used to collect paper and non-recyclable waste.

key to meeting the goal of reducing fleet-average emissions below 120 g/CO₂ km.

Less waste in the production sector

Despite increased production throughout the Group, and the introduction of new vehicle models, Volkswagen reduced its total waste quantities per vehicle produced (passenger cars and light commercial vehicles) during the period under review. In 2012, 188.72 kg of metallic waste was produced per vehicle (2011: 210.59), along with 10.62 kg of hazardous waste for recycling (2011: 11.27), 10.37 kg of hazardous waste for disposal (2011: 9.86), 10.62 kg of non-hazardous waste for disposal (2011: 11.74) and 34.46 kg of non-hazardous waste for recycling (2011: 34.14). The overall reduction was mainly down to the use of more resource-efficient production processes.

Production emissions reduced

Despite increased energy consumption due to increased production and the inclusion of new plants in the reporting data, direct CO₂ emissions (scope 1) have fallen, from 555.02 kg per vehicle in 2010 to 425.13 kg per vehicle in 2012. Other pollutant emissions have also been reduced significantly. Direct NOx emissions were reduced by 51.07 kg per vehicle compared with 2011, to 271.01 g, and SO₂ emissions were reduced by 48.46 g to 28.42 g. VOC emissions were reduced from 4,045 g per vehicle to 3,521 g.

The Porsche brand's Zuffenhausen plant illustrates one of many ways in which emissions can be reduced. At a new paintshop at this plant, a waste air treatment system has gone into operation which can filter out solvents using physical/mechanical processes. Wet-mechanical treatment reduces solvent concentrations in the waste air to less than 50 mg C/m³. No fossil fuels are used in the operation of this system.

Many further examples of real improvements in efficient production were presented during practice-sharing at the Group Environmental Conference in mid-2012, where they were discussed by more than 400 experts from all brands and regions. Outstanding examples and suggestions were compiled in "commitment papers", the aim of which is to further improve sharing of best-practice project data between the Group's brands. In addition, representatives of the five high-volume brands Audi, SEAT, ŠKODA, Volkswagen and Volkswagen Commercial Vehicles took part in a questionnaire-based survey on the subject of efficient production. Objectives, process landscapes and structures were mapped and documented, and outstanding initiatives in each market were identified. Finally, ideas for the optimisation or modification of higher-order processes and structures were developed, for use in a Group Environmental Strategy.

SUSTAINABLE MOBILITY

Sustainable mobility is not just about building fuel-efficient cars. It is also about integrating efficient vehicles and attractive services into a complex and heterogeneous network of structures and requirements such as changes in vehicle utilisation patterns, social and demographic trends, infrastructural and ecological challenges, and developments in the field of energy and technology. A global company like Volkswagen must take all these aspects into account as it develops a vision of sustainable mobility.

Vision

In a future world of sustainable mobility, the car will remain a key means of transport. However, it will also become increasingly integrated with other modes of transport such as buses, rail or two-wheeled transport. The mode of transport chosen will depend on the purpose of the individual journey. Road transport itself will be largely emission-free, and electric road vehicles will be integrated

with the power grid. In some cases, future vehicles will operate fully automatically, making optimal use of the finite infrastructure – both when driving and when parking. Accidents will be virtually eliminated, and assistance systems will support or even take over driving tasks. Close cooperation between vehicles and traffic lights will reduce time spent waiting at lights. This in turn will reduce environmental impacts and journey times. Vehicles will communicate and cooperate with other vehicles and with infrastructure, thereby improving traffic flow. **139, 141**

Hiring not owning: the car-sharing trend

The car-sharing project Quicar, launched in Hanover in 2011, saw further growth in 2012. The number of rental stations has now increased to 93, and well over 8,000 users have already registered for this scheme, showing that the Quicar concept is a good match for the needs of customers. The average duration of a rental is 2.75 hours. Quicar is also in step with the continuing trend towards urbanisation. As vehicle utilisation patterns change,



*Flexible and convenient: with more than 8,000 users in Hanover and the surrounding region, the Quicar car-sharing project is already a hit. **140***

within an increasingly dense urban environment, users are showing a growing interest in inter- or multimodal solutions. Quicar slots perfectly into these changing usage patterns. This logically structured concept was one of the reasons Quicar came out “best in test”, with an overall score of 1.8, when German consumer institute Stiftung Warentest compared nine car-sharing providers from Germany and the Netherlands. “Booking”, “driving” and “online experience” were among the categories where Quicar impressed the testers.  139

In addition, Quicar also impressed customers with its fair pricing, which is also geared to target groups with less available income. During the reporting period, further steps were taken to integrate Quicar into regional communities and infrastructures. Quicar entered into new cooperation arrangements, for example with the Edeka supermarket chain and with Studentenwerk, a students' welfare organisation in Hanover, or with LifeThek, an online lend-

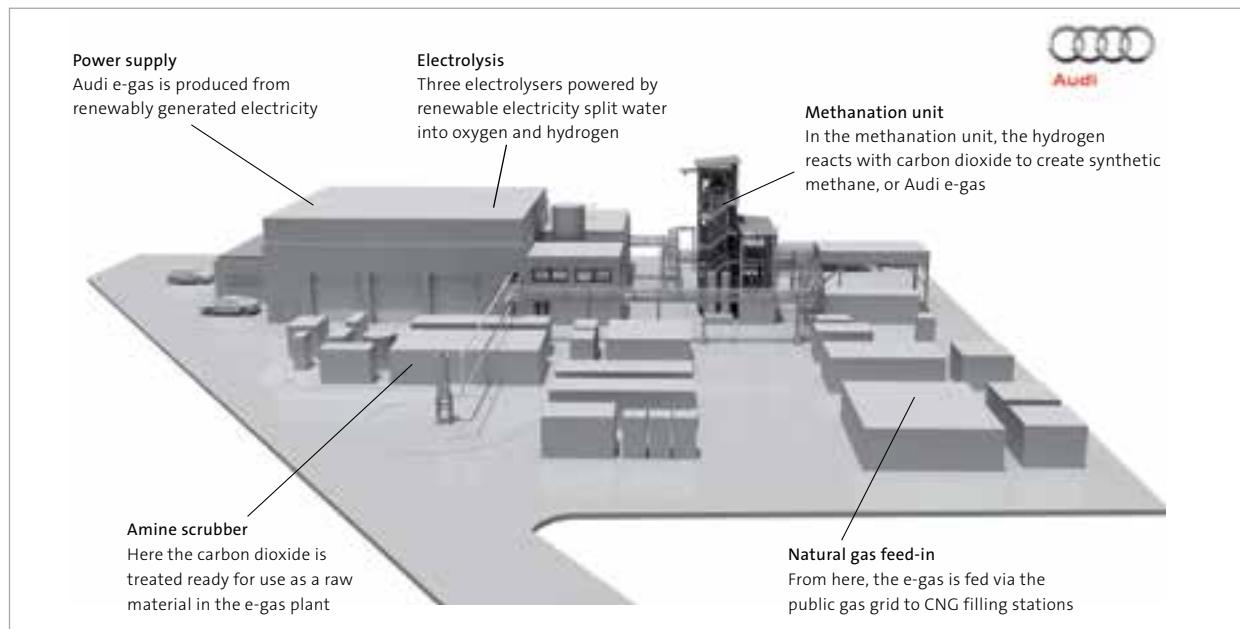
ing service for everyday articles. In cooperation with these partners, Quicar developed customised packages and opened new rental stations. An agreement was also signed with the Greater Hanover Transport Association (GVH), giving around 100,000 GVH season-ticket holders reduced-rate access to Quicar.  140

Another solution catering to the needs of an increasingly urban society is the MicroCity concept, developed by Volkswagen Group Research.  142

Challenges of the shift to renewables

The shift in energy production towards renewable sources presents huge opportunities, and also many challenges, including expansion of the power grid, integration of energy sources with highly intermittent output, such as wind and solar power, the development of smart grid and grid storage solutions for improved load management and the quest for

AUDI E-GAS PLANT



Alternative fuels have an important role to play in reducing carbon emissions. In Werlte in North Germany, the world's first industrial facility for generating synthetic methane (e-gas) from CO₂ and renewable electricity is under construction.

sustainable biofuels. Solutions being explored under Audi's "future energies" initiative include ways of integrating mobility into the energy landscape of the future and ways of developing practical and drivable carbon-neutral vehicles for short- and long-range transportation.  143

One objective is to use wind-power-generated electricity either to power electric vehicles directly or to power production of hydrogen at the "e-gas" plant in Werlte. The plant will also be capable of combining the hydrogen with CO₂ to produce synthetic natural gas, which could be fed into the existing natural gas network. The hydrogen could be used in future to power fuel-cell vehicles while the natural gas could be used, from as soon as the end of 2013, to power Audi TCNG natural gas models. The e-gas facility currently being built in Werlte will be the world's first power-to-gas plant. Due to come on stream in the third quarter of 2013, it will feed gas to the natural gas grid as a backup for intermittent renewable energy. In addition to the e-gas project, Audi is also working on other "e-fuels" based on CO₂ and renewable energy with the aim of providing future Audi customers with carbon-neutral mobility. Examples include e-thanol and e-diesel, which are being developed in cooperation with innovative project partners in the USA. No biomass is required to produce these fuels, nor do they divert arable land from food production.  143, 144

The "Electric Mobility Fleet Test", launched in 2008, is looking at the implications of large-scale use of renewable energy to power electric vehicles. Volkswagen is using 20 current-generation Golf Estate twinDRIVE models as research vehicles in this test. In urban driving, their plug-in hybrid drive system operates mainly in zero-emission electric mode. The Golf twinDRIVE research project is focusing particularly on integration of the electric vehicle into the power grid. Meanwhile, in Berlin, the Volkswagen Group is taking part in the Effizienzhaus Plus project, which is aiming to demonstrate how sustainable living can dovetail with carbon-neutral driving. The Volkswagen Group is contributing an Audi A1 e-tron and two Volkswagen e-Golf models to this project.  146

Mobility research: revealing future options

Volkswagen has for many years been carrying out mobility research aimed at obtaining a holistic understanding

of automotive mobility within the wider context of alternative modes of transport, human settlement patterns, transport infrastructures, public policy and urban development. On this basis it aims to derive strategic conclusions for future automotive development.  147

In 2012 once again, a wide range of dialogues, discussions and workshops took place. Often the focus was on broad-based mobility strategies under the headings of Reduce, Transfer or Improve and the potential contributions of such strategies to future sustainable mobility. Volkswagen thinks it is important to gain as sound and accurate a picture as possible of the respective potential of these strategies, and how it can best be exploited. Volkswagen has long believed that the urban – and rural – mobility of the future will require an intelligent mix of different transport modes. What mix ultimately emerges will depend not least on the innovation capability – among other things in terms of intermodal potential – of the different modes of transport. Accurately predicting the potential for modal shifts is a challenging task. Equally difficult to assess is the potential contribution of mobility services to improved transport, the potential for operating such services cost-effectively and the potential for improved access. Human behaviour modelling is an extremely complex task when it comes to modal choice. In this field, Volkswagen is therefore working with a range of well-known organisations, including scientific bodies such as ETH Zurich or the Karlsruhe Institute of Technology (KIT), the Fraunhofer Gesellschaft, as initiator of the Morgenstadt (city of tomorrow) initiative, the international think tank EM-BARQ at the World Resources Institute Center for Sustainable Transport and the World Business Council for Sustainable Development (WBCSD).  148, 149

In a variety of projects, Volkswagen has taken further steps towards the goal of sustainable mobility. One of these projects is the KOLINE project, which aims to reduce the adverse effects of traffic light stops. The associated braking, acceleration and waiting times have a significant impact on urban traffic emissions. In a bid to reduce the amount of time cars spend stopped at lights, the KOLINE project adopts a "cooperative" approach. The Volkswagen KOLINE research vehicle uses car-to-infrastructure (C2X) communication to optimise its approach to the lights. This (tacti-

cal) driving strategy is implemented using a near-production system for active longitudinal vehicle control (i.e. speed management). In addition, (strategic) model-based optimisation of traffic signal control is also performed, throughout the urban road network, using infrastructure- and vehicle-related sensor data. Simulations performed to date show significant potential for reducing the number of stops, fuel consumption and emissions. The project concluded in autumn 2012 with the successful testing and demonstration of the system on public roads.

In a further project, INEES, Volkswagen and other project partners are researching the possibilities for integrating electric vehicles into the electricity market. The project is concerned with intelligent grid integration of electric vehicles and provision of vehicle-to-grid services. Over the coming years, project activities will include a field test to collect data on the smart charging and discharging of EV batteries.

Raising public awareness

An important prerequisite for sustainable mobility is public awareness. Volkswagen supported a number of

projects in this area in 2012, including the Audi Urban Future Initiative. This initiative, which includes an architectural award with the biggest purse in Germany, aims to provide a better understanding of how major world cities – and urban mobility – will develop in future. Learning more about the future face of the city is important in order to assess what forms of personal mobility will still be possible in this context. In order to influence these future developments today, Audi aims to identify significant urban planning trends from around the world and assess their relevance for future mobility. The 2012 award was won by the Boston architecture practice Höweler + Yoon Architecture, for their “New American Dream” concept for the metropolitan region Boston/Washington. The US firm developed an ambitious architectural and urban planning vision centred on the “Shareway”, a revolutionary means of commuting between home and workplace. The basic idea involves merging private and public transport into a new kind of mobility platform, where the existing infrastructure is combined with intelligent traffic flows and networks. The “New American Dream” is based on a new social consensus, where the focus is on community, and where sharing is more important than ownership.  150



How does a traffic jam happen? “Stauspiel”, a tailback game at Autostadt Wolfsburg, presents scientific findings in an entertaining way.



“NEW AMERICAN DREAM” VISION FOR METROPOLITAN REGION BOSTON/WASHINGTON DEVELOPED AS PART OF AUDI URBAN FUTURE INITIATIVE

Another example is the “Stauspiel” exhibit at Autostadt Wolfsburg, an interactive simulation where visitors see how and why congestion can sometimes develop “out of thin air”, bringing traffic to a standstill. “Stauspiel” was developed on the basis of current research data, as a joint project of the Institute for Transport & Economics of Dresden University of Technology and Volkswagen Group Research. The simulation is unique in this form.

Sustainable mobility is not just a vision for the future. Volkswagen is currently working to improve traffic flow in and around its Wolfsburg site. To this end, the Company has joined with the City of Wolfsburg, Wolfsburg AG and Autostadt to form a Transport Task Force and draw up a coordinated traffic concept. Here too the approach is focused not just on the car but on an intelligent mix of transport modes. As well as enhancing traffic flow and parking, the initiative is also aiming to improve public transport, along with the cycle track and footpath networks. Concrete results have already emerged: for example a second exit lane has been added from the A39 motorway, leading to the factory gate. This has significantly reduced tailbacks in the morning rush hour. Also, several thousand new parking spaces have been created all around the factory, while reserved parking continues to be provided close to the factory for car pools (of three or more employees). Traffic light phasing has been improved, while for bus and rail users, more buses have been laid on and timetables have been extended. Within the plant, employees can use internal shuttle services to get to their office or from their office to a meeting elsewhere in the plant. The impact on commuter traffic emissions is shown in the SCOPE 3 inventory (> p. 143).

TRAFFIC NOISE

Cars, buses and trucks, motorcycles, trams and trains all generate noise which impacts on the health and quality of life of urban residents in particular. Safeguarding mobility while at the same time reducing noise is a challenge.

Volkswagen is facing up to this challenge not only by developing ever quieter vehicles but also through intensive activities in the field of traffic noise in general. The aim is to gain a better understanding of the contribution of the car to traffic noise, as a basis for deciding which tasks should in future be the responsibility of the vehicle manufacturers themselves and which tasks require a more broadly focused approach, involving dialogue with other stakeholders.

In cooperation with internationally recognised partners, a “noise level tool” has been developed. Based on a model city, the tool can be used to carry out a quantitative comparison of noise-reduction measures, looking at their effect in terms of both noise levels and numbers of people exposed to noise. The focus is on traffic noise in general, not the individual vehicle. A new feature of this tool is that for the first time it also addresses noise “immissions”, that is to say how much noise actually “reaches” how many of the city’s inhabitants. In the past, a focus exclusively on the emissions side – the sources of noise – resulted in a distorted picture of the effectiveness of noise-reducing measures. Factors which influence noise immissions include traffic volumes, the relative numbers of cars and trucks on the road, speeds, type of road surface, powertrain noise and tyre/road noise.

Volkswagen believes these activities can result in better co-ordination of future noise reduction measures and more effective targeting of funding.

Volkswagen’s work on vehicle noise reduction at the Acoustics Centre in Wolfsburg is focused on improvements to the powertrain – comprising the engine, the transmission, the drive shafts and the air intake and exhaust system – and on tyre/road noise. Noise is a particularly important consideration for Volkswagen when selecting original equipment tyres. The Volkswagen brand therefore only uses products

which comply with the noise limits set by Germany's Blue Angel eco-label system. Audi has its own test procedure for approving original equipment tyres, which goes well beyond the actual statutory requirements.

GREEN LOGISTICS

Volkswagen Logistics took further action to reduce environmental impacts from the transport of products and materials during the period under review. Measures were geared to ensuring that logistics products and processes deliver sustained environmental value.

Volkswagen has identified the following significant environmental aspects for this sector at the present time: energy consumption, emissions, fine particulate pollution, water consumption and waste. To achieve improvements in these areas, the following action areas have been defined:

- > reduction in freight traffic, for example through optimised transport structures, a reduction in the number of empty runs and improved load factors
- > a shift from road transport to other modes of transport
- > reduction in fuel consumption through use of efficient technologies. In 2012, Volkswagen made progress in implementing these strategic objectives, as the following examples show.

"Green Trains" have now gone into service on further routes. On the Wolfsburg to Zwickau line, Volkswagen has become the first German car manufacturer to use DB Schenker Rail's EcoPlus trains for the transport of materials. Eco-Plus trains are powered entirely by renewable energy.

