

# Sustainability

REPORT 2010

### About this report

#### Contents

This report contains information about the sustainability activities of the Volkswagen Group. It outlines strategic principles and presents practical examples. The report is divided into central chapters on Strategy, Economy, Society and Environment. The key sustainability indicators are set out starting on page 56.

#### Scope

Unless otherwise indicated, the information in this report relates to the entire Group, in which case we refer to the "Group" or "Volkswagen Group". When we use "Volkswagen" on its own, we mean the Volkswagen brand.

The business reports of the individual brands and companies are available on their respective websites.

The period under review extends from 15 June 2009, when the last report went to press, until March 31, 2011. The facts in this report are constantly updated on the Internet. The next Sustainability Report will be published in the second quarter of 2012.

#### >> 01 Internet concept

This printed sustainability report is closely linked to the website volkswagenag.com/sustainability. The entire contents of the present report are also available there. The Internet content is constantly updated.

This website also offers you a wealth of additional in-depth information: The >> 01-numbers in the text of this report indicate a specific link. These sources are listed in the List of Links on page 78 (cover), with a brief indication of their contents. This List of Links can also be found on the website volkswagenag.com/ sustainability, where a click on the relevant link will take you to the appropriate information.

www.volkswagenag.com/sustainability



If you have a smartphone, this code will take you straight to the website volkswagenag.com/ sustainability. The charges depend on your individual mobile call rates.

#### Indexes - Rankings - Awards

The Volkswagen Group is represented in all leading sustainability and corporate social responsibility (CSR) indexes. Moreover, this report was prepared in accordance with internationally recognised reporting standards. An overview of all indexes and awards can be found on page 68.



Furthermore, the selection of topics and our editorial processes and choice of indicators have been analysed and verified by independent auditors and stakeholders. For further information, see the Back-up section starting on page 72.



















#### VOLKSWAGEN FINANCIAL SERVICES

### 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 2010 the Group increased the number of vehicles delivered to customers to 7.2 million (2009: 6.3 million), which equates to a global market share of 11.4 percent. In Western Europe more than one fifth of all new cars (21.0 percent) were manufactured by the Volkswagen Group.

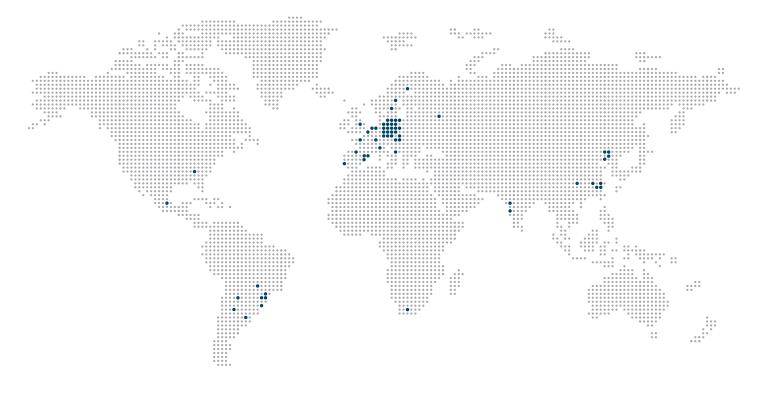
The Group's sales revenue rose from €105.2 billion in 2009 to €126.9 billion in 2010. Profit after tax in the fiscal year 2010 totalled €7.2 billion (2009: €0.9 billion). The Volkswagen Group owns nine brands from seven European countries: Volkswagen, Audi, Škoda, SEAT, Bentley, Lamborghini, Bugatti, Volkswagen Commercial Vehicles and Scania. Each brand has its own distinctive character and operates autonomously in the marketplace. The passenger car portfolio extends from economical compact cars to luxury highend 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 15 European countries and six countries in the Americas, Asia and Africa, the Volkswagen Group operates 62 production facilities (as of December 31, 2010). Around the world, nearly 400,000 employees produce more than 29,600 vehicles per working day or provide vehicle-related services. The Volkswagen Group's sales operations cover more than 150 countries worldwide. The Group's aim is to offer attractive, safe and eco-friendly vehicles that set the global benchmark in their respective classes.

At the end of 2010, the subscribed capital of Volkswagen AG comprised 295,045,567 ordinary shares and 170,142,778 preference shares. Porsche Automobil Holding SE, Stuttgart, held 50.74 percent of the voting rights. The second-largest shareholder was the State of Lower Saxony, with 20.0 percent of the voting rights. Qatar Holding LLC was the third-largest shareholder with 17.0 percent, while Porsche Holding GmbH, Salzburg, held 2.37 percent. The remaining 9.89 percent were held by other shareholders. Information on production and deliveries of the main Volkswagen Group products can be found in the Annual Report 2010 on pages 108-123. » 01

#### **VOLKSWAGEN GROUP**

Data	2010	2009
Vehicle sales (units)	7,278,440	6,309,74
Production (units)	7,357,505	6,054,829
Employees at Dec. 31	399,381	368,500
Proportion of female employees (percent)	14.2	14.7
Health index (percent)	96.7	97.
CO <sub>2</sub> emissions, European new vehicle fleet (g/km)	144	15
Direct CO <sub>2</sub> emissions (kg/vehicle)	175.19	234.6
Energy consumption (MWh/vehicle)	2.55	2.8
Financial data (IFRS), € million	2010	200
Sales revenue	126,875	105,18
Operating profit	7,141	1,85
Profit before tax	8,994	1,26
Profit after tax	7,226	91



7,278,440 vehicles sold

 $399,381_{\substack{\mathsf{employees} \\ \mathsf{worldwide}}}$ 

percent less CO<sub>2</sub> emissions by EU new vehicle fleet (EU 27) than in 2009

models with CO<sub>2</sub> emissions of less than 120 g/km, including 20 with less than 100 g/km » 04, » 05, » 06

8.4 percent more employees than in 2009

production plants, including 57 certified to international environmental management standards such as ISO 14001 and EMAS; 4 plants are currently preparing for certification >> 03

51,585 employees took part in training run by Volkswagen Coaching in 2010

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By 2018 we're aiming to be Number 1 – both economically and ecologically.

#### Dear Reader,

Responsible business management and commercial success are two sides of the same coin. In the last two years the Volkswagen Group has again given an impressive demonstration of this fact. In a challenging environment we have continued to post solid growth, enabling us to set new records in the 2010 financial year with 7.2 million vehicles delivered and an operating profit of  $\epsilon$ 7.1 billion.

Sustainability is and will remain the foundation of our corporate policy. One clear focus is on "green" mobility. This is dictated by both social responsibility and sound business thinking. In the last five years, for example, we have reduced our fleet's  $\rm CO_2$  emissions by 15 percent to 144 grams per kilometre. Today the Volkswagen Group's portfolio already includes 20 model variants with emissions of less than 100 grams of  $\rm CO_2$  /km. Tomorrow's mobility will be determined by efficiency and diversity. Which is why our Group, with the concentrated innovative power of its multi-brand alliance, is forging ahead with the entire technology and powertrain spectrum: from optimised combustion engines through lightweight design to electric drive. With our "one-litre" car XL1 we have already demonstrated technologies that could go into series production in the near future.

Green mobility goes hand in hand with environmentally sound production processes. The Volkswagen Group is making great efforts to further improve resource efficiency at its 62 production facilities. Our new factory in Chattanooga is setting standards in this respect. Equally high standards are characteristic of our worldwide labour relations: our self-image as a fair employer and our established culture of co-determination have proved to be anchors of stability and a clear competitive advantage. Moreover, successful initiatives such as "A chance to play" in South Africa demonstrate that our social commitment does not end at the factory gates.

In keeping with its responsibility for society, environment, employees and customers, the Volkswagen Group continues to adhere to the principles of the United Nations Global Compact. The effectiveness of our sustainability strategy is confirmed by international indexes such as the Dow Jones Sustainability Index and the FTSE4Good, in which the Volkswagen Group is again represented this year. Because sustainability calls for transparency, we have had this report audited in accordance with the AA1000AS standard. The Global Reporting Initiative (GRI) has again awarded us its highest rating "A+".

Supported by corporate leadership that is sustainable in all respects, our 400,000 employees are dedicated to making the Volkswagen Group the world's leading automaker by 2018 – both economically and ecologically. And they are also working on the best ideas for the next 125 years of automotive diversity.

See for yourself how far we have already travelled along this road. We trust you will find informative insights into the world of Volkswagen on the pages of this report, and we look forward to engaging in dialogue with you.



Prof. Dr. rer. nat. Martin Winterkorn



Bernd Osterlol

M. Wanter

Prof. Dr. rer. nat. Martin Winterkorn

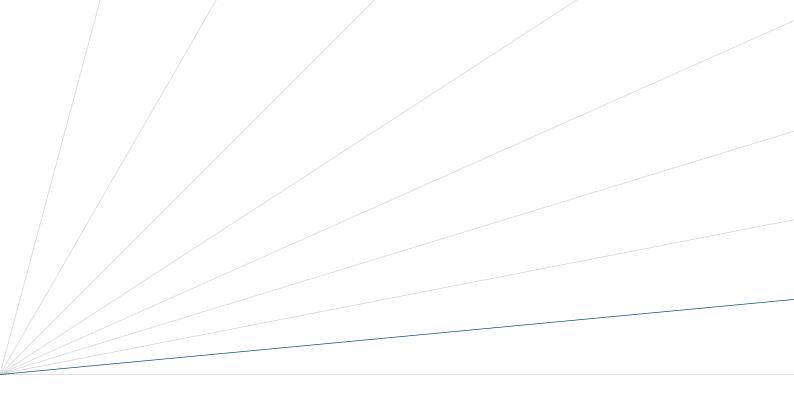
 $Chairman\ of\ the\ Board\ of\ Management\ of\ Volkswagen\ Aktiengesellschaft$ 

Chairman of the General and Group Works Councils



## Driving success.

Our strategy pursues a clear objective: By 2018 the Volkswagen Group is to be the world's most successful and fascinating automobile manufacturer – and the leading light when it comes to sustainability. Our Strategy 2018 paves the way to this goal.



Globalisation has developed an enormous economic momentum. This increases people's prospects of participation. Trade, transport and division of labour are the elementary driving forces behind an economic development that puts people in a position to raise their standard of living.

If, as expected, the world's population grows to more than nine billion by 2050, this means that companies will have to satisfy the needs of billions more people. These people need energy and food, housing and mobility, education and healthcare.

Our Strategy 2018 focuses special attention on the ecological orientation and benefits of our vehicle projects. We will be setting new ecological standards with regard to vehicles, major components and lightweight design.

Technical progress and significant productivity increases, innovations and structural change will help to achieve the necessary improvements. The guiding principle for the 21st century is sustainability. In other words, the way we manage our lives and the resources we consume must not reduce the opportunities available to future generations.

Sustainability is the foundation of Volkswagen's corporate strategy. This means that sustainability is integrated in the entire value-added process. In the long term, corporate responsibility committed to the vision of sustainability safeguards the future viability of the company, while respecting the need to harmonise economic, environmental and social goals.

As a group with worldwide operations, Volkswagen acknowledges this corporate responsibility and devotes its entire innovative power to making an effective contribution to sustainable mobility – with technologies for the cleanest and most economical cars. Job security and profitability are goals of equal importance in Volkswagen's corporate activities.

### Volkswagen stays on course: Strategy 2018

The Volkswagen Group has emerged safely and with renewed strength from the worldwide crisis that was triggered by the financial markets. Deliveries were at an all-time high of 7.2 million vehicles. With growth of 13.7 percent, we outperformed the market as a whole and extended our share of the global passenger car market to 11.4 percent.

With our "Strategy 2018" we are building consistently on the company's strengths and setting new goals. Attractive models and new vehicle segments, plus innovative environmental technologies, are paving the way for increasingly economical combustion engines and powertrains, for hybrid and electric vehicles, and for future biofuels. The latest example is the presentation of the XL1, a study with series-production potential which marks the third stage in the evolution of the Volkswagen Group's "1-litre" car strategy. Its plug-in hybrid system, lightweight design and impeccable aerodynamics enable the two-seater to manage on a bare 0.9 litres per 100 kilometres. That equates to CO<sub>2</sub> emissions of just 24 g/km. Currently the world's most efficient vehicle and due to go into (limited) series production in 2013, the XL1 underpins the

# Steering a clear course

Volkswagen Group's claim to play a leading environmental role. Added to which there are the electric vehicles "up! blue-e-motion", "Golf blue-e-motion" and "Audi A1 e-tron". Through its approach, the Group will be underlining the need for e-mobility to remain affordable.

With these technological innovations, the Volkswagen Group can build on a strong tradition and corporate culture that has always centred on a capacity for social and ecological change. Through our corporate values we are committed to a sustainable and socially responsible course of action. For us, commercial success must invariably go hand in hand with an intact environment and social responsibility.

Our basic position remains that, as the Volkswagen Group, we act responsibly towards our customers, our shareholders, our employees and towards society.

Through our Strategy 2018 we are pursuing the long-term goal of firmly anchoring the Volkswagen Group among the most successful automakers in the world. This applies to profitability, customer satisfaction and quality, to developing new markets and stepping up our production volume, and to our attractiveness as an employer.

With a model portfolio geared to ecological principles and the strong position of its brands in the global marketplace, the Volkswagen Group will be systematically building on its competitive advantages. Our growth strategy is

based on attractive vehicles that appeal to customers in all parts of the world and meet the individual regional requirements and cost targets. Our modular approach will be a great help in this respect. In conjunction with our TSI® and TDI® engines, the innovative DSG® dual-clutch gearbox and future electric powertrains, the MQB will play its part in ensuring that the Volkswagen Group meets its ambitious fuel consumption and emissions targets. With its broad product and segment coverage as a multi-brand company, the Volkswagen Group is in an almost unparalleled position to ensure very speedy implementation of innovations in high-volume brands and markets and thereby achieve significant improvements in efficiency. >> 07

Above and beyond this, we also apply our technological expertise in the interests of other products and services with the aim of safeguarding jobs, protecting the environment and boosting our profitability. These include, for example, projects focused on the development and use of industrial engines or boat engines that combine superior motive power with excellent fuel consumption figures and low emissions.

One milestone here is the incorporation of the million-selling 2-litre natural-gas engine from the Salzgitter plant in the EcoBlue compact CHP units. These are the packages contributed by Volkswagen to the "Home Power Plant" developed by the power partnership with energy supplier LichtBlick. The Home Power Plants are used by LichtBlick to realise an innovative, intelligent heat and power supply concept. In the long

Gaining worldwide acceptance – while catering for regional differences.



term, LichtBlick will be networking 100,000 distributed Home Power Plants to create Germany's largest virtual gas power station. The plants will generate "swarm power" – so called because, as in a swarm of fish, many small units will be moving in the same direction – supplementing fluctuating wind and solar power generation as necessary. The heat produced will be stored and will be available locally for heating and hot water. The first Home Power Plants have already been installed at private and commercial customers in Hamburg. » 35

We can only attain our ambitious goals as carmakers if, in addition to our existing customer base, we succeed in attracting many new customers all over the world. With this in mind, Volkswagen will be providing increasing support for its dealers as the vital link with the customer and expanding its marketing measures. The greatest long-term growth potential in this respect is to be found in Brazil, China, India, Russia and the USA. Localising supplier relations not only makes us less dependent on exchange rates, but enables us to contribute to economic development and location upgrading in the individual countries. And our suppliers are subject to the same ecological and social standards as our own production facilities.

The competence of our employees provides the basis for our business. Volkswagen will only be successful in mastering the present and future challenges of the automobile manufacturing

#### The "1-litre car"

The XL1 prototype, which made its debut at the Qatar Motor Show in January 2011, is a milestone on the way to sustainable mobility. With a consumption of 0.9 I/100 km, the XL1 only emits 24 grams of carbon dioxide per kilometre. This is possible thanks to consistent lightweight design using glass fibre-reinforced plastic, perfect aerodynamics and a plug-in hybrid system. The hybrid system comprises a two-cylinder TDI engine and an electric motor coupled with a 7-speed DSG dualclutch gearbox and a lithium-ion battery.



# litres is all the XL1 needs to go 100 kilometres.

sector if all employees – from apprentice to top manager – consistently deliver the outstanding performance needed to safeguard the excellent quality of innovation and products in the Volkswagen Group in the long term. Outstanding performance, the resulting successes and participation in the rewards are at the focus of Volkswagen's human resources strategy of being a good and attractive employer and building a top team. Be it vocational training, continuing professional development at home and abroad, a forward-looking remuneration policy or employee involvement: the Volkswagen Group always sets standards for good work in a process of dialogue with its employees.

The advancement and professional development of women in particular is a central principle of personnel work at Volkswagen. We are keen to encourage even more female graduates to commit to engineering and scientific professions and play their part in shaping the car of the future. One example of our initiatives here is the "Woman Driving Award".

Our Strategy 2018 will take us forward along our charted course. In this context we assign top priority to ecological relevance and sustainable commercial success. The initiatives that we have already set in motion to boost productivity and quality will continue undiminished. By applying rigorous discipline in terms of costs and capital expenditure, we will put the necessary conditions in place for attaining our long-term earnings targets and ensuring a sustainable high level of liquidity.

For Volkswagen, "green mobility" means no less than setting new ecological standards in automobile manufacturing in order to put the cleanest, most economical – and at the same time most fascinating – cars on the road. To this end Volks-

wagen brings together, under the heading of BlueMotionTechnologies, the best available contemporary environmental technologies. In the next few years we will be investing more than €8 billion a year in developments such as the optimisation of our existing TSI®, TDI® and DSG® technologies, as well as the ongoing enhancement of our TSI® technology to run on natural gas or as a flex-fuel powertrain. We will also be forging ahead with progress in the field of future biofuels. And finally we will be investing a great deal of funds and effort in the electrification automobiles. The success of electric powertrains depends to a very large extent on the batteries employed, and this is an area where much progress still needs to be made. The topic is supplemented by new mobility concepts that create an attractive package of the various means of transport and the ways they are used.

