

The image features the Volkswagen logo at the top center, consisting of the word "VOLKSWAGEN" in a bold, sans-serif font above the word "AKTIENGESELLSCHAFT" in a smaller, all-caps sans-serif font. The background is white with two large, overlapping teal-colored triangles. One triangle is light teal and points downwards from the top left. The other is a darker teal and points upwards from the bottom left, overlapping the first triangle.

**VOLKSWAGEN**  
AKTIENGESELLSCHAFT

**We are  
redefining  
mobility.**

Annual Report 2016

# Key Figures

FISCAL YEAR 2016

## VOLKSWAGEN GROUP

Volume data <sup>1</sup>	2016	2015	%
Vehicle sales (units)	10,391,113	10,009,605	+ 3.8
Production (units)	10,405,092	10,017,191	+ 3.9
Employees at Dec. 31	626,715	610,076	+ 2.7
<b>Financial data (IFRSs), € million</b>	<b>2016</b>	<b>2015</b>	<b>%</b>
Sales revenue	217,267	213,292	+ 1.9
Operating result before special items	14,623	12,824	+ 14.0
as a percentage of sales revenue	6.7	6.0	
Special items	- 7,520	- 16,893	- 55.5
Operating result	7,103	- 4,069	X
as a percentage of sales revenue	3.3	- 1.9	
Earnings before tax	7,292	- 1,301	X
Earnings after tax	5,379	- 1,361	X
Earnings attributable to Volkswagen AG shareholders	5,144	- 1,582	X
Cash flows from operating activities	9,430	13,679	- 31.1
Cash flows from investing activities attributable to operating activities	16,797	15,523	+ 8.2
<b>Automotive Division<sup>2</sup></b>			
EBITDA <sup>3</sup>	18,999	7,212	X
Cash flows from operating activities	20,271	23,796	- 14.8
Cash flows from investing activities attributable to operating activities <sup>4</sup>	15,941	14,909	+ 6.9
of which: capex	12,795	12,738	+ 0.4
as a percentage of sales revenue	6.9	6.9	
capitalized development costs	5,750	5,021	+ 14.5
as a percentage of sales revenue	3.1	2.7	
Net cash flow	4,330	8,887	- 51.3
Net liquidity at Dec. 31	27,180	24,522	+ 10.8
<b>Return ratios in %</b>	<b>2016</b>	<b>2015</b>	
Return on sales before tax	3.4	- 0.6	
Return on investment (ROI) in the Automotive Division	8.2	- 0.2	
Return on equity before tax (Financial Services Division) <sup>5</sup>	10.8	12.2	

1 Volume data including the unconsolidated Chinese joint ventures.

2 Including allocation of consolidation adjustments between the Automotive and Financial Services divisions.

3 Operating result plus net depreciation/amortization and impairment losses/reversals of impairment losses on property, plant and equipment,

capitalized development costs, lease assets, goodwill and financial assets as reported in the cash flow statement.

4 Excluding acquisition and disposal of equity investments: €18,224 (€17,270) million.

5 Earnings before tax as a percentage of average equity.

## VOLKSWAGEN AG

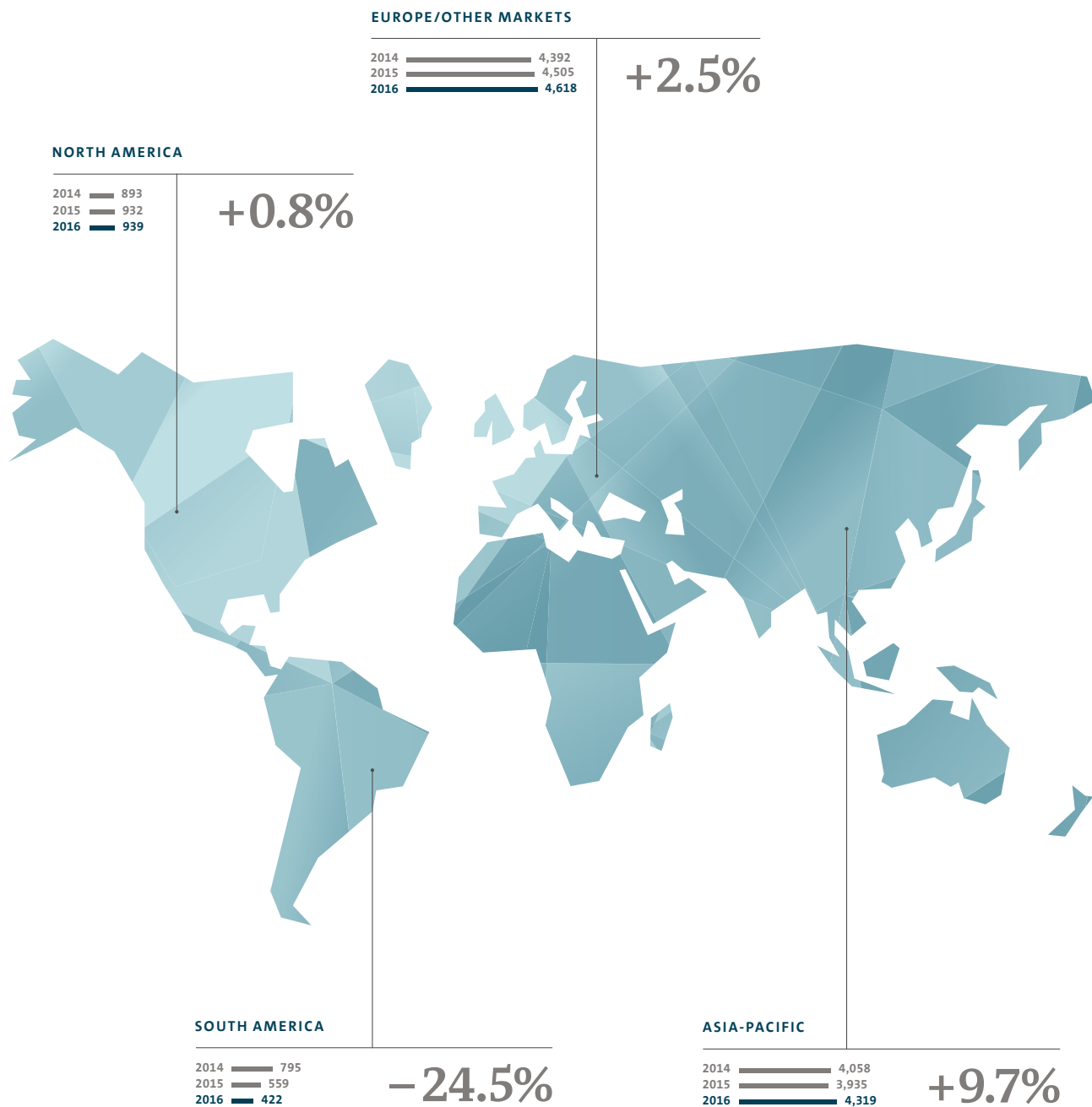
Volume data	2016	2015	%
Vehicle sales (units)	2,632,144	2,676,629	- 1.7
Production (units)	1,241,217	1,255,771	- 1.2
Employees at Dec. 31	113,928	114,066	- 0.1
<b>Financial data (HGB), € million</b>	<b>2016</b>	<b>2015</b>	<b>%</b>
Sales	75,310	73,510	+ 2.4
Net income/net loss for the year	2,799	- 5,515	X
Dividends (€)			
per ordinary share	2.00	0.11	
per preferred share	2.06	0.17	

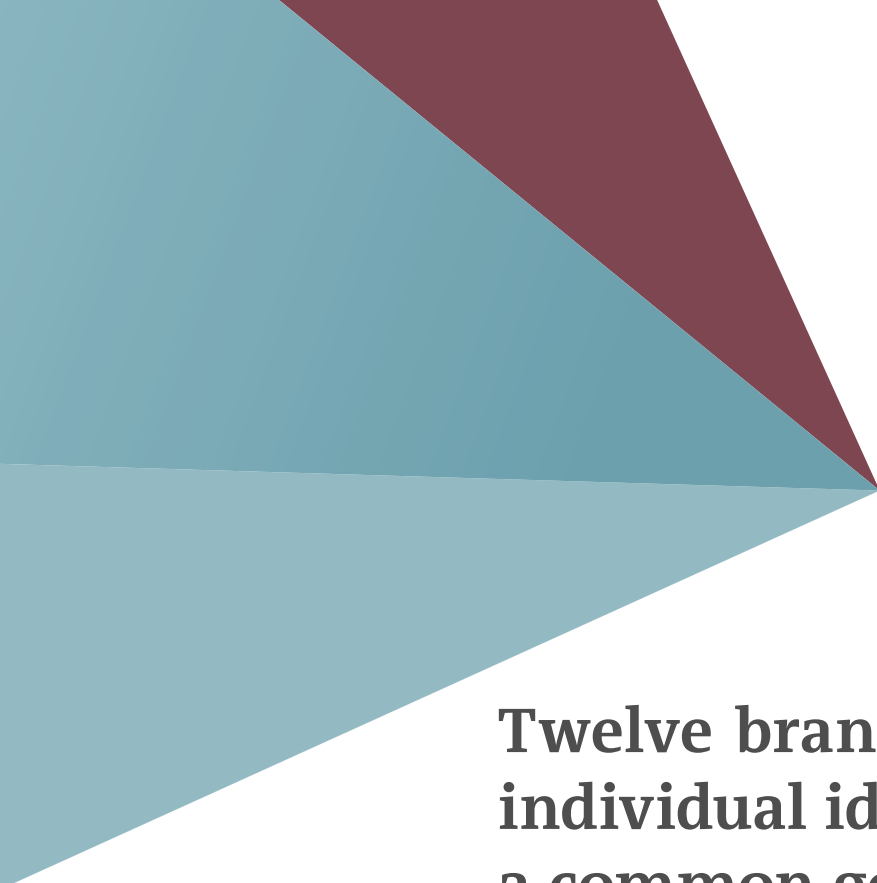
This version of the annual report is a translation of the German original. The German takes precedence. All figures shown in the report are rounded, so minor discrepancies may arise from addition of these amounts. The figures from the previous fiscal year are shown in parentheses directly after the figures for the current reporting period.

# Moving Globally

FISCAL YEAR 2016

VOLKSWAGEN GROUP DELIVERIES – IN THOUSAND UNITS





**Twelve brands with an  
individual identity and  
a common goal: mobility.  
For everyone, all over  
the world.**





Volkswagen



Audi



SEAT



ŠKODA



BENTLEY



PORSCHE



Commercial  
Vehicles



SCANIA



**VOLKSWAGEN FINANCIAL SERVICES**

AKTIENGESELLSCHAFT

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**“SUSTAINABLE, SAFE AND INDIVIDUAL  
MOBILITY – THAT IS OUR PROMISE TO  
EVERYONE. WE ARE REINVENTING  
VOLKSWAGEN TO DELIVER ON OUR  
PROMISE IN THE DIGITAL ERA.”**

——— Matthias Müller

The bottom half of the image features an abstract geometric design. It consists of several overlapping, semi-transparent shapes in various shades of red, maroon, and grey. The shapes are angular and layered, creating a sense of depth and movement. The overall composition is clean and modern, complementing the text above.



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To our  
Shareholders



**TO OUR SHAREHOLDERS**

**07** Letter to our Shareholders

**10** The Board of Management of  
Volkswagen Aktiengesellschaft

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# Letter to our Shareholders

*Dear Shareholders,*

Life sometimes has its ironic side. For years, Volkswagen seemed to be pursuing one overriding goal: to become the world's biggest carmaker. Then the diesel scandal broke in September 2015, marking a profound turning point. And now – in spring 2017, when we are still coping with the consequences of the crisis and have long since defined new priorities for the future – the headlines read: “Volkswagen becomes the world's best-selling automaker.”

Naturally, we are pleased with this success. But much more important than the fact that we delivered a record-breaking 10.3 million vehicles last year is that this achievement testifies to the trust our customers place in us. We are thankful for that. We will continue to do everything in our power to honor this confidence – and to win back the trust of those we have let down.

Our financial key performance indicators also confirm that 2016 was a very successful year for Volkswagen in spite of all the strains: sales revenue rose further to €217.3 billion. At €7.1 billion, the operating profit, which had slipped into the red in the previous year due to the diesel crisis, was back in strongly positive territory – even though it was once again impacted significantly by negative special items amounting to €7.5 billion. Before special items, the Group's operating profit was €14.6 billion – the highest ever in the history of our company. At 6.7 percent, the operating return on sales before special items also exceeded the target we had set ourselves.

Much as it gives me pleasure to report these figures, chasing records is not what drives us. Our real mission is to make Volkswagen and its products better and better. We progressed with that in the last fiscal year. And there is another message in these figures, as well: the Volkswagen Group and its 12 brands are very solidly positioned in both operational and financial terms. All this is no coincidence, it is the result of a strong team performance: I would like to thank all colleagues in the Group for their personal commitment and hard work during last year.

We also know we asked a lot of you, our shareholders, recently. On behalf of our employees and in my own name I would like to thank you for your loyalty and support during a difficult time for your company. With this in mind and given the good development of the operating business, the Board of Management and the Supervisory Board will propose a dividend for the fiscal year 2016 of €2.00 per ordinary share and €2.06 per preferred share.

We are all aware that the Volkswagen Group still has a long way to go. Size is certainly not the only thing that counts in tomorrow's world of mobility: a world shaped by new technologies, competitors and business models. What also matters is a new, holistic approach to mobility. This is about the capability and the courage to change. A company that “only” builds fascinating cars will not be able to compete for long.

**“CHASING RECORDS IS NOT WHAT DRIVES US. OUR REAL MISSION IS TO MAKE VOLKSWAGEN AND ITS PRODUCTS BETTER AND BETTER.”**

——— Matthias Müller





Our future program TOGETHER – Strategy 2025 maps out this change and underpins it with a convincing plan. We are working to transform Volkswagen into a globally leading provider of sustainable mobility. To that end, we have forged new partnerships and entered into new participations in recent months. With MOIA, we have established our own company for new mobility solutions. We have set clear signs regarding our ambitious plans for e-mobility. By decentralizing responsibility within the Group we are making Volkswagen faster, more focused and efficient. We are doing more in terms of integrity and sustainability, too, because a company's long-term success depends on its authenticity in assuming responsibility for the environment and society. And only a company with a solid system of values and a vibrant, open culture can lay claim to a firm place at the center of society.

Notwithstanding all reforms and changes, there is one thing we will never do, and that is to abandon our definitive strengths, the essence of our company. We will continue to work with passion on the best technologies, vehicles and business models for our customers. This year, our brands will be launching around 60 new vehicles; that underscores our determination and makes us optimistic for the coming months.

The Volkswagen Group is on the move. We are leading this great company whose brands and products have always stood for innovative strength, security, enduring value and emotional design into tomorrow's world. There is no question that we have set ourselves a challenging goal. But it is most definitely worth it. And we very much hope you will remain at our side on this journey.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matthias Müller', written in a cursive style.

Matthias Müller

# The Board of Management

of Volkswagen Aktiengesellschaft



**Matthias Müller**

Chairman of the Board of Management  
of Volkswagen Aktiengesellschaft



**Dr. rer. pol. h.c. Francisco Javier Garcia Sanz**  
Procurement



**Dr. rer. soc. Karlheinz Blessing**  
Human Resources and Organization



**Andreas Renschler**  
Commercial Vehicles



**Dr.-Ing. Herbert Diess**  
Chairman of the Brand Board of  
Management of Volkswagen Passenger Cars



**Frank Witter**  
Finance and Controlling



**Prof. Dr. rer. pol. Dr.-Ing. E.h. Jochem Heizmann**  
China



**Hiltrud Dorothea Werner**  
Integrity and Legal Affairs (since February 1, 2017)  
*until January 31, 2017:*  
*Dr. jur. Christine Hohmann-Dennhardt*



**Prof. Rupert Stadler**  
Chairman of the Board of Management of AUDI AG

# Report of the Supervisory Board

(in accordance with section 171(2) of the AktG)

Ladies and Gentlemen,

Fiscal year 2016 was dominated by the Volkswagen Group's realignment. The work of the Supervisory Board and its committees focused on the development of the future program TOGETHER – Strategy 2025, as well as the diesel issue and its consequences. The Supervisory Board of Volkswagen AG addressed the Company's position and development regularly and therefore with particular intensity in the reporting period. We supervised and supported the Board of Management in its running of the business and advised it on issues relating to the management of the Company in accordance with our duties under the law, the Articles of Association and the rules of procedure. We also observed the relevant recommendations and suggestions of the German Corporate Governance Code at all times. The Supervisory Board was directly involved in all decisions of fundamental importance to the Group. We additionally discussed strategic considerations with the Board of Management at regular intervals.

The Board of Management regularly, promptly and comprehensively informed the Supervisory Board in writing or orally on all matters of relevance to the Company relating to the strategy, the development of the business as well as the Company's planning and position, including the risk situation and risk management. In this respect, the Board of Management also informed it in particular of improvements to the risk and compliance management system with regard to the diesel issue. In addition, the Board of Management informed the Supervisory Board on an ongoing basis about compliance-related topics and other topical issues. In all cases we received the documents relevant to our decisions in good time for our meetings. We also received a detailed monthly report from the Board of Management on the current business position and the forecast for the current year. Any variances in performance that occurred as against the plans and targets previously drawn up were explained by the Board of Management in detail, either orally or in writing. We analyzed the reasons for the variances together with the Board of Management so as to enable countermeasures to be derived. In addition, the Board of Management presented regular reports on current developments in connection with the diesel issue at the meetings of the Special Committee on Diesel Engines.

The Chairman of the Supervisory Board also consulted with the Chairman of the Board of Management at regular intervals between meetings to discuss important current issues. Apart from the diesel issue, they included the Volkswagen Group's new strategy and planning, the development of the business, the Group's risk situation and risk management including integrity and compliance issues.

The Supervisory Board held a total of eleven meetings in fiscal year 2016. The average attendance ratio was 95.0%; all of the members of the Supervisory Board attended over half of the meetings of the Supervisory Board and the committees of which they are members. In addition, resolutions on urgent matters were adopted in writing or using electronic communications media.