On the car transport side, a further route went over to EcoPlus during 2012: "Green Trains" are now being used to transport new vehicles on the 693-kilometre journey from Audi's Neckarsulm plant in South Germany to the North Sea port of Emden, for onward shipment. The result is a saving of 38 kilograms in CO₂ emissions per vehicle transported, and a saving of 3,420 tonnes in total emissions per annum.

The Group brand Scania significantly reduced CO₂ emissions from internal freight traffic operations at its Södertälje site in Sweden in 2012 with the acquisition of eight trucks powered by bioethanol ED95. Using bioethanol instead of diesel reduces CO₂ emissions by approximately 70 percent.  136

Scania has also set up a wholly owned subsidiary, Scania Transportlaboratorium AB, to assess the characteristics and performance of vehicles used in commercial haulage and to train drivers in fuel-efficient, eco-friendly driving. In the space of one year, drivers in the Transportlaboratorium test fleet reduced their average fuel consumption from 33 to 27 litres/100 km. This represents an annual saving of €30,000 per truck and reduces the total annual CO₂ emissions of the fleet as a whole by 1,300 tonnes. Importantly, it has also been established that eco-friendly driving does not have to be at the expense of speed. In fact, Scania Transport Laboratory drivers improved their on-time delivery rate from 93 to 99 percent.

At the Wolfsburg site, the new Multimodal Logistics Centre Wolfsburg (MLW) was opened in October 2012. This hub centrally controls supplies of vehicle components and parts to overseas Volkswagen plants and the supply of new and used vehicles to Volkswagen dealers in the local region.

With the new Logistics Centre for materials and vehicles, Volkswagen is combining two key logistics functions. From this 200,000 square metre site in the Fallersleben area of Wolfsburg, Volkswagen Logistics will firstly coordinate the shipment of new and used vehicles to dealerships in the Wolfsburg, Hanover, Braunschweig, Celle, Göttingen and Magdeburg regions, and will provide technical services for these dealerships. Secondly, as well as handling the shipment of vehicles, the centre will also supply CKD (Completely Knocked Down) parts and components sets to overseas production plants of the Volkswagen Group.

Together with the inland port planned by GVZ Entwicklungsgesellschaft Wolfsburg, the new Logistics Centre will form a highly efficient hub offering trimodal (road, rail and water) transport capability.

The sustainability of the new Logistics Centre is further underscored by its eco-friendly use of recycled materials in the base layers under outdoor asphalt surfaces, a solar hot water heating system, LED office and outdoor lighting and a soundproofed building to reduce noise from night-time vehicle loading and unloading operations.

GREEN IT

Improved IT infrastructures and equipment offer great potential for further improving resource and energy efficiency.

Particularly in view of the large number of computer workstations in the Company, Green IT offers Volkswagen significant scope for reducing its use of consumables and energy and, by the same token, its CO₂ emissions. Green IT is also a key to more efficient networking in a global corporation.

A major project from the period under review indicates the scale of potential savings: in 2011, Volkswagen launched iDOMP, a global tender process for approximately 35,000 printers. As part of this process, shortlisted printers and suppliers were subjected to a green IT evaluation covering the entire life cycle of the product – from the materials and type of packaging used to reductions in energy consumption and reduced electronic scrap at the end of the product life cycle. Following this evaluation, in 2012 the supplier structure was optimised and the existing printers are now being replaced. By the time the changeover is completed, the printer fleet as a whole will be 32 percent more energy-efficient than the previous fleet, resulting in annual energy savings of 2.18 GWh. A one-off 33 percent reduction in packaging volumes and a 36,000 kilogram reduction in the volume of items packaged with the products have also been achieved.

To further emphasise the sustainability of the new printers, Volkswagen is working with the printer manufacturer and the German Nature and Biodiversity Conservation Union (NABU) to develop a new carbon offset project,



Audi's new data centre at the Ingolstadt plant provides 2,000 square metres of space for 6,000 highly efficient servers. The TÜV Rheinland technical inspectorate has issued the data centre with a "premium" certificate – its highest energy efficiency rating.

aimed at fully offsetting the CO₂ emissions associated with delivery, use and take-back of the products, taking into account not only the energy consumption of the printers themselves but also energy consumption for toner, paper, packaging and visits by service engineers. Volkswagen will offset these unavoidable CO₂ emissions with gold standard carbon offset certificates issued by The Gold Standard Foundation. Also, as a further contribution to protecting the natural environment and reducing greenhouse gas emissions, in Germany Volkswagen is investing in moorland restoration projects managed by NABU. All calculations for this project are being performed by ClimatePartner Deutschland GmbH and certified by Société Générale de Surveillance Holding GmbH (SGS).

RESOURCE EFFICIENCY

In its environmental goals, Volkswagen has committed itself to the responsible use and best possible conservation of natural resources.

Important levers for improving resource efficiency – in addition to energy efficiency (> p. 111), efficient water use (> p. 123) and improving air quality through reduced pollutant emissions (> p. 112) – include responsible use of natural materials and efficient recycling.

Tracking and streamlining material flows

To promote efficient and sustainable use of natural resources, in 2012 Volkswagen established a Raw Materials Management Steering Group to systematically identify and analyse risks to raw materials supplies and take timely counter-measures.

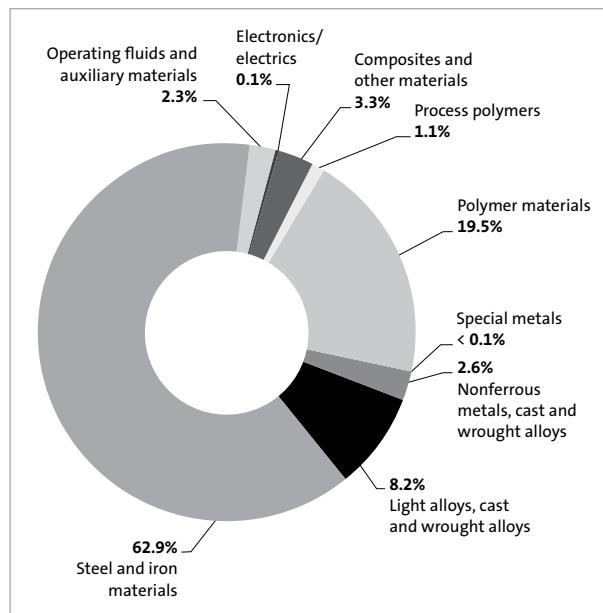
A helpful tool for ensuring more efficient resource use in the manufacturing process is material flow management. Material flow management allows transparent matching of energy and material flows to specific processes. It provides a basis for comparing different scenarios or technologies and identifying improvement opportunities. First launched in 2011, material flow management has been operating with an expanded and refined database since 2012, which

has led to an improvement in the quality of the results. In the meantime the tool is being used to plan new paintshop facilities and assess existing ones.

To handle the increasing level of detail generated in this modelling process, an operating wizard was developed which makes the system much more user-friendly. Small-scale pilot projects are currently being conducted to assess the suitability of this tool for deployment across the Group. The high degree of product diversity means that it is not possible to produce generalized statistics on material flows for the range as a whole. However, material flow analyses for many high-selling models can be found in the Environmental Commendations, or the general brochure “The Lifecycle of a Car”.  125

Responsible use of resources goes hand in hand with a high level of materials efficiency. A high level of materials efficiency means, for example, a smaller difference

MATERIAL COMPOSITION VW GOLF 7



Breakdown of the materials used in the new Golf. The new model is 12 percent more material-efficient than its predecessor.  124

between the weight of steel blanks entering the production process and that of the finished component. This in turn reduces the amount of offcut waste that needs to be recycled. In the new Golf, introduced during the reporting period, materials efficiency was increased by 12 percent.

Materials efficiency 12 percent up in the Golf

The efficient use of materials is an important factor in terms of total operating costs, environmental protection, and a cost-efficient production process. A breakdown of the materials used in the new Golf provides an example in which the materials efficiency has been improved by 12 percent compared to its predecessor. Among other materials used, 62.9 percent of the vehicle consists of steel and iron materials, 19.5 percent of polymers and 8.2 percent of light alloys, cast and wrought alloys.

Responsible and economical use of raw materials is a mandatory requirement at all our sites worldwide. 2012 saw a number of successes in this area. The following are some examples of the improvements achieved:

Bodywork components are made from sheet metal coils. Due to the complex shape of the body components, considerable quantities of offcuts are generated during this process. The Volkswagen brand's Wolfsburg plant has therefore reduced coil widths. It has also made improvements to tools, component geometries and the nesting of blanks. The result is a substantial improvement in materials efficiency on the production line for the new Golf, with a 15 percent reduction in waste volumes compared with the predecessor model. These and improvements to other models since 2011 have reduced steel consumption by approximately 73,000 tonnes annually compared with 2006.

In the paintshop at the Volkswagen plant in Wolfsburg, 48 state-of-the-art painting robots went into operation in 2012. Their innovative colour change and application systems reduce consumption of materials by up to 50 percent. The robots also consume up to 20 percent less compressed air and significantly less energy, cutting CO₂ emissions by 120 tonnes per year. There are cost benefits too, with annual savings of €800,000 at the Wolfsburg plant alone. **85**

Joint commitment

In 2012, together with other large corporations, SMEs and universities, Volkswagen launched the ValueRess project. Volkswagen's contribution to this project, which will have a three-year timeline, will include LCA and Raw Materials Analysis methodologies. In 2012, Volkswagen once again worked within industry associations to promote efficient, sustainable resource use not only in-house but also at industry level. For example Volkswagen is participating in the Federation of German Industry (BDI)'s Ad Hoc Working Group on Resource Efficiency Programmes. Resource efficiency issues are also discussed for example with the European Automobile Manufacturers Association (ACEA), e.g. in the Working Group Industrial Emissions.

The Volkswagen Group is constructively supporting the political process at German and European level in the field of resource efficiency. Among recent developments, in 2012 the German government adopted its Resource Efficiency Programme. And in 2011, the EU Commission published its roadmap for 2020, defining a policy framework for a resource-efficient Europe, aimed at setting Europe on track to become the world's most resource-efficient region. The EU Commission is currently working on the first step towards this goal, by developing resource efficiency indicators. Volkswagen is playing an active role here, and sharing its own experiences regarding optimisation of resource efficiency.

Recycling gains life cycle credits

A further important instrument for promoting resource efficiency is recycling. Reuse of recycled material reduces the need for extraction and processing of primary resources. In the LCA, therefore, recycling can effectively be treated as a life cycle "credit". At Volkswagen, recycling capability is built into new vehicles from the very beginning of the development process, ensuring that the company's new vehicles are now 85 percent recyclable. And thanks to the Volkswagen SiCon process, which is capable of recycling shredder residues, end-of-life vehicles are even 95 percent recoverable. **126**

One of Volkswagen's core environmental goals is to reduce its consumption of primary raw materials. This is why use of quality-assured recycled materials is explicitly

stated as a requirement in Volkswagen's general environmental specifications, which apply to all projects. The recycled content of the new Golf, calculated by means of a certified method based on DIN EN ISO 14021:2012, is between 34 and 35 percent of vehicle weight. **127, 128**

Not all vehicle components may require recycling. Many can be reconditioned and then reused. This is the principle behind the Volkswagen brand's Genuine Remanufactured Parts programme, which recently celebrated its 65th anniversary. Since the programme was first launched, a total of approximately 7.9 million remanufactured engines, 2.9 million remanufactured transmissions and over 78 million other remanufactured components have been sold. The current Genuine Remanufactured Parts range comprises more than 16,000 components from 63 product groups. Genuine remanufactured parts cost on average 40 percent less than genuine new parts, while nevertheless offering as-new quality and functionality, and being backed by the same warranty. And in addition

to the benefits for the customer, this is good news above all for the environment. For example, engine remanufacturing alone delivers annual savings in the order of 7,000 tonnes of steel. **129**

Since electric vehicles contain relatively large amounts of valuable resources such as cobalt, lithium and rare earth metals, in 2012 recycling was also an issue in Volkswagen's preparations for electric mobility. Cobalt in particular is for the most part fully recyclable and reusable. This has been demonstrated amongst other things by the LithoRec research project, in which Volkswagen participated. Tests carried out for this project showed that 90 percent of the raw materials used in a lithium-ion battery can be recovered. **130, 131**



Tree-planting under way on mountainsides in the Iztaccihuatl-Popocatepetl National Park. In the course of this reforestation project, 420,000 trees have been planted, 47,000 soakaways have been dug and 350 sizeable dams have been built to date. These measures are contributing around 2.6 million m³ to groundwater replenishment annually.

WATER

Volkswagen uses this valuable resource sparingly and responsibly. Key points in Volkswagen's sustainable water management policy include reduced water consumption, reduced wastewater volumes, treatment of wastewater and protection of habitats in and around water.

Sustainable water management is anchored in the Group's Environmental Principles: three of the 22 Environmental Principles for Production Plants are directly concerned with water, and the responsible member of the Board of Management is kept informed of issues and progress regarding their implementation. Ultimately, water shortages represent an economic risk for Volkswagen, given that our production processes are dependent on this indispensable resource.  24

In 2012, the water supplies of Volkswagen AG and Volkswagen Sachsen GmbH were taken from surface water (0.77 million m³), groundwater (2.14 million m³), on-site rainwater harvesting and treatment (1.85 million m³) and water supplied by public utility companies (3.67 million m³). During this period, the various forms of water withdrawal are not known to have caused damage to the ecosystem of these water sources. In fact, in Mexico the measures undertaken are contributing approximately 2.6 million m³ annually to groundwater replenishment – significantly in excess of the amount the Volkswagen Puebla plant actually withdraws from the groundwater. Wastewater discharges are in line with the official permits and are closely monitored.

Volkswagen is aiming to reduce water consumption across all plants by 25 percent by 2018 over 2010 levels. Important strides have already been made towards this goal: between 2010 and 2012, water consumption per vehicle produced fell by 0.45 m³ (scope 1). Wherever possible, Volkswagen aims to recycle water. The Salzgitter plant, for example, where all production wastewater is treated in an evaporator, achieves zero-wastewater production. In 2011, 25,251 m³ of industrial wastewater was treated and recycled in this way. Aggregate Group figures for water recycling are not yet available.  121

Under its GreenFuture initiative, the Group brand ŠKODA is aiming to source 80 percent of its process water require-

ments from treated rainwater by 2018. This kind of closed-loop water recovery is key to efficient water use.

Water footprint – knowing where water is consumed

Using the water footprint, calculated on the basis of the Life Cycle Assessments, Volkswagen is able to identify those processes in the automobile life cycle with the highest water consumption. This analysis shows that most water is consumed by upstream material production and supply processes.

Use of water resources at Volkswagen is audited and verified to rigorous standards such as DIN ISO 14001 or the EU Eco-Management and Audit Scheme (EMAS). Water is also a regular and important topic on the agenda of the Regional Environmental Conferences, and was a focus of extensive practice-sharing at the fourth Group Environmental Conference in 2012.

Transparent information

Volkswagen provides transparent information to stakeholders about its management of water resources, and action it is taking to reduce the risk of water shortages. Since 2011, Volkswagen has been participating in the Water Disclosure Project (WDP). This non-profit organisation collects water-related data from questionnaires submitted by participating companies. It analyses and evaluates this information and – with the approval of the reporting company – makes the results available to the public. In 2012, Volkswagen was the only German vehicle manufacturer to consent to publication.  132

Saving water in everyday industrial operations

At the end of 2012, one of the most advanced wastewater treatment plants in China came on stream at the new Volkswagen plant in Foshan. The wastewater is recycled in an environmentally compatible process that returns 100 percent of the water to the factory. Here it is used for, among other things, the rain test in the assembly shop and to replenish the cooling water. As a result, the plant's freshwater uptake has been reduced by some 30 percent. During the site approval process, agreements were al-



FIRST NEAR-ZERO WASTEWATER FACTORY UNDER CONSTRUCTION – IN FOSHAN, CHINA

ready drawn up on future water use, and plans were developed for a biological treatment plant. Wastewater fed to this central Membrane Bioreactor (MBR) plant is initially treated using bacteria. The water is then filtered through a membrane with an area of approximately 6,000 square metres, before being disinfected. The resulting water, which is virtually of drinking water quality, is used as cooling tower feed water (cooling and process water), and also for green area watering and toilet flushing. The MBR biological treatment plant achieves 98 percent COD (Chemical Oxygen Demand) and BOD (Biological Oxygen Demand) reduction. It is the first of its kind in the Chinese automobile industry and the largest in the Volkswagen Group. Further water-saving measures at the new site include a rinsing water recycling system in the paintshop and a dry overspray separation system.

The Volkswagen brand's plant in Taubaté, Brazil, provides a further example of efficient water management. Expansion of the paintshop at this plant has further improved efficiency. A state-of-the-art primerless painting process combined with an innovative overspray separation system has reduced water consumption by 20 percent.  133, 134

Efficient water use is also a top priority at the Puebla plant in Mexico. The expanded water strategy introduced at this plant in 2012 comprises an extensive range of measures:

- > rainwater is collected in lagoons for use as process water or in cooling towers,
- > rainwater from rooftops is collected, filtered through layers of turf, earth, stone and geotextiles and then fed to a buffer tank,
- > treated wastewater is used to flush toilets or to water green areas,
- > existing showerheads and taps are being replaced by more water-efficient fittings.

With these and other measures, the plant has cut statistical water consumption from 5.1 m³ per vehicle in 1999 to approximately 3.0 m³ in 2012. In 2013, the plant is aiming to reduce this figure below the 3.0 m³ mark. At the Chattanooga plant too, rainwater is being captured by smart collection systems and used for toilet-flushing, amongst other applications. In 2012, rainwater for more

than 700,000 toilet flushes was collected, with a corresponding reduction in freshwater consumption.

In 2012, Volkswagen also reported positive results from its ongoing reforestation project in the vicinity of the Popocatépetl volcano in Mexico. Since 2008, the Company has reforested a total area of 750 hectares on the slopes of this volcano. The trees stabilise the ecosystem and improve rainwater retention. So far 420,000 trees have been planted, 47,000 soakaways have been constructed and 350 sizeable dams have been built. These measures are contributing around 2.6 million m³ to groundwater replenishment annually – significantly in excess of the amount the Volkswagen Puebla plant actually withdraws from the groundwater.