In other words, it will still be some time before the paradigm shift to electric cars takes place. Here too, Volkswagen's credo remains unchanged: we will settle for nothing less than offering our customers the best solution. When developing new vehicles,  $\mathrm{CO}_2$  emissions are a key parameter. Consequently, at every stage of the product creation process, the  $\mathrm{CO}_2$  emissions are determined for all vehicles, and every decision in favour of a specific product is made with a view to its impact on the climate. That way we can ensure that the objectives laid down in the Group's Environmental Principles and in the Environmental Goals of the Technical Development Department are achieved.

The Volkswagen Group's maxim for its progress towards its goal of most successful automaker is to accept responsibility for people, the environment and society. In this way Volkswagen makes a substantial contribution to a world worth living in – today and for future generations.

Improving the efficiency of conventional powertrains while forging ahead with electromobility.



#### Sustainability management

For the Volkswagen Group, living up to our corporate social responsibility (CSR) is a corporate contribution to sustainable development. For us, CSR means voluntary acceptance of responsibility for social concerns on a scale that goes beyond mere compliance with statutory regulations. With its integrated CSR concept, the Volkswagen Group seeks to prevent risks, ensure timely identification of growth opportunities and enhance the company's reputation. As a whole, CSR management and sustainability management make an important contribution to safeguarding the long-term future of the company and increasing its value over time.

#### Model of Sustainable Development

We have formulated the principles of sustainable business in our Model of Sustainable Development. For us this is the benchmark for a corporate strategy focused on the long term, squaring up to challenges which are not only economic, but also ecological and social in nature. >> 08

Since 2006 our CSR Office has been responsible for coordinating corporate activities in the field of CSR and sustainability management throughout the Volkswagen Group. Its task is to determine the strategic direction of CSR and optimise sustainability management activities.

In 2010, with the aim of strengthening management processes, the CSR Steering Group and the Sustainability Reporting Group were combined to form the CSR & Sustainability Steering Group. The CSR & Sustainability Office reports to the CSR & Sustainability Steering Group, which consists of representatives of all central corporate departments at top management level plus the Group Works Council.



In 2010 management processes were strengthened by merging the CSR Steering Group and the Sustainability Reporting Steering Group to form the CSR & Sustainability Steering Group. unit brings together the various sustainability management bodies.

The aim of the Steering Group's work is to foster networks linking internal functions and strengthen the sharing of information between specialist departments. Our CSR project teams carry out cross-functional work on topical issues such as the enhancement of Group sustainability reporting; since the creation of a Group-wide CSR body in 2009 there has been a regular international exchange of information with the CSR coordinators of the brands and regions.

One central field of activity is the establishment of an IT-based CSR key indicator system cutting across regional and brand boundaries. During the last financial year we successfully completed the first phase of the introduction of this key indicator system. We are now in a position to steer CSR activities more efficiently, making them more transparent and more successful. This has created an important foundation for up-to-date CSR and sustainability reporting by the Group. In the second phase we are rolling out the key indicator system across the brands and regions. Thus Volkswagen is meeting its stakeholders' increasing expectations with regard to differentiated, up-to-the-minute reporting of the Group's performance in the fields of CSR and sustainability.

The Volkswagen Group contributes its experience and competence to the business sector's CSR networks at national, European and international levels and supports the projects initiated there. One important task is to prepare information on ecological and social standards for suppliers. For this purpose the online portal of CSR Europe, the leading European business network for corporate social responsibility, provides an important communication platform that enjoys international recognition. We are also actively involved in the steering body of "econsense" – the Forum for Sustainable Devel-

opment of German Business – and in various working groups on issues such as "Making sustainability measurable" and "Sustainability in the supply chain".

#### Stakeholder involvement

As a good "corporate citizen" we are committed to an ongoing dialogue with our stakeholders. Since 2002 Volkswagen has supported the Global Compact (GC) initiated by former UN Secretary General Kofi Annan. With over 7,000 companies in more than 135 countries, this is the world's biggest and most important CSR initiative. Its goal is to bring about a fairer and more sustainable global economy. Volkswagen plays an active part in ensuring that this goal is achieved.

The GC is based on ten principles relating to human rights, labour standards, environmental protection and anti-corruption measures. In 2010 Volkswagen continued to align its business activities with these principles at all locations. We make our know-how available within the GC so that other companies also have a chance to live up to their global responsibility. The progress made by Volkswagen as a result of its active participation in the GC is documented in an annual report.

Here are two examples: Volkswagen participates in the GC project "Supply Chain Sustainability". The results of the project were brought together in a manual and presented at the GC summit in New York in June 2010. In addition, the international GC Yearbook contained a report on the sustainability project for water utilisation in the mountain region of Izta-Popo in Mexico, which was run by Volkswagen de México. We also presented the project at the world biodiversity summit in Nagoya in September 2010. **»09** 

Sustainability is measurable...



Together with the German Nature and Biodiversity Conservation Union (NABU - Naturschutzbund Deutschland) we play a part in specific environmental protection projects. In the course of this cooperation we raise society's awareness of environmental and sustainability issues, for example through jointly-run fuel-saver courses. With our incentive systems for fleet operators we also create additional arguments for ecofriendly mobility.

#### Guidelines

Along with our Code of Conduct, further key reference points for our corporate strategy are the Convention of the International Labour Organisation (ILO) and the OECD Guidelines for Multinational Enterprises. We are also actively involved in CSR Europe, the Forum for

Sustainable Development of German Business (econsense) and the World Business Council for Sustainable Development (WBCSD). One example of this is the study "Vision 2050: a new agenda for businesses" presented by the WBCSD in 2010, which Volkswagen supported in the field of sustainable mobility in particular. Based on the assumption that the Earth's population will grow to around nine billion people by 2050, the study describes ways of making more sustainable and more efficient use of the existing resources. A total of 29 global companies in various industries were involved in preparing and discussing the study in numerous workshops. On the way to sustainable mobility it is only by taking a longer-term view of the future that we will be able to integrate underlying sociological and technological trends into our research and

Intl. conventions

Human rights



#### > Principles: Excerpt from the Code of Conduct

As well as the laws and regulations of individual countries, there are a number of conventions and recommendations drawn up by international organisations. They are primarily addressed to the member states, not to individual companies. They do however constitute important guidelines for the behaviour of an international group and its employees. We therefore attach great importance worldwide to ensuring that our corporate activities are in keeping with these guidelines. The main conventions of this kind are listed below:

- The Universal Declaration of Human Rights, dating from 1948 (UNO), and the European Convention on Human Rights (formerly Convention for the Protection of Human Rights and Fundamental Freedoms), 1950
- International Covenant on Economic, Social and Cultural Rights, 1966
- International Covenant on Civil and Political Rights, 1966
- Tripartite Declaration of Principles Concerning Multinational Enterprises and Social Policy, ILO (International Labour Organisation) 1977, and 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 groundbreaking 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

We also profess our commitment to the "Declaration on Social Rights and Industrial Relationships at Volkswagen" (Volkswagen Social Charter) and the Charter on Labour Relations concerning fundamental social rights and principles. >> 10

# 124 studies were evaluated to select the topics in the materiality matrix.

development activities. It was with this in mind that Volkswagen Group Research formulated its "Research Visions" in 2010. The topics are mobility, energy, the driving experience, safety, cost-effectiveness in the product life cycle, and the environment. And with our Environmental Radar we have also created a separate early-warning system for evaluating ecological risks.

In our day-to-day work we attach great importance to prudence in addressing potential environmental and sustainability risks to the company. To this end we have installed a risk management system that enables us to identify new risks and minimise existing ones. Moreover, the Supervisory Board has established an Audit Committee that is particularly concerned with accounting, risk management including the internal audit system, and compliance issues. »19

#### Materiality

On the basis of our main topics in the Strategy 2018 and a broad evaluation of recent international sustainability analyses, we set in motion an internal discussion and filtering process to identify issues that are of priority importance for us. Major external sources included international studies in the fields of politics and research, financial market analyses and position papers published by NGOs. Using a multi-stage scoring system we finally arrived at a short list of the most important topics. The main classification criteria were stakeholder expectations on the one hand and importance for the company's performance on the other. Another aspect taken into account was Volkswagen's capacity as an automaker to impact these issues.  $\gg 11$ 

A cross-functional team was set up to prepare this materiality matrix. The results of the analy-

sis were not only presented to internal steering bodies, such as the Corporate Strategy Group, but also discussed with external stakeholders, for example the German Nature and Biodiversity Conservation Union (NABU). They then underwent further revision and specification in the light of comments. This procedure enabled us to achieve further improvements in the transparency and quality of our agenda.

A cross-functional team evaluated internal and external sources to identify the most important sustainability issues. Their findings were discussed with independent stakeholders.

# Efficient production Employment Efficient powertrains Localisation

Climate protection & energy efficiency

Economic stability

e-mobility

Raw materials & resource efficiency

# Social responsibility Compliance Mobility concepts

Biodiversity

Demographic change

Air quality

Diversity

Water

Human rights

Market shifts

Health

Food

Land take

Segment shifts

Urbanisation

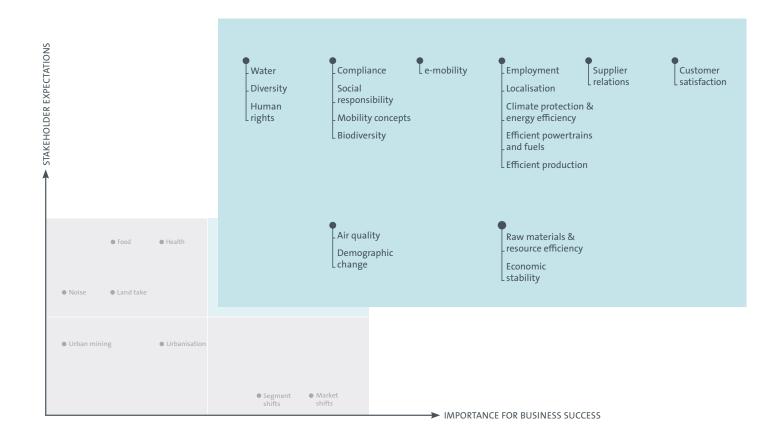
Noise

**Urban** mining

## Customer satisfaction

Supplier relations

## and fuels



The materiality matrix is the result of the analysis and scoring system mentioned earlier. It is the main thread running through our sustainability topics and projects, and hence a frame of reference for further descriptions in this sustainability report. The main topics are shown in the highlighted quadrant. Our projects and related measures are described in the chapters that follow. Topics not represented in this quad-

rant should not by any means be seen as unimportant within the general sustainability agenda: either they are largely beyond our control or they do not yet have any significant influence on the company's performance. More detailed information, e.g. about the definitions of the individual topics and the classification criteria, can be found via the online link. >> 11



## Making business sustainable.

For a company to achieve sustainable development it must first achieve commercial success. Because only a successful company can shape all its processes itself and ensure they are sustainable throughout. Only a successful company can make substantial investments in environmental protection and the development of sustainable products and solutions. And finally, only a successful company can offer its employees secure prospects for the future.



It is our customers who determine the Group's success – millions of times a day. Not just when 29,000-plus vehicles are handed over to their new owners, but every time someone drives one of our cars, fills the tank or visits a workshop. The more often a satisfied smile appears on the faces on our customers in the process, the better it is.

**Customer satisfaction** 

Customer satisfaction is the decisive factor in assuring our long-term success.

That explains why we consider customer satisfaction a crucial factor in our sustainable corporate success and have made it the core of our corporate Strategy 2018. That is the year by which we are aiming to rank among the three leading companies in all our markets. To measure our progress, we refer to the findings of two strategic studies: the New Car Buyer Study (NCBS) and the International Aftersales Customer Satisfaction Study (IACS). Our interim goal for 2012 is to be at least among the top five in all our markets.

Volkswagen measures three different categories of customer satisfaction: satisfaction with the purchasing process, satisfaction with the product and satisfaction with the most recent workshop visit.

The data is obtained from various sources: from day-to-day market analysis, from asking customers about their needs, at customer workshops, and from analysis of online discussion forums using web-tracking tools. We then actively integrate this customer feedback into the product development process. The Technical Development

department promptly translates this input into new design solutions, which are incorporated into facelifted or new models. As a result, we are able to adapt to and keep pace with changing customer requirements. One of the latest examples is the new Jetta in the USA, which was developed in direct response to customer feedback.

We also take a proactive approach to reducing the risk of incorrect operation of our vehicles by customers - and the associated risk of customer dissatisfaction. In this connection we also incorporate customer feedback into our product communication at dealerships. In the USA, the IQS Challenge training programme for sales personnel combines specifically sales-related training with technical training delivered by representatives from the vehicle-manufacturing plants. This equips sales personnel to give technically sound and to-the-point advice that increases the customer's interest in the technical features of the vehicle. This will also reduce the likelihood of incorrect operation - thereby increasing satisfaction with the product.

We have been analysing customer satisfaction for many years. In 2011, the number of markets around the world where customer satisfaction analysis is carried out increased to 19. In the case of the Volkswagen brand for example, that means we are now obtaining customer feedback on more than 90% of all cars we ship. Current customer satisfaction levels are reported to the Board of Management via the customer satisfaction forum up to six times a year. » 12, » 13

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#### What customers want

Many different things can raise a smile. And in cars in particular, so many different factors determine how happy a customer is with the vehicle. Everyone has their own personal preferences, be it in terms of equipment levels or accessories. But customers who buy cars from the Volkswagen Group expect them to display high quality, reliability and economy, combined with high levels of comfort and convenience, safety and environmental compatibility.

#### Comfort and convenience

Active safety systems such as the Electronic Stability Program (ESP), Lane Assist and ACC automatic distance control with Front Assist Ambient Traffic Monitoring all help to make the driver's task easier in complex driving situations. The drowsiness monitor warns drivers if it detects signs of fatigue because steering inputs have become very infrequent. Our lighting and vision systems help drivers see better at night by providing optimal illumination, whether for long-range vision, cornering or making a turn. Dynamic Light Assist is an assistance system which dips just certain portions of the high beam, to prevent other road users being dazzled, while the Area View camera system allows the driver to monitor the entire vehicle periphery. By providing the best possible assistance in tricky driving situations, for example when pulling into or out of a parking spot on a busy road, our driver assistance systems also help to avoid accidents. One thing all these systems have in common, however, is that they always leave the final decision up to the driver.

#### Safety

A sustainable vehicle must also enhance safety for its occupants. With their crashresistant bodies and intelligent safety systems, the cars built by the Volkswagen Group lead the field in this respect. We are continuously working on new ways to improve our passive safety systems. In 2010, we equipped the Sharan and Passat with a safety package consisting of an optimised body structure and a highly effective belt-and-airbag combination. Both vehicles received 5 stars in the NCAP crash test, which means they are among the safest in their class.

To help prevent accidents, first we have to know what causes them. With this in mind, Volkswagen has been investing in accident research since the early 1990s, not only in Germany, but also in China and India. To facilitate the effective exchange of the latest research findings between industry and public research institutions, in 2010 the Group's Volkswagen, Audi and Porsche brands joined with BMW and Daimler to form the "Trauma Biomechanics" research network at Regensburg University of Applied Sciences. »14

#### **Environmental compatibility**

The efficient cars built by the Volkswagen Group stand for low CO<sub>2</sub> emissions. The aim is to produce a fuel consumption leader in every class of vehicle. We also set the highest standards in terms of the materials we select, our production processes and when it comes to recycling, because an end-of-life vehicle is a source of raw materials: up to 95 percent of a car by weight can today be recycled or recovered. Along with fuel-efficient cars built by environmentally compatible production methods, another increasingly important aspect is an environmentally aware style of driving. Our fuel-saver driving courses are conducted by 'Volkswagen driving experience'. On top of this, since 20035,000 people have attended the fuel-saver training sessions we offer in conjunction with the German Nature and Biodiversity Conservation Union (NABU).

For further details on environmental protection and resource conservation in the Volkswagen Group can be found starting on page 42.

>> 14



#### Ethnic marketing

Since 2005 Volkswagen AG has been successfully engaged in ethnic marketing in the form of the project "Volkswagen speaks Turkish". The essence of the project is that in all forms of marketing, it caters for the cultural and ethnic traditions of the Turkish population in Germany. It is intended to demonstrate the high regard which Volkswagen AG has for its Turkish-born clientele in Germany.

Along with meeting customer wishes regarding their vehicles, respecting traditional cultural influences is another key factor in ensuring satisfied customers.

The pillars of this project are Turkish-speaking sales staff as the most important actors in car sales and the direct points of contact for the customer - which of course means all customers, regardless of their ethnic origins, since these sales staff speak German equally well. The ethnic marketing project also means that a growing group of certified sales staff of Turkish origin are being offered good career prospects at Volkswagen dealerships. These jobs are coupled with excellent training in keeping with Volkswagen's acknowledged high standards, and they offer unique career opportunities for these young German Turks as an important basis for successful integration. In this way the project makes an important contribution to cultural diversity at Volkswagen; it is also supported by the Works Council. It effectively fosters mutual understanding and trust between Turks and Germans at both employee and customer level, and is thus an active expression of progressive integration and cultural diversity. >> 15

#### **Supplier relations**

Sustainability in the supply chain has been a key focus of the Group Purchasing department since 2006. Volkswagen's sustainable supply chain policy comprises four main components: sustainability requirements for suppliers, an early warning system for minimising risk, a transparent

procurement process and a supplier monitoring and development process. The sustainable supply chain policy applies to all brands and all regions. Its effectiveness is continuously reviewed and assessed, and new purchasing employees are trained to be aware of the policy right from the start.

Our international "Sustainable Procurement Network" ensures that the principle of sustainability is applied throughout the Group, despite cultural differences. The supplier integration strategies are incorporated into action plans and regularly reviewed. Following the successful supplier development project in 2009, a second series of events in India was held in 2010. Further supplier development projects also took place in Brazil, Argentina and Mexico. In line with this continuously evolving system, when submitting a quote, all suppliers must declare that they agree to abide by Volkswagen's sustainability requirements. Since 2010, supplier sustainability information has been electronically catalogued.

From the second quarter of 2011, global supplier development will be supported by a development module which suppliers will find on the online platform www.vwgroupsupply.com. Development workshops will also be held in selected regions.