#### COMMITTEE ACTIVITIES

The Supervisory Board has established five committees in order to discharge the duties entrusted to it: the Executive Committee, the Nomination Committee, the Mediation Committee in accordance with section 27(3) of the Mitbestimmungsgesetz (MitbestG – German Codetermination Act), the Audit Committee and, since October 2015, the Special Committee on Diesel Engines. The Executive Committee and the Special Committee on Diesel Engines each consist of three shareholder representatives and three employee representatives. The members of the Nomination Committee are the shareholder representatives on the Executive Committee. The remaining two committees are each composed of two shareholder representatives and two employee representatives. The members of these committees as of December 31, 2016 are given on page 87 of this annual report.

The Executive Committee met 20 times during the past fiscal year, mainly discussing current matters related to the diesel issue. The Committee also prepared the resolutions by the Supervisory Board in detail and dealt with the composition of and contractual issues concerning the Board of Management other than remuneration.

The Nomination Committee is responsible for proposing suitable candidates for the Supervisory Board to recommend for election to the Annual General Meeting. The Committee met once in the reporting period.

The Mediation Committee did not have to be convened in 2016.

The Audit Committee held six meetings in fiscal year 2016. It focused primarily on the consolidated financial statements, risk management (including the internal control system), and the work performed by the Company's compliance organization. In addition, the Audit Committee addressed the Group's quarterly reports and the half-yearly financial report as well as current financial reporting issues and their examination by the auditors.

The Special Committee on Diesel Engines is responsible for coordinating all activities relating to the diesel issue and preparing resolutions by the Supervisory Board. The Special Committee is also provided with regular information by the Board of Management to enable that. It is also entrusted with examining any consequences of the findings. The Chairman of this Committee reports regularly on its work to the Supervisory Board. The Special Committee on Diesel Engines met on ten occasions in fiscal year 2016. At its meeting on June 18, 2016, the Special Committee on Diesel Engines decided – having been delegated by the Supervisory Board with the relevant authority – to approve the conclusion of settlements with the US authorities and customers in relation to the 2.0 l engines. At its meetings on November 17, 2016 and December 19, 2016, the Special Committee on Diesel Engines decided – having been delegated by the Supervisory Board with the relevant authority – to approve the conclusion of settlements with the US authorities and customers in relation to the 3.0 l engines.

Furthermore, as a rule the shareholder and employee representatives met for separate preliminary discussions before each of the Supervisory Board meetings.

#### TOPICS DISCUSSED BY THE SUPERVISORY BOARD

The Supervisory Board's first meeting in the reporting period was held on March 14, 2016 and mainly dealt with the current state of affairs with respect to the diesel issue. On the same date, the Board of Management and the Supervisory Board of Volkswagen AG also issued, among other things, a supplement to the declaration of conformity with the German Corporate Governance Code of November 20, 2015. This supplement became necessary because, due to unanswered questions relating to the consequences of the emissions issue and the resulting assessment questions, the Board of Management and the Supervisory Board decided not to publish either the 2015 Annual Report within 90 days of the end of the fiscal year, or the interim report for the first quarter of 2016 within 45 days of the end of the quarter.

In the meeting of the Supervisory Board on April 22, 2016, we dealt in detail with the remuneration system for the Board of Management and, in this connection, issued a further supplement to the declaration of conformity with the German Corporate Governance Code of November 20, 2015, together with the Board of Management. This supplement



**Hans Dieter Pötsch**

became necessary because the performance targets and comparison parameters used to determine the variable remuneration in fiscal year 2015 were amended in agreement with some members of the Board of Management. Following a detailed examination, we also approved the consolidated financial statements and the annual financial statements of Volkswagen AG for 2015 prepared by the Board of Management, as well as the combined management report. We examined the dependent company report submitted by the Board of Management and came to the conclusion that there were no objections to be raised to the concluding declaration by the Board of Management in the report. We also discussed the current state of affairs with respect to the diesel issue and dealt intensively with the situation of the Volkswagen Passenger Cars brand. Finally, the Board of Management explained the status of development of the future program TOGETHER – Strategy 2025.

Another Supervisory Board meeting was held on May 10, 2016, in which we mainly dealt with the current state of affairs with respect to the diesel issue and, in this connection, adopted the proposed resolutions to the Annual General Meeting concerning formal approval of the actions of the members of the Board of Management and Supervisory Board for fiscal year 2015, and dealt with the Board of Management's status report on the Group's new strategy.

The Supervisory Board meeting on June 14, 2016 again focused on the Group's strategy and the current state of affairs with respect to the diesel issue. The Supervisory Board decided in particular to make the conclusion of settlements with the US authorities and customers in relation to the 2.0l engines subject to its approval and to delegate the decision to grant such approval to the Special Committee on Diesel Engines.

Two more Supervisory Board meetings were held on June 21 and 22, 2016 in the context of Volkswagen AG's 2016 Annual General Meeting. Their agenda included in particular preparations for and the post-completion analysis of the 56th Annual General Meeting of Volkswagen AG on June 22, 2016, the composition of the committees, and the current state of affairs with respect to the diesel issue.

The agenda of the Supervisory Board meeting on September 23, 2016 included a status report on the future program TOGETHER – Strategy 2025 and the current state of affairs with respect to the diesel issue. The Supervisory Board decided in particular to make the conclusion of settlements with the US Department of Justice (DOJ) subject to its approval.

The Supervisory Board additionally held a telephone conference on the current state of affairs with respect to the diesel issue on November 1, 2016. The Supervisory Board decided in particular to make the conclusion of settlements with the US authorities and customers in relation to the 3.0l engines subject to its approval and to delegate the decision to grant such approval to the Special Committee on Diesel Engines.

The Supervisory Board held a meeting on November 4, 2016, in which we discussed not only the current state of affairs with respect to the diesel issue, but also the Volkswagen Group's investment and financial planning and the situation of the Volkswagen Passenger Cars brand.

At the Supervisory Board meeting on November 18, 2016, we discussed in detail the Volkswagen Group's investment and financial planning for the period from 2017 to 2021. We also dealt with the current state of affairs with respect to the diesel issue. Furthermore, the meeting focused on the status report on the new strategy and on issuing the annual declaration of conformity with the German Corporate Governance Code.

The Supervisory Board held a further telephone conference on December 20, 2016, in which we mainly dealt with the current state of affairs with respect to the diesel issue.

In the reporting period, we approved among other things the cooperation with the US-based commercial vehicle manufacturer Navistar in resolutions that were adopted by circulating written documents.

#### CONFLICTS OF INTEREST

At its meeting on November 17, 2016, the Executive Committee of the Supervisory Board addressed major shareholder business relationships. The Executive Committee members were guided exclusively by the interests of the Company when voting. No material conflicts of interest were discernible in this respect. In this context, the Executive Committee granted approvals to transactions with the State of Lower Saxony. Executive Committee member Mr. Stephan Weil is Minister-President of the State of Lower Saxony and abstained from voting.

Mr. Hans Dieter Pötsch was a member of the Board of Management of Volkswagen AG until October 2015. His move to the Supervisory Board had already been planned irrespective of the diesel issue. In order to avoid conceivable conflicts of interest, Mr. Pötsch does not participate in adopting Supervisory Board resolutions that might relate to his conduct in connection with the diesel issue. Consequently, Mr. Pötsch also did not vote on the resolution adopted by the Supervisory Board at its meeting on May 10, 2016 on the proposed resolution to the Annual General Meeting concerning formal approval of the actions of the members of the Board of Management for fiscal year 2015.

No other conflicts of interest were reported or were discernible in the reporting period.



#### CORPORATE GOVERNANCE AND DECLARATION OF CONFORMITY

The Supervisory Board meeting on November 18, 2016 focused on the implementation of the recommendations and suggestions of the German Corporate Governance Code at the Volkswagen Group. We discussed in detail the version of the German Corporate Governance Code dated May 5, 2015, as published by the relevant government commission on June 12, 2015, and issued the annual declaration of conformity with the recommendations of the German Corporate Governance Code in accordance with section 161 of the Aktiengesetz (AktG – German Stock Corporation Act) together with the Board of Management. Apart from this declaration, the Board of Management and Supervisory Board of Volkswagen AG jointly issued a supplement to the declaration of conformity of November 20, 2015 in the reporting period on March 14, 2016 and on April 22, 2016.

The joint declarations of conformity by the Board of Management and the Supervisory Board are permanently available at [www.volkswagenag.com/ir](http://www.volkswagenag.com/ir). Additional information on the implementation of the recommendations and suggestions of the German Corporate Governance Code can be found in the corporate governance report starting on page 60 and in the notes to the consolidated financial statements on page 317 of this annual report.

#### MEMBERS OF THE SUPERVISORY BOARD AND BOARD OF MANAGEMENT

In accordance with section 104 of the AktG, the court appointed Ms. Birgit Dietze, Secretary to the board of IG Metall trade union, to the Supervisory Board of Volkswagen AG as an employee representative effective June 1, 2016. She thus succeeded Ms. Babette Fröhlich, who stepped down from her office on the same date.

Mr. Akbar Al Baker, a shareholder representative on the Supervisory Board of Volkswagen AG, stepped down from his office with effect from the end of the 56th Annual General Meeting on June 22, 2016. The Annual General Meeting elected Dr. Hessa Sultan Al-Jaber to replace him for the remainder of his term of office.

Ms. Annika Falkengren's scheduled term of office and the terms of office of the court-appointed members of the Supervisory Board – Dr. Louise Kiesling and Mr. Hans Dieter Pötsch – expired at the end of the 56th Annual General Meeting. The Annual General Meeting elected all three members to a full term of office in the Supervisory Board of Volkswagen AG.

Dr. Karlheinz Blessing succeeded Dr. Horst Neumann as the member of the Board of Management of Volkswagen AG with responsibility for Human Resources and Organization effective January 1, 2016.

Dr. Christine Hohmann-Dennhardt, who was responsible for the newly created Integrity and Legal Affairs position on the Board of Management of Volkswagen AG with effect from January 1, 2016, left the Board of Management by mutual agreement effective January 31, 2017. The Supervisory Board thanks Dr. Hohmann-Dennhardt for helping the Group achieve key milestones with her outstanding technical expertise and experience and for supporting the Group in revising its internal directives and processes.

Ms. Hiltrud Dorothea Werner succeeded Dr. Hohmann-Dennhardt in the Integrity and Legal Affairs position on the Board of Management effective February 1, 2017.

Former Supervisory Board member Mr. Walther Leisler Kiep died on May 9, 2016 aged 90. The former Minister of Finance for the State of Lower Saxony was a member of the Supervisory Board from 1976 to 1982 and from 1983 to 1997 and accompanied the company's development with great personal commitment during that time. We will honor his memory.

#### AUDIT OF THE ANNUAL AND CONSOLIDATED FINANCIAL STATEMENTS

The Annual General Meeting of Volkswagen AG on June 22, 2016 elected PricewaterhouseCoopers Aktiengesellschaft Wirtschaftsprüfungsgesellschaft as auditors for fiscal year 2016, in line with our proposal. The auditors audited the annual financial statements of Volkswagen AG, the consolidated financial statements of the Volkswagen Group and the combined management report, and issued unqualified audit reports in each case.



In addition, they analyzed the risk management and internal control systems, concluding that the Board of Management had taken the measures required by section 91(2) of the AktG to ensure early detection of any risks endangering the continued existence of the Company. The Report by the Board of Management on Relationships of Volkswagen AG with Affiliated Companies in Accordance with Section 312 of the AktG for the period from January 1 to December 31, 2016 (dependent company report) submitted by the Board of Management was also audited by the auditors, who issued the following opinion: "In our opinion and in accordance with our statutory audit, we certify that the factual disclosures provided in the report are correct and that the Company's consideration concerning legal transactions referred to in the report was not unduly high."

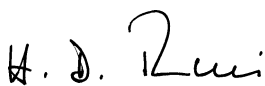
The members of the Audit Committee and the members of the Supervisory Board were provided in each case with the documentation relating to the annual financial statements, including the dependent company report, and the audit reports prepared by the auditors in good time for their meetings on February 23, 2017 and February 24, 2017, respectively. The auditors reported extensively at both meetings on the material findings of their audit and were available to provide additional information.

Taking into consideration the audit reports and the discussion with the auditors and based on its own conclusions, the Audit Committee prepared the documents for the Supervisory Board's examination of the consolidated financial statements, the annual financial statements of Volkswagen AG, the combined management report and the dependent company report and reported on these at the Supervisory Board meeting on February 24, 2017. Following this, the Audit Committee recommended that the Supervisory Board approve the annual financial statements. We examined the documents in depth in the knowledge and on the basis of the report by the Audit Committee and the audit report as well as in talks and discussions with the auditors. We came to the conclusion that they are due and proper and that the assessment of the position of the Company and the Group presented by the Board of Management in the management report corresponds to the assessment by the Supervisory Board. We therefore concurred with the auditors' findings and approved the annual financial statements prepared by the Board of Management and the consolidated financial statements at our meeting on February 24, 2017, at which the auditors also took part in discussions on the agenda items relating to the financial statements. The annual financial statements are thus adopted. Our examination of the dependent company report did not result in any objections to the concluding declaration by the Board of Management in the dependent company report. We reviewed the proposal on the appropriation of net profit submitted by the Board of Management, taking into account in particular the interests of the Company and its shareholders, and endorsed the proposal.

The trust of our customers, shareholders, partners, employees and the general public is our most important asset. The Supervisory Board will spare no effort to ensure that Volkswagen restores their trust. In doing so, we can and will set store by the qualities and strengths that have distinguished our Company and made it strong ever since it was established.

We would like to express our thanks and particular appreciation to the members of the Board of Management, the Works Council, the management and all the employees of Volkswagen AG and its affiliated companies for their work in 2016. With your resolve and loyalty, you all helped Volkswagen Group cope with the diverse challenges it faced in fiscal year 2016, rebuild trust and successfully tackle its realignment under the future program TOGETHER – Strategy 2025.

Wolfsburg, February 24, 2017



Hans Dieter Pötsch  
Chairman of the Supervisory Board





2

DIVISIONS

# Divisions



## **DIVISIONS**

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# Brands and Business Fields

Our brands achieved a new vehicle sales record in 2016 amid fierce competition in a market environment that remained challenging. Special items – particularly from the diesel issue – again affected the operating profit.

## GROUP STRUCTURE

The Volkswagen Group consists of two divisions: the Automotive Division and the Financial Services Division. The Automotive Division comprises the Passenger Cars, Commercial Vehicles and Power Engineering Business Areas. We report on the Passenger Cars segment and the reconciliation in the Passenger Cars Business Area. The Commercial Vehicles Business Area and Power Engineering Business Area correspond to the segments of the same name. Accordingly, the activities of the Automotive Division comprise the development of vehicles and engines, the production and sale of passenger cars, light commercial vehicles, trucks, buses and motorcycles, as well as the genuine parts, large-bore diesel engines, turbomachinery, special gear units, propulsion components and testing systems businesses. The Ducati brand is allocated to the Audi brand and thus to the Passenger Cars Business Area. The Financial Services Division, which corresponds to the Financial Services segment, combines dealer and customer financing, leasing, banking and insurance activities, fleet management and the mobility offerings.

## VOLKSWAGEN GROUP

Division	Automotive										Financial Services					
Brand/ Business Field	Volkswagen Passenger Cars	Audi	ŠKODA	SEAT	Bentley	Porsche	Volkswagen Commercial Vehicles	Scania	MAN	Others	Dealer and customer financing	Leasing	Direct bank	Insurance	Fleet management	Mobility offerings

In this chapter, we present the key volume and financial data relating to the Group brands and to Volkswagen Financial Services. In light of the considerable importance of the development of business in China for the Volkswagen Group and the continuing growth in the world's largest single market, we also report on business developments and the results of our activities in China in this chapter.

The production figures and deliveries to customers are presented separately by brand and their models, i.e. by product line. Unit sales figures refer to models sold by the various brand companies, including vehicles from other Group brands. In some cases, there are marked differences between delivery figures and unit sales as a result of our business development in China.

In addition, we explain unit sales and sales revenue in the Europe/Other markets, North America, South America and Asia-Pacific regions.

#### KEY FIGURES BY MARKET

Fiscal year 2016 was affected especially by the diesel issue. In particular, charges as a result of legal risks led to special items totaling €-7.5 (-16.9) billion. At €14.6 (12.8) billion, the operating profit before special items was up on the prior-year level.

The market remained challenging for the Volkswagen Group in the 2016 fiscal year, and competition was fierce. Unit sales reached a new record of 10.4 (10.0) million vehicles. Sales revenue rose by 1.9% to €217.3 billion.

In the Europe/Other markets region, we sold 4.6 million vehicles. This was 2.5% more than in the previous year. Due to volume and mix effects, sales revenue rose by 4.2% to €138.1 billion. Exchange rate effects had a negative impact.

In North America, higher demand in Mexico lifted sales of Group vehicles by 2.9% to 1.0 million units. Due to exchange rate developments, sales revenue fell by 0.2% year-on-year to €35.5 billion.

The economic environment in the markets of the South America region remained difficult in the reporting year. The Volkswagen Group sold 0.4 million vehicles there (-22.1%). The lower volume was combined with negative exchange rate effects, resulting in a 21.4% fall in sales revenue to €8.0 billion.

In the Asia-Pacific region, sales of Group models – including the Chinese joint ventures – in fiscal year 2016 amounted to 4.4 (4.0) million vehicles. At €35.8 billion, sales revenue exceeded the prior-year figure by 1.5%. Currency effects had a negative impact. This figure does not include the sales revenue generated by our Chinese joint ventures, since these are accounted for using the equity method.