For Volkswagen, responsible water management also means attempting to ensure that this resource is more fairly distributed in particularly drought-prone areas. To help people in low-rainfall areas of Brazil, in 2012 Volkswagen joined with partners to install more than 300 additional public water pumps. Volkswagen do Brasil has also assumed responsibility for managing the Popular Water Pump (PMP) programme. Under this project easy-to-operate public water pumps are providing a free water supply in nine states. The number of such pumps has now been increased to around 1,000, meaning that in future 140,000 people will benefit, most of them on low incomes.  135

In cases where water withdrawal is unavoidable, Volkswagen aims wherever possible to implement suitable offsetting measures. For example the state-of-the-art plant now being constructed in Ningbo, in southern China (annual production capacity 300,000 vehicles), is sited in an industrial zone which was originally built on tidal flats. As early as the planning stage, Volkswagen therefore also investigated the scope for offsetting projects. The Company is now looking into ways and means of designating tidal mudflats on the Yellow Sea as protected areas.



BIODIVERSITY

Biological diversity and the services performed by the world's ecosystems are the very foundations of life and economic activity. Yet despite this universally acknowledged truth, species, ecosystems and genetic diversity are in dramatic decline.

The reasons for this are many and varied, but scientists cite the destruction of habitats, excessive development and the depletion of natural resources, overfertilisation, the introduction of non-native species, and increasingly, climate change as the principal culprits. Protecting biodiversity is therefore one of the most pressing challenges of our time.

As an industrial company, Volkswagen is committed to the protection of biodiversity, primarily by reducing its greenhouse gas emissions and via conventional environmental management practices designed to reduce and eliminate waste, exhaust air, wastewater or noise. Direct nature and species conservation measures in the environment of our factories likewise play an important role, alongside the important issue of land use.

Biodiversity management

Volkswagen's commitment to the conservation of biodiversity includes implementing statutory guidelines and conventions, such as the International Convention on Biological Diversity (CBD) and the European and national biodiversity strategy of the German Government. Ever since the mission statement "Protecting Biological Diversity" was first drafted in 2007, safeguarding biodiversity has been an explicit corporate goal of Volkswagen AG. In the reporting period, the Group was continuously advised by the German Nature and Biodiversity Conservation Union (NABU).  151

The Company was also involved in both the international Business & Biodiversity (B&B) initiative and the Biodiversity project group of the econsense sustainability forum. As co-founder of the B&B initiative, Volkswagen donated €50,000 to this dedicated learning and dialogue platform for industry in 2012. At the same time, Volkswagen stepped up its efforts to incorporate species conservation

into its factories' environmental action plans, using the regular Regional Conferences staged by global Environmental Management as a platform. The Company also shared details of its biodiversity policy with its partners on the B2B supplier platform www.vwgroupsupply.com.

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Working together for biodiversity

Starting in 2010, in collaboration with partners from the worlds of research and insurance, Volkswagen made an assessment of the ecological risks at its production sites. The aim was to analyse and grade emission risks (exhaust air, wastewater and waste) in respect of the potential damage to water, soil and biodiversity. Having analysed ten German Volkswagen and Audi plants in 2010, followed by the Osnabrück, Brussels and Palmela plants in 2011, the process continued with the Leipzig, Zuffenhausen and Weissach plants in 2012. The 2012 assessment identified sites adjacent to areas of high biodiversity value (> p. 147). There were no known cases of Volkswagen's activities endangering the natural habitats of species on the Red List of the International Union for the Conservation of Nature and Natural Resources (IUCN) in 2012.

Volkswagen considers biodiversity aspects from the outset when considering potential new sites. For example, in 2012 it examined potential biodiversity projects in the area surrounding its new Changsha plant in the Chinese province of Hunan. In collaboration with the German development agency GIZ GmbH, it devised a range of project funding options to protect agricultural diversity. Volkswagen also commissioned a number of studies into potential projects to protect the tidal mudflats in the Yellow Sea as a compensatory measure.

Biodiversity reporting & communications

Reporting and communications on our activities to protect biodiversity have been extended and improved. In late 2012, the first progress report was posted on the website of the B&B initiative. One year prior to this, the website www.mobil-fuer-mensch-und-natur.de had gone live as an interactive platform for our collaboration with NABU. Furthermore, in May 2012, Volkswagen and econ-



Volkswagen is supporting around 30 biodiversity projects, which are helping to protect species such as the tree frog.



The flowering rush has spread from the Drömling reserve to the Aller river meadows near Wolfsburg, as a result of flooding.

sense co-hosted a conference entitled “Adventure Biodiversity” at the Natural History Museum in Berlin, attended by delegates from the worlds of politics and academia.

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The interactive exhibition “Tour de Wolf” by Volkswagen and NABU continued to make the rounds of wildlife parks and zoos, with wolf enclosures inviting visitors to a range of experience-based educational events (“Welcome Wolf”). The accompanying media competition “Wanted – Games, Apps, Clips” was designed to sensitise creative young people to this topic.

Having attended the previous two CBD Conferences, in October 2012 the Group once again sent a delegation to the 11th CoP in the Indian city of Hyderabad. Volkswagen India had its own multimedia “ThinkBlue” stand at the conference, where it showcased a range of topical issues including eco-friendly factories, water conservation, biogas, species inventory, and environmental education.

Nature conservation and biodiversity projects

Once again, a slew of projects for the conservation of nature and species were initiated or continued at numerous locations, spearheaded by individual brands and regions

in collaboration with local partners. The large-scale reforestation of the “Izta-Popo” mountain region in Mexico, for example, provides effective protection against soil erosion and allows the soil to store more precious groundwater (> p. 124). Meanwhile, Volkswagen de México’s “Por amor al planeta” (For love of the planet) project continued to support research into biodiversity and third-party projects focusing on the preservation of biodiversity.

Volkswagen of South Africa became a sponsor-partner of the Wilderness Foundation’s Rhino Protection Initiative, and also supported the work of the Dyer Island Conservation Trust to protect dolphins and penguins. Extensive tree-planting efforts continued at numerous locations around the globe, including the USA, India, Spain, Brazil, South Africa and Germany. Additionally, Volkswagen do Brasil made the environmental education of its workforce a particular priority.

For a number of years, the Volkswagen Group China has collaborated with the Chinese Center for Environmental Education and Communication on the Green Future Environmental Education Initiative, or GFEI. In summer 2012, the German Youth Association for the Protection of Nature (NAJU) visited the initiative to advise and educate the team in a hands-on way.

While Volkswagen supported a European Union-funded species inventory in the Czech Republic's national parks, Lamborghini launched another species diversity study in collaboration with universities in Bologna, Bolzano and Munich. The Group also provided (long-term) vehicle loans to a large number of nature conservation initiatives and associations, as well as scientific institutions and research organizations around the globe.

In Germany too, Volkswagen has been busy promoting nature and species conservation. A habitat networking project, funded by the Federal Office for Nature Conservation under the Federal Programme for Biological Diversity and initiated by the German Campaign for Otter Protection (Aktion Fischotterschutz e.V.) in collaboration with Volkswagen, was launched in late 2012 along the river Aller. Volkswagen is also supporting the renaturation of the Lower Havel, Europe's largest river renaturation project, and has contributed in various ways, including a major campaign to collect unwanted mobile phones at its Wolfsburg, Emden and Hanover factories, the proceeds from which were donated to the initiative. These two projects, which are carefully monitored by experts from the participating project partners, are renaturing large areas of river landscape – including 100 kilometres of river bank on the Lower Havel.  154, 155

Alongside water pollution control, growing importance is also attached to moorland conservation. The joint environmental programme developed by Volkswagen Leasing GmbH and NABU is a particularly effective tool in moorland conservation, and enabled NABU to rehydrate both the Theikenmeer region of Emsland (240 hectares) and the Grosses Moor region in south-east Lower Saxony (2,720 hectares), followed in mid-2012 by the Lichtenmoor region near Nienburg/Weser (13 hectares). This has helped to preserve a number of carbon sinks and biotopes for endangered species of fauna and flora, including the European viper, common lizard, large blue butterfly, European golden plover, sundew and hare's-tail cotton-grass. Without hydration, some 180,000 tonnes of CO₂ would be released as a result of oxidation in the next 20 years in the Lichtenmoor region alone. Volkswagen Leasing GmbH also set up the German Moorland Protection Fund with initial funding of €1.6 million, which it hopes

will help attract additional donations. In collaboration with NABU, Volkswagen also embarked upon a feasibility study to explore renaturation options for Russian moorlands in the Nizhniy Novgorod region.  23

Finally, in Lower Saxony, the Company also renewed its commitment to a wild cat project by the environmental protection and nature conservation association Bund für Umwelt und Naturschutz Deutschland (BUND), which is creating habitat corridors for this endangered species.

For the fifth year running, the Audi Environmental Foundation has joined with the Technical University of Munich to support the Oak Forest project near Audi's headquarters in Ingolstadt. The aim of the project is to plant trees and research optimum growing conditions for them. In the southern German town of Breitengüßbach, Audi supported the local environmental centre and opened a "Nature Classroom" on a 125 hectare site, where visitors can experience local nature and biodiversity. Meanwhile, Audi in Berlin supported a reaction kinetics project on older city trees, also run by the Technical University of Munich. The Audi Environmental Foundation also funded a bionics competition for school classes, and a project to promote bee-keeping in schools.

AWARDS

In 2012, Volkswagen once again received a slew of environmental and sustainability awards from independent organisations and media around the globe.

Yellow Angel

Each year, the German motoring organisation ADAC awards one of the automotive industry's most prestigious prizes – the Yellow Angel (Gelber Engel). The natural gas-powered Volkswagen Passat TSI EcoFuel won an award in the "Car of the Future" category, primarily in recognition of its low-emission powertrain. The new multicollision brake system developed by Volkswagen, which can help to prevent secondary collisions following an accident, was likewise awarded a Yellow Angel, winning the special prize in the "Innovation and Environment" category.

Ethics in Business Award

The World Forum for Ethics in Business awarded Volkswagen the Ethics in Business Award 2012 in the Outstand-

ing Corporation category, for its extensive activities in the field of sustainability and corporate social responsibility. As well as praising Volkswagen's ongoing efforts in the fields of environmental management and social engagement, the jury also recognised Volkswagen's inclusion in the Dow Jones Sustainability World Index and its third-place listing in the Sustainalytics DAX 30 Rating.

VCD Environmental Car List

The Transport Association Germany (VCD) publishes an annual ranking of the most climate-friendly cars on the market, and has crowned the Volkswagen brand's natural gas-powered eco up! as the overall winner for 2012/2013. As well as winning the top spot in the overall ranking, the eco up! also scored highest in the "Klimabesten" ("Best Air") category. The key deciding factors are pollutant emissions, fuel consumption and noise. With consumption of just 2.9 kilograms of natural gas per 100 kilometres, the eco up! sets new standards. Alongside the eco up!, the Touran TSI EcoFuel, likewise powered by natural gas, was awarded second place in the 7-seater category, with CO₂ emissions



Dr. Ulrich Hackenberg, Member of the Board of Management of the Volkswagen brand responsible for Development (right), stepped up to receive the award for the Volkswagen Golf in the Compact Car category (on the left is Jens Katemann, Editor-in-Chief, "auto motor und sport").

of 128 g/km. Other Volkswagen brand models also scored highly in other categories. As a manufacturer, Volkswagen was ranked in second place for its environmental commitment. The jury analysed production processes, studied environmental and sustainability reports, and considered the company's commitment to more efficient environmental technology in its vehicles.

Five stars in NCAP test

The new Volkswagen Golf was awarded the top five-star ranking by the European consumer protection organisation Euro NCAP. It also won the Euro NCAP Advanced Award for innovations in integral safety, one of which was the new multicollision brake.

Green Truck

The Scania R480 Euro 6 was rated the most environmentally compatible commercial vehicle in the heavy semitrailer tractor category by trade magazines "Verkehrsrundschau" and "Trucker", who awarded it the title of "Green Truck 2012". Alongside fuel consumption and related CO₂ emissions, the decision also took into account the EURO emissions class and other factors such as the maximum payload, and was based on extensive vehicle testing.

ÖkoGlobe 2012

Volkswagen and Deutsche Post were awarded the ÖkoGlobe for their prototype eT! research vehicle by the ÖkoGlobe Institute at Duisburg-Essen University. The jury praised the electric delivery vehicle for its manoeuvrability and space-saving design, as well as its state-of-the-art data and powertrain technology that makes for eco-compatible transportation with very low CO₂ emissions.

Green Car of the Year

The Gol Ecomotion and the Polo BlueMotion were named "Green Car of the Year" by the Brazilian magazine "Auto Esporte", winning one of the most prestigious automotive prizes in Brazil. The Gol is a compact car developed especially for the Latin American market following discontinuation of the legendary Beetle, and enjoys growing popularity.

A list of other environment-related awards from the reporting period is available online. Alongside the examples of environmental prizes listed here, Volkswagen also won numerous other awards for customer satisfaction, design, safety, equipment levels and vehicle performance. Details can be found on the websites of the respective brands. In 2012 the Volkswagen brand also created its own award gallery on its website.  156, 157

“Think Blue. Factory.”

IN LINE WITH ITS CORPORATE GOALS, VOLKSWAGEN IS AIMING TO MAKE ITS PRODUCTION OPERATIONS 25 PERCENT MORE ECO-FRIENDLY BY 2018. UNDER THE “THINK BLUE. FACTORY.” INITIATIVE, ALL THE VOLKSWAGEN BRAND’S PRODUCTION PLANTS ARE WORKING TO IMPROVE THEIR RESOURCE EFFICIENCY AND MAKE SUBSTANTIAL CUTS IN THEIR EMISSIONS.

The “Think Blue. Factory.” programme is a management approach that systematically builds on the successful “Think Blue.” philosophy, Volkswagen’s holistic approach to ecological sustainability. Integrating both ecological and economic objectives, it aims to reduce the environmental impacts from the Volkswagen brand’s production operations by 25 percent per vehicle by 2018.

To achieve this ambitious goal, the existing plants have begun a systematic “Think Blue. Factory.” process which is setting them on the road to greener production. The key tool in this process is know-how. Consequently, Volkswagen plants are pooling their experience in the field of innovative production technologies to create a body of know-how which can be used across the whole organisation.

To assist with this process, all plants have been equipped with the “Think Blue. Factory.” toolkit. This set of methods and tools allows each plant to develop a “migration path” for achieving its own particular sus-

tainability objectives. The most important tool is the standardised “Think Blue. Factory.” catalogue of actions and measures. This comprises a range of plant and process improvement measures covering all production sectors and functions. These measures are supplemented by improvement actions for building- and utility-related infrastructures.

The catalogue provides a pool of information about new Volkswagen production technologies. All measures in this catalogue are recommended for wider adoption across the plants. Further innovations and new developments from the plants are being added to the catalogue all the time. To monitor progress, the improvement drive is continuously tracked using the five key indicators energy, water, waste, carbon dioxide and solvent emissions.

Energy consumption

Across all categories of energy consumption, from electrical power for pro-

duction machinery to natural gas for space heating, Volkswagen identifies opportunities for savings and exploits these opportunities using efficient technologies. One example is the introduction of new boiler plants at the Wolfsburg site, which have reduced district heating consumption by 18,400 megawatt-hours and electricity consumption by 4,200 megawatt-hours annually.

Water consumption

Wherever water is taken from – on-site wells, rainwater or other sources – an ever increasing proportion of it is being recovered and reused. Meanwhile, overall consumption of water by production processes is being steadily reduced. For example, freshwater consumption for paint overspray separation at new plants has been reduced to zero by using dry overspray separation systems instead of conventional wet scrubbing.



Waste for disposal

Waste avoidance is a top priority at Volkswagen. Treatment and reuse of contaminated rinsing thinners at the paintshop in Osnabrück is just one example. This paintshop also reuses recycled PVC. And at the Bratislava plant, a comprehensive system for optimised waste management has been developed that will be taken up by all plants in future. Production waste, packaging waste and workshop waste at Volkswagen is recycled.

CO₂ emissions

Volkswagen reduces CO₂ emissions at source – for example by using climate-friendly renewable energy sources such as wind, solar and hydroelectric power. Recently added renewable energy facilities include a new solar facility in Chattanooga (USA) and the Anhanguera hydroelectric power plant in Brazil. In 2012, Volkswagen decided to build a second hydroelectric power plant in Brazil, near São Paulo. This will allow Volkswagen to meet 94 percent of its local energy needs from green power. And since December 2011, hydroelectric power has been supplying 100 percent of electricity requirements at the engine plant in Polkowice, Poland. At the same time, further reductions in CO₂ emissions are being achieved with the aid of optimised plant and equipment. For example, new production systems are now fitted with more efficient hydraulic pumps.

Solvent emissions

Volkswagen's paintshops are equipped with innovative waste air treatment systems. New technologies are also reducing consumption of rinsing agents. At the Pamplona plant in Spain, for example, materials utilisation for adhesives has been improved to 100 percent thanks to the "Think Blue. Factory." programme. As a result, at this one plant alone, hazardous waste and solvents for disposal have been reduced by five tonnes annually.

As the indicators show, in recent months the "Think Blue. Factory." programme has made significant progress in reducing environmental impacts. For example, at the Braunschweig components plant alone, heating energy consumption in production shops has been reduced by 630 MWh annually, thanks to optimised deployment of air curtain systems and high-speed doors. Controlled ventilation systems at the Kaluga plant in Russia have also improved energy efficiency. And at the Salzgitter plant, heat recovery from compressed air systems is delivering annual energy savings of 7,300 megawatt-hours. Finally, Volkswagen has upgraded the ventilation systems at the Wolfsburg plant with state-of-the-art filters in a measure that will reduce CO₂ emissions by approximately 2,000 tonnes per year.