» 16, » 17, » 18, » 65

#### **Raw materials**

Volkswagen depends on reliable supplies of strategically important high-grade raw materials, especially metals. For this reason the Group's Environmental Research Department, in conjunction with the Federal Institute of Geosciences and Raw Materials (Bundesanstalt für Geowissenschaften und Rohstoffe – BGR), has developed a system of criteria and indicators for systematic analysis of the raw materials markets.

# was when Volkswagen made its "Sustainability in Supplier Relations" concept a top priority for the Group Purchasing function.

In addition to risk factors, this also observes and assesses the extraction of raw materials in politically unstable countries to make sure that it is socially acceptable. In this context, Volkswagen seeks to engage in dialogue with NGOs such as the Extractive Industries Transparency Initiative (EITI). The EITI supports a standardised process in which payments by the raw materials industry to the government are disclosed and then verified by independent validators. This helps to curb corruption, thereby improving the economic and social climate and maximising protection of the environment in the country in question.

Risk management

The Group's risk management system is designed to identify potential risks at any early stage so that suitable countermeasures can be taken to avert the threat of loss to the Company, and any risks that might jeopardize its continued existence can be ruled out.

The risk management system is an integral part of the Volkswagen Group's structure and workflows and is embedded in its daily business processes. Events that entail a risk are identified and assessed on a decentralized basis in the divisions and at the investees. Countermeasures are introduced immediately, their effects are assessed and the information is incorporated into the planning in a timely manner. The results of the risk management process are used to support budget planning and controlling on an ongoing basis. The 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 incorporated into the monthly forecasts on further business development in a timely manner. This means that the Board of Management always has access to an overall picture of the current risk situation through the documented reporting channels.

We are prepared to enter into transparent risks that are proportionate to the benefits expected from the business. »19

#### Localisation

A central element of our strategy is the localisation of production and supplier relations and, increasingly, of financial services. Localisation not only enables us to reduce foreign exchange risks and achieve cost levels appropriate to the markets, but also to inject extra added value into growth markets. This generates considerable momentum for the economic development of the individual regions. Localisation means creation of jobs in the regions in question. This upgrades the locations where our facilities are based and paves the way for follow-up activities. Secondary and tertiary effects have a positive overall impact on the infrastructure in general. Decisions to locate production facilities - and thus the relevant suppliers – in a specific place give rise to new alliances with schools and universities, for example, and attract further service-sector compa-

The overall impact is to invest such a region – be it in Chattanooga or Pune, in Kaluga or Chengdu – with a new quality. For the Volkswagen Group, localisation not only has economic benefits; it also improves the prospects of sustainable structural development in the regions concerned.

The Board of Management is kept fully informed of the current risk position.



#### **Compliance**

In 2010, we heightened our focus on transparent corporate responsibility, creating the new Governance, Risk & Compliance unit. The head of the unit is also the Group Chief Compliance Officer of the Volkswagen Group, reporting directly to the Chairman of the Board. His responsibilities include the introduction, control and monitoring of preventive measures.

We have drawn up a corporate Code of Conduct, which was rolled out across the Group in 2010. Employees were made aware of this through brochures, in the internal media and at information events. All employees are able to contact the Compliance organisation via an internal e-mail address. » 21

As an anti-corruption measure, Volkswagen has been using an online learning program since 2009, designed specifically to increase employee awareness. This program was rolled out to management and other employee groups of Volkswagen AG and also to other Group companies. Face-to-face events were also arranged.

The Ombudsman system, introduced throughout the Group in 2006, has also become successfully established. Through this system, two independent lawyers are available as ombudsmen to all employees via an international hotline. The lawyers are bound by their obligation of secrecy.

Further employee training and information events are planned for 2011. These will include measures and events aimed at specific target groups as part of the new Compliance Programme, focusing on anti-trust and competition law. Additional compliance activities will also be devised in future, and the Compliance organisation will be further expanded. >> 20

	Research and Development	Purchasing	Production	Distribution	Financial Services
	Adaptation to local customer needs     Local R&D Teams in regions	Localised purchasing throughout supply chain	Local production facilities for key products	Strong dealer     network     Adapted local     marketing	Local offer of Financial Services
<b>*</b> ‡	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	Market entry <sup>2</sup>
	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>
•	1	<b>✓</b>	New: Pune	Quick expansion	Market entry <sup>2</sup>
	<b>✓</b> ¹	<b>✓</b>	New: Kaluga	Quick expansion	Market entry <sup>2</sup>
<sup>1</sup> Partial development capacity <sup>2</sup> Market entry planned					

Localisation creates new jobs and adds local value – substantial growth factors for the local economy.

#### **Economic stability**

In the years ahead, three megatrends on the economic front will be particularly important for Volkswagen: shifts in global equilibrium, addressing financial challenges in the face of growing volatility, and the (re-)emergence of old and new competitors.

#### Equilibrium

The BRIC states are at the forefront of the present economic recovery. They are resuming a growth trend that is well above European and North American levels and which will bring about substantial medium-term shifts in global economic equilibrium. As a result, the economic power of the emerging markets will continue to increase.

This opens up opportunities for Volkswagen, with prospects of large sales volumes. The rapid rise in the prosperity of broad sections of the population is creating new customer groups, and high priority must be given to recruiting these groups. Localised products adapted to individual markets are needed to fire their enthusiasm. And to ensure sustainable success, the contribution that these products make to earnings needs to be stepped up substantially.

#### Volatility

Although the long-term global growth trend is basically stable, fluctuations around this trend are increasing considerably. For example, the financial crisis is by no means over. Substantial risks to the world economy include growing levels of national debt in many countries, the instability of the financial system, growth deficits in selected industrialised countries, persistent imbalances of trade and current account figures, and the amount of speculation in the markets.

Levels of national debt in several Eurozone countries remain critical. The resulting potential instability of the banking system and the uncertainty about the future of the Euro states tend to encourage sudden and sharp exchange-rate fluctuations and cast a shadow over economic prospects. In many countries the central banks are trying to combat this by pursuing an expansive monetary policy. In the short term this has many beneficiaries, including Volkswagen which has already felt the substantial benefit of the economic upswing. In the medium term, however, this approach involves a risk of higher inflation, which could have a considerable destabilising effect on the economic system.

Market players are already reacting to inflation risks and turning to real assets such as gold, shares, commodities and real estate. This encourages speculative bubbles.

Another risk takes the form of persistent significant balance of trade and balance of payments deficits, as in the present situation between the USA and China, because these increase the underlying probability of protectionist measures.

On top of this, speculators are contributing to the great volatility of the financial markets. The scale of their influence is evident from crude oil trading, for example: in recent years the number of speculative transactions has undergone such a massive increase that, these days, only about one seventh of all transactions physically involve crude oil.

#### Competition

The pace of competition in the global markets is increasing. By way of illustration, the market shares of the four largest manufacturers in China, the USA and Brazil have shown a significant drop over the past decade.

Despite this difficult situation, Volkswagen is doing very well on the whole. In global terms, we rank third among car manufacturers on the basis of unit sales. By contrast, we

are only seventh when it comes to operating profit. This is not good enough to achieve our targets for 2018.

#### Conclusions

Volkswagen already has a strong presence in many important markets and is profiting from global growth. The challenge now is to achieve systematic growth in local value-added, in order to continue reducing dependence on exchange rates and the risk of barriers to trade. Increasing localisation of products and financial services is at the same time a central key to achieving market-oriented cost levels and adequate profitability worldwide.

This financial robustness is important to ensure that Volkswagen is well equipped to face future crises. A large measure of flexibility and financial independence is absolutely essential for dealing successfully with economic risks. Fluctuations in the commodity and currency markets must not be allowed to throw us off course, any more than falling unit sales in times of recession.

We are acting from a position of strength and are well on the way to achieving the ambitious targets of our Strategy 2018.



## Building 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 the highest standards right across its operations. Our employees also play an active part in a wide variety of social contexts.

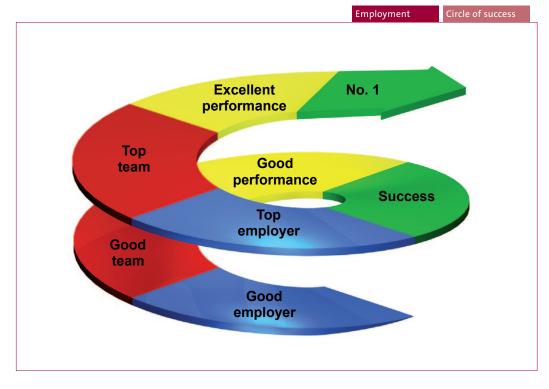
## A top team

#### **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 top the rankings in terms of 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 multi-dimensional stakeholder strategy that balances the interests of customers, shareholders, employees and other stakeholders.

In the 2010 financial year, the Volkswagen Group has made full use of the opportunities offered by its superb current range of models, winning new customers and expanding its market shares across the globe. 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. And it is a principle that is particularly important when the Group is growing, as it has done over the past few years.



The circle of success from our "Strategy 2018" shows that only an attractive employer can recruit a good team and develop it into a top team. And only a top team can turn in excellent performance.

Including the Chinese joint ventures, the Volkswagen Group employed a total of 399,381 people worldwide on December 31, 2010, 8.4 percent more than in December 2009 (368,500 employees). But as our workforce grows, so too does the complexity of the Group. The number of production sites, the range of technology used and the diversity of processes are expanding across the Group as it diversifies from vehicles with conventional drive into hybrid- and electric-drive vehicles. It is therefore more important than ever that the Group has access to the right skills in the right place at the right time.

#### Training and skills development

Over the next few years, the need for vocational training and skills development and transfer is set to increase across the Group. Volkswagen sets great store by being a learning and teaching organisation and is making every effort to ensure that it has the appropriate skills levels across its locations.

Outstanding vocational training and systematic supervisor training are crucial to our HR development strategy. The Volkswagen brand is introducing a global supervisory qualification to a common standard, so that we can employ highly skilled supervisors at all our locations. The aim is to make the supervisor grade a key position in all locations, and training and skills development programmes are currently being designed to achieve this.

Volkswagen sets great store by its vocational training, and the majority of its highly skilled workers join the Company via this route. The Company's locations in Germany have long-established, top-quality vocational training facilities, which are to be the model for all Volkswagen locations in future. This will also enable the

Group to achieve its aim of recruiting even more apprentices.

In September 2010, the number of employees in vocational training across the Volkswagen Group exceeded 10,000 for the first time. At the end of 2010, Volkswagen AG was training approximately 4,500 apprentices and students in 32 professions and 21 courses at its six German locations alone (Wolfsburg, Hanover, Braunschweig, Kassel, Emden and Salzgitter) under the StiP integrated study and traineeship scheme. In February 2010, the newly established Volkswagen Osnabrück GmbH also took on a further 99 StiP apprentices and students from the insolvent Karmann company.

While undergoing vocational training at Volkswagen, apprentices can benefit from a wide range of additional training programmes and events. These include cooperation between Volkswagen's vocational 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, which offer apprentices and students within the Volkswagen Group an opportunity to combine their technical talent with their passion for motor sport.

It's not all about work on the factory floor or in the back office, though. For 20 years, Volkswagen apprentices have been involved in the Auschwitz Memorial and Museum. Since 1990, Volkswagen has been sending four groups of apprentices to Auschwitz each year to spend two weeks with young Poles learning, helping and engaging with concentration camp survivors. The groups are briefed and supervised by the International Auschwitz Council and our subsidiary, Volkswagen Coaching GmbH. Over 1,400

Volkswagen apprentices' commitment to the Auschwitz Memorial is recognised worldwide.



young Germans and Poles have so far taken part in this very moving experience. Volkswagen AG's sustainable pedagogical and political commitment to the scheme is recognised across the world, and at the General Works Council's suggestion, it broadened its involvement in the Memorial and the International Youth Meeting Centre in 2008. As a result, for the past two years, four groups of managers, management trainees and supervisors have taken part in a four-day seminar each year, also overseen by the International Auschwitz Council.

Volkswagen is also nurturing particularly talented vocational trainees in talent groups for young specialists. Talent groups have existed at all Volkswagen AG sites since the end of 2010. They are an invaluable tool in helping technically and intellectually gifted employees manage the transition from vocational training to professional work and support participants in making a smooth switch to a department in which they have already acquired specialised knowledge.

Since 2006, on completion of their training, young people at the start of their career have had the opportunity to take part in the "Wanderjahre" (Years Abroad) programme; the name alludes to the tradition among newly-qualified craftsmen to travel the world and gain experience. Participants spend twelve months at one of the Group's international locations. So far, over 200 young employees of the Volkswagen Group have taken up this chance to gain their initial work experience outside Germany. 17 companies in 13 different countries now participate in the "Wanderjahre" programme.

Outstanding apprentices in the Group are given special recognition each year, when the Group Board of Management and the Group Global Works Council present the "Best Apprentice Award" to the Group's best trainees. The 2010 ceremony was held in Emden at the end of October, when the Group Board of Management and the Group Global Works Council presented the prestigious Best Apprentice Award to 22 former apprentices from twelve countries.

#### Skills development in vocational groups

The concept of "Berufsfamilien" (vocational groups) has been rolled out over the past two years and underpins all skills development across the Group. A "Berufsfamilie" includes all employees with related specialist skills. Existing "Berufsfamilien" include, for example, design, electronics, toolmaking, assembly, logistics, customer service, finance and human resources. The concept is particularly well developed in production and purchasing. Skills development across vocational groups involves targeted formulation and development of relevant competences within a specialist area. Employees systematically share their expertise and experience, in particular enabling younger employees to learn from more experienced colleagues. New ways of learning have been developed to support the approach, and experienced experts from specialist departments are involved.

Volkswagen Coaching GmbH offers employees a wide spectrum of training measures, including HR development programmes, general seminars and courses, as well as specialised training programmes geared to the specific requirements of individual "Berufsfamilien".

During 2010, over 51,500 employees received in-service training in 8,896 seminars held by Volkswagen Coaching GmbH, making a total of 152,984 participant-days. In the area of specialist skills development (e.g. factory automation, robotics and applications engineering or man-

Even apprentices can take advantage of the full range of opportunities offered by a global group. The Best Apprentice Award recognises outstanding performance.

# 51,585 employees attended skills development courses held by Volkswagen Coaching in 2010.

agement), 35,078 employees were involved in 6,227 seminars over 104,589 participant-days. Meanwhile, in the field of "cross-functional skills development" (which includes leadership skills and personal development), 16,507 employees attended 2,669 training courses representing 48,395 participant-days.

International skills development

Volkswagen also offers a wide range of skills development opportunities at its locations outside Germany. These include practice-based training in what the Company calls "profi rooms" – specially set-up training labs that replicate actual working environments. These provide training in basic skills and also reflect site- or product-specific requirements. After successfully implementing the concept at our Russian site in Kaluga in 2009, we rolled it out in early October 2010 in Pune, India, where the Volkswagen India Training Academy is the cornerstone of Volkswagen's vocational training and is currently training over 70 apprentices as welders, painters, fitters, electricians and tool mechanics.

The new production plant in Chattanooga, Tennessee was working hard in 2010, training staff for the start-up and subsequent regular production. By organising extensive training courses, Volkswagen ensures that its employees acquire and continue to develop both basic and expert knowledge in their field of activity. In addition, the Volkswagen Academy was set up in cooperation with the State of Tennessee and boasts its own teaching buildings for factory automation, automotive production and vocational training as well as "profi rooms" for body shell production, painting and assembly.

In 2010, Škoda opened a new training centre at its main plant in Mladá Boleslav. The seventh

such Company training centre, this one specialises in training for paintshop workers. Škoda now has training centres at all three of its locations in the Czech Republic, providing training in body production, engine production, logistics, assembly and paintshop functions.

During the year under review, Volkswagen of South Africa set up its own Learning Academy, while training centres also opened at Volkswagen Slovakia and Volkswagen Autoeuropa in Portugal. Further training initiatives included starting work on construction of a training centre at Volkswagen Navarra in Spain.

The Global Labour Charter

Skills development is also central to the further development of employee participation at locations outside Germany. The Volkswagen Global Labour Charter, which came into force in autumn 2009, combines rights to consultation with shared responsibilities, requiring employees to demonstrate first-class skills and a highly developed sense of responsibility. The Charter applies globally and provides for phased rights to information, consultation and codetermination for employee representatives of the brands, companies and locations represented on the Group Global Works Council. In 2010, many locations began to flesh out the Charter with declarations of intent and outline implementation arrangements agreed between management and employee representatives. The local collective bargaining partners then agree the phased implementation of these outlines, so that the rights to participation set out in the Charter are put into action. >> 66

Many locations outside Germany set up Training Academies in 2010.



#### **Career prospects for graduates**

Over the last ten years, some 1,400 young people who demonstrated outstanding abilities and dedication during their internships at Volkswagen have been included in the Student Talent Bank, Volkswagen's staff development programme for university students. Volkswagen supports and nurtures these former interns while they complete their studies with events such as workshops, specialist presentations, seminars, or visits to Volkswagen sites, building ties with talented students in the process.

The StartUp Direct and StartUp Cross trainee schemes mean new graduates get a head start at Volkswagen. In 2008, Volkswagen launched the StartUp Direct programme to give university graduates 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 can enter the StartUp Cross programme instead. This 18-month international programme includes a three-month international placement. Over 800 trainees have embarked on one of these two programmes since they were launched in 2008.

#### The AutoUni

Volkswagen AutoUni, based in Wolfsburg, plays a vital role in knowledge transfer at the highest level within the Group. It works in conjunction with individual departments of the Volkswagen Group and partner universities to offer in-service training at university level.

The AutoUni operates across all Volkswagen brands and locations. In 2010, for example, it organised conferences in Mexico and Russia. Be-

tween them, its six institutes ensure the transfer of academic knowledge within the Group, increasing Volkswagen's capacity for innovation. In 2010, over 11,300 participants attended a total of 180 seminars organised by the AutoUni. The AutoUni programme comprises lectures, conferences, seminars and – since 2010 – cooperative study modules covering in detail technical topics such as "hybrid and electric vehicle chassis". At the end of each cooperative study module, participants take a final examination.

The AutoUni intends to step up its cooperation with universities in 2011, and work is currently under way into surveying higher education in the BRIC states, the USA, the Czech Republic, Spain and Qatar. As part of Volkswagen's regional outreach, the AutoUni also stages conferences and lectures that are open to the general public.