KEY FIGURES BY BRAND AND BUSINESS FIELD<sup>1</sup>

Thousand vehicles/€ million	VEHICLE SALES		SALES REVENUE		SALES TO THIRD PARTIES		OPERATING RESULT	
	2016	2015	2016	2015	2016	2015	2016	2015
Volkswagen Passenger Cars	4,347	4,424	105,651	106,240	69,523	70,939	1,869	2,102
Audi	1,534	1,529	59,317	58,420	37,460	37,605	4,846	5,134
ŠKODA	814	800	13,705	12,486	6,606	6,128	1,197	915
SEAT	548	544	8,894	8,572	3,967	3,570	153	-10
Bentley	11	11	2,031	1,936	1,590	1,379	112	110
Porsche <sup>2</sup>	239	219	22,318	21,533	20,166	19,663	3,877	3,404
Volkswagen Commercial Vehicles	478	456	11,120	10,341	5,527	4,813	455	382
Scania <sup>2</sup>	83	78	11,303	10,479	11,291	10,479	1,072	1,027
MAN Commercial Vehicles	102	102	10,005	9,958	9,275	9,700	230	-4
MAN Power Engineering	-	-	3,593	3,775	3,590	3,769	194	283
VW China <sup>3</sup>	3,873	3,456	-	-	-	-	-	-
Other	-1,638	-1,608	-58,225	-56,349	23,646	21,922	-1,486 <sup>4</sup>	-2,440 <sup>4</sup>
Volkswagen Financial Services	-	-	27,554	25,901	24,625	23,326	2,105	1,921
<b>Volkswagen Group before special items</b>	-	-	-	-	-	-	<b>14,623</b>	<b>12,824</b>
Special items	-	-	-	-	-	-	-7,520	-16,893
<b>Volkswagen Group</b>	<b>10,391</b>	<b>10,010</b>	<b>217,267</b>	<b>213,292</b>	<b>217,267</b>	<b>213,292</b>	<b>7,103</b>	<b>-4,069</b>
Automotive Division <sup>5</sup>	10,391	10,010	186,016	183,936	189,384	186,869	4,668	-6,305
of which: Passenger Cars Business Area	9,729	9,374	150,343	149,716	160,409	158,716	4,167	-7,013
Commercial Vehicles Business Area	662	636	32,080	30,445	25,385	24,383	718	586
Power Engineering Business Area	-	-	3,593	3,775	3,590	3,769	-217	123
Financial Services Division	-	-	31,251	29,357	27,883	26,424	2,435	2,236

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

2 Including financial services.

3 The sales revenue and operating result of the joint venture companies in China are not included in the figures for the Group. The Chinese companies are accounted for using the equity method and recorded a proportionate operating result of €4,956 (5,214) million.

4 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 purchase price allocation for Scania, Porsche Holding Salzburg, MAN and Porsche.

5 Including allocation of consolidation adjustments between the Automotive and Financial Services divisions.

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

Thousand vehicles/€ million	VEHICLE SALES		SALES REVENUE	
	2016	2015	2016	2015
Europe/Other markets	4,635	4,524	138,079	132,535
North America	968	941	35,454	35,384
South America	421	540	7,973	10,148
Asia-Pacific <sup>2</sup>	4,367	4,005	35,761	35,225
<b>Volkswagen Group<sup>2</sup></b>	<b>10,391</b>	<b>10,010</b>	<b>217,267</b>	<b>213,292</b>

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

2 The sales revenue of the joint venture companies in China is not included in the figures for the Group and the Asia-Pacific market.



Volkswagen

**The investigation of the diesel issue continued in fiscal year 2016. Further special items had an impact on the operating profit. The Volkswagen Passenger Cars brand launched the new generation of the Tiguan. The I.D. concept vehicle heralds a new era of e-mobility.**

#### BUSINESS DEVELOPMENT

The Volkswagen Passenger Cars brand caused a stir at the Paris Motor Show with the I.D. concept vehicle. The show car represents a new generation of all-electric vehicles and a new automotive era of electric-powered, connected, autonomous cars. Another show car attracting media interest in the reporting year was the BUDD-e, whose appearance is inspired by the legendary VW campervan. Both vehicles are based on a new future-oriented platform for electric vehicles – the Modular Electric Toolkit (MEB). Last year, the brand also celebrated the 40th birthday of the Golf GTI.

The Volkswagen brand is completely repositioning itself with the TRANSFORM 2025+ strategy. The focus here is on strengthening the market position across the regions and segments, flanked by a significant increase in efficiency and productivity. At the same time, the brand will invest in e-mobility and connectivity. Furthermore, in the reporting period, the Board of Management and the General Works Council at Volkswagen made a pact for the future, which is aimed at initiating the return of the Volkswagen brand to a profitable course for growth. The program at locations in Germany with around 120,000 employees is intended to significantly increase competitiveness, in addition to ensuring that the company is secure enough to meet future challenges. It creates the prerequisites for the transformation from a pure automotive manufacturer to a successful mobility provider in the age of digitalization and increasing e-mobility.

At 6.0 million vehicles, deliveries by the Volkswagen Passenger Cars brand in the reporting period exceeded the prior-year figure by 2.7%. While sales in Brazil and Russia declined further in a difficult economic environment, there were substantial increases particularly in Italy (+14.9%), the Czech Republic (+14.7%), Poland (+18.7%), Mexico (+14.7%) and China (+14.0%). The new Tiguan was well received by the market.

Unit sales by the Volkswagen Passenger Cars brand were slightly down on the previous year at 4.3 (4.4) million vehicles. The Polo, the new Tiguan and the Touran models were in high demand. The difference between deliveries and unit sales is mainly due to the fact that the vehicle-producing joint ventures in China are not counted as Volkswagen Passenger Cars brand companies.

The Volkswagen Passenger Cars brand produced 6.1 million vehicles in 2016; this was 3.0% more than 2015.

#### SALES REVENUE AND EARNINGS

Sales revenue at the Volkswagen Passenger Cars brand declined by 0.6% year-on-year in the reporting period to €105.7 billion. Operating profit before special items fell to €1.9 (2.1) billion. The decline was mainly attributable to volume-, mix- and currency-related effects and higher marketing costs as a result of the diesel issue. Cost savings had a positive impact. The operating return on sales before special items was 1.8 (2.0)%. The diesel issue in particular gave rise to special items of €–5.2 billion compared with €–16.4 billion in the previous year.

# 6.0 million

Vehicles delivered in 2016



## PRODUCTION

Units	2016	2015
Golf	982,495	1,095,553
Jetta/Sagitar	968,135	844,907
Polo	794,388	754,546
Passat/Magotan	711,878	724,018
Tiguan	548,687	501,712
Lavida	547,187	462,748
Santana	312,177	279,583
Bora	236,427	202,964
up!	169,970	172,345
Touran	164,248	120,507
Gol	160,130	192,841
Lamando	146,285	103,573
Beetle	61,940	64,035
Fox	50,273	85,161
Touareg	47,495	59,190
Saveiro	47,460	75,397
CC	44,091	56,796
Sharan	41,949	53,423
Suran	20,163	24,691
Scirocco	11,963	16,251
Phideon	5,131	–
Phaeton	452	2,924
Atlas/Teramont	386	–
Eos	–	4,559
XL1	–	59
	<b>6,073,310</b>	<b>5,897,783</b>

## VOLKSWAGEN PASSENGER CARS BRAND

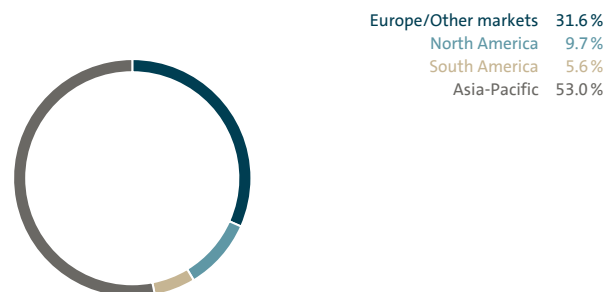
	2016	2015	%
Deliveries (thousand units)	5,980	5,823	+2.7
Vehicle sales	4,347	4,424	-1.7
Production	6,073	5,898	+3.0
Sales revenue (€ million)	105,651	106,240	-0.6
Operating result before special items	1,869	2,102	-11.1
as % of sales revenue	1.8	2.0	

# Tiguan



## DELIVERIES BY MARKET

in percent





**Deliveries by the Audi brand stood at 1.9 million vehicles in 2016, surpassing the previous year's record. The brand presented exciting new models: the Audi Q2, Audi A5 Coupé and Audi Q5. A new production plant opened in San José Chiapa, Mexico.**

#### BUSINESS DEVELOPMENT

The brand with the four rings presented the new Audi Q2 during the reporting period. This urban vehicle excels with its combination of youthful charm and high-tech features, impressing both in everyday driving and off road. With the world premiere of the new Audi A5 Coupé and the new Audi Q5, Audi once again reinforced its position at the top of the premium segment. In September 2016, Audi opened its new plant in San José Chiapa in the state of Puebla, Mexico, to produce the new Q5.

The Audi brand surpassed the previous year's sales record in fiscal year 2016, delivering 1.9 million vehicles (+3.6%). Audi saw encouraging growth in Western Europe (+7.0%), North America (+5.3%) and China (+3.6%).

At 1.5 million vehicles, unit sales exceeded the prior-year figure by 0.3%. The Chinese joint venture FAW-Volkswagen sold a further 536 thousand Audi vehicles. The Q3 SUV model and the new generations of the A4 and Q7 proved particularly popular worldwide. Automobili Lamborghini S.p.A. sold 3,465 (3,433) vehicles. The Huracán Spyder was especially popular among customers.

Audi produced 1.9 million models worldwide in 2016, 3.9% more than in the previous year. Lamborghini produced 3,579 (3,707) vehicles in the reporting period.

#### SALES REVENUE AND EARNINGS

At €59.3 billion, the Audi brand's sales revenue exceeded the prior-year figure by €0.9 billion. The operating profit before special items was €4.8 (5.1) billion. The sales trend and the ongoing optimization of processes and costs had a positive impact. The "SPEED UP!" action program launched in fiscal year 2016 also began to bear fruit. Earnings were negatively affected by exchange rate effects, intense competition, high upfront expenditure for new products and technologies and the expansion of the international production network, which led to increased depreciation and amortization charges and start-up costs. The brand achieved an operating return on sales before special items of 8.2 (8.8)%. The diesel issue in particular resulted in special items of €-1.8 (-0.3) billion. The financial key performance indicators for the Lamborghini and Ducati brands are included in the financial figures for the Audi brand.

# 1.9 million

Vehicles delivered in 2016

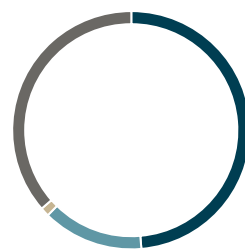
## PRODUCTION

Units	2016	2015
<b>Audi</b>		
A3	361,983	370,144
A4	357,999	318,788
Q5	297,750	267,861
A6	276,211	293,960
Q3	231,452	205,445
A1	105,252	116,250
Q7	103,344	82,340
A5	65,117	79,133
TT	26,886	35,510
A7	26,308	29,158
A8	24,179	27,065
Q2	19,419	67
R8	3,688	2,074
	<b>1,899,588</b>	<b>1,827,795</b>
<b>Lamborghini</b>		
Huracán Coupé	1,315	2,559
Huracán Spyder	1,104	69
Aventador Coupé	587	666
Aventador Roadster	573	413
	<b>3,579</b>	<b>3,707</b>
<b>Audi brand</b>	<b>1,903,167</b>	<b>1,831,502</b>
Ducati, motorcycles	56,978	55,551

## AUDI BRAND

	2016	2015	%
Deliveries (thousand units)	1,871	1,806	+3.6
Audi	1,868	1,803	+3.6
Lamborghini	3	3	+6.5
Vehicle sales	1,534	1,529	+0.3
Production	1,903	1,832	+3.9
Sales revenue (€ million)	59,317	58,420	+1.5
Operating result before special items	4,846	5,134	-5.6
as % of sales revenue	8.2	8.8	

## A5 Coupé

DELIVERIES BY MARKET  
in percent

**ŠKODA**

The Czech brand has been part of the Volkswagen Group for 25 years, contributing with its clever vehicle designs to the Group's success. ŠKODA presented a new series in the reporting period: the new Kodiaq SUV.

#### BUSINESS DEVELOPMENT

ŠKODA celebrated its 25th anniversary as part of the Volkswagen Group in 2016. During this time, the Czech brand has evolved from a regional provider into an internationally successful vehicle manufacturer. Today, ŠKODA offers an extensive model portfolio ranging from the small Citigo to the flagship Superb. A new series was added during the reporting year, when ŠKODA presented the new Kodiaq at the Paris Motor Show. The self-assured, powerful SUV combines all qualities of the ŠKODA brand: an exceptional amount of space, strong design, many practical features and excellent value for money. The best-selling ŠKODA Octavia celebrated its 20th birthday in 2016. Five million Octavias have been sold to date, more than any other ŠKODA model.

The ŠKODA brand delivered 1.1 million vehicles to customers worldwide in the reporting year, beating 2015 – the previous record year – by 6.7%. China was once again the brand's largest single market (+12,6%). Demand increased in all key markets in Western, Central and Eastern Europe, and ŠKODA also reported substantial growth in Turkey (+30.0%).

At 814 (800) thousand vehicles in 2016, ŠKODA's sales were slightly up on the prior-year level. The new Fabia and the Octavia family models were in especially high demand. The difference between figures for deliveries and unit sales is mainly due to the fact that the vehicle-producing joint ventures in China are not counted as ŠKODA brand companies.

The number of ŠKODA brand vehicles produced worldwide increased year-on-year to 1.2 (1.0) million units across seven series. The 19 millionth vehicle manufactured by ŠKODA since its formation rolled off the production line at the company's base in Mladá Boleslav in the reporting period.

#### SALES REVENUE AND EARNINGS

The ŠKODA brand's sales revenues increased by 9.8% in the reporting period to €13.7 billion. Positive volume- and mix-related effects and the optimization of product costs increased operating profit by 30.9% to €1.2 billion. Operating return on sales rose from the previous year's 7.3% to 8.7%.

# 25 years

In the Volkswagen Group

## PRODUCTION

Units	2016	2015
Octavia	445,415	425,629
Rapid	216,603	189,187
Fabia	203,308	195,349
Superb	148,880	84,550
Yeti	95,417	89,890
Citigo	41,247	41,280
Kodiaq	1,167	–
Roomster	–	11,166
	<b>1,152,037</b>	<b>1,037,051</b>

## ŠKODA BRAND

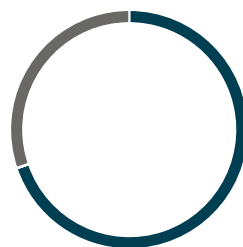
	2016	2015	%
Deliveries (thousand units)	1,126	1,056	+6.7
Vehicle sales	814	800	+1.7
Production	1,152	1,037	+11.1
Sales revenue (€ million)	13,705	12,486	+9.8
Operating result	1,197	915	+30.9
as % of sales revenue	8.7	7.3	

## Kodiaq



## DELIVERIES BY MARKET

in percent



Europe/Other markets	69.7%
North America	0.0%
South America	0.1%
Asia-Pacific	30.2%



The Spanish brand SEAT launched its new Ateca series in the reporting period. As the first SUV in the company's history, it made a major contribution to SEAT's record results in 2016.

#### BUSINESS DEVELOPMENT

2016 saw the SEAT brand unwrap its first-ever SUV. The new Ateca is a combination of distinctive design, dynamic driving fun, urban versatility and high user value. Its efficient petrol and diesel engines have power outputs of between 85 kW (116 PS) and 140 kW (190 PS). The impressive array of special features extends from full-LED headlamps through a variety of assistance systems, such as the innovative Traffic Jam Assist and the new Emergency Assist, to a package of latest-generation infotainment systems with superior connectivity. With its impressive sales figures, the Ateca played a significant role in the brand's success in the reporting year.

SEAT increased deliveries to customers by 2.2% to 409 thousand vehicles in fiscal year 2016. The brand's sales figures increased year-on-year in almost all markets; encouraging growth rates were achieved especially in Germany (+2.5%), Poland (+22.1%), Turkey (+41.5%) and Austria (+12.9%). The Ateca, Leon and Alhambra models were especially popular with customers, recording new sales records.

SEAT sold 548 thousand vehicles in the reporting period, 0.8% more than in the previous year. The Q3 produced for Audi is included in this figure.

SEAT produced 417 thousand vehicles in 2016, up 0.5% on the previous year.

#### SALES REVENUE AND EARNINGS

SEAT achieved a record sales revenue and operating profit in fiscal year 2016: At €8.9 billion, sales revenue exceeded the prior-year figure by 3.8%. SEAT returned to profit in the reporting year with an operating profit of €153 (-10) million. Cost reductions and improvements in the mix, particularly as a result of the success of the new Ateca, more than compensated for negative exchange rate effects. The SEAT brand's operating return on sales was +1.7 (-0.1)%.

# €153 million

Record operating profit in 2016

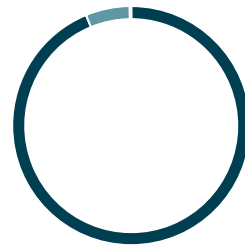
## PRODUCTION

Units	2016	2015
Leon	163,228	169,455
Ibiza	149,988	160,451
Ateca	35,833	–
Alhambra	31,214	27,925
Mii	18,720	24,516
Altea/Toledo	18,029	32,729
	<b>417,012</b>	<b>415,076</b>

## SEAT BRAND

	2016	2015	%
Deliveries (thousand units)	409	400	+2.2
Vehicle sales	548	544	+0.8
Production	417	415	+0.5
Sales revenue (€ million)	8,894	8,572	+3.8
Operating result	153	–10	x
as % of sales revenue	1.7	–0.1	

## Ateca

DELIVERIES BY MARKET  
in percent

Europe/Other markets	93.8%
North America	6.0%
South America	0.2%
Asia-Pacific	0.0%



**BENTLEY**

**In 2016, the Bentley brand presented the next generation of the Mulsanne series, including the Mulsanne Speed and Mulsanne Extended Wheelbase. The new Bentayga luxury SUV was in high demand and made a major contribution to record sales.**

#### **BUSINESS DEVELOPMENT**

In 2016, Bentley celebrated the world premiere of the new generation of its Mulsanne series, which thrills customers with enhanced assistance and infotainment functions and on the exterior in particular with its even more imposing radiator grille. In addition to the luxury Mulsanne with its 377 kW (512 PS) engine, Bentley offers the particularly powerful Mulsanne Speed with a power output of 395 kW (537 PS) and the highly luxurious Mulsanne Extended Wheelbase. Limited to 50 vehicles, the First Edition boasts exclusive features including a Mulliner-styled picnic table and a veneer crafted from the finest English walnut. The Bentley Bentayga, the Group's first luxury SUV, celebrated its successful market premiere in 2016 and immediately became the brand's best-selling model in its first year.