Extensive communication and information is helping to raise the employee awareness of "Think Blue. Factory." As

more employees become involved, the process becomes more energised and dynamic. This is reflected in a flood of improvement suggestions submitted by employees as well as in record participation in the ideas management system in 2012. The Energy Cup for employees and the Internal Environmental Award, which in 2012 was presented to the Pamplona (Spain), Pune (India), Wolfsburg (Germany), and Polkowice (Poland) sites, are further ways in which Volkswagen is motivating employees to develop eco-friendly initiatives.

"Think Blue. Factory." also includes regular Volkswagen-wide practice-sharing meetings. For example, the "Think Blue. Factory." Day 2012 in Wolfsburg brought together 350 energy and environment experts from all plants. This cross-site opportunity for networking and best-practice sharing sets the "Think Blue. Factory." concept on an ever-broader base, giving the plants a growing catalogue of measures from which to compile their individual roadmaps. In this way, and step by step, "Think Blue. Factory." is smoothing the way to making Volkswagen's production operations 25 percent more environmentally compatible by 2018.

"Think Blue. Factory." has already received widespread acclaim. For example, in 2012, Volkswagen was presented with the Sustainovation Award for best sustainability programme.  158, 159



Clean cars from clean production operations.

AS THESE SELECTED EXAMPLES OF THE MANY PROJECTS SHOW, THE “THINK BLUE.” APPROACH HAS BECOME A WAY OF LIFE, ADOPTED WORLDWIDE AND TRANSLATED INTO PRODUCTION OPERATIONS AS “THINK BLUE. FACTORY.” MANY OTHER PROJECT PORTRAITS ARE AVAILABLE ONLINE. ↗ 30



Solar farm
Chattanooga (USA)

Volkswagen's biggest solar power plant worldwide meets roughly 12.5 percent of energy requirements. Some 33,600 solar modules supply 13,100 megawatt-hours of green power every year, which is used for producing the Passat.



↗ 160



Wastewater treatment
Puebla (Mexico)



Some 4,400 cubic metres of water from production undergoes chemical or biological cleaning. A new wastewater treatment plant makes it possible to reuse 1,700 cubic metres of wastewater for production purposes.



Painting process
Chattanooga (USA)

The filler-less painting process 2010 saves around 75,000 litres of water per day. In addition, energy consumption has been cut by around 20 percent compared with conventional paint-shops.



Paintshop
Uitenhage (South Africa)



Electrostatic atomising technology is used instead of pneumatic spray guns to apply the second coat. This doubles material efficiency from 35 to 70 percent and results in corresponding reductions in waste disposal volume and solvent emissions.





Paintshop Wolfsburg (Germany)



Instead of expensive refurbishment of long pipelines for transporting hot water from the south power station to buildings 9 and 26, boiler rooms were built where they were needed. This prevents heat losses in transit – saving 18,369 megawatt-hours of district heating and 35 percent CO₂ per year.



Hydro-power plants Polkowice (Poland)



The energy required is supplied by hydro-power plants instead of conventional power plants. This saves 100% of the CO₂ emissions. The factory was awarded the internal Energy Cup for the lowest base load. The target: 80 kilowatt-hours per engine produced.

161



Heat recovery Salzgitter (Germany)



The heat arising from compressed-air production is used to preheat the fresh-air supply. This cuts heating costs. About 7,300 megawatt-hours of heat energy are recovered every year – enough to heat roughly 400 detached houses for a year.



Heat recovery Poznan (Poland)



A heat exchanger in the chimney is used to recover energy from waste heat. This has almost halved boiler-room operating hours and reduced gas consumption and CO₂ emissions by around five percent. The monthly saving is around €15,000, which means the innovation paid for itself in just a year.



Ventilation Braunschweig (Germany)



Installing frequency converters has resulted in more efficient operation of large fans for ventilating factory buildings and offices. Each ventilator now saves some 300 megawatt-hours of energy per year – enough energy for about 100 four-person households.



Biogas plant Pune (India)



Every day a new biogas plant converts 0.5 tonnes of organic waste into biogas and fertiliser. The central kitchen uses the gas as fuel for cooking, and the sludge produced by the process is applied as fertiliser to the green spaces in the factory grounds.





Key indicators & goals.

A close-up photograph showing a person's hand holding a white, cross-shaped gauge against the red tail light of a dark-colored car. The gauge has several markings and numbers visible on its arms. The background is blurred, suggesting an indoor setting.

5

Key indicators & goals.

FINANCIAL INDICATORS // SOCIAL INDICATORS //
ENVIRONMENTAL INDICATORS // GOALS & ACTIONS

Beauty is all around us, but it's only when beauty passes the test of close, rigorous and objective scrutiny that it becomes a genuine sustainable success factor. The numbers tell the true story.

Financial indicators

For a detailed presentation of our financial indicators, please consult our current annual report. The indicators set out below correspond to the International Financial Reporting Standards (IFRS) for the entire period from

2008 to 2012. The indicators for calendar year 2012 that have been audited by PricewaterhouseCoopers are marked with the following symbol .

VOLUME DATA IN '000



	2012	2011*	2010	2009	2008
Vehicle sales (units)	9,345	8,361	7,278	6,310	6,272
Germany	1,207	1,211	1,059	1,288	1,013
Abroad	8,137	7,150	6,219	5,022	5,259
Production (units)	9,255	8,494	7,358	6,055	6,347
Germany	2,321	2,640	2,115	1,938	2,146
Abroad	6,934	5,854	5,243	4,117	4,201
Employees (yearly average)	533	454	389	367	357
Germany	237	196	178	173	178
Abroad	296	258	210	194	179

* Adjusted

FINANCIAL DATA in € million



Volkswagen Group	2012	2011	2010	2009	2008
Sales revenue	192,676	159,337	126,875	105,187	113,808
Operating profit	11,510	11,271	7,141	1,855	6,333
Profit before tax	25,492	18,926	8,994	1,261	6,608
Profit after tax	21,884	15,799	7,226	911	4,688
Profit attributable to shareholders of Volkswagen AG	21,717	15,409	6,835	960	4,753
Cost of materials	122,450	104,648	79,394	67,925	75,954
Personnel expenses	29,503	23,854	19,027	16,027	15,784
Provisions for pensions	23,969	16,787	15,432	13,936	12,955
Automotive Division*					
Cash flows from operating activities**	16,232	17,109	13,930	12,815	8,800
Cash flows from investing activities attributable to operating activities	-16,455	-15,998	-9,095	-10,252	-11,479
Net liquidity at Dec. 31	10,573	16,951	18,639	10,636	8,039

* Including allocation of consolidation adjustments between the Automotive and Financial Services divisions.

** Before consolidation of intragroup transactions: €17,029 million (€17,868 million).

VALUE ADDED OF THE VOLKSWAGEN GROUP in € million

Source of funds	2012	2011	2010	2009	2008					
Sales revenue	192,676	159,337	126,875	105,187	113,808					
Other income	24,652	13,125	10,787	9,401	9,992					
Cost of materials	-122,450	-104,648	-79,394	-67,925	-75,954					
Depreciation and amortisation	-13,135	-10,346	-10,097	-8,877	-8,438					
Other upfront expenditures	-22,077	-9,759	-15,250	-15,767	-12,554					
Value added	59,666	47,709	32,922	22,019	26,854					
Appropriation of funds	2012	%	2011	%	2010	%	2009	%	2008	%
to shareholders	1,639	2.8	1,406	2.9	1,034	3.1	647	2.9	779	2.9
to employees (wages, salaries, benefits)	29,503	49.5	23,854	50.0	19,027	57.8	16,027	72.8	15,784	58.8
to the state (taxes, duties)	4,322	7.2	4,525	9.5	3,105	9.5	1,152	5.2	2,503	9.3
to creditors (interest expense)	3,957	6.6	3,530	7.4	3,563	10.8	3,928	17.8	3,879	14.4
to the Company (reserves)	20,246	33.9	14,393	30.2	6,193	18.8	265	1.2	3,909	14.6
Value added	59,666		47,709		32,922		22,019		26,854	

KEY FIGURES BY BRAND AND BUSINESS FIELD¹

thousand vehicles/€ million	VEHICLE SALES		SALES REVENUE		SALES TO THIRD PARTIES		OPERATING PROFIT	
	2012	2011	2012	2011	2012	2011	2012	2011
Volkswagen Passenger Cars	4,850	4,450	103,942	94,690	77,110	71,504	3,640	3,796
Audi	1,299	1,543	48,771	44,096	33,461	30,496	5,380	5,348
ŠKODA	727	690	10,438	10,266	5,633	6,212	712	743
SEAT	429	362	6,485	5,393	2,785	3,284	-156	-225
Bentley	9	7	1,453	1,119	1,274	1,060	100	8
Porsche ²	62		5,879		5,442		946	
Commercial vehicles	437	441	9,450	8,985	4,920	5,199	421	449
Scania ²	67	80	9,314	10,064	9,314	10,064	930	1,372
MAN ²	134	25	15,999	2,652	15,900	2,652	808	193
VW China ³	2,609	2,201	-	-	-	-	-	-
Other ⁴	-1,279	-1,438	-36,929	-33,768	20,516	14,474	-2,682 ⁵	-1,617 ⁵
Volkswagen Financial Services	-	-	17,872	15,840	16,322	14,392	1,410	1,203
Volkswagen Group	9,345	8,361	192,676	159,337	192,676	159,337	11,510	11,271
Automotive Division of which: Passenger Cars and Light Commercial Vehicles Business Area of which: Trucks and Buses, Power Engineering Business Area	9,345 9,143	8,361 8,256	172,822 148,021	142,092 129,706	174,525 150,042	143,620 131,428	9,923 9,405	9,973 9,042
Financial Services Division	-	-	19,854	17,244	18,151	15,717	1,586	1,298

¹ All figures shown are rounded, so minor discrepancies may arise from addition of these amounts. ² Including financial services; Porsche as from August 1, 2012; MAN as from November 9, 2011. ³ 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 an operating profit (proportionate) of €3,678 million (€2,616 million).

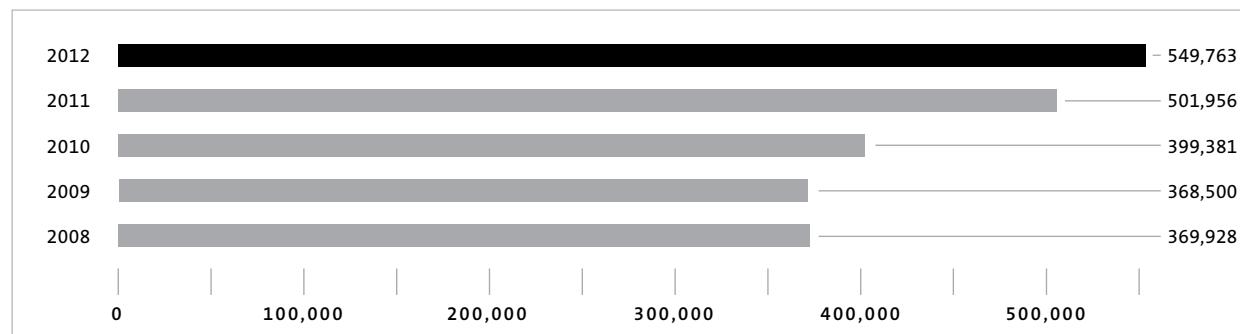
⁴ Including Porsche Holding Salzburg as from March 1, 2011. ⁵ Mainly intragroup items recognized in profit or loss, in particular from the elimination of intercompany profits; the figure includes depreciation and amortization of identifiable assets as part of the purchase price allocation for Scania, Porsche Holding Salzburg, MAN and Porsche.

Social indicators

Volkswagen's workforce is constantly growing. As at 31 December 2012, the Volkswagen Group, including the Chinese joint ventures, had 549,763 employees, 9.5% more than at the end of the 2011 financial year (501,956 employees). Major factors behind this increase, apart from growth in volume, were the consolidation of Porsche with 17,502 employees and of the motorcycle manufacturer Ducati with

1,197 employees. As a result, there has been a slight shift in the distribution of Group employees between Germany and abroad: while at the end of 2011 44.8% of staff worked in Germany, this proportion was 45.4% at 31 December 2012. The indicators for calendar year 2012 that have been audited by PricewaterhouseCoopers are marked with the following symbol .

TOTAL WORKFORCE OF THE VOLKSWAGEN GROUP



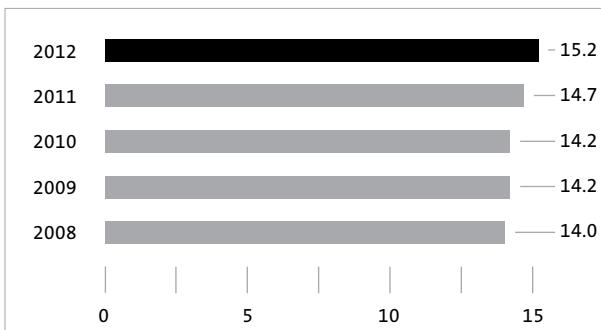
NUMBER OF EMPLOYEES IN THE VOLKSWAGEN GROUP BY TYPE OF WORK

	2012	2011	2010	2009	2008
Production workers	258,685	246,071	207,391	187,966	189,872
Non-production workers	274,364	240,864	181,445	170,688	170,172
Apprentices	16,714	15,021	10,545	9,846	9,884
Total workforce	549,763	501,956	399,381	368,500	369,928
of whom active employees	525,245	482,447	384,058	351,584	351,203
of whom in passive phased retirement	7,804	4,488	4,778	7,070	8,841

NUMBER OF EMPLOYEES IN THE VOLKSWAGEN GROUP BY REGION

	2012	2011	2010	2009	2008
Europe	410,427	378,030	290,159	278,779	284,962
The Americas	63,193	58,072	54,571	48,529	48,867
Africa	6,461	6,602	6,546	5,608	6,194
Asia	68,704	58,540	47,607	35,123	29,423
Australia	978	712	498	461	482
Total	549,763	501,956	399,381	368,500	369,928
of whom temporary staff	24,914	28,342	21,119	12,396	16,016
of whom permanent staff	524,849	473,614	378,262	356,104	353,912

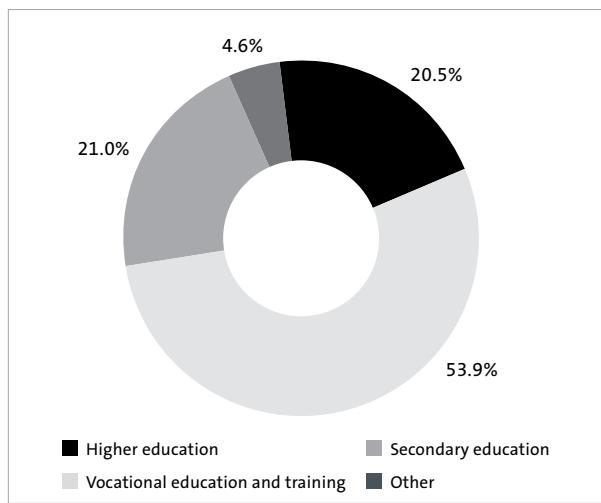
**FEMALE EMPLOYEES
IN THE VOLKSWAGEN GROUP* IN %**



* from 2011 incl. Scania

One of the Company's goals is to continue to increase the proportion of women from 15.2% across the Group, especially in management. In the year under review, the proportion of women in management roles in the Volkswagen Group in Germany was already increased to 5.5% among senior executives, to 7.0% in senior management and to 11.0% in management (situation at year-end, excl. Scania, MAN and Porsche).

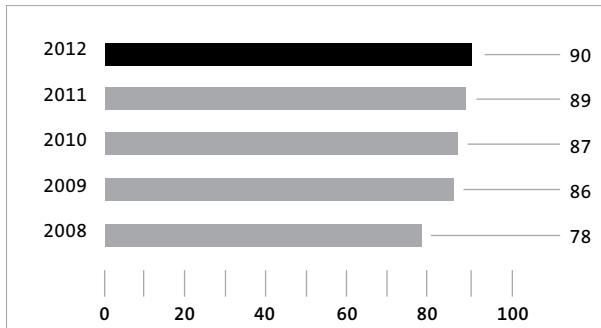
**LEVEL OF QUALIFICATIONS IN THE
VOLKSWAGEN GROUP***



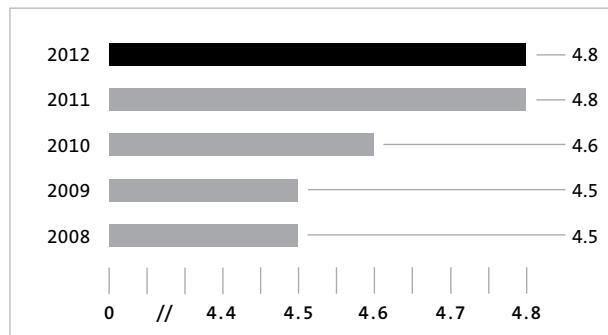
* excl. Scania, excl. MAN

Due to its targeted recruitment measures, the Volkswagen Group employs a large proportion of well qualified employees. Approximately 95% of employees hold some form of qualification.