Over and above this, the AutoUni is intensively involved in the Group's doctoral student programme, in which over 390 doctoral students were supervised in 2010 by the various companies of the Volkswagen Group in Germany. All these doctoral students work on ambitious PhD thesis topics with relevance for the Company. Under the doctoral student programme, students generally complete their thesis within three years, during which time 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.

#### Promoting performance and sharing profits

The Volkswagen Group sees its wide range of inservice training and skills development provision as a key part of its development of a top team. Systematic fostering and recognition of good performance is another key part of our



# 11,304 employees attended AutoUni events in 2010.

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. Ten percent of the Volkswagen brand's operating profit is channelled into profit-sharing, which applies to all employees covered by the agreement. This makes the

- scheme unique in the German collective bargaining context.
- Performance-related components in force since early 2011, which represent an additional reward for individual performance.

As part of the introduction of a performance-related pay component, Volkswagen AG and its unions have agreed that in future, each employee should have an annual individual appraisal with his or her line manager. The first step at this meeting is to provide the employee with feedback on past performance. The second step is to discuss the employee's personal future development.

In February 2010, the Company and the German metalworkers' union IG Metall also agreed that the collective agreement on sustainable location retention and employment protection would remain in force until at least 31 December 2014, giving all Volkswagen AG employees em-

The annual appraisal ensures that every employee covered by the collective agreement receives detailed feedback on their work at least once a year.

Employment Top team Entrepreneurship · Customer orientation Economic efficiency Management · Commitment + initiative Selection and formance assessment Responsibility Cooperation and leadership **Professionals**  Cooperation + communication Convincing + accomplishing Performance assessment for tariff employees Respect + appreciation (Employee leadership) **Apprentices** Professional competence Performance assess-Expert knowledge ment according to EFA+ Problem-solving behavior Experience Knowledge transfer

Volkswagen applies uniform criteria to assess employee performance for everyone, from apprentices to managers.



All Volkswagen AG employees enjoy protection from redundancy until 2014. ployment protection until that date. The agreement also stipulates that there will be no reduction in the recruitment of apprentices and that apprentices will, subject to performance, be taken on permanently on completion of their training, also until the end of 2014.

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 ensure fair pay and reward individual performance while preserving competitiveness. The three components are being rolled out across the Group and form the model for collective agreements concluded outside Germany. Thirty international agreements were signed at locations across the Volkswagen Group in 2010, and in all cases, bargaining was underpinned by an active information and communication process. Local disputes arose only in Brazil, Spain and South Africa, and these were rapidly resolved through mediation.

Management employees also earn part of their salary in the form of a personal performance bonus, which rewards individual performance. Group and Company bonuses enable management staff to share in the success of the Group or of their own part of the Company. An innovation in 2010 was the Long Term Incentive (LTI), which replaces Volkswagen AG's former stock option scheme. The LTI is a bonus paid over and above other profit-sharing schemes and 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 the LTI complies with the aims of the 2009 legislation on remuneration of Board of Management members but is applied more widely, to the whole of Volkswagen's management.

The Long Term Incentive is linked directly to the goals set out in the Group's Strategy 2018. It 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.

- The customer satisfaction goal measures how satisfied Volkswagen Group customers in key sales markets are with their vehicle, the dealership and customer service.
- Only successful companies can create and protect jobs in the long term, a key criterion for being top employer. The category is also measured by growth in productivity, employee participation, and the results of the annual employee opinion survey.
- The sales goal measures how far the Volkswagen Group has met its targets for unit sales of vehicles in the global markets.
- Indicators in the profitability category include return on sales and the dividend per share (in euros).

In this way, the LTI helps ensure that Volkswagen management consistently pursues the multidimensional and sustainable goals in the Company's stakeholder strategy.

#### **Employee opinion survey**

Employee satisfaction is measured each year using the Volkswagen Group's employee opinion survey, which covers the entire workforce. Once the survey is complete, the findings are jointly discussed by supervisors and employees, raising complaints and problems on the one hand and suggestions for improvements to work processes on the other. The survey was conducted for the third time in 2010. Around the world, over 285,000 employees took part, a response rate of 87 percent at the corporate locations and compa-

# 391,880

suggestions for improvements were submitted across the Group in 2010. 308,273 were adopted, earning their originators some €30 million.

nies included in the survey. The survey showed an improvement on the previous year, particularly in the areas of communication, cooperation and job satisfaction. After the survey was carried out, it was discussed in the individual teams and organisational units at the 48 participating locations, and improvements were introduced. In 2010, specific action weeks for the opinion survey were organised at Volkswagen AG plants.

The ideas management process also helps to make work 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 2010, 5,376 suggestions were related solely to safety at work, of which 2,474 were adopted.

#### **Ideas management**

Volkswagen sets great store by enabling its employees to make suggestions for improving work organisation and production processes. Employee suggestions and ideas are considered and assessed centrally by the Volkswagen "Ideenmanagement" ("ideas management") unit, which is represented at all the German sites. The first suggestion scheme at Volkswagen was introduced back in 1949, and employee commitment to improving products and processes has since becoming 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. The continual improvement process set out in our Company agreement, the "Volkswagen Way", is also supported by ideas management, which gives managers a vital tool for managing and motivating staff.

In 2010, Volkswagen employees throughout the Group submitted a total of 391,880 suggestions for improvements. Adopting 308,273 of these suggestions helped to drive up the quality of our products and the efficiency of our processes, reducing costs in the Group by a total of around  $\ensuremath{\mathfrak{C}} 340$  million. Bonuses worth some  $\ensuremath{\mathfrak{C}} 30$  million were awarded to staff whose ideas were adopted in acknowledgement of their creativity and involvement.

#### **Demographic change**

In 2010, Volkswagen continued to push forward ergonomic improvements. To raise awareness of the needs of older people and the challenges facing them, Volkswagen has started to use a newly-developed age simulation suit, developed jointly by The AutoUni, Volkswagen Group Research, Audi AG and Chemnitz University of Technology. The suit enables researchers to study age-related sensory and motor impairment.

A number of Volkswagen AG plants took an important step to reduce the health effects of shift work by reorganising shift patterns.

- At the Wolfsburg plant alone, more than 18,000 employees moved to shift patterns that imposed less stress on their health.
- New shift patterns are currently being developed in consultation with employees in pilot areas, drawing particularly on research findings relating to shift design and adapting these to the needs of the automotive industry.
- In January 2011, the Wolfsburg plant instigated a two-shift pattern for employees
  with performance impairment. These employees work an early and a late shift in alternate weeks but do not work night-shifts.

#### Opinion survey statements

- Volkswagen is viewed positively in public and by friends and acquaintances.
- > I'm well informed of current developments at Volkswagen.
- > Sufficient steps are being taken to ensure quality in our organisational unit (OU).
- > Flaws or disruptions in the work process are quickly resolved in our OU.
- > Collaboration in my OU/group is good.
- > Collaboration with colleagues from other OUs or groups is good.
- > Collaboration with my direct supervisor is good.
- I can deal with pressure on the job and work-related requirements comfortably.
- > I like my job as it is.
- > I like working for Volkswagen.
- > Our OU profited from discussing the results of the opinion barometer.





A whole raft of measures are reducing stress and strain and improving ergonomics. In September 2010, Volkswagen AG organised and hosted the autumn conference of the German Institute of Ergonomics (GfA) in Wolfsburg. The theme was "Person- and process-oriented work design in vehicle manufacture". The conference was also attended by representatives of Audi AG, Daimler AG, Robert Bosch GmbH and the University of Kassel. The findings are being rolled out in production areas and are helping the Company not only to improve productivity and employee well-being but also to manage demographic change.

Volkswagen AG is particularly committed to helping employees with reduced capacity or disabilities. People with disabilities made up 6.65 percent of the total workforce of Volkswagen AG in 2010, once again well above the statutory 5 percent quota. Volkswagen also orders goods from workshops for people with disabilities, which helps to boost employment prospects for the disabled outside the Company as well. During the reporting year, these orders totalled €21 million. In May 2010, Volkswagen AG was a co-organiser of the 39th meeting of disability officers from the German federal states, hosting the event at the Autostadt visitor centre next to the Wolfsburg plant.

Volkswagen also reflects the needs of people with disabilities in its product design. The Company directly supplies a comprehensive range of driving aids and offers a 15 percent discount on Volkswagen special vehicles. Special features available include rotating and swivel seats, manually operated accelerator and brake controls, an EDAG automatic wheelchair loading device, and the FRANZ hands-free driving system. These aids can be fitted to virtually all Volkswagen cars, from the Polo to the Touareg.

Work2Work is a key programme across all our plants. The programme was set up in 2001 to create new job opportunities for performanceimpaired employees. Around 600 people are employed in Wolfsburg in more than 40 roles adapted to their specific capacity. Work2Work's aim is to reintegrate employees who have suffered illness or injury into Volkswagen's production and specialist departments, and it already has over 400 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.

#### Staying fit, healthy and safe

Fit, healthy 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 is also vital to the Company's ongoing economic health and viability.

Volkswagen has for many years taken an integrated approach to health management, and this was extended and widened in 2010. The year under review saw the introduction of the Volkswagen Checkup, a high-quality, comprehensive medical examination and advice session available to all employees. Its aim is to help to maintain and improve the health, fitness and performance of all employees. More than 10,000 employees have so far taken advantage of the programme.

Ergonomic improvements across the entire product development process ensure that the

# 10,327 employees took advantage of a "Volkswagen Checkup" in 2010.

quality of workplaces and the stress and strain on employees caused by production processes are already taken into account at the planning and design stages. Assistance and mentoring opportunities for employees with mental health or psychosomatic problems and help with rehabilitation were also expanded in 2010. The newly developed workplace management system is a tool that allows workplace profiles to be reconciled with the deployment options of individual employees, taking health and strain factors into account.

In 2010, the Volkswagen Group also introduced the new Group occupational safety management system, known as KAMS, at all its locations around the world. KAMS is designed to bring a sustainable improvement in occupational safety. Each Group company is now responsible for using KAMS to analyse its existing occupational safety organisation and related processes. Internal Group occupational safety experts will then evaluate the results and develop improved standards. The system can already point to its first successes: in 2010, there was a further drop in the number and severity of workplace accidents. Safety representatives at German locations have been trained under a standard occupational safety programme since 2009, and this is also helping to reduce the frequency of accidents and the resulting negative impacts.

#### Advancing women and promoting diversity

Volkswagen has long been actively promoting gender equality and compatibility between work and family. In 2010, women accounted for almost 30 percent of the trainees taken on by Volkswagen AG. Over 22 percent of the university graduates hired by Volkswagen AG are women and today almost one in five junior managers is female. One of the Company's goals is to contin-

ue to increase the proportion of women in all fields from its current 14.2 percent but especially in management, where currently 10.4 percent of employees are female.

Since 1998, Volkswagen has offered a mentoring programme aimed at increasing the proportion of women in management positions. Having been through 17 cycles with a total of over 300 participants, this is a recognised development programme in the Group. The Company also gives female skilled workers the opportunity to train as supervisors.

In 2010 for the first time, Volkswagen AG approached its employees with daughters to provide them with information on commercial and technical vocational training at Volkswagen and career prospects for women within the Company.

At Volkswagen, both career and family life are considered extremely important, which is why the Company is redoubling its efforts to create a family-friendly environment. For Volkswagen, family-friendly HR policies are one of the keys to becoming a top employer. Meetings for employees on parental leave, initiatives for easing the transition back into work after parental leave, information on childcare providers on the intranet as well as telecommuting, flexible working hours and a range of part-time working models make it easier to balance job and family at Volkswagen.

In 2010, Volkswagen came one step nearer to becoming a family-friendly company by launching "Kaleo – SOS Childcare" at the Wolfsburg site, a service that takes care of employees' children when unforeseen circumstances arise. » 22

Mentoring programmes help encourage women supervisors and a new generation of women managers.





#### Social responsibility

Volkswagen is particularly active in exercising its social responsibility by promoting regional growth initiatives in the areas where it operates. Wolfsburg AG, a public-private partnership between the Company and the City of Wolfsburg set up in 1999, takes a leading role here. Since 2010, it has been partnering with another organisation to form the "Allianz für die Region" or Regional Alliance; its partner, the "Region Braunschweig" project, takes in the towns of Wolfsburg, Braunschweig and Salzgitter and surrounding rural areas as well as regional businesses. The aim of the Alliance is to focus skills and resources for regional development more effectively, and the main goal of the collaboration is to develop structures centred on creating and safeguarding jobs and improving the quality of life. 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 making the area more attractive as a business location. Networking with educational and research bodies and supraregional partners, and implementation of inspirational pilot projects are also pointing the way to new approaches to sustainable regional development.

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 committed teachers who work closely with business and educational experts and a wide range of extra-mural institutions.

But Volkswagen wants to support the older members of society as well as the youngest. Several thousand Volkswagen employees retire each year, and the Company's HR policy is to support them as they move from employment into retirement. About two years before they are due to retire, older employees take part in events facilitated by HR staff to help them make the transition. They are told about volunteering opportunities, for example 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 locations. Former employees are offered the opportunity to pass on their skills and experience to others, whether at regional, national or international level, by teaching technology and maths in schools, for example, or helping to train specialists or management staff. Since the project began in September 2010, 109 retirees have already signed up with the Senior Expert scheme.

Active employees are often also keen to do voluntary work and Volkswagen supports employees as they take up or engage in a voluntary role. The "Volkswagen Pro Ehrenamt" ("Volkswagen supports volunteering") initiative acts as a clearing-house, linking community initiatives looking for volunteers with Volkswagen staff wanting to help in a social capacity. 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. Since the project was set up late in 2008, it has

# 1,052 volunteers have been placed since late 2008 by Volkswagen's volunteering initiative.

registered2,400 volunteer openings and placed some 1,050 volunteers. The idea behind "Volkswagen Pro Ehrenamt" has already been adopted by Group subsidiary Autovision, and the plan is to roll it out at other Group companies. "Volkswagen Pro Ehrenamt" was commended as a Best Practice in Europe in 2010.

#### Fairtrade

At the suggestion of the General Works Council, Volkswagen has been selling Fairtrade products in its catering facilities via its catering provider, ServiceFactory 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 ever-wider range of products is available, and new sales stands and product information help raise awareness and boost sales. In 2010, for example, sales of Fairtrade coffee were 10 percent up on the previous year, and in all the Company bought 45 metric tons of coffee, up from 32 tons in 2005.

The following links provide further examples of Volkswagen's commitment to social development and sustainability. >> 23, >> 24, >> 25, >> 26, >> 27



Supporting and promoting volunteering is a key part of Volkswagen's sustainability strategy.



# Conserving resources.

As a globally active automaker, through our products we meet the needs of many people for personal, environmentally compatible mobility. The production and use of our products requires resources such as energy or water. The more conservative our approach to these resources is, the more sustainable our products are. We are squaring up to this responsibility.



We aim to design and build the most efficient and environmentally compatible cars. So dealing efficiently and consciously with energy and the Earth's natural resources is at the core of our activities. To live up to this claim, we take account of environmental impacts throughout the entire product life cycle. In all our activities, our extensive experience of environmental management and strategic environmental protection provides us with firm foundations.

**Environmental management** 

Our all-embracing sustainability philosophy flows directly into the Group's Environmental Policy and Environmental Principles. In the 2010 financial year we extended our Group Environmental Policy, which is basically founded on the environmental compatibility of our products and on a resource-conserving approach to their production. An effective energy management system is helping us achieve our goal of becoming the leading automaker in environmental terms as well by 2018. The main pillars of our Environmental Policy are the Group Environmental Principles governing our products and production operations, which apply worldwide.

Within the Technical Development department at the Volkswagen brand the Environmental Policy is strategically integrated into all processes and monitored by the technical inspectorate  $T\ddot{U}V$  NORD-CERT. At the end of November 2010, the Technical Development department's environ-

mental management system was certified to EN ISO 14001 – for the 15th time. In 1995, Volkswagen was the first automobile manufacturer to have its Technical Development department externally certified. 2010 also brought recertification to ISO/TR 14062, which was first obtained in 2009. This standard comprises binding requirements for the integration of environmental aspects in product design and development activities.

Since 1995, our German sites have participated voluntarily in the EU Eco-Management and Audit Scheme (EMAS), making Volkswagen one of the first automakers to get involved in this program, while our Group sites worldwide have participated in environmental certification processes in accordance with the international standard EN ISO 14001.

In the course of recertifications, Volkswagen confirmed its role as a trailblazer. For example, we identify environmentally relevant aspects early on and integrate them into the product development process. We also comply with the requirement to take environmental considerations into account at all stages of the product lifecycle. Taking account of the Group's binding minimum standards, all production plants are under obligation to set environmental goals at their own initiative and draw up continuous improvement programmes for their environmental performance. Regular meetings of the environmental officers of the Group's European production

Strategic environmental management and a clear environmental policy create binding environmental goals.



plants have been taking place since as long ago as 1976. At our plants outside Europe, we also stage additional Environmental Regional Conferences where action plans are drawn up in workshops to ensure a uniform high standard of environmental protection. A system of environmental sponsors promotes the initiation of environmental projects and helps with their deployment.

The Corporate Environmental Steering Group (KSK-U) performs a strategic function within the Group, safeguarding the long-term value of the company and protecting it against environmental risks. Its activities focus on the areas of products, production/sites, sales and communications. The aim is to harmonise environmental activities across the Group; to derive and pursue goals and measures; to foster Group-wide knowledge transfer; and to plan and steer international audits and the Regional Conferences.

Introduced in 1995, the Factory Agreement on Environmental Protection describes the rules of good environmental practice and encourages all employees to respect and apply these in their everyday work.