In the reporting year, the Bentley brand increased deliveries to customers to 11,023 (10,100) vehicles, marking a new sales record. Around a quarter of Bentley's vehicles were once again delivered to the USA. The brand also achieved high growth rates especially in Western Europe (+25.7%) and in Central and Eastern Europe (+67.5%).

The Bentley brand sold 11,298 vehicles worldwide in 2016, 6.4% more than in the previous year. The increase was primarily attributable to the success of the Bentayga.

The Bentley brand produced 11,817 vehicles in 2016, up 8.5% on the previous year.

#### **SALES REVENUE AND EARNINGS**

Bentley generated sales revenue of €2.0 billion, exceeding the equivalent prior-year figure by 4.9%. Despite a change in market conditions and the start-up costs for the Bentayga, positive exchange rate effects and cost reductions meant that the operating profit remained on a par with the previous year at €112 (110) million. The operating return on sales fell slightly to 5.5 (5.7)%.

# 11 thousand

**Vehicles delivered in 2016**



## PRODUCTION

Units	2016	2015
Bentayga	5,586	96
Continental GT Coupé	2,272	3,997
Flying Spur	1,731	3,660
Continental GT Convertible	1,600	2,216
Mulsanne	628	919
	<b>11,817</b>	<b>10,888</b>

## BENTLEY BRAND

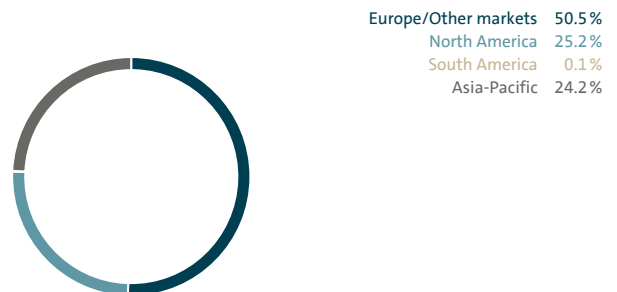
	2016	2015	%
Deliveries (units)	11,023	10,100	+9.1
Vehicle sales	11,298	10,616	+6.4
Production	11,817	10,888	+8.5
Sales revenue (€ million)	2,031	1,936	+4.9
Operating result	112	110	+1.5
as % of sales revenue	5.5	5.7	

# Bentayga



## DELIVERIES BY MARKET

in percent





PORSCHE

The Porsche brand presented the second generation of the Panamera in 2016. Its hybrid version, the Panamera 4 E-Hybrid, combines performance with sustainable mobility. New unit sales, sales revenue and profit records were achieved.

#### BUSINESS DEVELOPMENT

More than ever, the new generation of the Porsche Panamera offers both the performance of a sports car and the comfort of a luxury saloon. The new twin-turbo engines are more powerful, and thanks to the new eight-speed dual-clutch transmission they are up to 16% more fuel-efficient than those in the Panamera's predecessor. Many new assistance systems also enhance ride comfort as well as safety. The Porsche Communication Management offers an entirely new range of connectivity with its intelligent digital functions and online services. The Panamera 4 E-Hybrid stands for sustainable mobility without compromising performance. The vehicle has a system power output of 340 kW (462 PS) and a maximum speed of 278 km/h. It delivers a system torque of 700 Nm from stationary without hesitation. The Panamera 4 E-Hybrid breaks the 100 km/h barrier in just 4.6 seconds. Other product highlights in the reporting year included the new 718 Boxster and 718 Cayman models and the Targa and Turbo versions of the 911.

The Porsche brand delivered 238 thousand sports cars in the reporting year, 5.6% more than in 2015. China remained the largest single market for Porsche with deliveries of 65,246 vehicles (+12.5%). The brand sold 54,280 vehicles in the USA (+4.9%).

Porsche's sales in 2016 stood at 239 thousand vehicles, an increase of 9.2% year-on-year. The Macan, 911 and 718 Boxster/Cayman models were especially popular.

Porsche produced 240 thousand vehicles in the reporting year, up 2.2% on the figure for 2015.

#### SALES REVENUE AND EARNINGS

The Porsche brand set records again in fiscal year 2016. At €22.3 (21.5) billion, sales revenue exceeded the prior-year figure by 3.6%. Operating profit rose by 13.9% to €3.9 billion, primarily due to volume-, mix- and currency-related effects and a comparatively low cost growth despite expenditures on electrification, digitalization and new business fields. The operating return on sales rose to 17.4 (15.8)%.

The key figures presented here cover both the Automotive and Financial Services businesses.

# 17.4%

Operating return on sales in 2016

## PRODUCTION

Units	2016	2015
Macan	97,177	86,016
Cayenne	71,693	79,700
911 Coupé/Cabriolet	31,648	31,373
718 Boxster/Cayman	24,882	21,978
Panamera	14,218	15,055
918 Spyder	–	375
	<b>239,618</b>	<b>234,497</b>

## PORSCHE BRAND

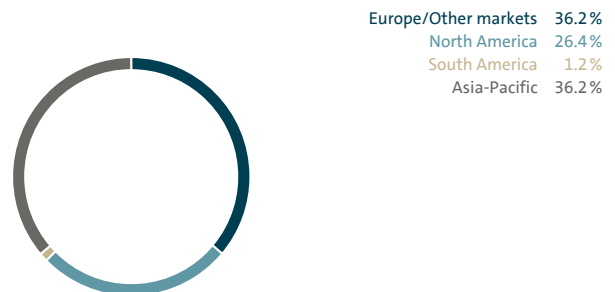
	2016	2015	%
Deliveries (thousand units)	238	225	+5.6
Vehicle sales	239	219	+9.2
Production	240	234	+2.2
Sales revenue (€ million)	22,318	21,533	+3.6
Operating result	3,877	3,404	+13.9
as % of sales revenue	17.4	15.8	

# Panamera



## DELIVERIES BY MARKET

in percent





**Commercial  
Vehicles**

**Volkswagen Commercial Vehicles celebrated 60 years of its headquarters in Hanover in the reporting year. It opened a new manufacturing site especially for the new Crafter in Wrzesnia, Poland.**

#### BUSINESS DEVELOPMENT

In fiscal year 2016, Volkswagen Commercial Vehicles celebrated 60 years of its headquarters in Hanover, where the Company has manufactured around 9.5 million vehicles since 1956. The Multivan/Transporter and the Amarok models as well as vehicle components are currently rolling off the production line here. With around 14,000 staff members, the site is one of the Hanover region's largest employers. At the IAA Commercial Vehicles motor show, the brand unveiled the new Crafter. The vehicle has been completely redesigned based on specific customer requirements, allowing it to offer customer-friendly functionality and practical, everyday solutions for the most diverse of individual transport needs. The all-electric e-Crafter concept vehicle was also on show. Close to series production and with a range of over 200 km, it will enable zero-emission deliveries in urban areas.

Volkswagen Commercial Vehicles increased deliveries by 10.9% in 2016 to 478 thousand vehicles. In Western Europe, sales exceeded the prior-year figure by 15.0%. In Central and Eastern Europe, sales rose by 16.8%.

Volkswagen Commercial Vehicles sold 478 thousand vehicles in the reporting year, 5.0% more than in 2015. The Multivan/Transporter and Caddy models were especially popular.

The Volkswagen Commercial Vehicles brand produced 422 thousand vehicles in the reporting period. This was 2.9% more than in the previous year. These figures do not include the first-generation Crafter, which is produced by a partner company. Production of the new Crafter began at the new plant in Wrzesnia, Poland, in the second half of 2016. The Hanover headquarters produced 190 (176) thousand units of the Amarok, Caravelle/Multivan and Transporter models in the reporting year. The plant in Poznan manufactured 186 (171) thousand units of the Caddy and T6. The Amarok is also produced in Argentina.

#### SALES REVENUE AND EARNINGS

At €11.1 (10.3) billion, sales revenue for the Volkswagen Commercial Vehicles brand in fiscal year 2016 exceeded the prior-year figure. The operating profit before special items (special items in the previous year: €-0.1 billion) improved by 19.0% to €455 million. Volume- and mix-related effects and product cost optimization had a positive impact. The operating return on sales rose from the previous year's 3.7% to 4.1%.

# 60 years

**At the Hanover headquarters**

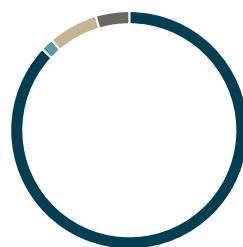
## PRODUCTION

Units	2016	2015
Caravelle/Multivan, Kombi	117,554	96,341
Caddy Kombi	86,841	74,302
Transporter	81,932	82,509
Caddy	71,757	76,048
Amarok	63,367	81,019
Crafter	596	–
	<b>422,047</b>	<b>410,219</b>

## VOLKSWAGEN COMMERCIAL VEHICLES BRAND

	2016	2015	%
Deliveries (thousand units)	478	431	+10.9
Vehicle sales	478	456	+5.0
Production	422	410	+2.9
Sales revenue (€ million)	11,120	10,341	+7.5
Operating result before special items	455	382	+19.0
as % of sales revenue	4.1	3.7	

## Crafter

DELIVERIES BY MARKET  
in percent

Europe/Other markets	86.9%
North America	1.8%
South America	6.7%
Asia-Pacific	4.5%

## VOLKSWAGEN TRUCK & BUS

Volkswagen Truck & Bus combines the activities of MAN Truck & Bus, MAN Latin America and Scania. The strategic objective is clear: Volkswagen Truck & Bus is aiming to become a global champion.

### BUSINESS DEVELOPMENT

Volkswagen Truck & Bus brings together the activities of MAN Truck & Bus, MAN Latin America (whose sales are largely generated by Volkswagen Caminhões e Ônibus) and Scania under one roof. It forms part of the Volkswagen Group's Commercial Vehicles Business Area together with the Volkswagen Commercial Vehicles brand.

Volkswagen Truck & Bus aims to become the industry's global champion. However, sales volume is not the top priority. Instead, the focus over the next decade will be on leading the industry in terms of profitability, innovation for our customers, employee satisfaction and global presence. Volkswagen Truck & Bus already leads the truck market in Western, Central and Eastern Europe and in Brazil.

Volkswagen Truck & Bus underscored its pioneering role in digitalization by unveiling its digital brand RIO in the fall of 2016. The open, cloud-based platform can be used across the entire transport and logistics system. For the first time, everyone in the supply chain – shippers, forwarders, carriers, dispatchers, drivers and recipients – is connected via a single information and application system with forecasting features. With RIO, we want to make the world of transport more efficient, secure and environmentally friendly. Following the market launch in the second quarter of 2017, RIO will offer digital solutions precisely tailored to the needs of all the players involved in the transport system. More than 265,000 trucks are already connected to MAN and Scania digital services, making Volkswagen Truck & Bus the number-one provider for connected commercial vehicles in Europe.

Volkswagen Truck & Bus reached a further strategic milestone in 2016 on its way to becoming a global champion. It began a wide-ranging alliance with US commercial vehicle manufacturer Navistar. This is designed to enable entry into the North American market, further expanding global presence. The alliance includes framework agreements for a strategic technology and supply cooperation and a joint venture that will pursue joint global sourcing opportunities. Volkswagen Truck & Bus will also acquire a 16.6% stake in Navistar through a capital increase. Navistar is a holding company whose subsidiaries produce trucks, coaches, commercial and school buses, diesel engines and service parts. While the partnership will focus on the development of common powertrain systems, it will also enable collaboration in other areas of commercial vehicle development and procurement aimed at jointly creating further synergies and achieving greater independence from the cycles in the industry. The transaction is subject to certain approvals by the regulatory authorities and other standard closing conditions. The share acquisition by Volkswagen Truck & Bus is further subject to the finalization of the agreement governing the procurement joint venture and of the first contract under the technology and supply cooperation. The transaction is expected to be concluded in the first quarter of 2017.

# 265 thousand

Connected vehicles

PRODUCTION

Units	2016	2015
Trucks	167,354	162,963
Buses	18,713	17,208
	<b>186,067</b>	<b>180,171</b>

DELIVERIES

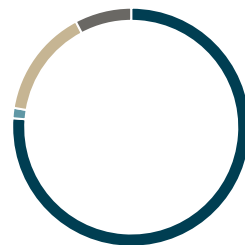
Units	2016	2015
Trucks	165,806	161,901
Buses	17,775	17,134
	<b>183,581</b>	<b>179,035</b>

# Strong brands

## VOLKSWAGEN TRUCK & BUS



DELIVERIES BY MARKET  
in percent



Europe/Other markets 76.2%  
 North America 1.4%  
 South America 14.7%  
 Asia-Pacific 7.7%



**Scania celebrated its 125th anniversary in 2016. The Swedish brand has set new benchmarks for efficiency and customer focus with its new generation of trucks. Deliveries increased year-on-year.**

#### BUSINESS DEVELOPMENT

In 2016, Scania looked back on its 125-year history as a commercial vehicles manufacturer and presented its new generation of trucks. Consuming 5% less fuel on average, the new vehicles improve customers' profitability and reduce CO<sub>2</sub> emissions. Once all versions have been launched, customers will be able to choose from 24 different cab models offering bespoke configuration. The side airbags incorporated in the roof are a first for the truck market. The new generation was awarded the title "International Truck of the Year 2017," partly in recognition of the vehicles' safety and driver comfort. Scania's hybrid truck received the "Green Truck Future Innovation 2016" environmental accolade in the promising innovations category. The vehicle reduces fuel consumption by up to 18% compared with a vehicle running on standard diesel. It can operate on electric power alone or using biodiesel.

The key figures presented in this chapter encompass Scania's truck and bus, industrial and marine engines and financial services businesses.

Scania received orders for 86 thousand vehicles in fiscal year 2016. This was 10.9% more than in 2015. Orders were up in Western Europe, primarily thanks to Scania's leading position in Euro 6 engines, its many years of experience with consumption-optimized vehicles and its wide range of alternative drive systems. At 81 (77) thousand vehicles, global deliveries were up on the previous year. Growth in Europe compensated for falling demand in Turkey and Brazil. Bus deliveries increased to 8 (7) thousand vehicles. Demand for services and replacement parts as well as for Scania Financial Services was higher in 2016 than in the previous year.

In the 2016 fiscal year, the Scania brand produced 84 (79) thousand commercial vehicles (+5.8%), including 8 (7) thousand buses.

#### SALES REVENUE AND EARNINGS

At €11.3 (10.5) billion, sales revenue for the Scania brand in fiscal year 2016 exceeded the prior-year figure by €0.8 billion. Operating profit before special items rose to €1,072 (1,027) million, as negative exchange rate effects were more than offset by higher vehicle sales and an expansion of the service business. In the reporting period, the operating return on sales before special items amounted to 9.5 (9.8)%. Legal risks in connection with the commercial vehicle antitrust proceedings launched by the European Commission gave rise to special items of €-0.4 billion.

# 125 years

Of Scania



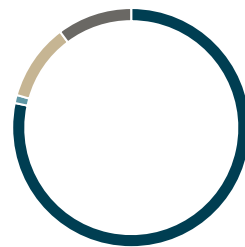
## PRODUCTION

Units	2016	2015
Trucks	75,452	72,382
Buses	8,488	6,964
	<b>83,940</b>	<b>79,346</b>

## SCANIA BRAND

	2016	2015	%
Orders received (thousand units)	86	77	+10.9
Deliveries	81	77	+6.2
Vehicle sales	83	78	+6.3
Production	84	79	+5.8
Sales revenue (€ million)	11,303	10,479	+7.9
Operating result before special items	1,072	1,027	+4.4
as % of sales revenue	9.5	9.8	

## R 730

DELIVERIES BY MARKET  
in percent

Europe/Other markets	78.3%
North America	1.1%
South America	10.4%
Asia-Pacific	10.2%



**MAN presented its new commercial vehicles and engines during the reporting year, including its first ever van, the MAN TGE. MAN's new future program, launched in 2015, is making a substantial contribution to the brand's success.**

#### BUSINESS DEVELOPMENT

In 2016, MAN presented the new TGL, TGM, TGS and TGX series vehicles with optimized powertrains. The D26 and D38 engines offer increased torque and an extra 20 PS of power output while also reducing fuel consumption. The 471 kW (640 PS) top-of-the-range version of the new D38 engine, which was previously reserved for heavy-duty vehicles, is now available for almost all versions of the MAN TGX D38. It generates up to 3,000 Nm of torque even at low revs. With the world premiere of the MAN TGE, the long-established, Munich-based brand has entered the van market. From 2017, this will make MAN a comprehensive provider for all transport needs from 3 to 250 tonnes. The newly unveiled NEOPLAN Tourliner rounds off MAN's bus portfolio with an entry model for the premium coach segment. The Power Engineering Business Area commissioned a gas-fired power station in China and a diesel power plant in Africa during the reporting year. A comprehensive package of measures was initiated to safeguard the future viability of the business area.

The economic environment remained challenging for MAN in the 2016 fiscal year. In South America, demand was down on the weak prior-year level. Meanwhile, the European commercial vehicle market continued to recover. Orders received by MAN were 2.3% down on 2015 at 105 thousand vehicles. Deliveries remained on a par with the previous year at 102 (102) thousand commercial vehicles, of which 10 (10) thousand were buses.

MAN produced 102 (101) thousand commercial vehicles in 2016, of which 10 (10) thousand were buses.

Incoming orders in the Power Engineering Business Area fell to €3.3 (3.4) billion as a result of the continued difficult situation in the shipping industry, economic difficulties in developing countries and emerging markets and the low price of oil.