**EMPLOYEE OPINION SURVEY IN THE
VOLKSWAGEN GROUP: PARTICIPATION IN %**

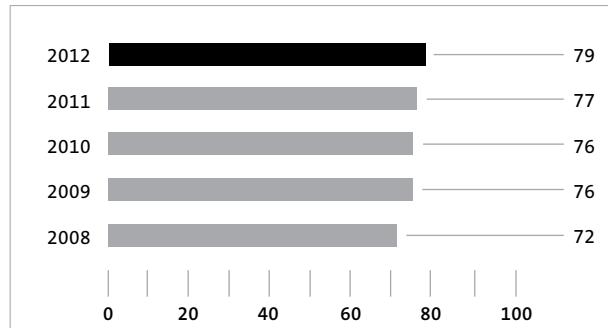


**APPRENTICES IN THE VOLKSWAGEN GROUP
IN GERMANY IN %**



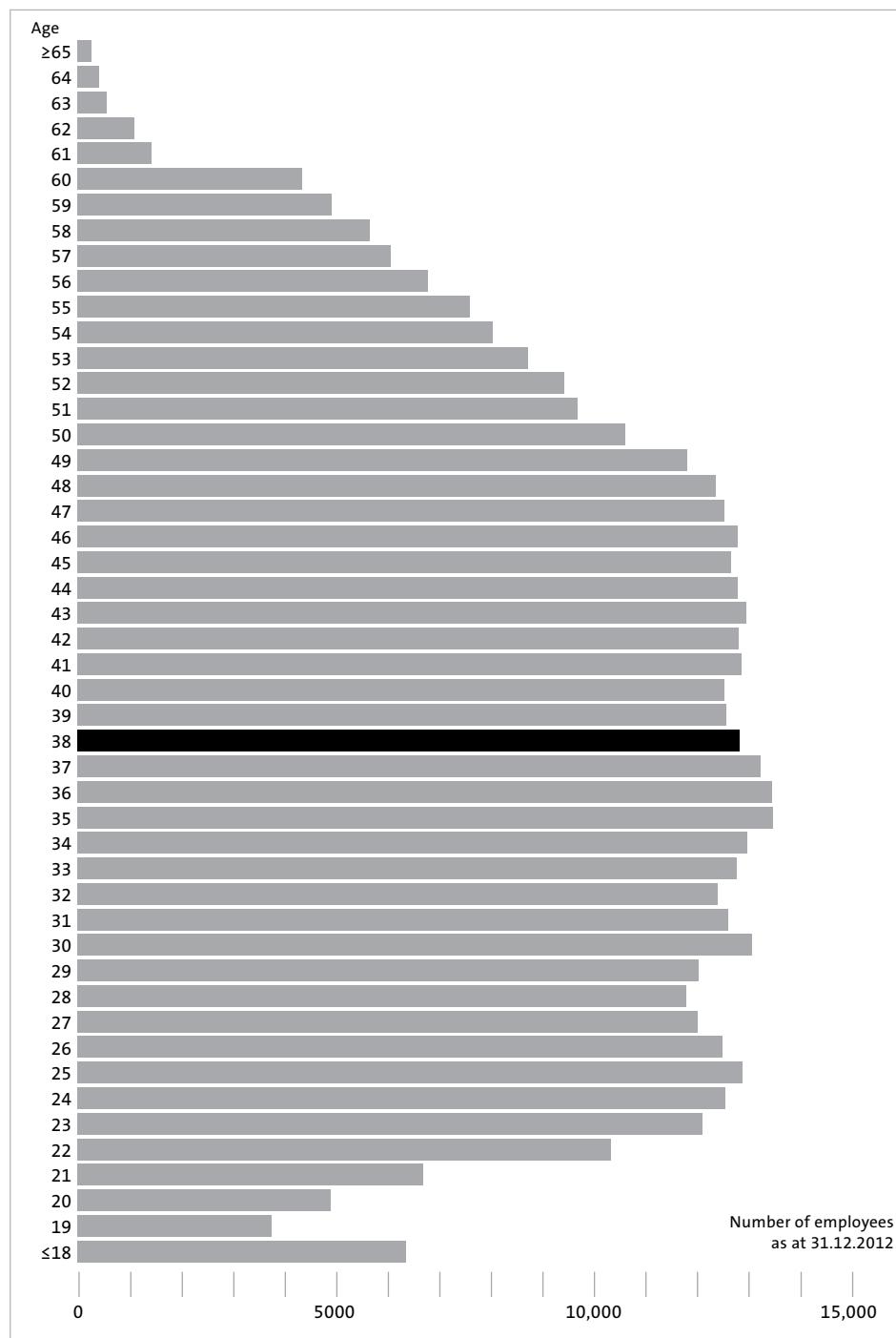
Volkswagen AG offered 125 more apprenticeships than in 2011, with a further 50 places for apprentices created at Volkswagen Sachsen GmbH, Automobilmanufaktur Dresden GmbH, and Volkswagen Osnabrück GmbH.

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



The annual employee opinion survey, introduced in 2008, is an established standardised Group-wide tool designed to assess employee satisfaction, eliminate errors and improve work processes. Its acceptance and level of participation are growing year by year. The employee satisfaction index reflects the level of satisfaction as a weighted average of the 11 statements rated across the Group. The scale of the index extends from zero to 100.

AGE STRUCTURE OF THE VOLKSWAGEN GROUP* IN '000



* excl. Scania, excl. MAN

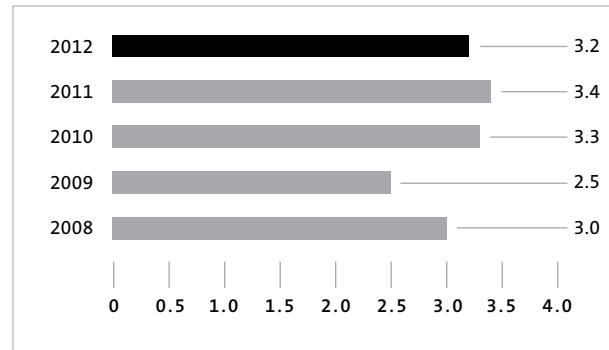
The chart shows the age structure of employees in the Volkswagen Group. The average age of Group employees is 38.4 years, while the average age of the Volkswagen AG workforce is 42.6 years, the average for female employees being 38.0 years and that for male employees 43.4 years.

VOLKSWAGEN AG: AVERAGE AGE



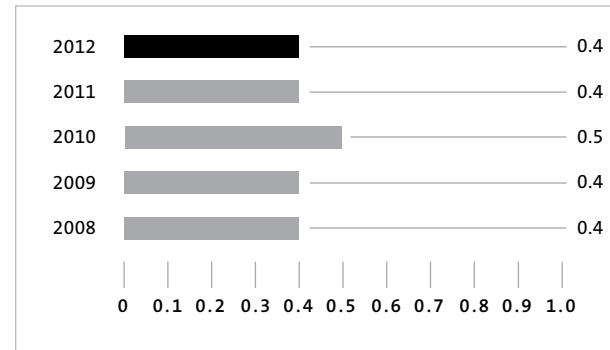
	2012	2011	2010	2009	2008
Female employees	38.0	37.8	37.9	37.7	37.5
Male employees	43.4	43.1	43.2	43.1	42.8
Total workforce	42.6	42.3	42.4	42.2	42.0

Since 2008, 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 training and retirement of long-serving employees.

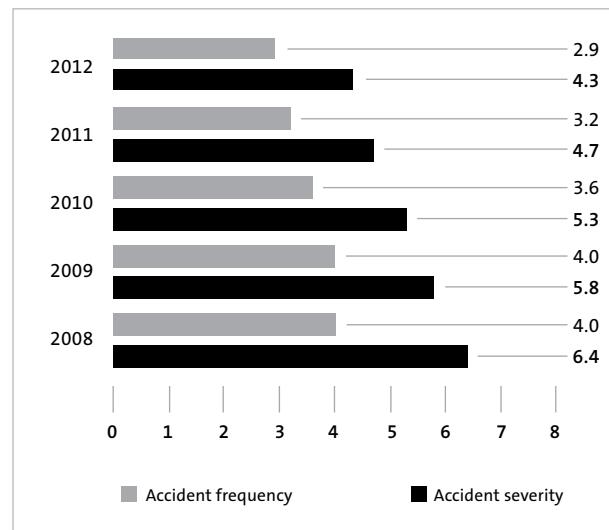
ABSENTEEISM – CUMULATIVE VALUES* IN %

* Production sites excl. Scania, MAN and Porsche

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

VOLKSWAGEN AG: EMPLOYEE TURNOVER IN %

The employee turnover rate indicates the percentage of employees that leave the Company in the course of a year. As the chart shows, there is a very high level of stability in Volkswagen's workforce.

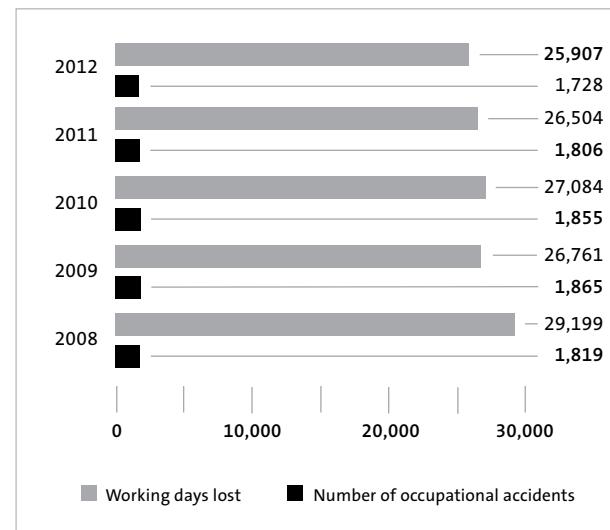
ACCIDENT INDEXES*

* Production sites excl. Scania, MAN and Porsche
(2009 also excluding Audi Brussels)

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. In this case, 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.

Information on occupational safety training measures: 65

INCIDENCE OF ACCIDENTS*

* Production sites excl. Scania, MAN and Porsche
(2009 also excluding Audi Brussels)

From one year to the next, Volkswagen continues to enhance occupational safety across the Group. As is clear from the accident frequency index, the number of accidents is falling continuously. This is mainly attributable to a more systematic approach to and continuous improvement in occupational safety at the Group's plants. Accident severity in the Volkswagen Group has also declined since 2006. Since then, only one Volkswagen AG employee has died, in 2011, as the result of an occupational accident. The greatest improvements in accident frequency were achieved at Volkswagen Slovakia in Martin, Volkswagen do Brasil in Taubaté, Volkswagen Motor Polska in Polkovice, Volkswagen AG in Kassel, Volkswagen Argentina in Pacheco and Volkswagen do Brasil in Curitiba.

Environmental indicators

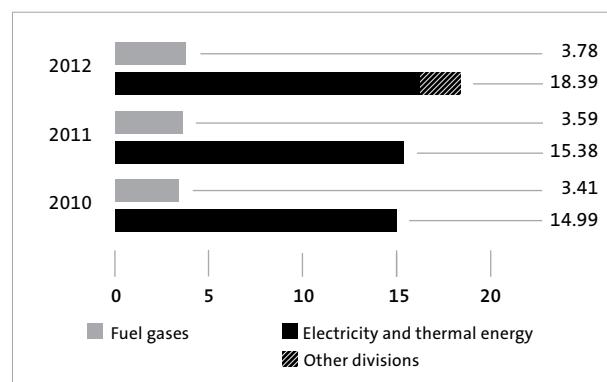
This section presents selected environmental data for the Volkswagen Group in aggregated form. The data are collected, checked and approved at the individual production plants on the basis of an internal standard (VW standard 98 000). The environmental data come from production plants with a total workforce of around 450,000 (as of 31 December 2012); figures for Porsche AG are included from 1 August 2012 onwards. As in Volkswagen's Annual Report, the data are shown for the years 2010, 2011 and 2012.

The absolute figures include all production sites, plus the power stations and boiler plants operated by Volkswagen AG at Wolfsburg, Kassel and Hanover. The proportions due to cars and light commercial vehicles are shown as solid bars, while those due to other parts of the Group (MAN SE, Scania AB and power stations and boiler plants operated by Volkswagen AG) are cross-hatched.

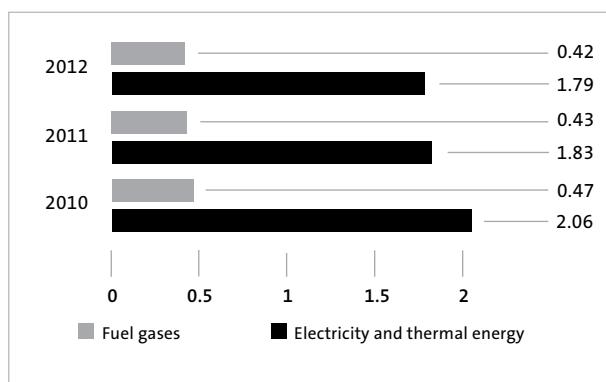
The Volkswagen Group is first and foremost a car manufacturer. Apart from heavy goods vehicles and buses, we primarily produce cars and light commercial vehicles in quantities that have steadily increased over the years. However, the inclusion of MAN SE saw the addition of marine engines and entire power plants to our product portfolio. For this reason the overall environmental impacts cannot be considered simply in relation to the number of vehicles produced. This report therefore introduces the use of relative indicators for the category "cars and light commercial vehicles". In future the aim is to show vehicle-related impacts for the "trucks and buses" category as well, when the necessary data collection methods are available.

The indicators for calendar year 2012 that have been audited by PricewaterhouseCoopers are marked with the following symbol .

ENERGY CONSUMPTION in million MWh/year

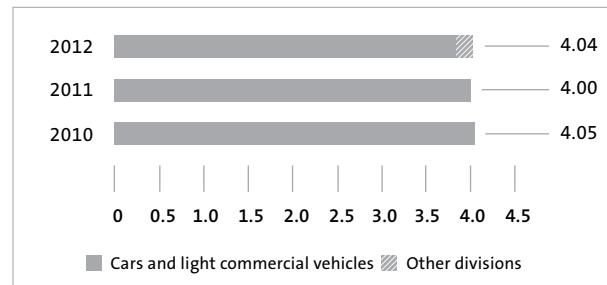


ENERGY CONSUMPTION in MWh/vehicle

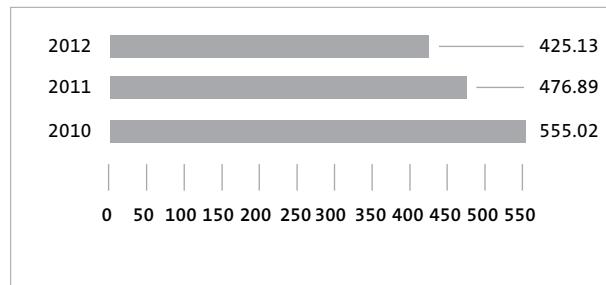


The increase in energy and heat consumption and in the consumption of fuel gases for manufacturing processes is associated with the continuous increase in production over the reporting period. Heat consumption, being the sum of space heat and industrial heat, is subject to variation due to climatic and manufacturing conditions. In relation to the number of vehicles produced, consumption of heat and electricity – one of the largest sources of CO₂ emissions – was down thanks to the Group's resource conservation strategy. The same also applies to fuel gas consumption per vehicle produced.

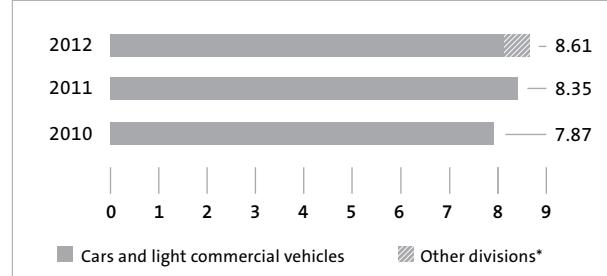
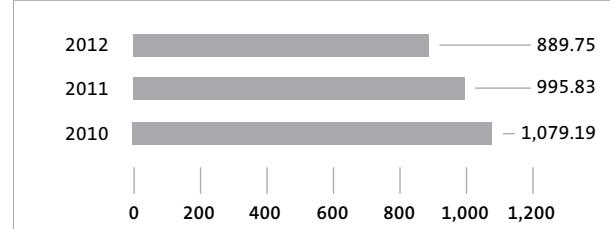
**DIRECT CO₂ EMISSIONS (SCOPE 1)
in million tonnes/year**



**DIRECT CO₂ EMISSIONS (SCOPE 1)
in kg/vehicle**



Despite increased production volumes and the inclusion of new production plants, with an associated increase in energy consumption, direct CO₂ emissions have been falling since 2010. Resource-optimised manufacturing processes, climatic influences and changes in the quality of the supplied energy sources have a positive impact on CO₂ emissions.

CO₂ EMISSIONS (SCOPES 1 & 2)
 in million tonnes/year

CO₂ EMISSIONS (SCOPES 1 & 2)
 in kg/vehicle


* The cities of Wolfsburg and Baunatal use power and heat generated by power stations operated by Volkswagen AG. The quantities of CO₂ arising in this process amounted to 332,251 tonnes in 2012.

As a result of increased consumption of electricity and heat, overall CO₂ emissions have risen. Greater use of renewably generated energy did, however, limit the increase in CO₂ emissions. The CO₂ emissions produced by power stations and boiler plants operated by Volkswagen AG as a result of power and heat generation for Volkswagen AG production plants are included with suitable CO₂ emission factors in the total quantity of CO₂ emissions. The stated carbon dioxide emissions do not include the emissions arising from district heating and power supplied to third parties from power stations operated by Volkswagen AG.