Through a network of environmental specialists, who not only act as local contacts but also have a multiplier role, since 1990 production-related environmental protection has been set on ever broader foundations. The Internal Environmental Award provides an example of the commit-

ment of Volkswagen's employees. The award is presented to individual or groups of employees of the Volkswagen brand or a corporate function in Europe who have demonstrated great personal commitment to environmental protection in the workplace. » 28, » 29, » 30, » 31, » 32

#### Life Cycle Assessments

To minimise the environmental impact of our products, we analyse the entire lifecycle using Life Cycle Assessments (LCA) in accordance with international standard ISO 14040/44. LCAs cover the life cycle of new vehicles, powertrains, components and materials from the initial idea and design sketches through to technical development and production, use and subsequent recycling. Where we identify relevant optimisation potential, we amend our LCA specifications accordingly. This also applies to the supply chain, where we engage in a dialogue with suppliers to identify environmental action that can be taken.

Today, LCAs are a tried and tested environmental management tool that plays a key role in reliably achieving the objectives of Volkswagen's Environmental Policy. To keep our customers informed about this work, we issue what we call Environmental Commendations based on the results of the LCAs we have drawn up for vehicles or technologies; results that have been verified by independent experts. »33, »34

From initial design sketch through to recycling: sustainability at every stage of the vehicle life cycle.



#### Climate protection & energy efficiency

Climate protection is a top priority for the Volkswagen Group. For a carmaker, climate protection means first and foremost producing vehicles with low  $CO_2$  emissions. The Volkswagen Fuel and Powertrain Strategy is our roadmap for achieving this objective.

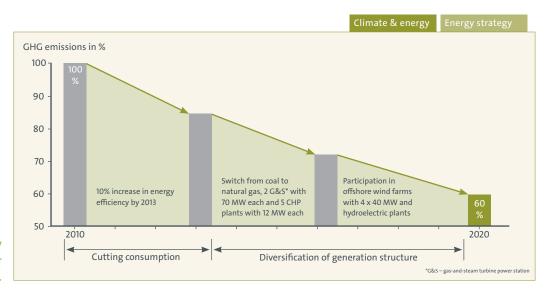
A key aspect of this strategy is efficiency improvement.  $CO_2$  reduction measures throughout the Group are coordinated by a Corporate  $CO_2$  Steering Group to develop efficient technologies for all brands and bring them to the market as costeffectively as possible using modular toolkits. The  $CO_2$  registry is one such instrument which analyses the  $CO_2$  emissions over the entire product creation process for every vehicle project across the Group. That way we can ensure that the binding reductions in  $CO_2$  laid down in the Group's Environmental Principles are attained.

In the production sector too, Volkswagen reduces emissions with a harmful impact on the climate, for example by introducing energy-saving measures. For years now, the Corporate Energy Working Group has been responsible for these activities. In addition, the Volkswagen brand has established a central energy management function.

Volkswagen is also involved in consultation with government and scientific institutes, for example in the context of our cooperation with the International Energy Agency (IEA), the UN Intergovernmental Panel on Climate Change (IPCC) or our active membership of the World Business Council for Sustainable Development (WBCSD). The objective is to lay a firm foundation of facts and figures for the sustainable long-term plans of policymakers and of the Group. For the internal exchange of knowledge between all brands, regions and departments, a Group Expert Network Climate and Energy has been established.

#### Energy supply strategy

Volkswagen Kraftwerk GmbH plays a key role in securing the future of our sites and ensuring energy supplies that are increasingly eco-friendly.



The energy supply strategy points the way to far greater energy efficiency.

# percent less greenhouse gas emissions by 2020 compared to 2010.

To maintain secure, cost-efficient and sustainable energy supplies to the production plants, a Volkswagen energy strategy has been developed. The main goal of this strategy is to reduce greenhouse gas emissions by 40% over 2010 levels by 2020. The first step will be to improve energy efficiency in the production sector.

At the same time the Volkswagen Group is also working to diversify its energy structure. The following measures are currently being implemented or are at the detailed planning stage:

- Changeover from coal to natural gas: construction of two gas-and-steam turbine power stations, each with an output of 70 MW, and five combined heat and power stations, each with an output of 12 MW, at plants in Germany
- Participation in offshore wind farms  $(4 \times 40 \text{ MW})$
- Construction of a further hydroelectric power plant in Brazil, with an output of 25 MW
- Construction of a modified water-wheel on the Aller river in Lower Saxony to provide power for the Golf blue-e-motion test fleet
- Consistent expansion of the use of rooftop photovoltaic systems at Volkswagen Group production plants. » 36, » 37, » 38

#### **Efficient powertrains & fuels**

The basic principle is to drive forward decarbonisation and further improve the efficiency of the entire powertrain. The Volkswagen AG Fuel and Powertrain Strategy focuses on two technologies that are to be pursued in parallel and will coexist: electromobility and advanced internal combustion engines. However, both electric propulsion systems and internal combustion engines face the long-term challenge of switching successively

to sustainable carbon-neutral energy sources. For electromobility, for example, this means a shift to hydropower, wind energy and solar power. For the internal combustion engine, energy sources based on sustainable biomass and biogenic fuels produced from such biomass are becoming increasingly important. At Volkswagen, these are referred to as SunFuel® – provided that the  $\rm CO_2$  reduction potential is at least 60%, EU sustainability criteria are met and the fuels are compatible with the powertrain technology of the present or the foreseeable future.

For SunFuel® production, Volkswagen favours the use of waste materials that do not compete with food crops for agricultural land and do not require any change in land use. In addition, further improvement in sustainable biofuel production processes is possible if the process energy required is generated using waste. The higher the share of waste in energy generation, the better the energy balance and the higher the CO<sub>2</sub> reduction potential of the fuel on a well-to-wheel basis, i.e. considered over the entire production process. Taking these factors into consideration, the Volkswagen Group sees considerable potential in processes that extract ethanol from straw as well as in the Biomass-to-Liquid (BtL) process based on the use of wood waste.

#### Efficiency brands

People will only be won over to sustainability if the benefits are evident to them. This is why we highlight the particularly efficient cars among all Group brands and clearly underline the benefits through the relevant efficiency brands. Between 2007 and 2010, worldwide sales of efficiency models of the Group's Audi, Volkswagen, Volkswagen Commercial Vehicles, SEAT and Škoda brands rose by a factor of 12, from 32,500 to 402,400 units.



#### LichtBlick partnership

Climate protection also opens up new business areas. In cooperation with LichtBlick AG, Volkswagen is producing compact CHP plants based on highly efficient gas engines. Marketed by LichtBlick as Home Power Plants, these decentralised units are controlled as a "swarm" of power plants. Series production at the Salzgitter plant started recently, helping to safeguard jobs. >> 35



BlueMotionTechnologies is the umbrella brand for all products and technologies of the Volkswagen brand that save fuel and reduce emissions of  $\mathrm{CO}_2$  and pollutants. Four sub-brands come under this label:

- BlueMotion: for the most economical Volks-wagen model in its particular class. All BlueMotiontechnology measures are combined in one special model with distinctive visuals. The Polo BlueMotion, for example, with a combined fuel consumption of 3.3 litres/100 km and 87 g CO<sub>2</sub>/km, is the most economical 5-seater in the world.
- BlueMotionTechnology: Here, the customer chooses between various models, engines and equipment levels and can add an optional BlueMotionTechnology package.
- TSI EcoFuel identifies Volkswagen's natural gas-powered models with TSI, achieving  ${\rm CO_2}$  emissions that are almost one quarter less than their petrol-engined counterparts.
- BlueTDI with exhaust gas treatment designates vehicles with the lowest nitrogen oxide emissions (up to 90 percent reduction), ensuring early compliance with the Euro 6 exhaust emissions standard (category N) that will come into effect in 2014. In 2010, production of the Passat BlueTDI in Germany reached 2,800 units, compared to 1,800 units in 2009; up by a factor of 1.5.

At Škoda, cars with particularly low fuel consumption are badged as GreenLine models. The new second generation is available in all Škoda models. The Škoda Fabia GreenLine, with  ${\rm CO_2}$  emissions of 89 grams per kilometre, is the

Škoda model with the lowest consumption and emissions. Škoda also offers the GreenLine Technology equipment package for the Octavia, aimed at environmentally aware customers with their own specific requirements in terms of the comfort and convenience features and equipment level of their car. At SEAT, the Ecomotive and E-Ecomotive labels (for the lowest-consumption SEAT model) designate particularly economical models. The SEAT Ibiza E-Ecomotive, with emissions of only 89 grams of CO<sub>2</sub> per kilometre, is the vehicle with the lowest consumption and emissions. Ecomotive means that SEAT offers various models and engine options with a start/stop system and recuperation. In addition, SEAT offers market-specific models such as bi-fuel (LPG) and multi-fuel (E85) vehicles with lower CO<sub>2</sub> emissions.

True to the notion of "Vorsprung durch Technik. Efficiency: standard in every Audi", all vehicles at Audi are equipped with fuel-saving technologies. The new Audi A1, for example, is already fitted with the start/stop system, recuperation and an on-board computer with an efficiency program. Audi now offers 54 models with a  $\rm CO_2$  value of less than 140 g/km. Of these, 17 fall within the range up to a maximum of 120 g/km.

In addition, Audi offers flex-fuel vehicles, which can be run on fuel containing 85% ethanol, as well as "TDI Clean Diesel" technologies. The customary economy of the TDI and the efficient minimisation of the emissions of the ultra-low emission system ensure both economical and clean motoring. ">24, ">5, ">6, ">39, ">40</sub>

#### **Customer information**

Sustainable mobility calls for a joint effort on the part of the manufacturer and the driver. Reducing the  ${\rm CO}_2$  emissions of the vehicles we build is a goal that keeps us motivated in our everyday

#### **New Small Family**

With the New Small Family, Volkswagen is again adding a fully-fledged compact car programme to its range. Take the Up! for example, production of which will start in August 2011: With the optional BlueMotion-Technology package, the 55 kW petrol-engined model will emit less than 100 grams of CO<sub>2</sub> per kilometre. In the production of the Up! a new painting process based on paints with no filler marks another step towards resource conservation. From 2012 onwards a natural gas version of the Up! will become available, followed in 2013 by the Up! bluee-motion with electric drive. SEAT and Škoda will also be launching their own versions of the Up!

# litres of fuel take the Polo BlueMotion 100 km, making it the world's most economical 5-seater.

work. With our BlueMotionTechnologies we are already setting the standards out on the road. And through a combination of such leading-edge automotive technology and an eco-friendly style of driving, our vehicles can become even more efficient. It's an approach we call "Think Blue."

"Think Blue." stands for a brand mindset that goes beyond products and technologies. It's a reminder to join with our customers and employees to act in an even more environmentally compatible way. As an integral approach, "Think Blue." is fully aligned with the core values of the Volkswagen brand "innovative, valuable and responsible."

In terms of content, "Think Blue." rests on three conceptual pillars: development of eco-friendly products and solutions; fostering of environmentally compatible personal behaviour; and supporting environmental initiatives.

We began presenting "Think Blue." to a wider public at the end of February 2010. As part of an

integrated campaign, the underlying mindset is being conveyed not only in classical brochures or flyers but also through social networks, clearing the way for a targeted engagement in dialogue with our customers. When we know in which areas of ecological sustainability our customers see room for improvement and know which way their thoughts are turning, we are even better placed to join forces with them to drive sustainable change. One special focus is on the involvement of our employees through a range of internal measures designed to heighten awareness of the way each individual deals with energy in their own sphere of influence. And because we think acting sustainably should also be fun, we have also added game elements to "Think Blue."

In addition to the existing activities, through progressive internationalisation, stakeholder involvement and integration measures along the value chain, we will be working to permanently establish "Think Blue." as the mindset of the Volkswagen brand. »41, »42, »43



Back in the 1950s the revolutionary slogan for the Volkswagen Beetle ran "Think small." In much the same way, "Think Blue." today marks the dawn of another new era.



2005: one label 2008: one umbrella brand 2010: one mindset



#### **Electromobility**

In future, Volkswagen's heart will also beat with an electric pulse. According to our roadmap, the recently-introduced Touareg Hybrid will be followed in 2012 by the Jetta Hybrid and, in the following year, by the E-Up!, just ahead of the Golf blue-e-motion. One of these models will also be the brand's first all-electric vehicle in the USA. Volkswagen will be the first vehicle manufacturer to offer an electric car that is accessible to every customer.

Two roads, one destination:
the Volkswagen Fuel and
Powertrain Strategy assigns
equal importance to the parallel development of e-mobility
solutions and more efficient
internal combustion engines —
en route to the sustainable
mobility of the future.

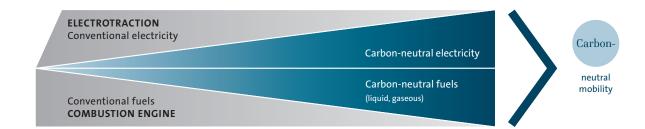
Our engineers in America, Europe and Asia are creating the platform for this initiative. In this worldwide research and pre-development network, Volkswagen is investigating modular options for new electrical components and is also researching a variety of energy storage concepts. The company regards not only the bodywork, but also the electric motor - the electric heart of the e-car - along with the battery system and power electronics as a core competence. The electric motors, for example, will be manufactured at the Kassel plant and the battery system in Braunschweig. With the development of an electrical module that allows flexible and efficient integration of the electric motor into the various vehicle platforms, Volkswagen also plans to forge ahead with the electrification of further models. The five-door and five-seater version of the Golf blue-e-motion study will be

driven by an electric motor built into the front of the engine compartment, delivering a maximum output of 85 kW/115 hp. It has a continuous power output of 50 kW/69 hp. The electricity used to drive the motor is stored in a lithium-ion battery with a capacity of 26.5 kilowatt-hours. Depending on driving style and other factors, such as use of the air conditioning and heating, ranges of up to 150 kilometres can be achieved. The Volkswagen Group is aiming to become the market leader in e-mobility by 2018. The focus will initially be on Europe, China, Japan and the USA as the main world markets, and the success of e-mobility in these areas will be vital to the global implementation of the Volkswagen Group's e-mobility strategy. >> 44

#### **Resource efficiency**

Volkswagen is constantly striving to improve its resource efficiency. This is not simply measured as the ratio of resource input to product output in a process but taken in a holistic context. Consequently, resource efficiency is not only a top priority in product design and production but is also fostered by efficient product use and recycling.

Volkswagen is committed to the systematic enhancement of its resource efficiency. So when innovative vehicle and component production processes were recently selected, the Company



# percent of a vehicle can be recycled or recovered by the Volkswagen-SiCon process.

reviewed the effectiveness of materials flow management and this approach is now being introduced. The examples under the heading of "Environmental Technology" highlight the specific effects of resource efficiency at Volkswagen. In addition, energy and material consumption for component production are being reduced. Volkswagen is tackling the key issue of base load consumption, for example by packages of measures designed to reduce the standby energy consumption of its plants. To ensure more efficient material use, processes with minimum lubrication and dry machining are used. This also includes orbital cold forming, an innovative forming method that replaces the machining processes previously used. As the blanks for orbital forming are near to the shape of the final part, the quantity of waste produced is reduced significantly. >> 45, >> 46

#### Vehicle recycling

Volkswagen has developed and introduced a number of processes to ensure that 85% of new vehicles by weight can be recycled and 95% recycled or recovered. These figures are regularly reviewed by the Kraftfahrtbundesamt, Germany's Federal Motor Vehicle Bureau. Thanks to the processing of shredder residue with the Volkswagen SiCon process, it is now possible to recycle or recover 95% of an end-of-life vehicle in a way that is both environmentally compatible and economically viable. Normally, "end-oflife" Volkswagen vehicles are taken back free of charge in the EU. These vehicles are then recycled by a tightly meshed network of mediumsized partner companies. Many used components (some 13,000 different parts in all) are remanufactured and tested by Volkswagen, and offered for sale as reprocessed parts. These parts meet the same quality requirements and benefit from the same warranties as new parts. Recycling activities are also being gradually extended to markets outside the EU. For example, from 2011, major components are to be remanufactured in China.  $\gg 47, \gg 48$ 

#### Recycled materials

Reducing the use of primary raw materials is a top priority for Volkswagen. This is why the use of quality-assured recycled materials is not only permitted in almost all vehicle components but explicitly required by Volkswagen's general environmental specification that applies to all projects. The share of all recycled materials in the weight of the current Golf, Polo and Sharan series is about 40%. Apart from a large number of metals, recycled plastics are also used. One example is the underbody tray, which is made from 100% recycled plastics. These positive results are confirmed by test certificates issued by TÜV NORD.  $\gg 49$ 

#### **Efficient production**

 $Energy\,management\,in\,the\,production\,sector$ In the production sector, all measures geared to efficient energy use are coordinated by the Energy Management team. The team supports Group-wide best practice-sharing and organises workshops and events at the plants – such as the recent Energy and Environment Day, which included an exhibition with examples and information about efficiency-enhancing measures. In addition, the Energy Management team develops Group-wide standards on energy efficiency. These standards are rigorously implemented both at existing sites and when constructing new production plants. For example the new plant in Chattanooga, USA, has set a benchmark in energy efficiency with its use of energy-saving ventilation systems and efficient lighting systems with specular reflectors. In total, energy consumption has been reduced by 522,000 MWh since central energy manage13,000 different used components can be remanufactured as replacement parts.



ment was introduced, corresponding to a saving of around 296,000 metric tons of CO<sub>2</sub> since 2008.

To unlock even more potential in the future, the Energy Management team recently began systematically analysing energy flows in specific production sectors. In addition, the Energy Management System has been integrated into the Environmental Management System. In 2010 the Polkowice, Pamplona, Emden, Dresden and Kassel plants all achieved DIN EN 16001 certification. The first Volkswagen plant in the world to be certified to this standard, in 2009, was the Braunschweig plant. Savings of around 10,000 metric tons of CO<sub>2</sub> per year are now expected at these plants. The European production sites which operate their own energy-generating plants will face a major challenge when new emissions trading rules come into force in 2013. Under the allocation rules, power- and

heat-generating plants will have to buy emissions permits to emit  ${\rm CO}_2$ . The percentage of free allowances will be reduced annually.