#### SALES REVENUE AND EARNINGS

MAN Commercial Vehicles' sales revenue in 2016 stood at €10.0 billion, up 0.5% on the previous year. Operating profit before special items rose to €230 (–4) million. The operating return on sales before special items was 2.3 (0.0)%. Volume effects, improved margins in Europe and the future programs introduced had a positive effect. Restructuring measures in South America led to special items of €–0.1 billion; in the previous year, special items of €–0.2 billion were incurred for restructuring measures in Europe.

Sales revenue in the Power Engineering segment amounted to €3.6 (3.8) billion. There was a volume- and margin-related decline in operating profit before special items to €194 (283) million. The operating return on sales before special items was 5.4 (7.5)%. Restructuring measures led to special items of €–0.2 billion.

# 102 thousand

**Commercial Vehicles delivered in 2016**

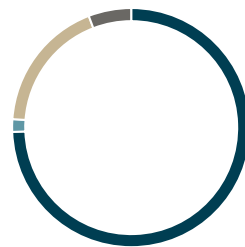
## PRODUCTION

Units	2016	2015
Trucks	91,902	90,581
Buses	10,225	10,244
	<b>102,127</b>	<b>100,825</b>

## MAN BRAND

	2016	2015	%
<b>Commercial Vehicles</b>			
Orders received (thousand units)	105	108	-2.3
Deliveries	102	102	-0.2
Vehicle sales	102	102	-0.2
Production	102	101	+1.3
Sales revenue (€ million)	10,005	9,958	+0.5
Operating result before special items	230	-4	x
as % of sales revenue	2.3	0.0	
<b>Power Engineering</b>			
Sales revenue (€ million)	3,593	3,775	-4.8
Operating result before special items	194	283	-31.4
as % of sales revenue	5.4	7.5	

## NEOPLAN Tourliner

DELIVERIES BY MARKET  
in percent

Europe/Other markets	74.4%
North America	1.7%
South America	18.1%
Asia-Pacific	5.8%

## Volkswagen Group China

Volkswagen presented two exciting new models for the Chinese market in 2016: the Phideon and the Teramont. A new partnership is set to develop innovative battery-powered electric vehicles in the future.

### BUSINESS DEVELOPMENT

The Phideon, a premium saloon for the Chinese market, made its debut at the Geneva Motor Show in 2016. With smooth transitions and clear lines, from the energetically forward-leaning front and a sharp shoulder line to the harmonious coupé sloping roof at the rear, the vehicle redefines the design language of Volkswagen's premium models. At the Guangzhou Auto Show in November, the Volkswagen Passenger Cars brand revealed the Teramont, its first seven-seater SUV for the Chinese market. The completely new model for the Chinese market reflects Volkswagen's new SUV design and offers an elegant but robust exterior to satisfy the premium standards of Chinese consumers. Based on the Modular Transverse Toolkit and at more than five meters long, the Teramont impresses with its spaciousness and wide range of new assistance, convenience and infotainment systems. In the reporting period, the Volkswagen Group and the Chinese automaker Anhui Jianghuai Automobile Co., Ltd. (JAC) signed an in-principle agreement on a long-term partnership for joint development of innovative battery-powered electric vehicles. The cooperation will entail research and development, manufacture and sales, in addition to mobility services and parts that will improve fuel efficiency.

We currently manufacture vehicles and components at 20 locations in China. Together with our joint venture partner, FAW, we also plan to create two new vehicle plants for environmentally friendly models in Qingdao and Tianjin on the east coast of China. We aim to gradually expand capacity in China to around 5 million vehicles a year by 2020. The joint ventures are financing the investments using their own funds.

Along with the new generation of the popular Audi A6 L premium saloon, 2016 also saw the launch of the Audi A6 L e-tron with plug-in hybrid drive. In addition to new and existing import models, the e-mobility strategy tailored to the Chinese market involves phased-in local production of 15 plug-in hybrid and electric vehicles by the joint ventures in the period up to 2020.

In the Chinese market, the Volkswagen Group offers more than 150 imported and locally produced models representing the Volkswagen Passenger Cars, Audi, ŠKODA, Porsche, Bentley and Lamborghini brands as well as commercial vehicles. Deliveries to the Group's Chinese customers amounted to 4.0 (3.5) million vehicles in the reporting year (including imports). Volkswagen's Jetta, Lávda, Sagitar, Santana and Tiguan models, the Audi Q3, Q5, A6 L and the ŠKODA Octavia were especially popular.

# 4.0 million

Vehicles delivered in 2016

Thousand units	2016	2015	%
Deliveries	3,982	3,549	+12.2
Vehicle sales <sup>1</sup>	3,873	3,456	+12.1
Production	3,896	3,420	+13.9

1 Produced locally.

Our two joint ventures, SAIC VOLKSWAGEN and FAW-Volkswagen, produced a total of 3.9 million vehicles in the reporting year. This was 13.9% more than in the previous year. The joint ventures produce a mixture of established Group models and those specially modified for Chinese customers (e.g. with lengthened wheelbases), as well as vehicles developed exclusively for the Chinese market (such as the Volkswagen Lamando, Lavida, New Bora, New Jetta and New Santana). Production of the Phideon, a model specially designed for the needs of Chinese customers, commenced in the reporting year, along with the Teramont, the extended-wheelbase Tiguan, the Magotan, Passat, Audi A6 L and A6 L e-tron, among others.

## Teramont



### EARNINGS

€ million	2016	2015
Operating profit (100%)	11,094	11,937
Operating profit (proportionate)	4,956	5,214

At €5.0 billion, the proportionate operating profit of the joint ventures in the reporting year was down on the prior-year figure. Increases in volume and optimization of product costs were unable to fully offset the impact of the more competitive market environment and negative exchange rate effects.

The figures of the Chinese joint venture companies are not included in Group earnings as they are accounted for using the equity method. Their profits are included solely in the Group's financial result on a proportionate basis.

### LOCAL PRODUCTION

Units	2016	2015
Volkswagen Passenger Cars	3,012,664	2,661,562
Audi	555,777	490,260
ŠKODA	327,858	268,116
<b>Total</b>	<b>3,896,299</b>	<b>3,419,938</b>

## VOLKSWAGEN FINANCIAL SERVICES

THE KEY TO MOBILITY

**Volkswagen Financial Services were in global demand in 2016 and once again made a significant contribution to the Volkswagen Group's earnings. Success was boosted by an attractive product portfolio and international presence.**

### STRUCTURE OF VOLKSWAGEN FINANCIAL SERVICES

Volkswagen Financial Services comprises dealer and customer financing, leasing, banking and insurance activities, fleet management and mobility services in 51 countries. Volkswagen Financial Services AG is responsible for global coordination of the Group's financial services activities, the only exceptions being the financial services business of the Scania and Porsche brands and of Porsche Holding Salzburg. In Europe, the principal companies are Volkswagen Bank GmbH, Volkswagen Leasing GmbH and Volkswagen Versicherungsdienst GmbH. VW CREDIT, INC. operates financial services activities in North America.

### BUSINESS DEVELOPMENT

Volkswagen Financial Services continued its success story in fiscal year 2016 and posted another record year. Diverse products, attractive terms and an exceptional range of services contributed in equal measure to this success.

In addition to offering mobile, cashless payment services for parking processes in German cities via "sunhill technologies GmbH", Volkswagen Financial Services intensified its work in this area during the reporting period and acquired "PayByPhone", the world's leading cashless payment provider for parking processes. Customers can use the "PayByPhone parking" app to select a parking location and duration and then pay for it on their smartphone. In 2016, PayByPhone processed some 60 million transactions with a total volume of approximately €240 million.

MAN Financial Services, which is part of Volkswagen Financial Services, grew its product portfolio by increasing the range of services for the MAN Card. A major expansion of the acceptance network was achieved through cooperation with 49,000 TOTAL and AS24 filling stations across Europe. Collaborations like this are putting MAN Financial Services on course to becoming the largest fuel services provider in Europe, and there are plans to expand into processing road toll payments in future.

Volkswagen Financial Services won recognition for the third time in a row in the "Great place to work" competition. It was named as Germany's best employer among companies with more than 5,000 staff. An employee survey rated key workplace- and HR-related criteria.

# €2.1 billion

Operating profit in 2016

The funding strategy of Volkswagen Financial Services was shaped in 2016 by the consequences of the diesel issue. Unsecured bonds for funding purposes were only issued in some local markets. In May 2016, a first unsecured renminbi bond was issued in China, for example. This debut bond from Volkswagen Finance (China) Co., Ltd. had a total volume of 2 billion Chinese renminbi and a maturity of three years. Bonds were also successfully placed in Turkey (maturity of 1.5 years, total volume 117 million Turkish lira) and Russia (maturities of 2.5 and 1.5 years, each with a total volume of 5 billion Russian rubles), among other places, to cover funding requirements.

Volkswagen Leasing GmbH was active on the market again in 2016 with its asset-backed securities (ABS) transactions. German leasing receivables were securitized in April 2016 in the “Volkswagen Car Lease 23” transaction, which had a volume of approximately €750 million. “Volkswagen Car Lease 24” was placed on the market in November 2016 and increased from €750 million to €1.25 billion due to strong interest from investors.

Outside Germany, Volkswagen Financial Services was active on the market with various ABS programs. It conducted transactions in Australia, China, the UK and Japan, among other places. A total of three bonds were placed in China in the course of the year. After Germany, Japan is the market with the longest ABS history for Volkswagen Financial Services.

Furthermore, the stock of customer deposits continued to rise as part of the diversified funding strategy. In addition, commercial papers were issued and credit lines were used.

Thanks to its sustainable refinancing measures, Volkswagen Financial Services AG once again successfully passed the bank stress test coordinated by the European Banking Authority (EBA). On the basis of the 2015 annual financial statements, a baseline and an adverse scenario were simulated for the years 2016 to 2018 and the capital ratios were calculated under the given preconditions. The stress test proved that Volkswagen Financial Services AG has a solid business model and adequate capital resources.

## Parking App

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At 6.5 million contracts, the number of new financing, leasing, service and insurance contracts signed in the reporting period was 12.7% higher than in the previous year. The total number of contracts as of December 31, 2016, stood at 16.1 million, a new record figure (+9.9%). This included 8.9 million contracts in the Customer Financing/Leasing area, an increase of 6.7% compared with the previous year. The underlying contract types were modified according to their significance. The Service/Insurance area posted a year-on-year increase of 14.2% to 7.2 million contracts. With credit eligibility criteria remaining unchanged, the penetration rate, expressed as the ratio of financed or leased vehicles to relevant Group delivery volumes – including the Chinese joint ventures – rose to 33.1 (31.3)%.

Volkswagen Bank's direct banking operations managed 1,559 (1,428) thousand accounts at the end of the reporting period. As of December 31, 2016, Volkswagen Financial Services employed 13,406 people worldwide, including 6,503 in Germany.

#### SALES REVENUE AND EARNINGS

Volkswagen Financial Services generated sales revenue of €27.6 billion in fiscal year 2016, up 6.4% on the previous year. At €2.1 billion, operating profit exceeded the prior-year figure by 9.6%. The new record result was primarily due to the growth in business. It made a significant contribution to Group earnings, as it has done in previous years.

#### VOLKSWAGEN FINANCIAL SERVICES

		2016	2015	%
Number of contracts <sup>1</sup>	thousands	16,133	14,673	+9.9
Customer financing		6,155	5,833	+5.5
Leasing		2,760	2,518	+9.6
Service/Insurance <sup>1</sup>		7,218	6,322	+14.2
Lease assets	€ million	31,593	27,777	+13.7
Receivables from	€ million			
Customer financing		67,545	64,020	+5.5
Dealer financing		17,921	16,846	+6.4
Leasing agreements		22,655	20,461	+10.7
Direct banking deposits	€ million	32,412	25,450	+27.4
Total assets	€ million	170,070	157,855	+7.7
Equity	€ million	21,178	18,607	+13.8
Liabilities <sup>2</sup>	€ million	141,830	133,237	+6.4
Equity ratio	%	12.5	11.8	
Return on equity before tax <sup>3</sup>	%	10.4	11.9	
Leverage <sup>4</sup>		6.7	7.2	
Operating result	€ million	2,105	1,921	+9.6
Earnings before tax	€ million	2,073	2,015	+2.9
Employees at Dec. 31		13,406	13,329	+0.6

1 Prior year adjusted.

2 Excluding provisions and deferred tax liabilities.

3 Earnings before tax as a percentage of average equity (continuing operations).

4 Liabilities as a percentage of equity.

#### FURTHER INFORMATION

[www.vwfsag.com](http://www.vwfsag.com)



3

# Group Management Report

(Combined Management Report of the Volkswagen Group and Volkswagen AG)



**GROUP MANAGEMENT REPORT**

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# Goals and Strategies

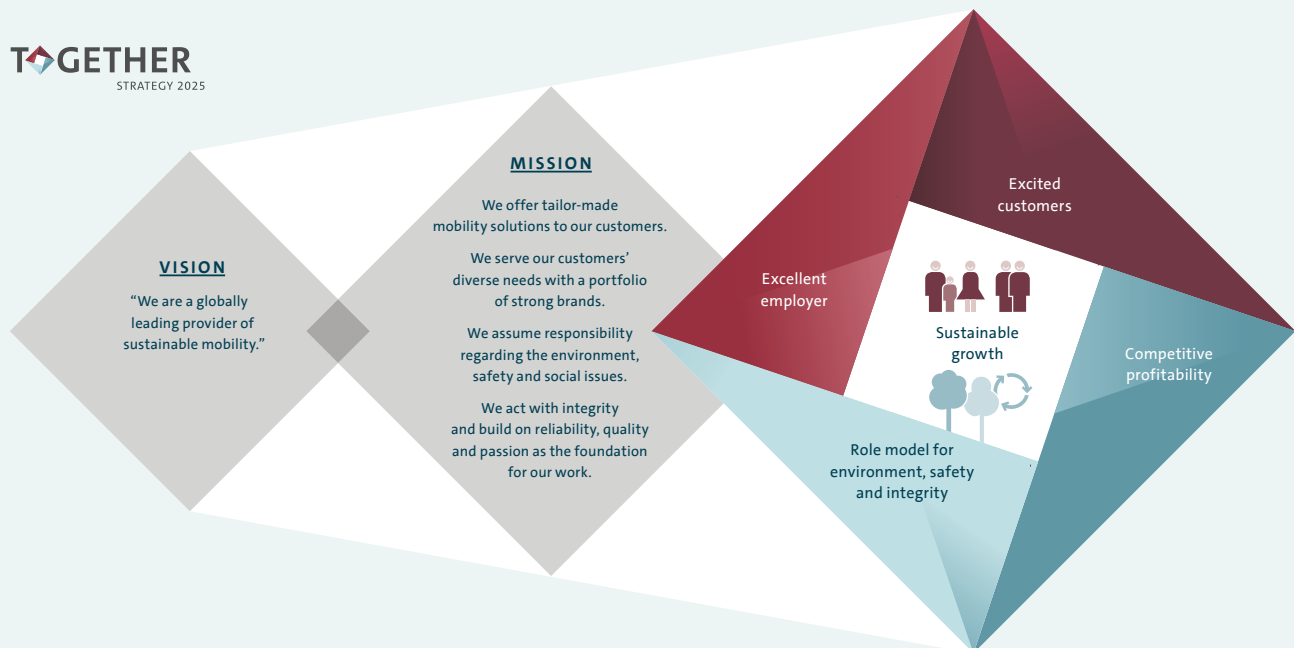
With its future program TOGETHER – Strategy 2025, the Volkswagen Group has launched the biggest change process in its history, laying the foundations for lasting success in tomorrow’s world of mobility and for its evolution into a globally leading provider of sustainable mobility.

The automotive world is in a state of transformation, and autonomous driving, e-mobility and connected vehicle concepts are the dominant trends. Technological changes are influencing customer needs and business models; new competitors are entering the market from other industries; shorter innovation cycles and the establishment of new core competencies are requiring ever more capital; stricter emission standards and increased market

volatility are leading to more complex underlying conditions. All this poses new challenges for us as a vehicle manufacturer.

Against this backdrop and with the approval of the Supervisory Board, the Volkswagen Group’s Board of Management resolved in June 2016 to launch the future program TOGETHER – Strategy 2025, the biggest change process in Volkswagen’s history. We want to make a decisive contribution to shaping not only today’s

## FUTURE PROGRAM TOGETHER – STRATEGY 2025



mobility, but tomorrow's too. That is why the Group has reinvented itself, guided by the vision of becoming one of the world's leading providers of sustainable mobility. With the future program, we are making the Volkswagen Group more focused, efficient, innovative, customer-oriented and sustainable, and more systematically geared to generating profitable growth.

Experts from all parts of the Company worked on developing TOGETHER – Strategy 2025, which builds on the successful Strategy 2018. The strategy arose at the core of the Company and unites the knowledge, experience and vision of the Volkswagen Group and its employees. The time horizon until 2025, which features in the strategy's name, stands for long-term, future-oriented thought and action. The term TOGETHER describes the mindset that will be even more vital to the Volkswagen Group's long-term success going forward. Our intention with the new Group strategy is for everyone in the Volkswagen Group to join us in producing fascinating vehicles and forward-looking, tailor-made mobility solutions that will continue to inspire our customers, meeting their diverse needs with a portfolio of strong brands. Every day, we actively assume and exercise responsibility in relation to the environment, society and safety, and we wish to be a role model in these areas. Integrity, reliability, quality and passion form the basis for our work. The realignment will enable us to maintain our technological leadership in the industry and at the same time ensure our competitive profitability. Volkswagen will thus remain an attractive investment and, what is more, an excellent, reliable and secure employer.

TOGETHER – Strategy 2025 creates the framework and lays the building blocks for the evolution of the Group, with its strong brands, its international production sites and its skilled, dedicated workforce. The Code of Collaboration formulated as part of the future program is the foundation on which the Group strategy rests. The Code describes how collaboration is to take place within the Group and between individuals in their day-to-day work. Its core values are encapsulated in the terms “open and honest”, “uncomplicated”, “without prejudice”, “on an equal footing” and “for one another”. The change process is complemented by the corresponding strategies of the brands and functional areas.