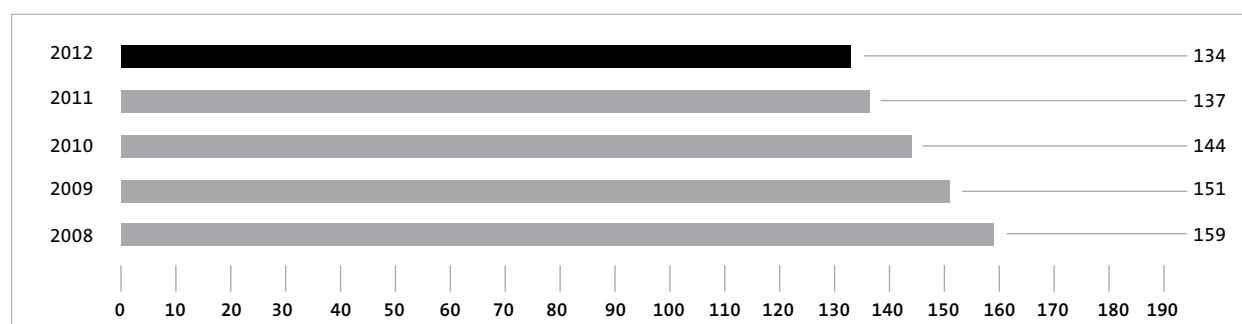
GROUP EMISSIONS (SCOPE 3)

Nr.	Category	tonnes CO ₂	%
1.	Purchased goods and services	54,871,485	16.8
2.	Capital goods	8,866,872	2.7
3.	Fuel/energy	1,234,636	0.4
4.	Upstream transportation and distribution	3,806,495*	1.2
5.	Waste generated in operations	1,783,630	0.5
6.	Business travel	593,744	0.2
7.	Employee commuting	846,358	0.3
8.	Upstream leased assets	not yet reported	0.0
9.	Downstream transportation and distribution	not yet reported	0.0
10.	Processing of sold products	5,223	0.002
11.	Use phase (150,000 km)	250,481,613	76.8
12.	End-of-life treatment	1,355,869	0.4
13.	Downstream leased assets	565,000	0.2
14.	Franchises	1,550,000	0.5
15.	Investments	not yet reported	0.0
Total of reported Scope 3 emissions		325,960,925	100.0

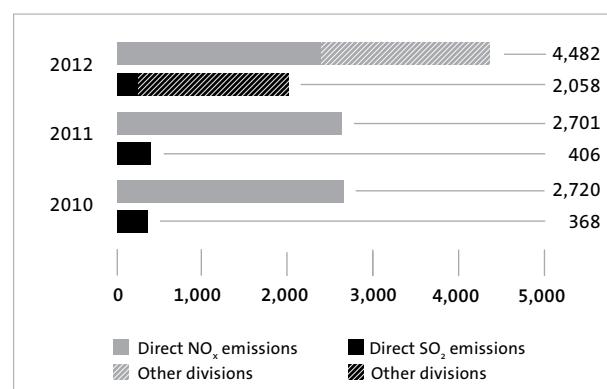
The 2012 Sustainability Report is the first time that the Volkswagen Group has published a Scope 3 inventory for CO₂ emissions. In line with the WBCSD/WRI Scope 3 standard published in 2011, Volkswagen is reporting CO₂ emissions for 12 out of a total of 15 Scope 3 categories. The calculations have revealed that the "purchased goods and services" and "use phase" emission categories account for over 93% of all Scope 3 emissions. These categories were therefore additionally validated and verified by external auditors from TÜV NORD in accordance with the internationally recognised ISO 14064-3 standard. 86

* 2011 value

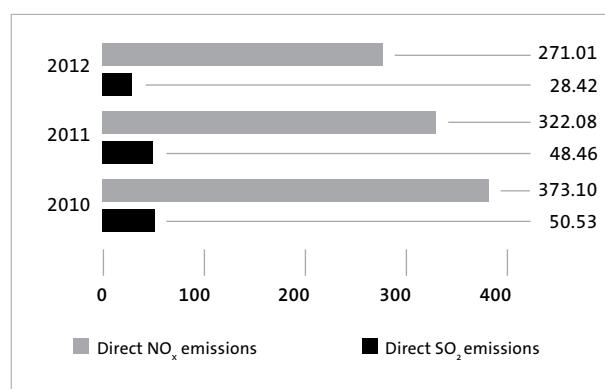
CO₂ EMISSIONS FROM THE VOLKSWAGEN GROUP'S EUROPEAN (EU27) NEW CAR FLEET in g/km



DIRECT NO_x AND SO₂ EMISSIONS in tonnes/year

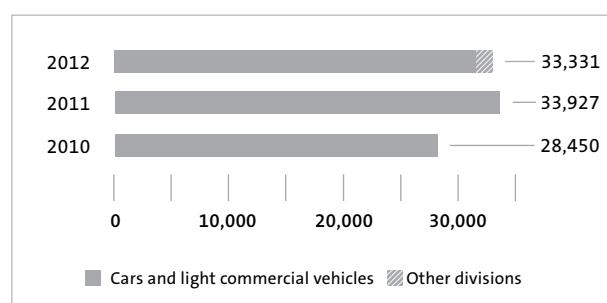


DIRECT NO_x AND SO₂ EMISSIONS in g/vehicle

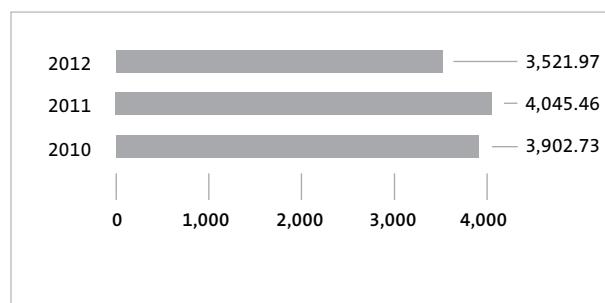


There was a downwards trend in emissions over the 2010 to 2012 period, with this decline also occurring in the specific values per vehicle.

VOC EMISSIONS in tonnes/year



VOC EMISSIONS in g/vehicle

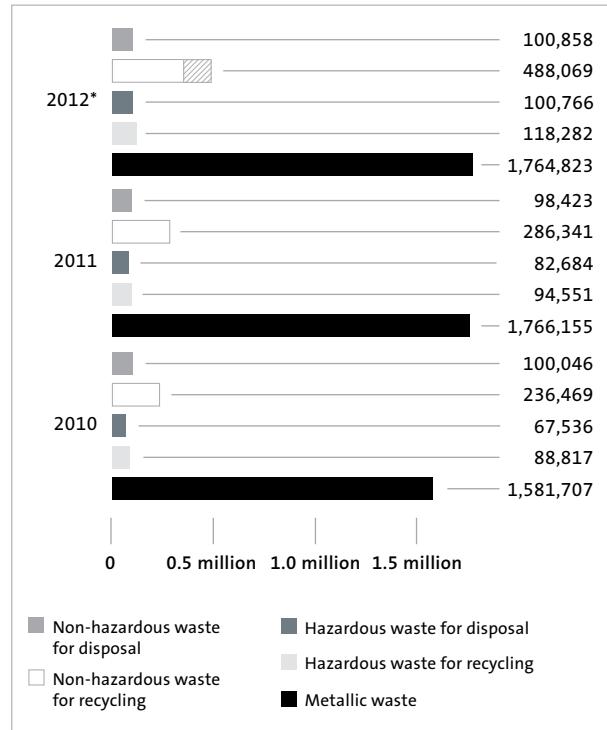
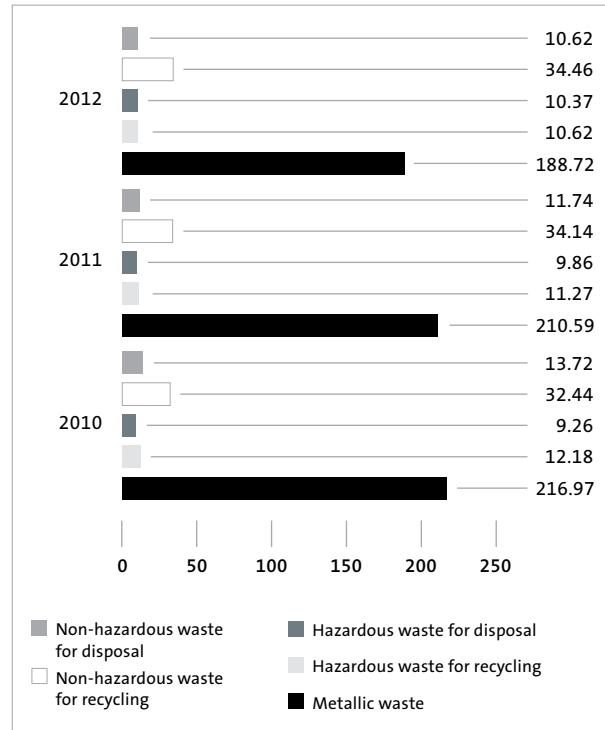


As a result of the increase in vehicle production over the reporting period and the associated higher paint consumption, there was an increase in VOC emissions. Between 2010 and 2012, however, there was a downturn in the specific values per vehicle.

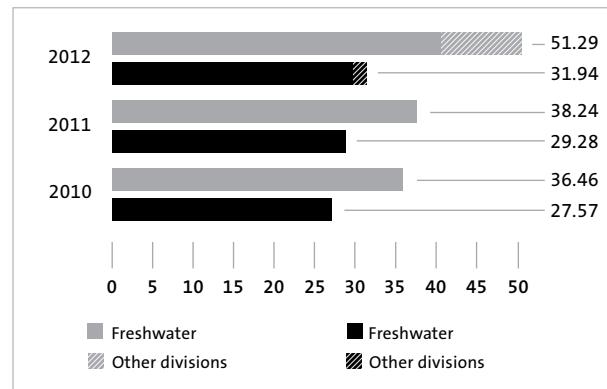
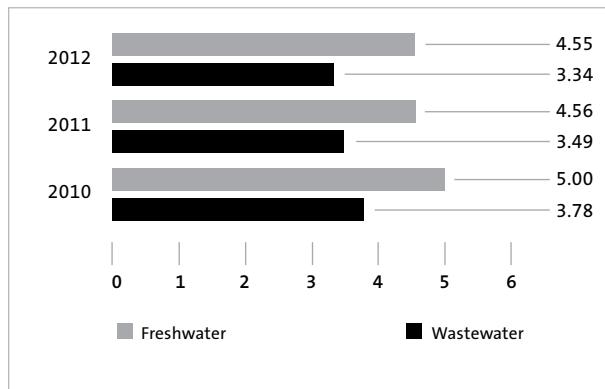
PARTICULATE EMISSIONS VOLKSWAGEN AG GERMANY (TOTAL DUST) in tonnes/year



The values are the sum of values from Volkswagen AG plants in Germany.

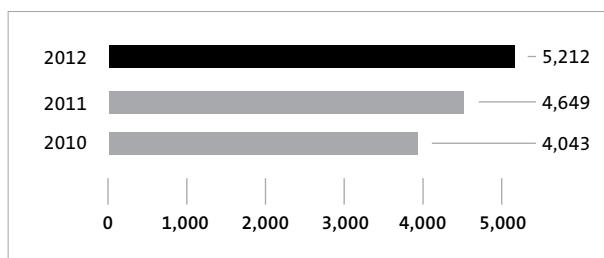
WASTE in tonnes/year**WASTE in kg/vehicle**

As a result of increased production across the Group and the introduction of new models, metallic waste volumes rose over the total reporting period. The reduction in this kind of waste per vehicle is attributable to improved material utilisation and resource-optimised manufacturing processes. Over the entire reporting period, there was an improvement in waste for disposal per vehicle, while waste volumes for recycling per vehicle rose slightly.

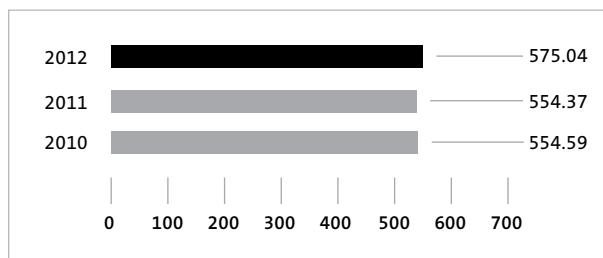
**FRESHWATER AND WASTEWATER
in million m³/year****FRESHWATER AND WASTEWATER
in million m³/vehicle**

Due to the inclusion of new production plants, water consumption and wastewater volumes rose over the reporting period. Increased production across the Group also contributed to this increase. At many plants, water consumption has basically dropped relative to the volume of vehicles produced thanks to the Volkswagen Group's resource conservation strategy. This is also reflected in the wastewater volumes per vehicle.

CHEMICAL OXYGEN DEMAND (COD)
in tonnes/year

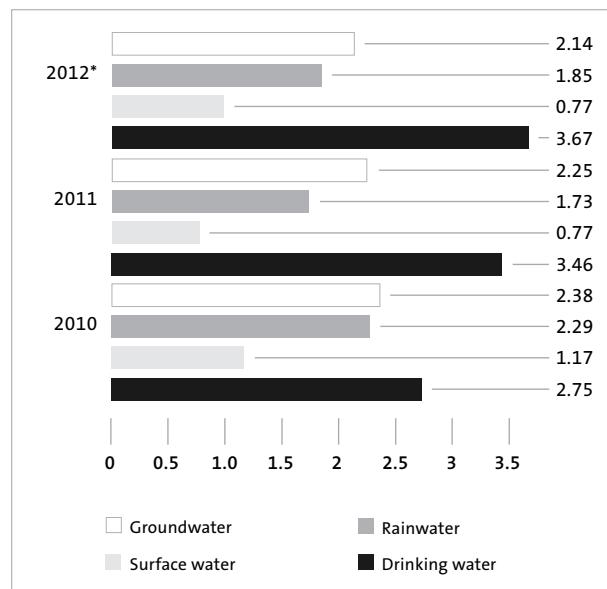


CHEMICAL OXYGEN DEMAND (COD)
in grams/vehicle



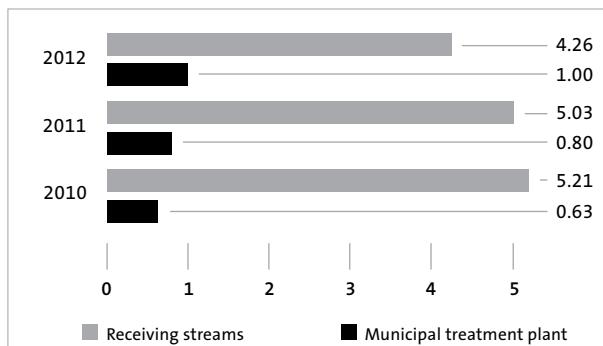
As a result of the increase in production across the Group, there was an increase in chemical oxygen demand in wastewater contamination, with this parameter also rising per vehicle produced.

WATER WITHDRAWAL BY SOURCE* in million m³/year

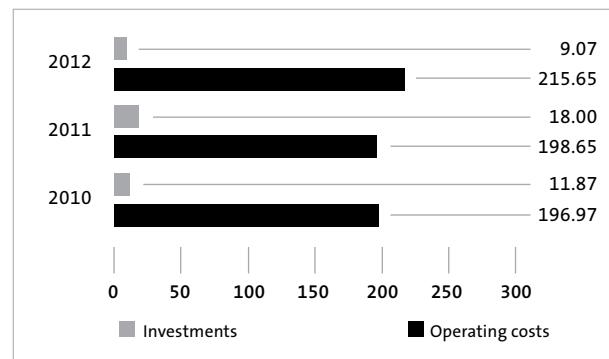
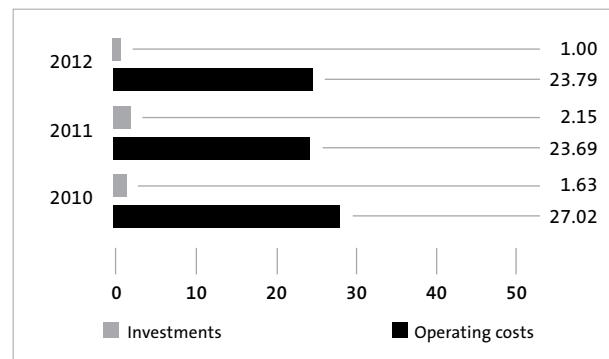


* Volkswagen AG and Volkswagen Sachsen GmbH plants

WATER DISCHARGE BY DESTINATION* in million m³/year



* Volkswagen AG and Volkswagen Sachsen GmbH plants

EXPENDITURE ON ENVIRONMENTAL PROTECTION
 in million €/year

EXPENDITURE ON ENVIRONMENTAL PROTECTION
 in €/vehicle


As in the Volkswagen Annual Report, expenditure on environmental protection relates to Volkswagen AG's German plants. While investments in environmental protection fell, operating costs rose. These trends are also reflected in the expenditure on environmental protection per manufactured vehicle.

PLANTS IN THE VICINITY OF PROTECTED SITES

Plants	Distance (km)	Area* (ha)	Plants	Distance (km)	Area* (ha)
Braunschweig (D): Oker	0.8	53	Polkowice, Components (PL): Jelonek	> 5	14
Chemnitz (D): Zwönitztal	2.5	21.3	Polkowice, Sitech (PL): Jelonek	> 5	10
Dresden (D): Mühlberg	1	8.3	Poznań, Logistics (PL): Dolina Cybiny	2.7	30
Ehra-Lessien (D): Vogelmoor	3.9		Poznań, Foundry (PL): Fortyfikacje-w-Poznaniu	6.7	40
Emden (D)	0.9	400	Poznań, Production (PL): Dolina Cybiny	0.6	40
Hanover (D): Leine	0.75	118	Mlada Boleslav, Production (CZ): Radouci	1.2	212
Ingolstadt (D): Übungsplatz	3.8	200	Vrchlabí, Production (CZ): Krkonose	1.1	23
Kassel (D): Fulldatal	1.6	280	Kvasiny, Production (CZ): Uh inov-Benátky	5	42
Leipzig (D): Tannenwald, Strohgäu	0	20	Martin, Components (SK): Malá Fatra	< 5	12.4
Neckarsulm (D): Jagst, Kocher	0.1	95	Bratislava, Production (SK): Moravy	< 2	178
Osnabrück (D): Mausohr, Belm	5.45	36.1	Palmela, Production (POR): Arrabida	3.5	24.5
Salzgitter (D): Heerter See	7.5	280	Barcelona, Production (ES): Llobregat	3.6	39.3
Stuttgart (D): Max-Eyth-See	0.75	28.8	Martorell, R&E, Production (ES): Llobregat	0.85	800
Weissach (D): Enztal, Stuttgarter Bucht	0.05	84.9	Pamplona, Production (ES): Pena de Etxauri	15	163
Wolfsburg (D): Bahnbruch	0.2	800	Prat, Components (ES): Llobregat	0.7	15.5
Zwickau (D): Zwickauer Muldetal	0.1	180	Brussels, Production (B): Verrewinkel-Kinsendael	3	44

The plants stated here are Volkswagen AG's production plants in Germany and the rest of Europe which are located in the vicinity of protected sites pursuant to Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (The Habitats Directive).

* Area = surface area of the production site

Goals and actions

THE MOST IMPORTANT ECONOMIC, SOCIAL AND ENVIRONMENTAL GOALS OF THE VOLKSWAGEN SUSTAINABILITY PROGRAMME ARE SET OUT BELOW.