#### Environmental technology

Using environmental technology from Volkswagen, opportunities for improved resource efficiency are identified and the necessary concrete actions are implemented. In the paintshop for example, where the paint tools have to be rinsed with solvents when changing to a new colour, new colour change systems have now been installed which reduce paint loss during changeover by 85%. In the paint booth itself, a new air recirculation system has reduced the amount of intensively pre-treated intake air required to just a fifth of previous levels. In the bodyshop meanwhile, the use of new disc lasers can result in a tenfold improvement in energy efficiency. »50

#### Water

Water quality and water availability are not only key challenges for humanity, they are also an important issue for the Volkswagen Group. In order to identify which processes in the life cycle of our products are responsible for the highest water consumption, we have calculated water footprints for selected models, based on the extensive data collected for our Life Cycle Assessments. These calculations show that in the case of water consumption - unlike CO<sub>2</sub> emissions – the vehicle's service life plays only a minor role. By far the largest proportion of water consumption is accounted for by processes in the upstream material supply chain. Volkswagen takes its responsibilities in this area very seriously, and makes every effort to be economical in its use of water.

Often, Volkswagen's initiatives extend far beyond simply reducing water consumption. For



Be it in Shanghai or Chattanooga, the same energy efficiency standards apply across the Group. times over, statistically speaking, every drop of water is recycled at the Wolfsburg plant.

example at Volkswagen Mexico's Puebla site, 300 hectares of land was afforested during 2008 and 2009 to reduce soil erosion and improve rainwater infiltration into the groundwater. This will increase local water resources by retaining an additional 1.6 million  $m^3$  of water a year for regional use. In the second stage of this project, we are now getting together with 39 local suppliers to plant an additional 200 hectares with native mountain pines. 26, 51

reports have been prepared cataloguing all species meriting conservation in the vicinity of the plant, along with the emissions produced by the plant. Volkswagen is also involved in the international business and biodiversity initiative "Biodiversity in Good Company". The German Environment Ministry launched this multi-sector inter-company network in 2007, with the aim of involving industry more closely in implementation of the national biodiversity strategy.



#### Air quality

In line with European air quality policy, Volkswagen is making significant reductions in its emissions of key pollutants such as particulates, nitrogen oxides, ammonia, sulphur dioxide and volatile organic compounds.

For example in the body shop, all laser welding fumes are captured and filtered out. In the paint-shop, overspray from spray-painting – already greatly reduced by the use of electrostatic application techniques – is further reduced by highly efficient separator systems. New paint booths are now fitted with state-of-the-art particle separators that reduce particle emissions by a factor of 50.

At our Kassel plant, a modern gas-fired gas-andsteam power plant will soon replace the previous coal-fired system, and this will reduce particulate and nitrogen oxide emissions. » 52, » 53

#### **Biodiversity**

Under the heading of "Volkswagen connects habitats" Volkswagen has begun to develop a global biodiversity management strategy. Clear responsibilities have been defined, and the issue of biodiversity is regularly discussed during the environmental audits of our plants around the world. At many German and European sites,

2010 saw the onset of the Aller Project. As part of Volkswagen's conservation programme for the Wolfsburg region, this year work is starting on creating habitats for indigenous flora and fauna including the otter, the salmon and the river lamprey.

Volkswagen AG's requirements for a modern biodiversity management approach are also communicated to our suppliers, via a B2B platform. In parallel with this, the company is also systematically extending its own expertise in the field through a dialogue with competent partners — in Germany that means primarily the German Nature and Biodiversity Conservation Union (NABU). »26, »54, »55, »56, »57

#### **Green Logistics**

Green Logistics is all about increasing the efficiency of transport, container and real estate management with an environment-friendly approach. One example of sustainable transport management is the Multimode Logistics Concept Wolfsburg (MLW), where a regional logistics site is being set up right next to the Mittelland Canal, integrating road, rail and waterway transport systems at one location. The overall concept offers potential savings for finished vehicle transportation in the order of 1.26 million truck-kilometres and a  $\rm CO_2$  reduction of around 2,000 metric tons per annum.

Global biodiversity management helps conserve species worldwide.



In the logistics domain, the number of different bulk container types used for the shipment of large components was reduced from 31 to 17 between 2003 and 2010 as a result of increased standardisation. This simplifies container control and reduces the number of empty-load kilometres travelled, resulting in a significant reduction in transport-related  $\mathrm{CO}_2$  emissions.

Sustainable logistics embraces all means of transport – road, rail and water. Sustainability in real estate management is evident in the "SEAT al Sol" project. The Martorell plant in Spain has been generating power using photovoltaic systems since March 2008. In 2010, the existing logistics areas were integrated into the power generation system. Photovoltaic systems covering a surface area of 135,000 m<sup>2</sup> were installed on roofs and on a covered parking area. The installation is expected to reach a total maximum output of 10.6 MW of green energy by the beginning of 2012. Audi's "Green Train" is another example. In August 2010, Audi became the first company in Germany to use trains powered by green electricity to transport its vehicles from Ingolstadt to the North Sea port of loading in Emden. In doing so, Audi avoids the emission of around 5,250 metric tons of CO<sub>2</sub> per annum, equivalent to more than 35 kilograms for each transported vehicle.

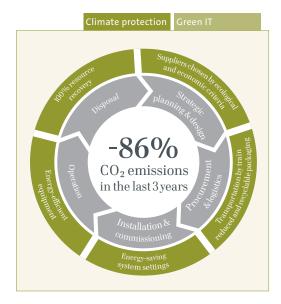
#### Green IT

The principles of sustainability must also be applied to information and communication technology. Green IT is particularly important for our employees when it comes to their workstations. Here, energy consumption is well below the levels required for ecolabel certification. When selecting IT suppliers and products, we look particularly for the Energy Star or Blue Angel labels. The products we use not only meet but exceed the requirements of European environmental legislation. Another important aspect of Green IT policy at Volkswagen is to use

no more equipment than absolutely necessary. By bringing the use of notebooks, monitors, printers and other terminals into line with actual needs, we have been able to reduce the number of items of IT equipment in use within the Group by 66%, resulting in an 86% reduction in energy consumption and CO<sub>2</sub> emissions. To improve transparency within the organisation the "Sustainable IT" research project was launched, as part of an IT-based CSR indicator system. With a focus both on the sustainability "of IT" itself and on the sustainability achieved "by IT", the aim is to develop performance indicators and metrics for a sustainable IT policy. To make the business value of IT transparent across the whole Group, a system of objectives and indicators will be defined which will be embedded, along with the relevant responsibilities, in the IT organisation's structures, processes and tools.

#### **Mobility concepts**

Mobility is a multidimensional topic that is impacted by many different factors, from climate



# kilograms less CO<sub>2</sub> per car transported is what Audi's Green Train achieves.

and energy aspects through globalisation to demographics and urbanisation.

In 2010, Volkswagen Group Research developed a strategy that addresses these various aspects and focuses all the Group's activities on the vision of sustainable mobility. The aim is to maximise our innovation capability to meet the diverse challenges in the many and various regions around the world. For example in densely populated areas it will be essential to ensure more efficient use of scarce infrastructure. Intelligent vehicles, as components in an efficient traffic management system, will provide an effective approach to reducing congestion and accidents. With assistance systems that deliver accurate navigation information, help drivers maintain the correct following distance, and help them cross intersections safely or park their vehicle quickly, we are working step by step to develop new ways of promoting intelligent cooperation in urban traffic. Our researchers are working on systems that will make driving less stressful and so ensure safer and more efficient traffic flow - for example at roadworks.

Particularly in highly urbanised environments, however, no one form of transport, be it the private car or public transport, is capable of meeting all the demand. The bigger the city, the more important it is to integrate a number of different modes of transport. In line with this co-modal approach, our cars of the future will feature "car-to-X" technologies that will keep drivers informed and in touch and assist them when changing to other modes of transport. And evolution is taking place not only on the technology front but also in attitudes and behaviour. For example the "don't own it, just use it" philosophy is spawning a range of new mobility services. In its work on flexible hire and leasing concepts, Volkswagen can also draw on its own

pioneering efforts in the field of car sharing from the 1990s. »58, »59

#### Urban micro-mobility

E-mobility must be affordable and it must cater uncompromisingly to everyday needs. Volkswagen therefore takes a complete end-to-end approach in its development work. For the last short part of the way into the city centre after drivers have parked their car, the Volkswagen "Urban Micro-Mobility" ConceptTeam is developing zero-emission micro-vehicles such as the ultra-compact "Kickstep" folding scooter. After charging up in the boot of the E-Up!, the Kickstep can be unfolded for use as soon as the driver has gone as far as possible by car. Another example of a sub-car complementary mobility solution is the "Bik.e". This battery-powered electric bike, with its innovative folding system, fits neatly into the spare wheel well. Lifted out of the car, it unfolds into a full-size bike which provides safe transport at speeds of up to 20 km/h and has a range of at least 20 km. » 60

#### Audi Urban Future Award

What sort of world awaits city-dwellers of tomorrow? And how can our future urban lifestyles promote sustainable energy management and sustainable mobility? These are the questions being studied by the participants in the Audi Urban Future Award, an architectural competition dedicated to developing architectural and urban planning visions for the future. The aim is to take a serious look into the future and discuss the relationship between mobility, architecture and urban planning.  $\gg 61$ 



One tangible contribution to sustainable mobility is being made by the environmental programme of Volkswagen Leasing GmbH. Anyone leasing extra-fuel-efficient BlueMotion or EcoFuel models also helps to fund NABU initiatives – such as a wetlands restoration project. In addition, Volkswagen Leasing GmbH joins forces with NABU to commend eco-friendly fleet management through the GREEN FLEET award.

*» 62* 



# Fact finding.

On the following pages we have set out the key environmental, financial and social indicators. Along with the figures for the year under review (January 1 to December 31, 2010) we have also provided the figures for the preceding years so that trends can be more easily identified. Data have been consolidated at Group level since 2001, while the individual brands and companies are responsible for data collection. We will be making ongoing efforts to extend the range of key indicators for future sustainability reporting.

All charts and diagrams can also be found online at: www.volkswagenag.com/sustainability

#### **Financial indicators**

For a detailed presentation of our financial indicators, please consult our 2010 Annual Report. The indicators set out below correspond to the International Financial Reporting Standards (IFRS) for the entire period from 2006 to 2010.

#### **VOLUME DATA in '000\***

	2010	2009	2008	2007	200
Vehicle sales (units)	7,278	6,310	6,272	6,192	5,72
Germany	1,059	1,288	1,013	1,030	1,09
outside Germany	6,219	5,022	5,259	5,162	4,62
Production (units)	7,358	6,055	6,347	6,213	5,66
Germany	2,115	1,938	2,146	2,086	1,93
outside Germany	5,243	4,117	4,201	4,127	3,72
mployees (annual average)	389	367	357	329	32
Germany	178	173	178	175	17
outside Germany	210	194	179	154	15

<sup>\*</sup> Volume data including the unconsolidated Chinese joint ventures. Employees in 2009 not including Chinese component plants.

#### FINANCIAL DATA in € million

Volkswagen Group	2010	2009	2008	2007	2006
Sales revenue	126,875	105,187	113,808	108,897	104,875
Operating profit	7,141	1,855	6,333	6,151	2,009
Profit before tax	8,994	1,261	6,608	6,543	1,793*
Profit after tax	7,226	911	4,688	4,122	1,955*
Profit attributable to shareholders of Volkswagen AG	6,835	960	4,753	4,120	2,749
Cost of materials	79,394	67,925	75,954	72,340	66,935
Personnel expenses	19,027	16,027	15,784	14,549	17,400
Provisions for pensions	15,432	13,936	12,955	12,603	13,854
Automotive Division					
Cash flows from operating activities	13,930	12,815	8,800	13,675	11,745
Cash flows from investing activities	- 9,095	- 10,252	- 11,479	- 6,550	- 6,114
Net liquidity at Dec. 31	18,639	10,636	8,039	13,478	7,133

#### VALUE ADDED OF THE VOLKSWAGEN GROUP in € million

Source of funds	2010		2009		2008		2007		2006	
Sales revenue	126,875		105,187		113,808		108,897		104,875	
Other income	10,787		9,401		9,992		7,050		6,849	
Cost of materials	-79,394		-67,925		-75,954		-72,340		-66,935	
Depreciation and amortization	-10,097		-8,877		-8,438		-9,238		-9,398	
Other upfront expenditures	-15,250		-15,767		-12,554		-9,289		-11,790	
Value added	32,922		22,019		26,854		25,080		23,601	
Appropriation of funds	2010	%	2009	%	2008	%	2007	%	2006	_
to shareholders	1,034	3.1	647	2.9	779	2.9	720	2.9	497	2.
to employees (wages, salaries, benefits)	19,027	57.8	16,027	72.8	15,784	58.8	14,549	58.0	17,400	73.
to the state (taxes, duties)	3,105	9.5	1,152	5.2	2,503	9.3	2,950	11.8	440	1.
to creditors (interest expense)	3,563	10.8	3,928	17.8	3,879	14.4	3,459	13.7	3,011	12.
to the Company (reserves)	6,193	18.8	265	1.2	3,909	14.6	3,402	13.6	2,253	9.
Value added	32,922		22,019		26,854		25,080		23,601	

#### KEY FIGURES BY BRAND AND BUSINESS FIELD in 'ooo vehicles/€ million¹

	VEHICLE SALES	5	SALES REVENU	JE	SALES TO THIR	D PARTIES	OPERATING RE	SULT
thousand vehicles/€ million	2010	2009	2010	2009	2010	2009	2010	200
Volkswagen Passenger Cars	3,863	3,459	80,251	65,368	62,648	52,816	2,173	56
Audi	1,321	1,183	35,441	29,840	24,638	20,443	3,340	1,60
Škoda	585	552	8,692	7,100	5,892	5,761	447	20
SEAT	349	319	5,038	4,561	3,635	3,360	-311	-33
Bentley	5	4	721	571	691	553	-245	-19
Commercial Vehicles	349	275	7,392	5,294	4,809	3,844	232	31
Scania <sup>3</sup>	64	43	8,462	6,385	8,462	6,385	1,342	2
VW China⁴	1,871	1,397						
Other	-1,128	-923	-32,709	-25,592	3,499	929	-769 <sup>5</sup>	-1,13
Volkswagen Financial Services			13,587	11,660	12,600	11,095	932	6
Volkswagen Group	7,278	6,310	126,875	105,187	126,875	105,187	7,141	1,8
of which: Automotive Division	7,278	6,310	112,806	93,041	113,792	93,605	6,189	1,2
of which: Financial Services Division			14,069	12,146	13,083	11,581	952	5:

<sup>&</sup>lt;sup>1</sup> All figures shown are rounded, so minor discrepancies may arise from addition of these amounts.

<sup>&</sup>lt;sup>a</sup> Including the proceeds from the sale of Volkswagen Caminhoes e Onibus Industria e Comercio de Veiculos Comerciais Ltda., Resende

 $<sup>^{\</sup>rm 3}$  Vehicles & Services and Financial Services.

<sup>&</sup>lt;sup>4</sup> The sales revenue and operating profit of the joint venture companies in China are not included in the figures for the Group. The Chinese companies are accounted for using the equity method and recorded an operating profit (proportionate) of € 1,907 million (831 million). The prior-year figures were adjusted.

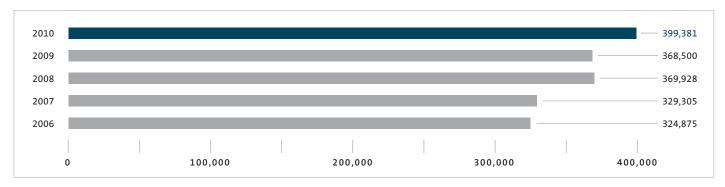
<sup>&</sup>lt;sup>5</sup> Mainly intragroup items recognized in profit or loss, in particular from the elimination of intercompany profits; the figure includes depreciation and amortization of identifiable assets as part of the purchase price allocation for Scania.

#### **Social Indicators**

The Volkswagen workforce is constantly growing. On December 31, 2010, the Volkswagen Group had a total of 399,381 employees on the worldwide payroll. That is 8.4% more than at the end of the 2009 financial year (368,500 employees). On the one hand this increase is due to growth (+23,662 employees) and on the other to

newly consolidated companies (+7,219 employees). The social indicators given below relate to all consolidated companies including the Chinese joint venture companies. On account of peculiarities in Swedish stock company law, Scania is only partly included in the following data.

#### THE TOTAL VOLKSWAGEN GROUP WORKFORCE



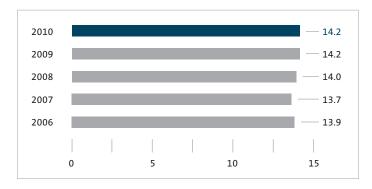
#### NUMBER OF EMPLOYEES BY TYPE OF WORK

	2010	2009	2008	2007	2006
Production workers	207,391	187,966	189,872	177,736	176,187
Non-production workers	181,445	170,688	170,172	142,267	139,489
Apprentices	10,545	9,846	9,884	9,302	9,199
Total workforce	399,381	368,500	369,928	329,305	324,875
of whom active employees	384,058	351,584	351,203	310,156	306,526
of whom in passive phased retirement	4,778	7,070	8,841	9,847	9,150

#### NUMBER OF EMPLOYEES BY REGION

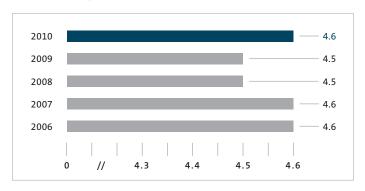
	2010	2009	2008	2007	2006
Europe	290,159	278,779	284,962	256,119	256,60
The Americas	54,571	48,529	48,867	42,814	40,01
Africa	6,546	5,608	6,424	5,886	6,76
Asia	48,105	35,584	29,675	24,486	21,48
Total	399,381	368,500	369,928	329,305	324,87
of whom temporary staff	21,119	12,396	16,016	15,282	14,48
of whom permanent staff	378,262	356,104	353,912	314,023	310,38

#### FEMALE EMPLOYEES IN THE VOLKSWAGEN GROUP in %



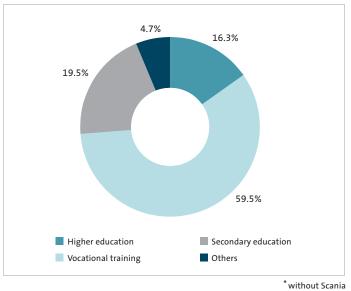
Almost 30 percent of the apprentices taken on by Volkswagen AG are women. Over 22 percent of the university graduates hired by Volkswagen AG are women and today almost one in five junior managers are female. One of the Company's goals is to continue to increase the proportion of women in all fields from its current 14.2 percent but especially in management, where currently 10.4 percent of employees are female.