#### FOUR KEY BUILDING BLOCKS OF THE FUTURE PROGRAM

##### TOGETHER – STRATEGY 2025

The new Group strategy comprises a raft of far-reaching strategic decisions and specific initiatives essentially aimed at safe-guarding the Group's long-term future and generating profitable growth. A total of 16 strategic Group initiatives are assigned to the four key building blocks of the program. The latter are: comprehensively transforming our core automotive business; establishing a new mobility solutions business; strengthening the Group's innovative power; and secure funding of our investments.

##### First key building block: transforming our core business

Developing, building and selling vehicles will remain essential for the Volkswagen Group going forward. However, there will be far-reaching and lasting changes to this business. That is why we are profoundly restructuring our core business to face this new era of mobility.

As part of this transformation process, we will prospectively sharpen the positioning of the Group brands and optimize the vehicle and drivetrain portfolio to focus on the most attractive and fastest-growing market segments. The Group's product portfolio will be geared to profitability, taking the needs of customers and regional markets into account. One focus will be on e-mobility. The regional growth strategy that has been launched will continue in particularly attractive automotive markets. Expansion and investment plans for North America and the expansion program in China will remain in place. In Asia, especially, we want to tap the economy segment, i.e. the segment comprising attractively priced entry-level products, forging partnerships with local companies to achieve this.

As part of its policy of generating profitable growth, the Volkswagen Group will review and streamline its modular toolkits so as to reduce complexity in development and production and simultaneously enhance efficiency. Transforming our core business also encompasses systematically promoting an entrepreneurial mindset and approach, which is why we have implemented a product line organization in the high-volume passenger car brands. The components business will be realigned, with the aim of improving competitiveness and efficiency, and making an important contribution to the trends that will shape the future.

With regard to vehicles and drivetrains, special emphasis will be placed on e-mobility. In the coming years, we intend to launch more than 30 different types of purely battery-powered electric vehicles (BEVs) and to sell between two and three million BEVs by 2025 – equivalent to around 20–25% of the Group's expected total unit sales.

In light of the expected rapid gains in market volume and unit sales of BEVs, the Volkswagen Group will develop battery technology as a new core competency, thus reducing the risk of becoming dependent on suppliers in these areas. On top of that, we will work together with partners.

A further lever for transforming our core automotive business is to develop new core competencies in forward-looking areas such as autonomous driving and artificial intelligence. We need to provide the necessary resources in order to develop a competitive technical solution for a self-driving system and have it licensed by the end of the decade.

16 COMPREHENSIVE GROUP INITIATIVES



Our goal and our aspiration is to systematically put ourselves in our customers' shoes. At three Volkswagen Group Future Centers in Germany, the USA and China, designers and digital experts are working together on the vehicles of the future so that the Group can offer the best-possible customer experience and make optimum use of the latest technologies.

In the Commercial Vehicles Business Area, too, we are pursuing a future-oriented policy with the Scania, MAN and Volkswagen Commercial Vehicles brands, one of our goals being to become a provider of intelligent transport solutions. Offering vehicles under several different brands, Volkswagen Truck & Bus is to become a global industry champion, with a significant presence in all key regions of the world and with enhanced overall performance.

After the strategic realignment of the Volkswagen Group, the Financial Services Division will continue to support the brands' business models and remain an important source of revenue.

**Second key building block: establishing a mobility solutions business**

The second key building block of the new Group strategy is the new cross-brand mobility solutions business, in which we are setting up mobility services. In this context, we have established a new business unit with MOIA. This will center on ride hailing. Subsequently, further attractive and profitable services that are tailored to customer requirements, such as robotaxis, carsharing, or on-demand transport for the logistics industry shall be developed or acquired. In order to achieve this, we will rely to a greater extent than previously on partnerships, acquisitions and venture capital investments. Investment selection will be managed centrally so as to generate maximum value for the Group and its brands.

We have secured the City of Hamburg as a strategic partner in our determination to become an end-to-end mobility provider. The focus of this partnership is on sustainable urban mobility concepts, intermodality, innovative vehicle concepts and technologies, autonomous driving and parking, and traffic flow management.

#### Third key building block: strengthening innovative power

Both the transformation of our core business and the new mobility solutions business require us to strengthen our traditionally excellent power to innovate and place it on an even broader footing. To this end, the Volkswagen Group is pushing ahead with the digital transformation in all parts of the Company.

This involves operational aspects such as Industry 4.0 in production and logistics as well as digitalization in sales. In addition, the Organization 4.0 initiative will put in place a more attractive, up-to-date work organization. Structures and processes will be changed in everyday work situations and an environment created that encourages open, collaborative working relationships across all levels.

#### Fourth key building block: secure funding

Becoming one of the world's leading providers of sustainable mobility calls for substantial capital expenditure. This expenditure is to be funded primarily through efficiency gains across all brands and functional areas: operational excellence is something that concerns the entire value chain, from product development and sourcing through to production and distribution. Additional funds for future investments can also be generated by optimizing the existing portfolio of brands and equity investments.

The continuity and even closer interlinking of strategic and operational planning enhances transparency when it comes to the financial assessment and the evaluation of directional decisions.

#### GOALS AND KEY PERFORMANCE INDICATORS OF THE GROUP'S STRATEGY

The strategic initiatives describe how we intend to achieve our vision of becoming one of the world's leading providers of sustainable mobility. For this purpose, we have defined four target dimensions – excited customers, excellent employer, role model for environment, safety and integrity, and competitive profitability – which are designed to help us grow sustainably.

Although these target dimensions apply throughout the Group, the strategic KPIs that we will use to measure how well we have implemented our Group strategy will depend on the business model. The business model for our passenger car brands is thus different not only from that of our truck and bus brands, but also from that of power engineering and our services business. In the following we describe the Group's strategic goals attached to these targets. The strategic KPIs of the competitive profitability target dimension have been defined and anchored uniformly in the Group. As the new Group strategy has yet to be specified in detail, the content of the strategic KPIs in the other targets is still being determined.

#### Target dimension: excited customers

This target dimension focuses on the diverse needs of our customers and on tailor-made mobility solutions. We aspire to exceed our customers' expectations, generating maximum benefit for them. That calls not only for the best products, the most efficient solutions and the best service, but also for flawless quality and an outstanding image. We want to excite our existing customers, win over new ones and retain their loyalty in the long term – because only loyal and faithful customers will recommend us to others.

The strategic KPIs include, for example, the loyalty rate, conquest rate and breakdowns.

#### Target dimension: excellent employer

Skilled and dedicated employees are one of the keys to sustainable success. We wish to promote their satisfaction and motivation by means of equal opportunities, a modern and attractive working environment, and a forward-looking work organization. An exemplary leadership and corporate culture forms the foundation for this, enabling us to retain our core workforce and attract new talent.

The strategic KPIs of this target dimension include the Group's attractiveness as an employer as determined internally by means of the opinion survey and as perceived externally, as well as the equality index.

#### Target dimension: role model for the environment, safety and integrity

Every day, we at the Volkswagen Group assume and exercise responsibility in relation to the environment, safety and society. This sense of responsibility informs all our thoughts and actions in equal measure in all the decisions we take.

We pay particular attention to the use of resources and the emissions of our product portfolio as well as those of our locations and plants, with the goal of continuously reducing our carbon footprint and lowering pollutant emissions. Through our innovations and outstanding quality, we offer our customers maximum product safety.

We want to regain and strengthen the trust of our customers and restore the Group's positive public image. The most important principles in this process include compliance with laws and regulations, the establishment of secure processes, and dealing openly with mistakes so that they can be avoided or rectified in the future. In terms of integrity, Volkswagen aims to become a role model for a modern, transparent and successful enterprise.

The strategic KPIs of this target dimensions include the decarbonization index and emissions figures, as well as compliance, process reliability and an error management culture.

**Target dimension: competitive profitability**

Investors judge us by whether we are able to meet our obligations as regards interest payments and debt repayments. As equity holders, they expect adequate dividends and a lasting increase in the value of their shares.

We make investments with a view to achieving profitable growth and strengthening our competitiveness, thus keeping the Volkswagen Group on a firm footing and ensuring it remains an attractive investment option.

The goals we have set ourselves are to achieve operational excellence in all business processes and to become the benchmark for the entire industry.

The strategic KPIs are operationalized for internal management purposes: target and actual data are derived from Volkswagen Group figures.

**STRATEGIC KPIS: COMPETITIVE PROFITABILITY**

	2015	2025
Operating return on sales <sup>1</sup>	6.0%	7 to 8%
Research and development ratio (R&D ratio) in the Automotive Division	7.4%	~ 6%
Capex/sales revenue in the Automotive Division	6.9%	~ 6%
Net cash flow in the Automotive Division	€8,887 million	Positive, to allow a distribution ratio of 30%
Net liquidity in the Automotive Division	€24,522 million, 11.5%	~ 10% of consolidated sales revenue
Return on investment (ROI) in the Automotive Division	-0.2%	> 15%

<sup>1</sup> 2015 before special items

# Internal Management System and Key Performance Indicators

This chapter describes, on the basis of the Group strategy, how the Volkswagen Group is managed and the key performance indicators used for this purpose. In addition to financial measures, our management system also contains nonfinancial key performance indicators.

The Volkswagen Group's performance and success can be measured using both financial and nonfinancial key performance indicators. In the following, we first describe the internal management process and then explain the Volkswagen Group's core performance indicators.

## INTERNAL MANAGEMENT PROCESS IN THE VOLKSWAGEN GROUP

The starting point for the Volkswagen Group's internal management process is the medium-term planning aligned with the corporate strategy that is conducted once a year and generally covers a period of five years. This forms the core of our operational planning and is used to formulate and check the requirements for realizing strategic projects designed to meet Group targets in both technical and economic terms – and particularly in relation to earnings and liquidity effects. In addition, it is used to coordinate all business areas with respect to the strategic action areas concerned: functions/processes, products and markets.

When planning the Company's future, the individual planning components are determined on the basis of the timescale involved:

- › the long-term unit sales plan, which sets out market and segment growth and then derives the Volkswagen Group's delivery volumes from them;
- › the product program as the strategic, long-term factor determining corporate policy;
- › capacity and utilization planning for the individual locations.

The coordinated results of the upstream planning processes are used as the basis for the medium-term financial planning: the Group's financial planning, including the brands and business fields, comprises the income statement, cash flow and balance sheet planning, profitability and liquidity, as well as the upfront investments needed for alternative products and the implementation of strategic options. The first year of the medium-term planning period is fixed and a budget drawn up for the individual months. This is planned in detail down to the level of the operating cost centers.

The budget is reviewed each month throughout the year to establish the degree to which the targets have been met. Key internal management instruments comprise target/actual comparisons, prior-year comparisons, variance analyses and, where necessary, action plans to ensure targets are met. For the current fiscal year, detailed revolving monthly forecasts are prepared for the coming three months and the full year, taking into account the current risks and opportunities. The focus of intrayear internal management is therefore on adapting ongoing operations. At the same time, the current forecast serves as a potential, ongoing corrective to the medium-term and budget planning that follows on from it.



#### CORE PERFORMANCE INDICATORS IN THE VOLKSWAGEN GROUP

The Volkswagen Group's internal management system is based on nine core performance indicators, which are derived from our strategic goals. Two of these indicators will be added in 2017 under the future program TOGETHER – Strategy 2025:

- > Deliveries to customers
- > Sales revenue
- > Operating result
- > Operating return on sales
- > Research and development ratio (R&D ratio) in the Automotive Division (from 2017)
- > Capex/sales revenue in the Automotive Division
- > Net cash flow in the Automotive Division
- > Net liquidity in the Automotive Division (from 2017)
- > Return on investment (ROI) in the Automotive Division

Deliveries to customers are defined as handovers of new vehicles to the end customer. This figure shows the popularity of our products and is the measure we use to determine our competitive position in the markets. Deliveries are closely related to our targets of exciting customers, being a role model in terms of the environment, safety and integrity, and being an excellent employer. One of the most important prerequisites for the Company's long-term success is a strong brand portfolio that – on the basis of outstanding quality – offers tailor-made mobility solutions with safe, resource-efficient vehicles, thus meeting the diverse needs of customers. Demand for our products guarantees not only unit sales and production, but also full utilization of our locations and the jobs of our employees. The goals we are striving for cannot be achieved without a skilled, dedicated workforce and a consensus on shared values.

Sales revenue, which does not include the figures for our equity-accounted Chinese joint ventures, reflects our market success in financial terms. Following adjustment for our use of resources, the operating result reflects the Company's actual business activity and documents the economic success of our core business. The operating return on sales is the ratio of the operating result to sales revenue.

The research and development ratio (R & D ratio) in the Automotive Division shows total research and development costs in relation to sales revenue. Research and development costs comprise a range of expenses, from futurology through to the development of marketable products. Particular emphasis is placed on the environmentally friendly orientation of our product portfolio. The R&D ratio underscores the efforts made to ensure the Company's future viability: the goal of competitive profitability geared to sustainable growth.

The ratio of capex (investments in property, plant and equipment, investment property and intangible assets, excluding capitalized development costs) to sales revenue in the Automotive Division reflects both our innovative power and our future competitiveness. It shows our capital expenditure – largely for modernizing and expanding our product range and for environmentally friendly drivetrains, as well as for adjusting the production capacity and improving production processes – in relation to the Automotive Division's sales revenue.

Net cash flow in the Automotive Division represents the excess funds from operating activities available for dividend payments, for example. It is calculated as cash flows from operating activities less cash flows from investing activities attributable to operating activities.

Net liquidity in the Automotive Division is the total of cash, cash equivalents, securities, loans and time deposits not financed by third-party borrowings. To safeguard our business activities, we have formulated the strategic target that net liquidity in the Automotive Division should amount to approximately 10% of the consolidated sales revenue.

We use the return on investment (ROI) to calculate the return on invested capital for a particular period in the Automotive Division, including the Chinese joint ventures on a proportionate basis, by calculating the ratio of the operating result after tax to average invested capital. If the return on investment (ROI) exceeds the market cost of capital, the value of the Company has increased. This is how we measure the financial success of our brands, locations and vehicle projects.

You can find information and explanations of the sales figures and the Volkswagen Group's financial key performance indicators on pages 104 to 110 and on pages 118 to 135, respectively.

Detailed descriptions of our activities and additional nonfinancial key performance indicators in the areas of sustainability, research and development, procurement, production, sales and marketing, quality assurance, employees, information technology and the environment can be found in the chapter entitled "Sustainable Value Enhancement" beginning on page 140 of this annual report.

# Structure and Business Activities

This chapter describes the legal and organizational structure of the Volkswagen Group and explains the material changes in 2016 with respect to equity investments.

## OUTLINE OF THE LEGAL STRUCTURE OF THE GROUP

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

Volkswagen AG is a vertically integrated energy company within the meaning of section 3 no. 38 of the Energiewirtschaftsgesetz (EnWG – German Energy Industry Act) and is therefore subject to the provisions of the EnWG. In the electricity sector, Volkswagen AG generates, sells, and distributes electricity together with a Group subsidiary.

Volkswagen AG's Board of Management is the ultimate body responsible for managing the Group. The Supervisory Board appoints, monitors and advises the Board of Management; it is consulted directly on decisions that are of fundamental significance for the Company.

## ORGANIZATIONAL STRUCTURE OF THE GROUP

The Volkswagen Group is one of the leading multibrand groups in the automotive industry. The Company's business activities comprise the Automotive and Financial Services divisions. All brands in the Automotive Division – with the exception of the Volkswagen Passenger Cars and Volkswagen Commercial Vehicles brands – are legally independent separate companies. The business activities of the various

companies in the Volkswagen Group focus on developing, producing and selling passenger cars, light commercial vehicles, trucks and buses. The product portfolio of the Passenger Cars Business Area ranges from motorcycles to fuel-efficient small cars and luxury vehicles. In the Commercial Vehicles Business Area, the collaboration between the MAN and Scania brands is managed and coordinated under the umbrella of Volkswagen Truck & Bus GmbH. The commercial vehicles portfolio ranges from pickups to heavy trucks and buses. Power Engineering manufactures large-bore diesel engines and special gear units, among other things. A wide array of financial services, which will be gradually expanded to include mobility services rounds off the Company's portfolio. With its brands, the Volkswagen Group has a presence in all relevant markets around the world, with Western Europe, China, the USA, Brazil, Mexico and Turkey currently representing its key sales markets.

Volkswagen AG and the Volkswagen Group are managed by Volkswagen AG's Board of Management in accordance with the Volkswagen AG Articles of Association and the rules of procedure for Volkswagen AG's Board of Management issued by the Supervisory Board.

At Group level, committees also deal with key strategic issues relating to product planning, investments, liquidity and foreign currency, and management issues.

Each brand in the Volkswagen Group is managed by a board of management, which ensures its independent and separate development and business operations. The Group targets and requirements laid down by the Board of Management of Volkswagen AG must be complied with to the extent permitted by law. This allows Group-wide interests to be pursued while at the same time safeguarding and reinforcing each brand's specific characteristics. Matters that are of importance to the Group as a whole are submitted to the Group Board of Management in order to reach agreement between

the parties involved, to the extent permitted by law. The rights and obligations of the statutory bodies of the relevant brand companies remain unaffected.

The companies of the Volkswagen Group are managed separately by their respective management. In addition to the interests of their own companies, the management of each individual company takes into account the interests of the Group and of the individual brands in accordance with the framework laid down by law.

Following the realignment of Group structures, we fine-tuned the management model in the reporting period and made adjustments to its specific structure. The Group functions have been given a more pronounced strategic focus. They should:

- > sustainably enhance the leadership and management model;
- > leverage substantial synergies across all brands and business fields; and
- > pool competencies and make them available to the brands.

Operational fine-tuning at Group level has been reduced and, at the same time, greater entrepreneurial responsibility assigned to the brands and regions, making the Group more agile and speeding up decision-making processes. The Group Board of Management can concentrate more on strategy and the management of major areas in which synergies can be created, for example product strategy, toolkits, procurement, plant capacity utilization and key technologies such as digitalization. Further information on the Volkswagen Group's future organizational alignment can be found in the Report on Expected Developments on page 178.