ECONOMY

Goal	Action	Deadline	Status
Increase efficiency of vehicles, powertrains and technology and boost environmentally compatible production	More than two thirds of total investment programme of €50.2 billion to flow directly into increasingly efficient vehicles, new technologies and environmentally compatible production	by 2015	● ○ ○
Top customer satisfaction: Top 3 in all markets measured by the NCBS and IACS strategic studies for the questions: satisfaction with purchase, product and last workshop visit	19 markets worldwide to be integrated into the customer satisfaction programme	2018	● ○ ○
Extend and interlink compliance activities in China	Compliance in China is a key focus for 2013 including various communication measures	2013	● ● ○
Prevent money laundering	Identification of at-risk units; creation of necessary structures together with development and implementation of necessary training courses	2013	● ● ○
Reinforce exchanges between the members of the international Compliance organisation	Direct support in particular for plants in international growth markets by staff from corporate functions	ongoing	● ● ○
Embed anti-trust and competition law in corporate culture	Training courses	ongoing	● ○ ○
Add greater depth to the corporate compliance culture	Target-group specific information to be communicated via various internal media (e.g. videos, apps, etc.) in different brands and companies	ongoing	● ● ○
Further expand opportunities to use online learning programs about the Code of Conduct	Obligatory participation in online learning programs about the Code of Conduct for new employees of Volkswagen AG	ongoing since 2012	● ● ●
Introduce in-depth supplier sustainability audits	Implementation of "Sustainability in Supplier Relations" concept	2013	● ○ ○
Introduce additional supplier training courses on sustainability	Implementation of "Sustainability in Supplier Relations" concept	2013	● ○ ○

Goal	Action	Deadline	Status
Work exclusively with suppliers who meet all of Volkswagen's specific sustainability requirements	Implementation of "Sustainability in Supplier Relations" concept	ongoing since 2006	● ● ●
Enhance responsible supply chain management	Global e-learning on the Group Business Platform Expansion of country risk profiles Extension of supplier monitoring and supplier development	2012 2012 2013	● ● ● ● ● ● ● ● ○
Group-wide inclusion of human rights in compliance risk analysis	The "Guiding Principles on Business and Human Rights: Implementing the United Nations 'Protect, Respect and Remedy' Framework" have led to the topic of human rights being included in the annual compliance risk analysis process and for the first time being assessed across the Group. Among other things, Volkswagen is monitoring the risks in respect of human rights in the context of sustainability in the supply chain	2013	● ○ ○

SOCIETY

Goal	Action	Deadline	Status
Strengthen vocational training internationally and introduce Meister (foreman/group leader) qualification worldwide	Implementation of specialist training and Meister qualification in accordance with globally identical quality standards and on the basis of uniform skills	2018	● ● ○
Develop university graduates into top experts	Excellent levels of qualification in all "Berufsfa-milien" (vocational groups). Principle: the young learn from the experienced	ongoing	● ● ○
Enhance performance and ensure all employees share in success/profits	Establishment of three-part pay system with basic pay, profit-sharing and performance-related components as Group standard	ongoing	● ● ○
Promote health, fitness and ergonomics	Extension of Volkswagen Checkup and subsequent prevention programmes; continuous improvement of ergonomics	ongoing	● ● ○
Increase the proportion of women at all levels of management	The Volkswagen Group is endeavouring to ensure that women fill 30% of management posts at all levels. Broadening the provision of HR development programmes for women	ongoing	● ● ○
Introduce Group-wide analysis of the effectiveness of Corporate Citizenship activities	Inclusion of Corporate Citizenship activities in IT-based sustainability management system. Development and implementation of pilot projects for measuring the effectiveness of Corporate Citizenship activities	2015	● ○ ○

ENVIRONMENT AND SUSTAINABLE MOBILITY

Goal	Action	Deadline	Status
Reduce CO ₂ emissions for the European new car fleet by around 30 percent between 2006 and 2015 to below 120 g CO ₂ /km	Wide-ranging actions to optimise consumption through the Volkswagen Group's Powertrain and Fuel Strategy	by 2015	● ● ○
Reduce CO ₂ emissions for the European new car fleet to 95 g CO ₂ /km	Wide-ranging actions to optimise consumption through the Volkswagen Group's Powertrain and Fuel Strategy	2020	● ○ ○
Every new model to be 10-15 percent more efficient on average than its predecessor	Systematic implementation of the Group Environmental Principles, Product	by 2015	● ● ○
"Think Blue." to be permanently established as the mindset of the Volkswagen brand on ecological sustainability, through increasing internationalisation, stakeholder involvement and integration along the value chain	Making "Think Blue." part of the product experience by measures such as "Think Blue. Trainer." Ongoing communication of core measures relating to alternative powertrains (e.g. electric mobility, CNG, etc.) Ongoing communication of innovative mobility concepts (e.g. Quicar car-sharing)	2011, ongoing	● ● ●
	International fuel-efficient driving championship: "Think Blue. World Championship 2012."	2011, 2012	● ● ●
	Inclusion in various consumer shows with engaging exhibits (Beijing, Detroit, Geneva, Paris, Hanover)	2012	● ● ●
	Continuous involvement of employees worldwide on topics of environmental relevance, such as use of a monthly newsletter, publication on intranet or in employee magazine	2011, ongoing	● ● ●
Electromobility to be established as an integral part of the Group's CO ₂ mitigation strategy	Market launch of the e-up! and e-Golf Market launch of the XL1 with plug-in hybrid technology Market launch of models with plug-in hybrid technology Market leadership in the electric mobility sector Group-wide modular electric traction system	2013, 2014 2013 from 2013 2018 from 2013	● ● ○ ● ● ○ ● ● ○ ● ● ○ ● ● ○
Production operations at the Volkswagen Group to be 25 percent more eco-friendly by 2018. In concrete terms that means 25 percent less energy and water consumption, waste and emissions	Systematic implementation of the Group Environmental Principles, Production	2018	● ● ○

○○○ not begun ●○○ action started ●●○ goal partially achieved ●●● goal achieved

Goal	Action	Deadline	Status
Reduce greenhouse gas emissions in the supply of energy to production facilities in Germany by 40 percent by 2020	Investment of €600 million in the expansion of the renewable resources solar power, wind energy and hydroelectricity	2020	● ● ○
Produce efficiency models locally in China	Local production of "BlueMotion" models. Use of consumption-reducing technology in ŠKODA GreenLine models (at SVW) and Audi vehicles (at FAW-Volkswagen)	from 2012	● ○ ○
Increase road safety in China	Volkswagen Road Safety is a TV series promoting road safety in China, made in collaboration with the founders of "Der 7. Sinn", a German road safety programme, and Chinese producers and is set to run until 2016	ongoing until 2016	● ● ○
Audi balanced mobility: vision for CO ₂ -neutral mobility	The Audi e-gas project makes use of environmentally friendly renewable energy sources for producing fuels for various environmentally friendly powertrain technologies. Power generated by four offshore wind turbines in the North Sea is used to produce e-gas, a CO ₂ -neutral, artificial methane gas. It can be fed into the natural gas grid and thus be used to power the A3 TCNG fleet. The 1.4 TFSI, specially adapted for use with natural gas, is the basic engine for the A3 TCNG. Project: e-gas using A3 TCNG by way of example (2nd prize in the 2011 "Grüne Lenkrad" awards for environmental technology)	ongoing	● ● ○
Optimise combustion engine – Audi	Audi: "Cylinder on demand" to boost efficiency under part load. Under low loads, the system deactivates four of the eight (or two of the four) cylinders, cutting fuel consumption by up to ten percent at moderate motorway speeds - 4.0 series TFSI - S8/S7/S6 4.0 TFSI - A1 and A3 NF 1.4 TFSI	2011-2012	● ● ●
Reduce greenhouse gas emissions	Start-up of MQB platform (in-engine innovations such as variable valve control, intelligent thermal management and demand-based control of auxiliary units) Cylinder-on-demand technology in four- and eight-cylinder petrol engines (see entry above for Audi) Start-up of Modular diesel system (MDB) (new generation of three- and four-cylinder engines)	2012, ongoing	● ● ●
Ensure recyclability and labelling of materials	Processes in place, continuous external monitoring of processes and vehicle models	ongoing	● ● ○

Goal	Action	Deadline	Status
Increase use of recycled materials	Apart from justified exceptions, use is generally approved, providing quality and availability criteria are met	ongoing	● ● ○
Improve resource transparency	Joined Extractive Industries Transparency Initiative	2012	● ● ●
Enable use of alternative fuels taking regional circumstances into account	eco up! with emissions of 79 g CO ₂ /km Market launch of Golf TGI BlueMotion 94 g CO ₂ /km Evaluation of the availability of "green electricity" as energy source (e.g. as electricity, hydrogen, synthetic natural gas) for mobility in 2030 Evaluation of production processes for liquid and gaseous fuels based on biomass and CO ₂	2012 2013 ongoing ongoing	● ● ● ● ● ● ● ● ○ ● ● ○
Develop and provide alternative powertrain technologies	Electric mobility field testing by VW Commercial Vehicles with seven E-Caddy vans in cooperation with state capital Hanover; Stadtwerke Hannover AG (enercity), Deutsche Messe AG and Gesellschaft für Bauen und Wohnen mbH (GBH) Production of a small batch of 40 E-Caddy vans SEAT: GreenLion project (battery modules) Electric mobility: fleet trials in Austria, France, Belgium and USA Audi A4 Plug-In Hybrid Audi A6 4x4 Plug-In Hybrid Porsche Spyder 918 Porsche Panamera Plug-In Hybrid Volkswagen Golf TSI twinDRIVE Audi A3 Plug-In Hybrid Volkswagen Passat Plug-In Hybrid Porsche Cayenne Plug-In Hybrid Audi Q7 Plug-In Hybrid Audi A8 Plug-In Hybrid	2011–2013 2012 2011–2014 2012 2015 2017 2013 2013 from 2014 from 2014 from 2014 from 2014 from 2014 from 2014 from 2014 from 2014 from 2014 from 2014	● ● ○ ● ● ● ● ● ○ ● ● ● ● ● ○ ● ○ ○ ● ○ ○ ● ● ○ ● ● ○ ● ○ ○
Reduce fuel consumption by cutting vehicle weight while taking account of design and customer requirements	New SEAT Exeo and ST estate with output of 88 kW or 105 kW – emissions of 117 g CO ₂ /km (saloon) and 119 g CO ₂ /km (estate). Average fuel consumption for both variants: 4.5 l/100 km New SEAT Leon 1.6 TDI Ecomotive with output of 77 kW/105; 3.8 l/100 km – 99 g CO ₂ /km	from 2013 from 2013	● ● ● ● ● ●

FRAME OF REFERENCE

Indicator / Document	Frame of reference	Notes	Cross-refer- ence (p./>)
Environmental indicators	Volkswagen Group, deviations marked		142-147
Social indicators	Volkswagen Group Volkswagen Group in Germany Volkswagen AG	Report on respective scope of validity can be found on pages 138 ff.	138-141
Financial indicators	Volkswagen Group		136-137
Model of Sustainable Development	Volkswagen Group	Introduced in 2002	9
Code of Conduct	Volkswagen Group	Introduced in 2010	42 f., 80, 15
Volkswagen Group requirements for sustainable development with regard to relationships with business partners	Volkswagen Group, all tier 1 suppliers	Introduced in 2006	34 f.
Mission Statement on Biodiversity	Volkswagen AG	Introduced in 2008	125
Environmental Policy	Volkswagen Group	Introduced in 1995	94 ff.
Environmental Principles, Product	Volkswagen Group	Introduced in 2008	94 ff.
Environmental Principles, Production	Volkswagen Group	Introduced in 2007	94 ff.
Factory Agreement on Environmental Protection	Volkswagen AG	Introduced in 1995	96
Declaration on Social Rights and Industrial Relations at Volkswagen (Social Charter)	Countries and regions represented in the Volkswagen Group Global Works Council	Introduced in 2002, updated in 2012	19, 18
Charter on Labour Relations	Volkswagen Group	Introduced in 2009	19, 17
Occupational Safety Policy	Volkswagen Group	Introduced in 2004	76, 66



Background.

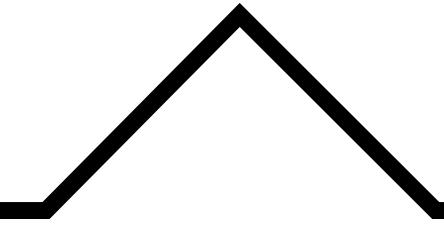
6

Background.

HIGHLIGHTS AND LOWLIGHTS // CONSUMPTION AND EMISSION DATA // GRI INDEX //
GRI STATEMENT // INDICES, RATINGS, RANKINGS AND AWARDS // INDEPENDENT ASSURANCE
REPORT // LIST OF LINKS // CREDITS



Anyone seeking to accurately appraise a company's commitment does well not to just skim the surface. It takes a careful look behind the scenes to see how things are really connected.



Highlights

Volkswagen opens up perspectives for specialists from Southern Europe

The Volkswagen Group is now offering a new programme for young people from Southern Europe, offering them an opportunity to kick-start a career with Europe's largest automaker. The "StartUp Europe" trainee programme is tailor-made for engineers wanting to gain international experience after obtaining their degree.

Volkswagen Group adopts Charter on Temporary Work

The Group Board of Management, the European Group Works Council and the Global Group Works Council of Volkswagen Aktiengesellschaft have adopted a "Charter on Temporary Work for the Volkswagen Group". The charter lays down the principles for the use of temporary work throughout the Volkswagen Group. The points covered include ensuring appropriate employment and remuneration conditions for temporary external personnel.

Stiftung Warentest gives Quicar top rating

Volkswagen's Quicar car-sharing service has been awarded a top rating of 1.8 by consumer organisation Stiftung Warentest. Nine car-sharing firms from Germany and the Netherlands were assessed, with test winner Quicar presenting a compelling case to the experts in categories including booking, driving and online presence.

Sustainovation Award

The environmental programme "Think Blue. Factory." has been presented with the "Sustainovation Award 2012" by German business magazine *WirtschaftsWoche* and the Al-

tran Foundation for Innovation. Volkswagen has a clear objective with this international initiative: to improve key environmental performance figures. The aim is to achieve a 25 percent reduction in levels of energy consumption, waste, water consumption, CO₂ and solvent emissions by 2018.

Presentation of the new Golf

Volkswagen celebrated the world premiere of the new Golf in Berlin on September 4. The seventh generation of the VW model is the best Golf ever built. Across the entire engine range, Volkswagen has managed to reduce CO₂ emissions from the new Golf by an average of around 14 percent.

Gelber Engel

Volkswagen won the 2013 Gelber Engel ("Yellow Angel") award from German automobile club ADAC in the "Innovation and Environment" category in recognition of its efficient three-cylinder natural gas engine.

Winning support for "A chance to play" project

Volkswagen is donating €2 million to support disadvantaged children and young people in Brazil. "A chance to play", launched to coincide with the football World Cup 2010 in South Africa by Volkswagen Group Works Council and children's rights organisation "terre des hommes", strives to improve the lives of impoverished children at Volkswagen locations around the world. In the run-up to the 2014 World Cup, the initiative will now be supporting 14 projects targeting child poverty in host country Brazil, reaching out to 60,000 children.

Lowlights

Poor performance in CSR Online Awards

The CSR Online Awards presented by Lundquist reflect the Milan-based communications consultancy's analysis of sustainability reporting by large companies on the Internet. In 2012 the lion's share of companies failed to do justice to the possibilities offered by the medium with their static communications approaches. Volkswagen was among those who slipped down the rankings – from 51st (2011) to 93rd (2012).

Greenpeace protest

Environmental organisation Greenpeace staged various protests during the reporting year – e.g. at the Annual General Meeting in Hamburg, the presentation of the new Golf in Berlin's Nationalgalerie and the Paris Motor Show. Greenpeace accuses Volkswagen of bringing vehicles onto the market with excessive fuel consumption and thus CO₂ emissions – and therefore failing to meet its responsibilities with regard to environmental protection.*

Weak start for home power plants

The "home power plant" is a Volkswagen EcoBlue natural gas-powered cogeneration plant produced by the Group exclusively for LichtBlick. It produces combined heat and power for private homes. In 2011 Volkswagen and LichtBlick set themselves a goal of installing around 100,000 such facilities within Germany. In 2012 it became clear that this aim was far too ambitious.

"auto motor und sport" reports negative trend in "eco-compatible cars" category

Since 2010 the Volkswagen brand has seen its image suffer in the "makes eco-compatible cars" category of "auto motor und sport" magazine's annual appraisal – despite its use of innovative, fuel economy-enhancing and low-emission technologies. Volkswagen currently ranks only third, behind Toyota and BMW.