#### APPRENTICES, VOLKSWAGEN GROUP IN GERMANY in %



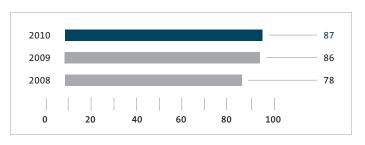
Since other countries do not have a training model which corresponds to the German "dual system", these figures relate solely to Germany.

#### QUALIFICATION LEVELS AT THE VOLKSWAGEN GROUP\*



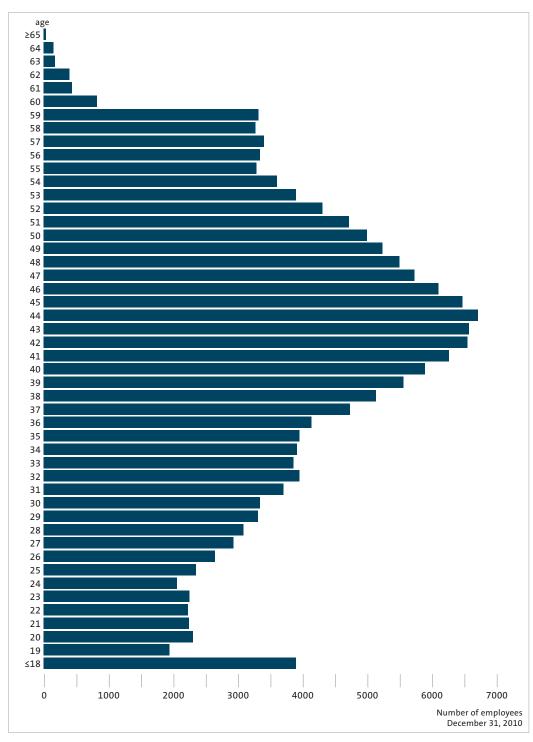
As a result of targeted recruitment measures, the Volkswagen Group employs a high proportion of qualified employees. More than 95% of employees hold some form of qualification.

#### **VOLKSWAGEN GROUP EMPLOYEE OPINION SURVEY: PARTICIPATION in %**



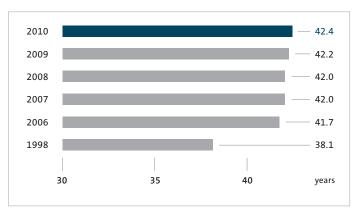
The annual employee opinion survey introduced in 2008 is an established standardised Group-wide tool designed to assess employee satisfaction, eliminate faults and improve work processes. Its acceptance and the level of participation increase from one year to the next.

#### AGE STRUCTURE, VOLKSWAGEN GROUP IN GERMANY in 'ooo



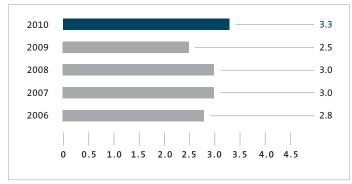
The chart shows the age structure of the employees of the Volkswagen Group in Germany. The recruitment of qualified younger employees by hiring industrial and commercial trainees as well as students on "dual system" courses is reflected in the 18-27 age groups. The average age of the Group's employees in Germany is 40.7 years; the average age of the Volkswagen AG workforce is 42.4.

#### **VOLKSWAGEN AG: AVERAGE AGE**



The average age at Volkswagen AG has been rising more slowly since 2006, which is a sign of a healthy balance between the recruitment of trainees and retirement of long-serving employees.

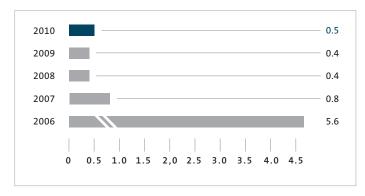
#### **ABSENTEEISM - CUMULATIVE VALUES\* in %**



\* Volkswagen Group production plants without Scania

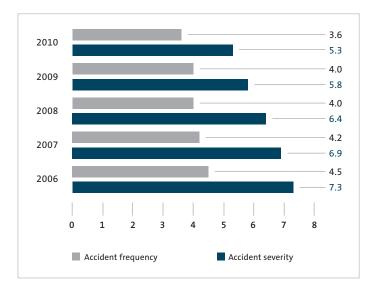
Low absenteeism calls for increased availability of diagnostic and preventive measures. Absenteeism is calculated in line with the formula: no. of days lost to illness or accident x 100, divided by total possible days' attendance in the relevant period.

#### **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 the Volkswagen workforce. The exception was 2006, when a series of restructuring measures led to a sharp increase in employee turnover.

#### **ACCIDENT INDEXES**

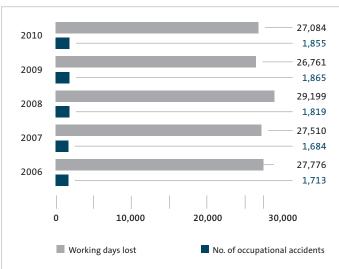


The accident frequency index is an indication of the frequency with which accidents at work occurred in relation to the total number of hours worked. The underlying formula is: no. of occupational accidents, multiplied by 1 million, divided by no. of hours worked.

The accident severity index indicates how serious the accidents are by relating the total number of working days lost to the number of hours worked. The underlying formula here is: no. of working days lost, multiplied by 1 million, divided by no. of hours worked multiplied by ten.

The number of accidents revealed by the accident frequency index continues to fall. This is due above all to a more systematic approach to and the continuous improvement of occupational safety at the Group's plants. Accident severity in the Volkswagen Group has also declined continuously since 2006. The most marked improvements were achieved at SEAT, Volkswagen do Brasil and the Volkswagen car plants in Kassel and Salzgitter.

#### ACCIDENT FREQUENCY in 'ooo



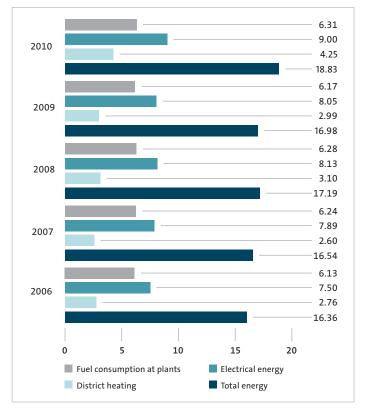
Volkswagen continues to enhance occupational safety across the Group from one year to the next. The rise in the number of occupational accidents between 2007 and 2008 shown in this chart is due to statistical factors, because from 2008 onwards the figures also include occupational accidents affecting salaried employees. This change in reporting to include the entire workforce was introduced to comply with the worldwide reporting standard.

#### **Environmental Indicators**

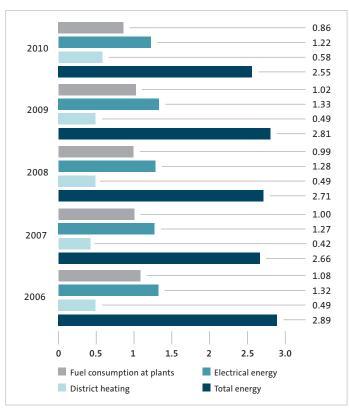
The environmental data are collected, checked and approved at the individual production plants in line with an internal standard (VW standard 98 000) and a process standard. Environmental data collection at the plants has been further improved for the years shown, which led to some slight adjustments to data values from previous years. In addition to stating absolute environmental performance, this report again also shows relative indicators. These are obtained by relating the absolute environmental performance to the number of vehicles

produced. The environmental data in the Sustainability Report provide a compact reflection of trends in the Group's overall environmental performance. In total, environmental data are collected from production plants with a workforce of around 348,000 (as at 31.12.2010). The following Group production plants or companies are not included in the data: Chengdu plant, FAW-Volkswagen Automotive Company Ltd. and Volkswagen Kraftwerk GmbH. Moreover, the non-manufacturing companies (e.g. Financial Services) are not included in the environmental data. » 64

#### **ENERGY CONSUMPTION in million MWh/a**



#### **ENERGY CONSUMPTION in MWh/vehicle**

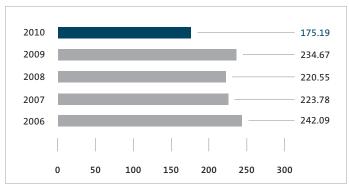


The increase in energy consumption is associated with the continuous increase in production over the reporting period. District heating and fuel consumption also fluctuate depending on weather conditions. In relation to the number of vehicles produced, consumption of electrical energy, one of the largest sources of CO<sub>2</sub> emissions, was down as a result of the Group's resource conservation strategy.

#### DIRECT CO, EMISSIONS in million t/a



#### DIRECT CO<sub>2</sub> EMISSIONS in kg/vehicle

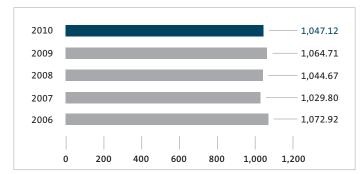


Despite higher production figures and the inclusion of new production plants, above all in South America and Asia, and the consequent increase in energy consumption, direct  $CO_2$  emissions are in decline. Resource-optimised manufacturing processes and methods have had a positive impact on  $CO_2$  emissions per vehicle produced.

#### TOTAL EMITTED CO2 in million t/a

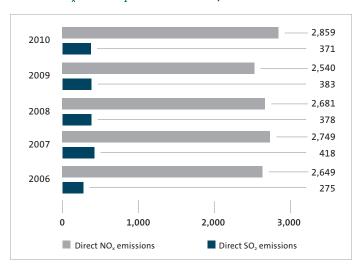
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#### TOTAL EMITTED CO2 in kg/vehicle

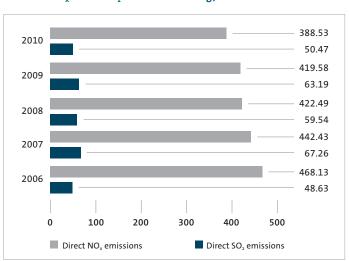


While in the previous reporting period, total  $CO_2$  emissions were still 4.7 times greater than direct  $CO_2$  emissions, this multiplier has now risen to approx. 5.9 times direct  $CO_2$  emissions (2010 values). This means that roughly 83 percent of the Volkswagen Group's total  $CO_2$  emissions are accounted for indirectly by district heating and power generation. These indirect  $CO_2$  emissions, per consumed megawatt-hour, are greatly influenced by the generating infrastructure present in each particular country. The remaining 17 percent of total  $CO_2$  emissions are caused by combustion processes directly at the plant. However, against a background of increased vehicle production, total  $CO_2$  emissions per vehicle have remained virtually constant over the entire reporting period.

#### DIRECT NO<sub>x</sub> AND SO<sub>2</sub> EMISSIONS in t/a

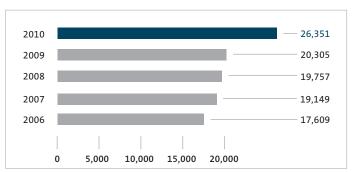


#### DIRECT NO<sub>x</sub> AND SO<sub>2</sub> EMISSIONS in g/vehicle

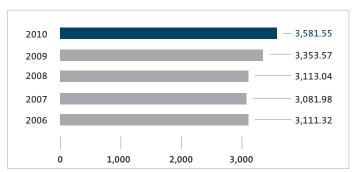


The increase in these parameters over the reporting period is predominantly due to a slight increase in fuel consumption by non-European plants as a result of their increased production. The relative decline in emissions is the result of improved flue gas purification performance in energy generation.

#### VOC EMISSIONS in t/a



#### VOC EMISSIONS in g/vehicle

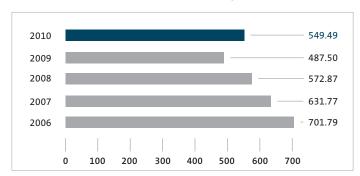


As a result of the increase in vehicle production over the reporting period and the associated higher paint consumption, there was an increase in VOC emissions. Improved exhaust air treatment and optimised coating processes reduced emissions per vehicle.

#### CHEMICAL OXYGEN DEMAND (COD) in T/A

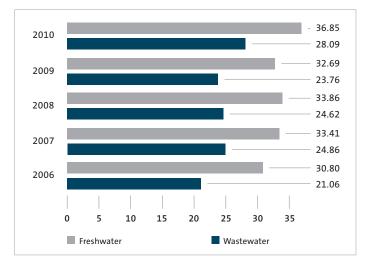
# 2010 — 4,043 2009 — 2,952 2008 — 3,636 2007 — 3,925 2006 — 3,972 | | | | | | 0 1,000 2,000 3,000 4,000

#### CHEMICAL OXYGEN DEMAND (COD) in g/vehicle

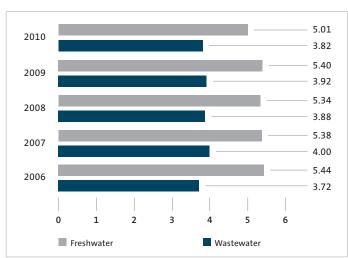


As a result of the increase in production across the Group, there was an increase in chemical oxygen demand in wastewater contamination. However, per vehicle produced, this parameter has declined.

#### FRESHWATER AND WASTEWATER in million m<sup>3</sup>/a

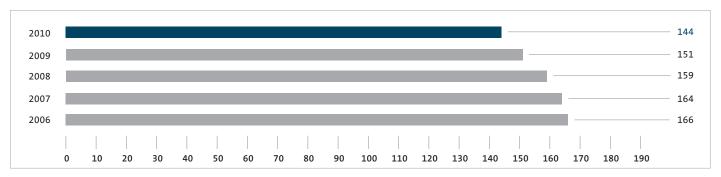


#### FRESHWATER AND WASTEWATER in m³/vehicle



Due to the inclusion of additional 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, in response to the Volkswagen Group's resource conservation strategy.

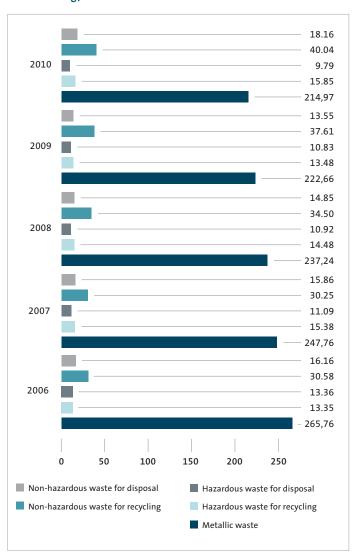
#### CO2 EMISSIONS FROM THE VOLKSWAGEN GROUP'S EUROPEAN (EU 27) NEW CAR FLEET in g/km



#### WASTE in t/a

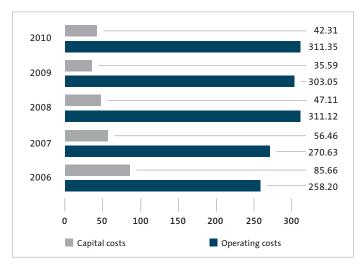
#### 133,610 294,581 2010 72,001 116,620 1,581,635 82,031 227,699 2009 65,585 81.611 1,348,181 94,215 218,972 2008 69,321 91,870 1,505,648 98.529 187,927 2007 68,931 95,575 1.539.427 91,465 173,095 2006 75,609 75,576 1,504,063 0 0.5 mill. 1.0 mill. 1.5 mill. Non-hazardous waste for disposal Hazardous waste for disposal Non-hazardous waste for recycling Hazardous waste for recycling Metallic waste

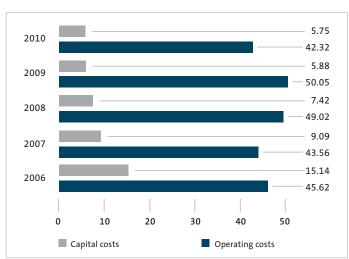
#### WASTE in kg/vehicle



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. Waste recycling rates were also increased thanks to optimised waste segregation and treatment.

#### EXPENDITURE ON ENVIRONMENTAL PROTECTION in € million/a EXPENDITURE ON ENVIRONMENTAL PROTECTION in €/vehicle





Capital investment in environmental protection declined over the current reporting period and water conservation accounted for the majority of the investment made. Operating costs for environmental protection have risen. Water conservation and waste management accounted for the majority of these operating costs. Air pollution control also accounted for a significant proportion of operating costs in this reporting period.

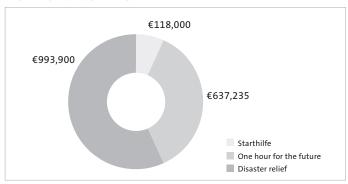
#### Workforce donation

The workforce donation has a long tradition at Volkswagen as a means through which the employees and the Company join forces to help the underprivileged. In 2010, over  $\[mathcal{\in}$  1.7 million was donated to good causes.

In the "One hour for the future" campaign the employees of Volk-swagen plants donate one hour's pay to help street children. Since the summer of 2003 this initiative has also included the collection of "spare cents": the employees donate the spare cents after the

decimal point on their monthly pay slip. The "Starthilfe" (Getting Started) initiative is a 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. Also in 2010, the workforce donated almost €1 million to help the victims of the natural disasters in Pakistan and Haiti.

#### **WORKFORCE DONATION**



#### Indexes, rankings and awards

The Volkswagen Group is a pioneer in the field of sustainable mobility. The Group's commitment in this respect is reflected in leading sustainability and CSR indexes and ratings. In addition,

in the year under review our eco-friendly fuel-efficient products with their low  ${\rm CO}_2$  emissions also won multiple awards.