#### MATERIAL CHANGES IN EQUITY INVESTMENTS

The control and profit and loss transfer agreement between MAN SE, as the controlled company, and Volkswagen Truck & Bus GmbH, a wholly owned subsidiary of Volkswagen AG, as the controlling company, came into force upon its entry in the commercial register on July 16, 2013. The conclusion of the control and profit and loss transfer agreement replaced the group based on the de facto exercise of management control by a "contractual group", permitting considerably more efficient and less bureaucratic cooperation between the MAN Group and the rest of the Volkswagen Group. Non-controlling interest shareholders of MAN SE have the right to tender MAN ordinary and preferred shares in Volkswagen Truck & Bus GmbH during and two months after the conclusion of the award proceedings instituted in July 2013 to review the appropriateness of the cash settlement set out in the agreement in accordance with section 305 of the Aktiengesetz (AktG – German Stock Corporation Act) and the cash compensation in accordance with section 304 of the

AktG. The Munich Regional Court ruled in the first instance at the end of July 2015 that the settlement payable to the shareholders should be increased from €80.89 to €90.29 per share. Both Volkswagen and a number of the noncontrolling interest shareholders have appealed to the Higher Regional Court in Munich. At the end of December 2016, Volkswagen Truck & Bus GmbH held 75.73% of the ordinary shares and 46.43% of the preferred shares of MAN SE.

On March 14, 2014, Volkswagen AG made a voluntary tender offer to Scania's shareholders for all shares not previously held by Volkswagen either directly or indirectly. Following completion of the offer, Volkswagen increased its interest in Scania's share capital to 99.57% at the end of 2014. A squeeze-out was initiated for the Scania shares not tendered in the course of the offer and, on November 11, 2014, the Swedish court of arbitration ruled in the squeeze-out proceedings that all Scania shares outstanding would be transferred to Volkswagen AG. Volkswagen AG has been the indirect and direct legal owner of all Scania shares since January 14, 2015, when the decision became final and unappealable. In its ruling of June 30, 2016, the court of arbitration confirmed that the bid price paid by Volkswagen was an appropriate settlement.

Through its 50% interest in the joint venture Global Mobility Holding B.V. (GMH), Amsterdam, the Netherlands, the Volkswagen Group held a 50% indirect stake in the joint venture's subsidiary, LeasePlan Corporation N.V., Amsterdam, the Netherlands (LeasePlan). LeasePlan is a Dutch financial services group whose core business is leasing and fleet management. The final approvals for the sale of LeasePlan to an international consortium of investors were issued by the competent authorities in January 2016. Legal transfer of the LeasePlan shares to the consortium was completed on March 21, 2016.

#### LEGAL FACTORS INFLUENCING BUSINESS

Like other international companies, Volkswagen companies are affected by numerous laws in Germany and abroad. In particular, there are legal requirements relating to development, production and distribution, as well as to tax, company, commercial, financial and capital market regulations, and those relating to labor, banking, state aid, energy, environmental and insurance law.

**■ VOLKSWAGEN AG SHAREHOLDINGS**  
[www.volkswagenag.com/ir](http://www.volkswagenag.com/ir)

# Corporate Governance Report

Corporate governance is defined as responsible, transparent corporate management and supervision that aims to add long-term value. For us, good corporate governance not only forms the basis for lasting success; it is also an important prerequisite for strengthening the trust of our stakeholders in our work.

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

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

## DECLARATIONS OF CONFORMITY (VALID AS OF THE DATE OF THE RELEVANT DECLARATION)

On March 14, 2016, the Board of Management and the Supervisory Board of Volkswagen AG issued a supplement to the declaration of conformity with the Code as required by section 161 of the Aktiengesetz (AktG – German Stock Corporation Act) of November 20, 2015 with the wording quoted below.

“The Board of Management and the Supervisory Board declare that:

1) In their Declaration of Conformity dated November 20, 2015, the Board of Management and the Supervisory Board of Volkswagen AG declared that they would fully comply with the recommendations of the Government Commission of the German Corporate Governance Code (DCGK) in the version dated May 5, 2015 that had been published by the German Ministry of Justice in the official section of the Federal

Gazette (Bundesanzeiger) on June 12, 2015 with the exception of the following numbers:

- > a) 4.2.3(4) (severance pay cap)
- > b) 5.1.2(2) sentence 3 (age limit for members of the Board of Management)
- > c) 5.3.2 sentence 3 (independence of the Chair of the Audit Committee)
- > d) 5.4.1(5 to 7) (disclosure regarding election recommendations)
- > e) 5.4.6(2) sentence 2 (performance-related compensation of members of the Supervisory Board)

2) Due to the currently still unanswered questions relating to the consequences of the emissions issue and the resulting assessment questions, the Board of Management and the Supervisory Board have decided that the 2015 Consolidated Financial Statements and the interim report for the first quarter of 2016 will not be made publicly accessible within 90 days of the end of the fiscal year or within 45 days of the end of the quarter. As such, the supplement to the Declaration of Conformity from November 20, 2015 will include an explanation of the deviation from number 7.1.2 sentence 4 of the German Corporate Governance Code (deadlines for publication). The deviation is limited to the publications listed and the recommendation will be complied with once again as of the 2016 Half-Yearly Financial Report.”

On April 22, 2016, the Board of Management and the Supervisory Board of Volkswagen AG issued a further supplement to the declaration of conformity with the Code as required by section 161 of the AktG of November 20, 2015 with the wording quoted below.

“The Board of Management and the Supervisory Board declare the following:

1) In their Declaration of Conformity dated November 20, 2015, the Board of Management and the Supervisory Board of Volkswagen AG declared that they would comply with the recommendations of the Government Commission of the German Corporate Governance Code (the Code) in the version dated May 5, 2015 published by the German Ministry of Justice in the official section of the Federal Gazette (Bundesanzeiger) on June 12, 2015 with the exception of the following articles:

- > a) 4.2.3(4) (severance payment cap)
- > b) 5.1.2(2) sentence 3 (age limit for members of the Board of Management)
- > c) 5.3.2 sentence 3 (independence of the Audit Committee Chair)
- > d) 5.4.1(5 to 7) (disclosure regarding election recommendations)
- > e) 5.4.6(2) sentence 2 (performance-related remuneration of members of the Supervisory Board)

2) In their supplement to the declaration described under 1) above, decided on March 14, 2016, the Board of Management and the Supervisory Board of Volkswagen AG further declared that an exception would be made in respect of article 7.1.2 sentence 4 of the Code (date of publication of financial statements).

3) The Supervisory Board today adjusted the performance targets and comparison parameters used to determine the variable remuneration for the members of the Board of Management in fiscal year 2015 in agreement with the individual members of the Board of Management. Article 4.2.3(2) sentence 8 of the Code excludes retroactive changes to the performance targets and comparison parameters for the variable remuneration components. However, the Supervisory Board and members of the Board of Management were of the opinion that continued adherence to the previous performance targets and comparison parameters would have led to results that do not adequately reflect the current situation of the company. A retroactive adjustment of the performance targets and comparison parameters was therefore considered advisable.

As such, a second supplement to the Declaration of Conformity dated 20 November 2015 is being issued in which the company declares that an exception will be made in respect of article 4.2.3(2) sentence 8 of the Code (exclusion of retroactive changes to the comparison parameters)."

On November 18, 2016, the Board of Management and the Supervisory Board of Volkswagen AG issued the annual declaration of conformity with the German Corporate Governance Code as required by section 161 of the AktG with the following wording:

"The Board of Management and the Supervisory Board declare the following:

The recommendations of the Government Commission of the German Corporate Governance Code in the version dated May 5, 2015 ("the Code"), that was published by the German Ministry of Justice in the official section of the Federal Gazette (Bundesanzeiger) on June 12, 2015, was complied with in the period from the last Declaration of Conformity from November 20, 2015 and will continue to be complied with, with the exception of the recommendations and their stated reasons and periods listed below.

- > a) 4.2.3(2) sentence 8 (exclusion of retroactive changes to comparison parameters)

On April 22, 2016, the Supervisory Board adjusted the performance targets and comparison parameters used to determine the variable remuneration for the members of the Board of Management in fiscal year 2015 in agreement with the individual members of the Board of Management. Article 4.2.3(2) sentence 8 of the Code excludes retroactive changes to the performance targets and comparison parameters for the variable remuneration components. However, the Supervisory Board and the members of the Board of Management were of the opinion that continued adherence to the previous performance targets and comparison parameters would have led to results that do not adequately reflect the situation of the company. A retroactive adjustment of the performance targets and comparison parameters was therefore considered advisable. As such, a supplement to the Declaration of Conformity dated November 20, 2015 was issued on April 22, 2016 in which the company declares that an exception will be made in respect of article 4.2.3(2) sentence 8 of the Code (exclusion of retroactive changes to the comparison parameters). The deviation is limited to the changes listed and since then the recommendation was and continues to be complied with once again.

- > b) 4.2.3(4) (severance pay cap)  
A severance pay cap will be included in new contracts concluded with members of the Board of Management, but not in contracts concluded with Board of Management members entering their third term of office or beyond, provided a cap did not form part of the initial contract. Grandfather rights have been applied accordingly.
- > c) 5.1.2(2) sentence 3 (age limit for members of the Board of Management)  
Previously, the members of the Supervisory Board had not considered an age limit for members of the Board of Management to be appropriate because the ability to manage a company successfully does not necessarily cease when a specific age is reached and a fixed age limit could be discriminating. The Supervisory Board has come to the conclusion that this concern can be allayed by drafting an appropriate definition for an age limit and has therefore determined a corresponding age limit today for members of the Board of Management. This recommendation shall therefore be approved again from today onwards.
- > d) 5.3.2 sentence 3 (independence of the chair of the Audit Committee)

It is unclear from the wording of this recommendation whether the Chairman of the Audit Committee is "independent" within the meaning of number 5.3.2 sentence 3 of the Code. Such independence could be considered lacking in view of his membership of the Supervisory Board of Porsche Automobil Holding SE, kinship with other members of the Supervisory Board of the company and of Porsche Automobil Holding SE, his indirect minority interest in Porsche Automobil Holding SE, and business



relations with other members of the Porsche and Piëch families, who also have an indirect interest in Porsche Automobil Holding SE. However, in the opinion of the Supervisory Board and the Board of Management, these relationships do not constitute a conflict of interest, nor do they interfere with his duties as the Chairman of the Audit Committee. This exception is therefore being declared purely as a precautionary measure.

- › e) 5.4.1(5 to 7) (disclosure regarding election recommendations)

With regard to recommendation number 5.4.1(5 to 7) of the Code stating that certain circumstances must be disclosed by the Supervisory Board when making election recommendations to the Annual General Meeting, the stipulations of the Code are vague and the definitions unclear. Purely as a precautionary measure, the Board of Management and the Supervisory Board therefore declare a deviation from the Code in this respect. Notwithstanding this, the Supervisory Board will make every effort to satisfy the requirements of the recommendation.

- › f) 5.4.6(2) sentence 2 (performance-related remuneration of members of the Supervisory Board)

The remuneration of members of the Supervisory Board is regulated by the shareholders in article 17(1) of our Articles of Association. This regulation includes the linking of remuneration to dividend distribution. We therefore assume that we have complied with the Code and that the variable compensation component is oriented toward the sustainable growth of the enterprise as defined in number 5.4.6(2) sentence 2 of the Code. However, as it cannot be ruled out that other views will be taken in this respect, a deviation from this recommendation in the Code is being declared as a precautionary measure.

- › g) 7.1.2 sentence 4 (deadlines for publication)

Due to the unresolved questions relating to the consequences of the emissions issue and the resulting assessment questions, the Board of Management and the Supervisory Board have decided that the 2015 Consolidated Financial Statements and the interim report for the first quarter of 2016 will not be publicly accessible within 90 days of the end of the fiscal year or within 45 days of the end of the quarter. As such, the supplement to the Declaration of Conformity issued on November 20, 2015 included an explanation on March 14, 2016 of the deviation from item 7.1.2 sentence 4 of the German Corporate Governance Code (deadlines for publication). The deviation was limited to the publications listed and the recommendation was and continues to be complied with once again since the 2016 Half-Yearly Financial Report.”

The current declaration of conformity is also published on our website, [www.volkswagen.com/ir](http://www.volkswagen.com/ir).

With the exception of article 5.1.2(2) sentence 1 (appointment period for first-time appointments to the Board of Management), the suggestions of the current version of the Code have been complied with. The Supervisory Board decides the appointment period for each first-time appointment to the Board of Management on an individual basis, taking the best interests of the Company into account. The suggestion made in article 2.3.2 (availability of the proxy during the Annual General Meeting) was implemented at the 2016 Annual General Meeting in such a manner that the shareholders were able to reach, by electronic means and until 1:00 pm on the day of the Annual General Meeting, the proxies named by the Company to exercise their voting rights. The suggestion made in article 2.3.3 (broadcasting of the Annual General Meeting) was implemented at the 2016 Annual General Meeting in such a manner that the introductory remarks of the Chairman of the Supervisory Board and the speech of the Chairman of the Board of Management were broadcast.

Our listed subsidiaries AUDI AG, MAN SE and Renk AG have also issued declarations of conformity with the German Corporate Governance Code.

The declarations of conformity of our listed subsidiaries can be accessed at the websites shown on this page.

#### COOPERATION BETWEEN THE BOARD OF MANAGEMENT AND THE SUPERVISORY BOARD

The Supervisory Board advises and monitors the Board of Management with regard to the management of the Company and is directly involved in decisions of fundamental importance to the Group. The Board of Management and the Supervisory Board of Volkswagen AG consult closely on the strategic orientation of the Volkswagen Group. The two bodies jointly assess, at regular intervals, the progress made in implementing the strategy. The Board of Management reports to the Supervisory Board regularly, promptly and comprehensively in both written and oral form on all issues of relevance for the Company with regard to strategy, planning, the development of the business, the risk situation, risk management and compliance.

More information on the cooperation between the Board of Management and the Supervisory Board of Volkswagen AG

**i** DECLARATION OF CONFORMITY OF VOLKSWAGEN AG  
[www.volkswagen.com/ir](http://www.volkswagen.com/ir)

**i** DECLARATION OF CONFORMITY OF AUDI AG  
[www.audi.com/cgk-declaration](http://www.audi.com/cgk-declaration)

**i** DECLARATION OF CONFORMITY OF MAN SE  
[www.man.eu/corporate](http://www.man.eu/corporate)

**i** DECLARATION OF CONFORMITY OF RENK AG  
<http://www.renk.biz/corporated-governance.html>

and on the work and structure of the committees of the Supervisory Board can be found in the Report of the Supervisory Board on pages 12 to 17 of this annual report.

Information on the members of the Board of Management and Supervisory Board as well as on the Supervisory Board committees can be found on pages 84 to 87.

#### OBJECTIVES FOR THE COMPOSITION OF THE SUPERVISORY BOARD, BOARD OF MANAGEMENT AND SENIOR EXECUTIVE POSITIONS

In view of the purpose of the Company, its size and the extent of its international activities, the Supervisory Board of Volkswagen AG strives to take the following criteria into account in its composition:

- > At least three members of the Supervisory Board should be persons who embody in particular the characteristic of internationality.
- > At least four shareholder representative members of the Supervisory Board should be persons who do not represent potential conflicts of interest, particularly conflicts of interest that could arise through a position as a consultant or member of the governing bodies of customers, suppliers, lenders, or other third parties.
- > In addition, at least four of the shareholder representatives must be persons who are independent as defined in article 5.4.2 of the German Corporate Governance Code.
- > Furthermore, proposals for elections should not normally include persons who will have reached the age of 75 by the time the election takes place or who will have been members of the Supervisory Board for more than 15 years by the time the election takes place.

The above criteria have been met. The statutory quota of at least 30% women and 30% men will apply to new appointments to the Supervisory Board of Volkswagen AG from January 1, 2016 in accordance with the Gesetz für die gleichberechtigte Teilhabe von Frauen und Männern an Führungspositionen in der Privatwirtschaft und im öffentlichen Dienst (FührposGleichberG – Act on the Equal Participation of Women and Men in Leadership Positions in the Private and Public Sectors). Shareholder and employee representatives have resolved that each side shall meet this quota separately. The election of Ms Hessa Sultan Al-Jaber to the Supervisory Board at the 2016 Annual General Meeting meant that the quota of at least 30% women and 30% men was achieved separately for the shareholder representatives; the quota was still complied with as of December 31, 2016. As far as the employee representatives are concerned, the minimum quota does not have to be met until the next scheduled election of employee representatives to the Supervisory Board in 2017. As of year-

end 2016, 10% of the employee representatives on the Supervisory Board of Volkswagen AG were women.

In 2015, the Supervisory Board of Volkswagen AG set itself the long-term goal of increasing the proportion of female members on the Board of Management to 30%. As of the date stipulated in the FührposGleichberG for determining a specific target, the Supervisory Board did not see any opportunity to increase the proportion of female members on the Board of Management before the end of 2016 and consequently resolved a target quota of zero for December 31, 2016. Since the appointment of Dr. Christine Hohmann-Dennhardt, who was responsible for Integrity and Legal Affairs on the Board of Management from January 1, 2016 to January 31, 2017 and Ms. Hiltrud Dorothea Werner, who has been responsible for the position since February 1, 2017, the proportion of female members on the Group Board of Management has been 11.1%; the target quota as of December 31, 2016 has thus been exceeded.

In accordance with the aforementioned act, the Supervisory Board was required to set a target quota for the proportion of female members on the Board of Management for the period after December 31, 2016. This target quota was set at 11.1% and has to be achieved by December 31, 2021.

In the reporting period, Volkswagen AG reached the target quotas it had set for the proportion of women in management in accordance with FührposGleichberG: by the end of the year, the proportion of women was 9.8% (target: 9.8%) in the first management level and 13.5% (target: 13.3%) in the second management level. For the new period up to the end of 2021, Volkswagen AG is aiming to have 13.0% women in the first management level and 16.9% women in the second management level.