Transparency International criticises sustainability reporting of German companies

The anti-corruption organisation Transparency International Deutschland (TI) has criticised the sustainability reports issued by German companies for failing to deliver on their promises in the fight against corruption. According to Transparency International, the information given in the sustainability reports of many German car makers did not fully satisfy the requirements of the GRI indicator protocols for the four GRI core indicators examined by TI. Volkswagen was one of the companies cited.  162

* Following the Geneva Motor Show, Volkswagen and Greenpeace signed a joint statement on the 95 g/km goal adopted by Volkswagen. In this statement, Volkswagen and the independent environmental protection organisation agree to maintain an ongoing process of constructive dialogue.  165

Consumption and emission data

Model	Output kW (hp)	FUEL CONSUMPTION (L/100 KM)			CO ₂ EMISSIONS (G/KM) combined
		urban	extra-urban	combined	
Audi A3 Sportback 1.6 TDI	77 (105)	4.6	3.3	3.8	99
Bentley Mulsanne 6.75-litre twin-turbo V8	377 (512)	25.3	11.8	16.9	393
Bugatti Veyron Fbg par Hermès	736 (1,001)	41.9	15.6	24.9	596
SEAT IBIZA SC CUPRA 1.4 TSI DSG	132 (180)	7.5	5.1	5.9	139
ŠKODA Citigo CNG Green tec (CNG)	50 (68)	5.5 m ³ (3.6 kg)	3.8 m ³ (2.5 kg)	4.4 m ³ (2.9 kg)	79
ŠKODA Octavia 1.4 TSI Green tec	103 (140)	6.5	4.6	5.3	121
Porsche Boxster manual	195 (265)	11.4	6.3	8.2	192
Volkswagen eco up! 1.0 EcoFuel (CNG)	50 (68)	5.5 m ³ (3.6 kg)	3.8 m ³ (2.5 kg)	4.4 m ³ (2.9 kg)	79
Volkswagen Golf 1.6 TDI BlueMotion, 5-speed manual	77 (105)	4.6	3.3	3.8	99
Volkswagen Jetta Hybrid 1.4 TSI	110 (150)	4.4	3.9	4.1	95
Volkswagen Passat 1.4 TSI EcoFuel (petrol)	110 (150)	9.0	5.4	6.8	157
Volkswagen Touareg Hybrid 3.0 V6 TSI	279 (380)	8.7	7.9	8.2	193
Volkswagen Touran 1.4 TSI EcoFuel (CNG)	110 (150)	9.5 m ³ (6.2 kg)	5.8 m ³ (3.8 kg)	7.2 m ³ (4.7 kg)	128

Model	FUEL CONSUMPTION (L/100 KM)		CO ₂ EMISSIONS (G/KM) combined
	combined	combined	
Audi A1	5.9 – 3.8		139 – 99
Audi A3	6.6 – 3.8		152 – 99
Audi A6	9.7 – 4.9		226 – 129
Audi Q7	10.7 – 7.2		249 – 189
Audi A8	10.1 – 6.0		235 – 147
Lamborghini Gallardo Spyder	13.8 – 13.6		330 – 327
SEAT Exeo	7.7 – 4.5		179 – 117
SEAT Exeo ST Kombi	7.4 – 4.5		172 – 119
SEAT Leon	5.2 – 3.8		120 – 99
SEAT Mii	4.7 – 4.1		108 – 95
ŠKODA Octavia	7.8 – 3.8		182 – 99
ŠKODA Rapid	6.1 – 3.9		137 – 104
Volkswagen Caddy EcoFuel	8.7 m ³ (5.7 kg) – 8.8 m ³ (5.8 kg)		157 – 156
Volkswagen Golf	5.2 – 3.8		122 – 99
Volkswagen Golf BlueMotion	5.5 – 3.8		129 – 99
Volkswagen Golf Variant	6.4 – 4.2		149 – 109
Volkswagen Jetta	7.7 – 4.1		178 – 95
Volkswagen Polo BlueMotion	3.4 – 3.3		89 – 87
Volkswagen XL1	0.9		21

GRI Content Index

The present Sustainability Report takes full account of the reporting guidelines of the Global Reporting Initiative (GRI). Selected indicators and the degree to which they are reported are set out on this page. A full overview with supplementary indicators and corresponding answers is available on the internet. [163](#)

GRI Standard Disclosure	Reference	Status	UNGC	GSC
Strategy and Analysis				
1.1 Statement from the most senior decisionmaker	8, AR 22, 23	●		1
1.2 Key impacts, risks	8, 26, 27, 98, 99	●		2
Organizational Profile				
2.1 Name of the organization	10	●		
2.2 Brands, products and/or services	10, 11, AR 104-128	●		
2.3 Operational structure	10, 11, AR 143-146	●		
2.4 Headquarter location	10	●		
2.5 Countries in operation	10, 11, 12, 13	●		
2.6 Nature of ownership	10, AR 143-146	●		
2.7 Markets served	10, 11, 50, 51, AR 104-128, 153-157	●		
2.8 Scale of the organization	10, 11, AR 104-128	●		
2.9 Significant changes regarding size, structure or ownership	10, 11, AR 144, 153, 165 128, 129, 156, 163	●		
2.10 Awards received		●		
Reporting Parameters				
3.1 Reporting period	2	●		
3.2 Date of most recent previous report	2	●		
3.3 Reporting cycle	2	●		
3.4 Contact point for questions	169	●		
3.5 Process for defining report content	26, 27	●		
3.6 Boundary of the report	2, 12-13, 50-55	●		
3.7 Limitations on the scope or boundary of the report	2, 136-147, 155	●		
3.8 Joint ventures, subsidiaries, and outsourced operations	2, 136-147, 155	●		
3.9 Data measurement techniques	136-147	●		
3.10 Effects of re-statement or information provided in earlier reports	2, 10, 26-29, 136-147	●		
3.11 Significant changes in the scope, boundary or measurement methods	2, 10, 136-147	●		
3.12 GRI Content Index	160, 161, OSR 163	●		
3.13 External assurance	166, 167	●		

Status: ● fully reported
○ partly reported
■ not reported

AR = Annual Report
GP = Group Portal www.volkswagenag.com
BP = Brand Portal www.volkswagen.com
OSR = Online Sustainability Report
UNGC = United Nations Global Compact
GSC = German Sustainability Code
D = Direct Answer (online-index)

GRI Standard Disclosure		Reference	Status	UNGC	GSC
Governance, Commitments, and Engagement					
4.1	Governance structure	17, AR 133, 145-150	●	1-10	
4.2	Indication whether chairperson is also executive officer	17, AR 133-150	●	1-10	
4.3	Independent members at the board	AR 147-150	●	1-10	
4.4	Mechanisms for shareholders and employees to provide recommendations to the board	8, 42, 43, AR 136, GP	●	1-10	
4.5	Linkage between executive compensation and organization's performance	66-68, AR 133, 137-142	●	1-10	8
4.6	Processes to avoid conflicts of interest at the board	17-21, AR 131-140	●	1-10	
4.7	Expertise of board members on sustainability topics	16, 17, 26-27, AR 131-140	●	1-10	
4.8	Statements of mission, codes of conduct, and principles	8, 9, 18-20	●	1-10	5
4.9	Procedures of board governance on management of sustainability performance	8, 16-21, AR 192, 193	●	1-10	6
4.10	Processes for evaluation of the board's sustainability performance	16, 17, AR 131-136	●	7, 8	
4.11	Precautionary approach	10-19, 23-29	●	7	
4.12	External charters, principles, or other initiatives	8, 18-21, AR 192-195	●	1-10	3
4.13	Memberships in associations	18-27, OSR 11	●	1-10	
4.14	Stakeholder groups	24, 25, OSR 11	●	9	
4.15	Stakeholder identification and selection	22, 23	●	9	
4.16	Approaches to stakeholder engagement	18-27	●	9	
4.17	Topics and concerns raised by stakeholders	2, 8, 12-27, 15, 28, 56, 91	●	9	
Economic Performance Indicators					
	Disclosure on management approach	10, 11, 20-47	●	1, 4, 6, 7	
EC1	Direct economic value generated and distributed	84-85, 136-137	●		18
EC2	Financial implications due to climate change	97-103, AR 231-233	●	7	
EC3	Coverage of the organization's defined benefit plan	136, AR 189, 216-217	●		
EC4	Financial government assistance	AR 279, 285	●		
EC6	Locally-based suppliers	34-39, 48-49, 69-70, OSR 17	●		
EC7	Local hiring	48-49, 60-66, 69-70, OSR 17, D	●	6	
EC8	Infrastructure investment and services for public benefit	48-49, 81-89, 137	●		
Environmental Performance Indicators					
	Disclosure on management approach	8, 16-20, 94-117, 120, 121, 124-127, OSR 15, 24, 25, 83, 88	●	7, 8, 9	
EN1	Volume of materials used	35, 101, 102, 120, OSR 124, AR 222	●	8	11
EN2	Recycled materials	121, 122, OSR 127, 128, 129, 131, D	●	8, 9	12
EN3	Direct primary energy consumption	16, 92, 98, 110-112, 142, OSR 85, 86, 160	●	8	12
EN4	Indirect primary energy consumption	98, 111, 142, OSR 120, 160	●	8	12
EN8	Total water withdrawal	122-124, 146, OSR 78, 91, 132, BP	●	8	12
EN11	Land assets in or adjacent to protected areas	124-127, 147, OSR 78, 151, 152, 153, 154, 155, AR 225	●	8	
EN12	Impacts on biodiversity	124-127, OSR 23, 78, 151, 152, 153, 154, 155, AR 225	●	8	
EN16	Greenhouse gas emissions	142-143, AR 221	●	8	13
EN17	Other greenhouse gas emissions	98, OSR 86, D	●	8	13
EN19	Emissions of ozone-depleting substances	D	●	8	
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EN21	Water discharge	146, OSR 85, BP	●	8	
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LA2 Employee turnover	141	●	6	
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LA10 Training per employee	65	●		16
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PR6 Marketing communication standards	16-21, 32-33, 107, OSR 15, 114, 137, BP	●		
PR9 Sanctions for non-compliance with product and service related regulations	AR 233-234	●		

Status: ● fully reported

● partly reported

● not reported

AR = Annual Report

GP = Group Portal www.volkswagenag.comBP = Brand Portal www.volkswagen.com

OSR = Online Sustainability Report

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 2012" 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

Application Levels do not provide an opinion on the sustainability performance of the reporter nor the quality of the information in the report.

Amsterdam, 26 March 2013

Nelmaria Arbex
Deputy Chief Executive
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

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 19 March 2013. GRI explicitly excludes the statement being applied to any later changes to such material.

Indexes, ratings, rankings and awards.

This report was prepared in accordance with the internationally recognised G3 sustainability reporting standards of the Global Reporting Initiative (GRI). This label documents the fact that the information in this report meets the requirements of the GRI. ↗ 163

Indexes

ASPI Advanced Sustainability Performance Index	listed	
Dow Jones Sustainability Index (DJSI) World	listed	
ECPI Ethical Index Europe	listed	
ECPI Ethical Index EMU	listed	
ECPI Ethical Index Global	listed	
ESI Excellence Euro	listed	
ESI Excellence Europe	listed	
ESI Excellence Global	listed	
FTSE4Good	listed	
STOXX® Global ESG Leaders indexes	listed	
Storebrand Trippel Smart and SPP Global Topp 100*	listed	

Ratings & rankings

Carbon Disclosure Project	93%; B**	
Oekom Research	Prime Status	
Sustainalytics – DAX 30	ranked 3rd	
VCD automobile manufacturer ranking		
“Environmental Management”	ranked 2nd	
Reputation Institute – DAX 30	ranked 2nd	

Awards

Ethics in Business Award		
in the category “Outstanding Corporation”	award-winner 2012	
Automotive Award – Media & Publications		
in the category “Digital Media”	award-winner 2012	
SAM Sustainability Awards ↗ 164	finalist 2012	

* This Norwegian pension fund ranks the world's top 100 most sustainable companies but is, strictly speaking, not a classical stock market index.

** 93% = Disclosure Score; B = Performance Score



To be continued.



A 170-page Sustainability Report – packed with examples of corporate responsibility in action. Our commitment has nothing to do with following trends. It helps us build better cars. www.sustainability-report2012.volkswagenag.com

Independent Assurance Report

To Volkswagen Aktiengesellschaft, Wolfsburg

We have been engaged by Volkswagen AG to perform an independent assurance engagement to attain moderate assurance¹ in respect of observing the AA1000 AccountAbility Principles and regarding individual quantitative sustainability data selected by Volkswagen AG in the Sustainability Report 2012 of Volkswagen AG, Wolfsburg.

Responsibility of the legal representatives

It is the responsibility of the legal representatives of the Company

- to comply with the principles of inclusivity, materiality and responsiveness as defined in the AccountAbility Principles Standard (2008) (the “AA1000 AccountAbility Principles”), and
- to prepare the sustainability information in the Sustainability Report 2012 in accordance with the criteria set out in the Sustainability Reporting Guidelines Vol. 3.0 (pages 7 to 17) of the Global Reporting Initiative (GRI).

This responsibility includes the conception, implementation and maintenance of systems and processes for ensuring compliance with the AA1000 AccountAbility Principles and the preparation of the Sustainability Report 2012 using assumptions and estimations that are appropriate under the given circumstances.

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 of inclusivity, materiality and responsiveness; or
- the selected quantitative sustainability information set out in the Sustainability Report 2012 has not been prepared in compliance with the criteria set out in the Sustainability Reporting Guidelines Vol. 3.0 (p. 7 to p.17) of the Global Reporting Initiative (GRI).

The individual quantitative sustainability information selected by Volkswagen AG for calendar year 2012, which is included in our engagement, can be found on pages 136 to 147 of the Sustainability Report 2012, excluding the Employee Opinion Survey in the Volkswagen Group, Scope, 3-Emissions Group, Particles Emission, Water Consumption according to Sources and Sites in the Proximity of Protection Areas. The indicators for calendar year 2012, which we audited, are marked separately with the following symbol .

We were also engaged to provide recommendations for the further development of Corporate Social Responsibility (CSR)

Management and CSR Reporting on the basis of 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 the International Standard on Assurance Engagements (ISAE) 3000.

These standards require that we fulfill our professional duties and plan and conduct the engagement in accordance with the principle of materiality so that we can form an opinion with moderate assurance,¹ which is the degree of assurance that was required by Volkswagen AG. We are independent, as defined by Section 3.2 of AA1000AS (2008).

Due to our expertise and experience in auditing non-financial information, sustainability management and social and ecological issues, we have the competencies required to conduct this independent assurance engagement.

An independent assurance engagement performed to obtain moderate assurance¹ is less substantial in scope than an independent assurance engagement performed to obtain high assurance², 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.

With regard to compliance with the AA1000 AccountAbility Principles, our examination procedures included the following:

- Discussions with management
- Gaining an understanding of the relevant systems and processes and comprehension of relevant documentation
- Random sampling to obtain evidence of the implementation and appropriateness of the relevant systems and processes

With regard to the selected sustainability information in the Sustainability Report, our work included the following examinations, inter alia:

- Discussions with the employees responsible for the reporting of sustainability information
- Examination of the systems and processes for the compilation, calculation and reporting of sustainability information
- Functional examination of the controls respecting the assurance of data quality
- Analytical assessment of selected sustainability data

Depending on the selected sustainability information, various audit activities are performed at Group, brand and plant level:

¹“Moderate assurance” as specified by AA1000AS (2008) is equivalent to “limited assurance” as specified by ISAE 3000.

²“High assurance” as specified by AA1000AS (2008) is equivalent to “reasonable assurance” as specified by ISAE 3000.

Volkswagen

- Volkswagen PKW, Wolfsburg
- Volkswagen Poznán Sp.z.o.o
- Volkswagen Autoeuropa, Lda., Setubal
- Volkswagen de México, S.A., Puebla
- Shanghai-Volkswagen Automotive Company Ltd., Shanghai-Anting
- Volkswagen FAW Engine Co., Ltd. & Volkswagen Automatic Transmission Co.,Ltd., Dalian
- Volkswagen Kraftwerke GmbH, Wolfsburg

Audi AG, Ingolstadt

Seat SA, Martorell

Skoda Auto a.s., Mladá Boleslav

MAN SE, München

Material findings and judgments

Findings with regard to the AA1000 AccountAbility Principle of Inclusivity:

- Internal documentation and publicly accessible information provide evidence of the identification and analysis of significant internal and external stakeholder expectations.
- Independent stakeholder management systems are developed by individual brands.
- Involvement of management in the results of stakeholder processes at Group level is ensured.
- Formal requirements for stakeholder management have not yet been defined at Group-wide level.

Findings with regard to the AA1000 AccountAbility Principle of materiality:

- The process to determine the materiality of sustainability issues is based on adequate criteria and has been established.
- The identified relevant topics are prioritized within the scope of sustainability reporting.
- The inclusion of brands and regions in the materiality process is not uniform.

Findings with regard to the AA1000 AccountAbility Principle of responsiveness:

- Volkswagen AG has established procedures for responding to sustainability issues that are important to stakeholders.
- The brands and regions as well as individual companies of the Volkswagen Group sometimes do not have systematic procedures for standardized response to stakeholder inquiries.

On the basis of our moderate assurance engagement to obtain a 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 AA1000 AccountAbility Principles of inclusivity, materiality and responsiveness.

Furthermore, nothing has come to our attention that causes us to believe that, in all material respects, the selected quantitative sustainability information of the Sustainability Report has not been prepared in accordance with the above-mentioned crite-

ria of the Sustainability Reporting Guidelines Vol. 3.0 (p. 7 to p. 17) of the Global Reporting Initiative (GRI).

Recommendations

Without qualifying our audit opinions stated above, we make the following recommendations concerning further development of stakeholder management, sustainability management and sustainability reporting:

Recommendations regarding stakeholder management:

- A higher-level framework (e.g. guideline) should be established with the aim further developing the steering and monitoring of Group-wide stakeholder activities.
- Ensuring consistent handling of stakeholder concerns Group-wide is just as necessary as the establishment of escalation mechanisms regarding potentially critical issues.
- Documentation requirements regarding stakeholder management should be standardized.

In addition, we recommend:

- Company's dynamic and globality should take into account the continuous further development of the Group-wide sustainability management.
- Systematization of significant aspects of sustainability management concerning all brands and regions should be promoted Group-wide.
- Systematic and continuous integration of sustainability aspects in the core processes of the Company.
- Successive and Group-wide further development of the steering system as well as improvement of existing process and control mechanisms regarding internal reporting on sustainability data.
- Further Group-wide automation of data consolidation, e.g. through use of a higher-level IT system for the reporting of sustainability data.
- Continuous and systematic further development of the target and measures catalogue and systematic implementation of same.

Hanover, March 21, 2013

**PricewaterhouseCoopers
Aktiengesellschaft
Wirtschaftsprüfungsgesellschaft**

Harald Kayser
Wirtschaftsprüfer

Michael Werner

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PUBLISHER

Volkswagen Aktiengesellschaft
Berliner Ring 2
38440 Wolfsburg, Germany
info@volkswagen-nachhaltigkeit.de

Group Research Environment
Strategy and Mobility
Dr. Hans-Jürgen Stauss

Group External and Governmental Relations
Coordination CSR and Sustainability
Prof. Dr. Gerhard Prätorius

EDITING

Volkswagen Aktiengesellschaft

PROJECT MANAGEMENT

Dr. Daniel-Sascha Roth
Group Research Environment
Strategy and Mobility

CONCEPT AND DESIGN

VOLKE Kommunikations-Design GmbH, Wolfsburg
Volkswagen Aktiengesellschaft

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