#### Indexes

ASPI Advanced Sustustainability Performance Index	included
Dow Jones Sustainability Index (DJSI) World	included
Dow Jones Sustainability Index (DJSI) Europe	included
FTSE4Good	included
FTSE4Good Environmental Leaders Europe 40	included
ECPI Ethical Index Europe	included
ECPI Ethical Index EMU	included
ECPI Ethical Index Global	included
Ethibel Sustainability Index	included

#### Rankings

IÖW/future Ranking of Sustainability Reports 2009ranked 6thOekom ResearchStatus PrimeReputation Instituteranked 1stSustainable Asset Management company (SAM)Gold Class 2011VCD 2010/20111st in VCD manufacturers' ranking for "environmental management"

#### **Awards**

German CSR Award German Sustainability Award award-winner 2010 and 2011 award-winner 2008

## Frame of reference

Indicator/Document	Frame of reference	Notes	Cross-reference (>>/p.)
Environmental indicators	Volkswagen Group		64 - 67
Social indicators	Volkswagen Group Volkswagen Group in Germany Volkswagen AG	Report on respective scope of validity can be found on pages 60 - 63.	60 - 63
Financial indicators	Volkswagen Group		58 - 59
Model of Sustainable Development	Volkswagen Group	Introduced in 2002	» 08 / 14 - 15
Code of Conduct	Volkswagen Group	Introduced in 2010	<b>»21/</b> 16
Volkswagen Group requirements for sustainable development with regard to relationships with business partners	Volkswagen Group, all tier 1 suppliers	Introduced in 2006	<i>»66</i> /24
Certification/validation of production sites in line with ISO 14001 and/or EMAS	98.4% of production sites are already certified/validated or plan to do so	Introduced in 1995	»03/c2
Mission Statement on Biodiversity	Volkswagen AG	Introduced in 2008	» 57
Environmental Policy	Volkswagen Group	Introduced in 1995	<b>&gt;&gt; 28 /</b> 44 - 45
Environmental Principles, Product	Volkswagen Group	Introduced in 2008	<b>» 29 /</b> 44 - 45
Environmental Principles, Production	Volkswagen Group	Introduced in 2007	<b>»30/</b> 44-45
Factory Agreement on Environmental Protection of 1995	Volkswagen AG	Introduced in 1995	44 - 45
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	<b>»10</b> /16
Labour Charter	Volkswagen Group	Introduced in 2009	<b>» 67 /</b> 33
Occupational Safety Policy	Volkswagen Group	Introduced in 2004	<b>»65/</b> 39

## Feedback on our Sustainability Report 2009

To ensure the continuous improvement of the quality of our reporting and its relevance to the target groups, since 1995 we have had detailed evaluations of our reporting carried out. We are supported in this by consultants image Beratungsgesellschaft, who survey readers from various stakeholder groups on Volkswagen's behalf. Along with the many positive comments, we were particularly interested in any critical feedback. Below you will find a selection of items that came in for criticism in the last Volkswagen Sustainability Report 2009.

"I couldn't tell how Volkswagen actually conducts its stakeholder dialogue. What system do you use to select the stakeholders and in what form do you seek to engage in dialogue with them (web-based dialogue options, workshops, etc.)?"

"The texts could have been shorter if you had dispensed with the mass of prose. I'd like to see a more straight-talking approach: what is the question and what is Volkswagen's answer to it?"

"In a sustainability report I expect to find VİSİONS and new ideas for the future."

"Unfortunately the text does not help to explain the chart in which the Materiality Process is set out. So the question why some challenges are considered more relevant than others remains unanswered." "While I noticed the quick links in the print version of the report, it was not clear to me how I was supposed to use them on the Internet."

"The organisational structures and foundations are not set out clearly enough. I fail to see how CSR topics are actually managed at Group level."

"For me the question of how Volkswagen is working to improve integration of the various means of transport remains unanswered."

"I have a problem with the basic structure of the report. Dividing it up into 'Strategy and Management' and 'Ambitions' makes it harder to find specific information. I'd prefer to see separate chapters on Employees, Suppliers, Environmental Management in the Production Sector, Products, etc."

We are constantly striving to improve our reporting, so we would warmly welcome your feedback on this report. Please send your comments by e-mail to info@volkswagen-sustainability.com

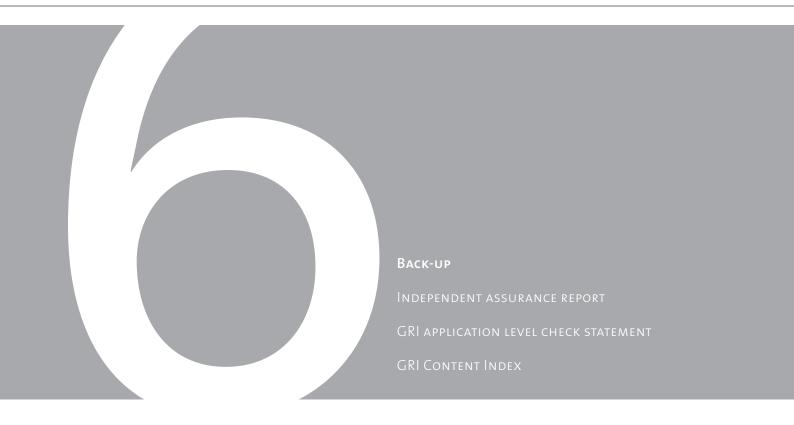
## Goals and actions

The Sustainability Programme set out below summarises the most important newly defined goals. The complete list of all new Goals and Actions and a progress report on the Goals and Actions contained in the Sustainability Programme from our Sustainability Report 2009/2010 can be found on the Internet: >> 68



	Goals/Actions	Society
Goal	Action	Deadline
Strengthen vocational training internationally and introduce training as supervisors worldwide	Implementation of specialist training and supervisor training 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 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 Check-up and subsequent prevention programmes, continuous improvement of ergonomics	ongoing

	Goals/Actions	Environment
Goal	Action	Deadline
Reduce CO <sub>2</sub> emissions for the new car fleet in Europe (EU 27) by 20 percent by 2015 compared with 2006	Wide-ranging actions to optimise consumption in the context of the Volkswagen Group's Powertrain and Fuel Strategy	2015
Integration of energy management into the environmental management system	Continuous inclusion of energy management in the context of ongoing plant certification measures	2011 (Chemnitz, Hanover, Zwickau, Crewe)
Reduction of greenhouse gas emissions (energy supply) by 40 percent compared with 2010	Increased efficiency in production, diversification of energy generation structure	2020



## Checks and balances.

If a company's sustainability performance is going to be analysed and compared, then uniform rules must apply. That is why there are unequivocal requirements and standards with which sustainability reporting must comply. Leading rating agencies and independent organisations define the content and form of corporate reporting. The outcome – this report, for example, and the associated website – are then checked for completeness, information content and quality. On top of this, independent auditors assure the transparency of the information provided.

### Independent Assurance Report

To Volkswagen Aktiengesellschaft, Wolfsburg

We have been engaged by Volkswagen AG of Wolfsburg to perform an independent assurance engagement to attain moderate assurance in respect of observing the AA1000 AccountAbility principles and in respect of individual quantitative sustainability data selected by Volkswagen AG in the Sustainability Report 2010 (the "Sustainability Report").

#### 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 AccountAbility Principles Standard (2008) (the "AA1000 AccountAbility Principles"), and
- to prepare the sustainability information in the Sustainability Report in accordance with the criteria set out in the Sustainability Reporting Guidelines Vol. 3 (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 AccountAbility Principles and to prepare the Sustainability Report with the application of assumptions and estimations that are appropriate under the given circumstances.

#### $Responsibility \, of \, the \, auditors \,$

Our responsibility is to form an independent opinion, based on our assurance procedures, on whether facts have come to our attention leading us to believe that in all material respects

- the systems and processes installed by the Company are not appropriate for compliance with the AccountAbility Principles; or
- the selected quantitative sustainability information set out in the section "Report profile" on cover page C2 in the Sustainability Report has not been prepared in compliance with the GRI criteria.

The selected quantitative sustainability information includes the data on pages 58 to 67, except Employee Opinion Survey, Health Index, Employee Turnover, Accident Frequency and Accident Indexes.

We also have been engaged to report on recommendations for the further development of sustainability management and sustainability reporting and on observations whether previous year's recommendations have been implemented.

We conducted our independent assurance engagement in accordance with AA1000 Assurance Standard (AA1000AS) 2008 and also in accordance with International Standard on Assurance Engagements (ISAE) 3000.

These standards require that we fulfil 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 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 with non-financial assessments, 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 assurance is less substantial in scope than an independent assurance engagement performed to obtain high assurance", with the result that a corresponding lower level of assurance is obtained. The selection of the issues to be examined is a matter for the dutiful judgement of the independent auditors performing the engagement.

With regard to compliance with the AccountAbility Principles, our examination procedures included the following:

- · discussions with management
- understanding the relevant documentation
- samples to obtain evidence of the implementation and appropriateness of the relevant systems and processes

With regard to the selected sustainability information, our work included the following examinations:

- discussions with the employees responsible for the reporting of sustainability information and process-oriented environmental protection
- examination of the systems and processes for the compilation, calculation and reporting of sustainability information
- functional examination of the controls for the assurance of data quality
- · analytical assessment of selected sustainability data
- visits of selected sites (Volkswagen Emden, Volkswagen Hannover, ŠKODA AUTO a.s.)
- site-related inquiries and data collection (Volkswagen Puebla / Mexico, Volkswagen Pune / India)

#### Material findings and judgments

With regard to the AccountAbility Principle of inclusivity:

- Internal documentation and publicly accessible information exist that describe the identification and analysis of important stakeholders and stating various obligations vis-àvis stakeholders.
- We found evidence that Volkswagen AG has set up a procedure calling for the involvement of stakeholders in deci-

- sion-making processes on issues relating to sustainability and calling for the execution of stakeholder dialogues.
- In the context of a long-term project Volkswagen systematised the sample of sustainability relevant data of stakeholders as well as the external sustainability reporting.
- The planning process of stakeholder involvement that has been implemented by Volkswagen is not documented in a comprehensive and understandable manner.

With regard to the AccountAbility Principle of materiality:

- With the use of internal documentation and discussions with management, evidence was found of definitive components of the procedure for ascertaining the materiality of sustainability issues.
- Following a critical review of the Sustainability Report, we determined that internally prioritised issues were given due consideration therein.
- We inspected the process for defining the relevance and significance of sustainability issues. The process has been sufficiently improved on the basis of the conclusion of PwC from the audit of the CR Report 2009/2010. The determination of significance and relevance of sustainability issues is based on suitable criteria and is complete and understandable.
- The coordination of relevant sustainability issues between group sustainability management and sub divisions has been initially set up which has resulted in concrete actions.
   The transparency of the reporting on these actions to Stakeholder of Volkswagen is not as sufficient yet.

With regard to the AccountAbility Principle of responsiveness:

- Internal documents prove that procedures have been set up for the identification and consideration of matters raised by stakeholders.
- By means of various examples and internal documentation, we determined that external communication is balanced across the spectrum of sustainability issues.
- We determined that, in the form of the GRI criteria, suitable guidelines for sustainability reporting are in use. There are additional guidelines in use for structuring the sustainability report like criteria of the "Institute for Ecological Economy Research".
- On a sample basis we found out that the Company responses to stakeholder concerns are comprehensive and understandable.

Based on our moderate assurance engagement, nothing has come to our attention that causes us to believe that, in all material respects, the systems and processes implemented by Volkswagen AG are not suitable to adhere to the AA1000 AccountAbility Principles Inclusivity, Materiality and Responsiveness.

Furthermore, nothing has come to our attention that causes us to believe that, in all material respects, the specified sustainability performance information of the Sustainability Report has not been prepared in accordance with the abovementioned criteria of the Sustainability Reporting Guidelines Vol. 3 of the GRI.

#### Recommendations

Without qualifying the opinions on our engagement stated above, we make recommendations to further develop the sustainability management and the sustainability reporting:

Recommendations regarding "Inclusivity"

We recommend documenting the planning of stakeholder involvement more comprehensible.

Recommendations regarding "Materiality"

We recommend increasing the transparency of reporting on concrete actions and the achievement of goals regarding the group-wide coordination of sustainability.

Recommendations regarding "Responsiveness" No further recommendations.

We further recommend:

- Further integration of sustainability into the core processes (e.g. procurement).
- The improvement of the sustainability steering system to measure and monitor the sustainability goals, particularly in the context of the strategy 2018.
- The improvement of the data collection standards for environmental and human resource data according to common quality standards.
- The enhancement of the sustainability indicator set by adding additional appropriate indicators, e.g. sustainability in procurement.
- The automation of data consolidation, e.g. by using the overarching IT-system for the reporting of sustainability data.
- The systematic and continuous monitoring of reporting and process standards for the internal reporting of sustainability data.

Hanover, 15.04.2011

PricewaterhouseCoopers Aktiengesellschaft Wirtschaftsprüfungsgesellschaft

Harald **K**ayser Wirtschaftsprüfer Andreas Bröcher Wirtschaftsprüfer

<sup>&</sup>lt;sup>1</sup> "Moderate assurance" as specified by AA1000AS (2008) is equivalent to "limited assurance" as specified by ISAE 3000.

<sup>&</sup>quot; "High assurance" as specified by AA1000AS (2008) is equivalent to "reasonable assurance" as specified by ISAE 3000.

## **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 additional indicators and more in-depth information is available on the Internet. >> 69

3 K	tandard Disclosure	Reference	Status GRI	Standard Disclosure		Reference	Statu
Strat	egy and Analysis		Envi	ronmental Performance Indicat	ors		
			LIIVI			2 0 14 20 27 15 17	
L.1	Statement from the most senior	6 7 40 22 22		Disclosure on management		3, 8-14, 20-27, 46-47,	
2	decisionmaker Key impacts, risks	6-7, AR 22-23 6-7, 9-14, 17-19, 25	EN1	approach Volume of materials used		AR 147-157, 205-222 45, OSR 33, 34, AR 202, OSR	
.2	key impacts, risks	6-7, 9-14, 17-19, 25	EN1 EN2			51, OSR 47, 48, 49, OSR	
rga	nizational Profile		EN2 EN3	,	tion	46-47, 64, OSR 36, 37, OSR	
			EN4	Indirect primary energy consum		40-47, 04, 038 30, 37, 038	
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2.2	Brands, products and/or services	3, AR 105-126		Land assets in or adjacent to pro	ntected areas		62
.3	Operational structure	3, AR 106-126, 137-140, GP		! Impacts on biodiversity	otecteu areas	14, 15, 53, 55, OSR 26, 54, 55	
.4	Headquarter location	3	ENT	impuets on blourversity		56, 57, 62	,
1.5	Countries in operation	3, 4	FN1	Greenhouse gas emissions		52-53, 64-65, OSR 50, 52, 53	
1.6	Nature of ownership	3, AR 137-140	ENIA:	Other greenhouse gas emission	S	32 33, 04 03, 03k 30, 32, 33	
.7	Markets served	3, AR 105-126, 147-157	EN11	Emissions of ozone-depleting s		OSR	
.8	Scale of the organization	3-4, AR 105-126		NOx, SOx, and other air emission		63	
.9	Significant changes regarding	2 40 106 127 140 147 157		Water discharge		66, OSR 51, BP	
10	size, structure or ownership	3, AR 106, 137-140, 147-157		Waste by type and disposal me	thod	64, 67	
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срс	iting raidineters			Packaging materials	•		
.1	Reporting period	2		S Sanctions for noncompliance			
.2	Date of most recent previous report	2		with environmental regulations		25, AR 209-210, OSR 19	
.3	Reporting cycle	2					
.4	Contact point for questions	79		al performance indicators:			
.5	Process for defining report content	17-19	Labo	r Practices and Decent Work			
.6	Boundary of the report	2, 3		Disclosure on management appr	oach	7, 30-39, 43, AR 194-197	- 1
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9	Data measurement techniques	58, 60, 64	LA5	Minimum notice period(s) regard	ling	10, 21, 04, 00	
10	Effects of re-statement or information		LAS	operational changes	шв	16, 33, OSR 9, 10, 21, 66	
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ove	rnance, Commitments, and Engagement			Gender pay disparity		16, 69, OSR 10, 21, 66	
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.2	Indication whether chairperson			Disclosure on management appr	oach	9, 14, 16-17, OSR 10	-
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.3	Independent members at the board	AR 141-144	HR2		hts	14, 16, OSR 8, 9, 16, 17, 18	(
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.8	sustainability topics Statements of mission, codes of conduct,	10-14, 17-19, AR 129-132		Disclosure on management appr	oach	7, 14-17, 21, 26, 71, OSR 10, 2	1. 22
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9	and principles  Procedures of board governance on	7, 10-15, 16-17	SO1	Impacts on communities		7, 14-15, 25, 40, OSR 26, 27	
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10	management of sustainability performance Processes for evaluation of the	7, 8-14, 17-19, 25, AR 205-212	SO2	Corruption risks		26, OSR 20, 21, AR 131-132,	GP
10	board's sustainability performance	AR 22-23, 131, 133-136	SO3	Anti-corruption training		26, OSR 20, 21, AR 131-132,	
11	Precautionary approach	8-19, 24-27	504	Actions taken in response to incid	dents		
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14	External charters, principles, or other initiatives	16-17, AR 204	SO5	Lobbying		46	
13	Memberships in associations		508	Sanctions for non-compliance			
	Stakeholder groups	14-17, 24, 25, 40, 46, 53 OSR		with laws and regulations			
14 15	Stakeholder identification and selection	15-17					
16	Approaches to stakeholder engagement	15-17, AR 203-204, OSR	Soci	al Performance indicators: Produ	ct Responsibil	ity	
17	Topics and concerns raised by stakeholders	2, 7, 15-17, 30, 49, AR 203-204		Disclosure on management appr	oach	7, 14-17, 22-23, 26, 45, 47-50	1
1/	Topics and concerns raised by stakeholders	2, 7, 13-17, 30, 49, AR 203-204		Disclosure on management appr	Oacii	AR 200-202	,
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4	Financial government assistance	AR 248, 254, 268		- College of the Coll	AD	must Dansut	
6	Locally-based suppliers	24, 25, AR 187, 188, OSR 26	Statu	s: • fully reported	AK = An	nual Report	
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## Statement GRI Application Level Check

GRI hereby states that **Volkswagen Group** has presented its report "Sustainability - Report 2010" to GRI's Report Services which have concluded that the report fulfills the requirements 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.

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14 April 2011, Amsterdam



Nelmara 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 judgment for choosing its assurance Provider and for deciding the scope of the assurance.

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**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 6 April 2011. GRI explicitly excludes the statement being applied to any later changes to such material.

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