#### REMUNERATION REPORT

Extensive explanations of the remuneration system and the individual remuneration of the members of the Board of Management and the Supervisory Board can be found in the Remuneration Report on pages 67 to 83 of the management report, in the notes to the consolidated financial statements on page 319, and on page 57 of the notes to the annual financial statements of Volkswagen AG.

#### CORPORATE GOVERNANCE DECLARATION

The corporate governance declaration forms part of the combined management report and is permanently available at [www.volkswagenag.com/ir](http://www.volkswagenag.com/ir).

#### COMPLIANCE

Compliance with international rules and the fair treatment of our business partners and competitors are among our Company's guiding principles. Volkswagen's commitment has gone beyond statutory and internal requirements; voluntary commitments and ethical principles also form an integral part of our corporate culture. Compliant behavior is a corner-

stone of economic success and must be self-evident for all Group employees. One of our Company's main tasks at the present time is to enhance awareness of this.

#### Commitment to compliance at the highest level

This view is expressly shared by the Company's management. At a management event in Wolfsburg in 2016, Matthias Müller, Chairman of the Board of Management of Volkswagen AG, said: "We want to make integrity the basis for all of our actions, anchored deeply throughout the entire Group. To this end, we will redouble our efforts as regards compliance with rules and regulations across the Group." He continued: "Compliance is not the task of a single person or department: as managers are all called upon to play a part."

In an article for the Volkswagen intranet, the member of the Board of Management responsible for Integrity and Legal Affairs emphasized: "We at Volkswagen want our business to be respectable – in both senses of the word. We can achieve that only by complying with laws and regulations, obeying our internal rules and honoring the voluntary commitments we have entered into. One thing is certain: we will enjoy long-term success only if our actions are marked by honesty and integrity. Let us all do everything in our power to ensure that we can be proud not only of what we achieve, but also of how we achieve it."

#### Preventive compliance management system

Since 2016, responsibility for compliance has been assigned to the new Integrity and Legal Affairs position on the Board of Management, and it is also a key component of the Governance, Risk & Compliance (GRC) organization (see also Report on Risks and Opportunities starting on page 180). Volkswagen adopts, above all, a preventive approach to compliance that is designed to stop potential breaches before they occur by raising awareness and educating employees. This particularly includes the Code of Conduct and guidelines, communicating compliance, tutorials, training and advice measures, the business partner check as well as the ombudsman system (individual details pertaining to this listed below).

In addition, Volkswagen adopts a repressive approach to compliance. Group Internal Audit and Group Security regularly perform the necessary investigative activities, systematically monitor compliance and perform random checks regardless of any suspicion of infringements, and investigate specific suspected breaches. Responses are implemented by the Human Resources and Group Legal departments. These processes are closely interrelated, in line with the concept of a comprehensive compliance management system. Nevertheless, we are aware that even the best compliance management system can never entirely prevent the criminal actions of individuals.

The Group Chief Compliance Officer is supported by 14 chief compliance officers and compliance contact persons (staff who are responsible at the brands, Volkswagen Finan-

cial Services and Porsche Holding GmbH, Salzburg). They are supported by compliance officers in the Group companies. Networking activities of this organization during the reporting period included the major GRC Global Conference in Berlin, in which some 300 employees from 30 countries and representing 12 Group brands took part. In a variety of workshops and presentations, the participants had an opportunity to share their ideas on current and future aspects of compliance and risk management.

In addition, various bodies support the work of the compliance organization at Group and brand company levels. These include the Compliance Council at senior management level and the Compliance Core Team, which pools compliance expertise from different departments.

#### Focal points in 2016

Each year, detailed compliance risk assessments are carried out across the Group as part of the standard GRC process. The results are factored into the risk analyses performed by the Volkswagen Group, the brands and the companies, as well as into compliance program planning.

In response to the diesel issue, we worked on measures to ensure enhanced product compliance, both in the development and production process and as regards quality assurance. Furthermore, the way development processes are designed makes it even easier to identify and prevent even the mere attempt to circumvent binding rules. In this context, we have further strengthened, among other things, the conformity assessments for our products.

What is more, in the reporting period we expanded the range of services aimed at providing employees with advice and support, extending our advisory services and our range of online tutorials. We also published a new information guide for our staff on the prevention of money laundering.

The structure and processes of the Volkswagen Group's whistleblower system were reorganized. The Board of Management has adopted a Group-wide guideline for the whistleblower system that sets out, in particular, clear rights for protecting whistleblowers and those under investigation. As of 2017, the Integrity and Legal Affairs position on the Board of Management will be responsible for the process of recording and analyzing the information reported by whistleblowers. In particular, Group Internal Audit and Group Security will be tasked with investigating whistleblower reports.

#### Code of Conduct and guidelines

We have communicated the Code of Conduct, including the obligation to comply with laws, to employees at the brand companies; it is a key component of our compliance training. It is also integrated into our operational processes. For example, all new employment contracts entered into between Volkswagen AG on the one hand and both management staff and employees covered by collective agreements on the other



hand include a reference to the Code of Conduct and the obligation to comply with it. In addition, compliance with the Code of Conduct remained a component of our employees' annual reviews in the reporting period and was thus taken into account when calculating their variable, performance-related remuneration.

In addition to the Code of Conduct, the Volkswagen Group's compliance framework incorporates the anti-corruption guidelines, including checklists and the express prohibition of facilitation payments, as well as guidelines on competition, antitrust law and anti-money laundering. Organizational instructions on dealing with gifts and invitations as well as on making donations also apply across the Group.

Employees have access to the compliance rules and regulations via the special compliance pages on the Company intranet.

#### Communicating compliance

The GRC organization provided information on various compliance issues to the Group's brands and companies over the year, using a wide range of traditional communication channels. These include reports in various employee magazines produced by the brands, companies and locations. Digital media such as intranet portals, smartphone and tablet apps, blogs and newsletters are also frequently used to provide compliance information.

#### Learning programs, training and advice

Providing information to employees at all levels continues to be a core component of our compliance activities. In 2016, approximately 187,000 employees across the Group participated in a variety of training courses on compliance-related topics such as the Code of Conduct, anti-corruption, human rights, anti-money laundering, and competition and antitrust law. In addition to traditional lectures and online tutorials, case studies, role-playing games and other interactive formats form an integral part of the training provided to employees and managers. In addition, a management talk on risk management and compliance is offered to newly appointed senior managers of Volkswagen AG. All new Volkswagen AG employees are required to complete an online tutorial and an online test on the Group's Code of Conduct. The subject of human rights forms an integral part of this tutorial. Among other things, a compliance app for smartphones and tablets is available to Volkswagen AG's employees as a self-learning tool. Employees of all brand companies and a large number of Group companies are able to obtain personal advice about compliance issues, usually by contacting the compliance organization via a dedicated e-mail address. An IT-based information and advisory tool is available at Volkswagen AG's German locations.

#### Business partner check

We also expect our business partners to act with integrity and ensure regulatory compliance. For this reason, Volkswagen verifies the integrity of its business partners (business partner check) in a risk-oriented approach. This check allows us to find out about potential business partners before entering into a relationship with them, thus reducing the risk of starting a partnership that could be damaging to the Company or its business.

#### Ombudsman system

The Group-wide ombudsman system can be used to report any breaches or suspicions regarding corruption, illegal economic activity, or other irregularities, such as violations of human rights and unethical conduct. The reports, which are sent to two external lawyers appointed by the Group, may be submitted in any of the major languages used by the Group. Since 2014, employees providing information have had the option of communicating with the ombudsmen via an additional online channel; breaches can be reported using a technically highly secure electronic mailbox. It goes without saying that the people providing the information need not fear any sanctions from the Company for their actions. After carrying out a corresponding plausibility check, the ombudsmen passed on 125 reports from people – whose details were kept confidential if requested – to Volkswagen AG's Group Internal Audit department in 2016. Furthermore, 110 reports were submitted directly to the Head of Group Internal Audit. The local auditing departments of the brands and Group companies received a total of 481 reports. All information was or is being followed up. By the time the project has been categorically completed, all reports will have been processed and a final evaluation prepared.

**■ OMBUDSMAN SYSTEM**  
[www.ombudsmen-of-volkswagen.com](http://www.ombudsmen-of-volkswagen.com)

#### Effectiveness review

We review the effectiveness of the compliance measures taken at the Volkswagen Group's brands and companies annually using an integrated survey, which forms part of the standard GRC process. We check the effectiveness of selected countermeasures as well as the management controls used to respond to compliance risks. In addition, independent reviews by the Group Internal Audit function at the corporate units and the regular exchange of information with external bodies help ensure continuous improvement of the compliance management system.

In accordance with the normative standards issued by Deutsches Institut für Interne Revision e.V. (German Institute for Internal Auditing – DIIR), internal audit functions should be audited externally every five years. An external quality assessment of the Volkswagen Group's internal audit system was carried out by an audit firm in the period between the third quarter of 2014 and the first quarter of 2015. In addition to central management and supervisory processes, this took into consideration the quality of the brands' and regions' internal audit functions (sample size: Volkswagen AG, AUDI AG, SEAT S.A., Volkswagen de Mexico, Volkswagen Group China). The auditors confirmed that all of the internal audit units examined are fully compliant with the underlying DIIR Standard No. 3 "Quality management in the internal audit activity" and, in many areas, use leading internal audit methodologies and practices. During the reporting period, the internal quality management process was further developed and a continuous improvement process was also performed under the direction of Group Internal Audit.

#### RISK MANAGEMENT, AUDIT

Carefully managing potential risks to the Company is a key component of our daily work. Volkswagen Group's risk management system is oriented toward identifying, assessing, communicating and responding to risks at an early stage. This system is reviewed on an ongoing basis and adjusted if and when conditions change. A detailed description of the risk management system and our accounting-related internal control system can be found in the Risk Report on pages 180 to 183 of this annual report.

The Supervisory Board has established an Audit Committee, which above all monitors the financial accounting processes and the effectiveness of the internal control system, the risk management system and the internal audit system. It also supervises the audit of the financial statements, particularly the independence of the auditors and the additional services provided by them. The Committee offers a recommendation for the Supervisory Board proposal on the election of the auditor. In addition, it conducts a pre-audit of the financial reporting and considers questions related to accounting and compliance. Furthermore, the Audit Committee obtains a declaration of independence from the auditor, prepares the audit

engagement resolution, thereby giving consideration to the annual audit planning, the areas of emphasis for the audit, the agreed fee and the auditor's information obligations.

#### COMMUNICATION AND TRANSPARENCY

The Volkswagen Group publishes a financial calendar listing all the relevant dates for its shareholders in its annual report and interim reports as well as on its website at [www.volkswagenag.com/ir](http://www.volkswagenag.com/ir). Among other things, invitations to and the agendas for the shareholders' meetings and any counter motions received are also available on this website. At the shareholders' meetings, shareholders may exercise their voting rights themselves, have this right exercised on their behalf by a third-party proxy whom they have appointed, or use a proxy designated by the Company who votes on their behalf in accordance with their voting instructions. We also give our shareholders the opportunity to watch the introductory remarks of the Chairman of the Supervisory Board and the speech of the Chairman of the Board of Management on the Internet. In addition, news and information on the Volkswagen Group are available on our website. The press releases and other information are published in both English and German.

Immediately after their publication in accordance with legal requirements, the Company's ad hoc releases are also published on the same website under the heading "IR News, Financial Publications & Presentations", menu item "Ad-hoc releases".

We publish directors' dealings pursuant to section 15a of the Wertpapierhandelsgesetz (WpHG – German Securities Trading Act) and Article 19 of the Market Abuse Directive under the heading "Corporate Governance", menu item "Directors' Dealings".

On the same web page – under the heading "IR News, Financial Publications & Presentations", menu item "Financial Publications" – you can also access details of the notifications filed in the reporting period in compliance with sections 21 ff. of the WpHG as well as notifications relating to other legal issues.

The supervisory body appointments held by Board of Management members and Supervisory Board members can be found on pages 85 to 87 of this annual report. The shareholder structure is presented on page 113.

**MANDATORY PUBLICATIONS OF VOLKSWAGEN AG**  
[www.volkswagenag.com/ir](http://www.volkswagenag.com/ir)

# Remuneration Report

The Remuneration Report details the individualized remuneration of the Board of Management and the Supervisory Board of Volkswagen AG, broken down into components, as well as individualized pension provision disclosures for the members of the Board of Management. In addition, we explain in this chapter the main elements of the variable remuneration system for the Board of Management.

## PRINCIPLES OF AND CHANGES TO BOARD OF MANAGEMENT REMUNERATION

The full Supervisory Board resolves on the remuneration system and the total remuneration for each individual member of Volkswagen AG's Board of Management on the basis of the Executive Committee's recommendations. The remuneration of current members of the Board of Management complies with the requirements of the Aktiengesetz (AktG – German Stock Corporation Act) and the recommendations of the German Corporate Governance Code. In particular, the remuneration structure is focused on ensuring sustainable business growth in accordance with the Gesetz zur Angemessenheit der Vorstandsvergütung (VorstAG – German Act on the Appropriateness of Executive Board Remuneration) and section 87(1) of the AktG.

The remuneration system of the members of the Board of Management was approved by the 50th Annual General Meeting on April 22, 2010 by 99.44% of the votes cast. At the same time, the Volkswagen Group's positive business performance made it necessary in 2013 to modify and realign Board of Management remuneration and the comparative parameters on which it is based. The remuneration of the Board of Management was modified with the assistance of a remuneration consultant, whose independence has been assured by the Supervisory Board and by the Company.

The level of the Board of Management remuneration should be appropriate and attractive in the context of the Company's national and international peer group. Criteria include the tasks of the individual Board of Management member, their personal performance, the economic situation, the performance of and outlook for the Company, as well as how customary the remuneration is when measured against its peer group and the remuneration structure that applies to other areas of Volkswagen. In this context, comparative studies on remuneration are conducted on a regular basis.

## COMPONENTS OF BOARD OF MANAGEMENT REMUNERATION

The remuneration of the Board of Management comprises non-performance-related and performance-related components. The non-performance-related components of the package ensure firstly a basic level of remuneration enabling the individual members of the Board of Management to perform their duties in the interests of the Company and to fulfill their obligation to act with proper business prudence without needing to focus on merely short-term performance targets. On the other hand, performance-related components, dependent among other criteria on the financial performance of the Company, serve to ensure the long-term impact of behavioral incentives.

Upper limits are in place for both the overall remuneration and the performance-related remuneration components.

Annual minimum remuneration of €3.5 million (sum of basic and variable remuneration) was contractually agreed with both Ms. Hohmann-Dennhardt and Mr. Blessing. In its meeting on February 24, 2017, the Supervisory Board accepted Mr. Blessing's offer to irrevocably relinquish the top-up amount of €512.5 thousand for fiscal year 2016 to reach the minimum remuneration.

### Non-performance-related remuneration

The non-performance-related remuneration comprises fixed remuneration and fringe benefits. In addition to the basic level of remuneration, the fixed remuneration also includes differing levels of remuneration for appointments assumed at Group companies. The fringe benefits result from the granting of noncash benefits and include in particular the use of operating assets such as company cars and the payment of insurance premiums. Taxes due on these noncash benefits are mainly borne by Volkswagen AG.

To compensate for lost entitlements resulting from the change in employer, Ms. Hohmann-Dennhardt received the partial payment of €2.1 million due in fiscal year 2016, which corresponds to one-third of the agreed total of €6.3 million. The other partial payments will be made in 2017 and 2018.

The basic level of remuneration is reviewed regularly and adjusted if necessary.

#### Performance-related remuneration

The performance-related/variable remuneration comprises a business performance bonus, which relates to business performance in the reporting period and in the preceding year, and, since 2010, a Long-Term Incentive (LTI) plan, which is based on the reporting period and the previous three fiscal years. Both components of performance-related/variable remuneration are therefore calculated on a multiyear basis and reflect both positive and negative developments. Members of the Board of Management can also be awarded bonuses that reflect their individual performance.

The amounts shown in the Board of Management remuneration (benefits received) tables in accordance with the German Corporate Governance Code correspond to the amounts paid out for the fiscal year in question.

The amounts shown in the Board of Management remuneration (benefits granted) tables in accordance with the German Corporate Governance Code are based on a mean probability scenario at the beginning of fiscal year 2016.

The Supervisory Board may cap the performance-related/variable remuneration components in the event of extraordinary developments.

#### Bonus

The bonus rewards the positive business development of the Volkswagen Group.

The business performance bonus is calculated on the basis of the average operating result, including the proportionate operating result in China, over a period of two years. A calculation floor below which no bonus will be paid is in place. This floor was set at €5.0 billion. In addition, a cap for extraordinary developments is explicitly provided for by limiting the maximum theoretical bonus which, subject to the individual performance-related bonus, is €6.75 million for the Chairman of the Board of Management and €2.5 million for the other members of the Board of Management. The system and the cap are regularly reviewed by the Supervisory Board to establish whether any adjustments are necessary.

Accordingly, the method resolved by the Supervisory Board in 2013 for calculating the business performance bonus for members of the Board of Management was

changed for fiscal year 2015 and led to the operating result, including the proportionate operating result in China, for fiscal year 2015 that was used to calculate the business performance bonus for fiscal year 2015 being reduced to €0.

In addition, the Supervisory Board may increase the theoretical business performance bonus, which is calculated on the basis of the average operating result, by up to 50% by applying individual adjustment factors that are not linked to the theoretical cap so as to reward members of the Board of Management for extraordinary individual performance (individual performance bonus). This may take into account extraordinary performance in the area of integration, or the successful implementation of special projects, for example.

#### Long-Term Incentive (LTI)

The amount of the LTI depends on the achievement of the targets laid down in Strategy 2018 on which the remuneration system applicable for fiscal year 2016 is based. The target areas are:

- > Leader in customer satisfaction, measured using the Customer Satisfaction Index,
- > Leading employer, measured using the Employee Index,
- > Unit sales growth, measured using the Growth Index, and
- > Increase in the return on sales, measured using the Return Index.

The Customer Satisfaction Index is calculated using indicators that quantify the overall satisfaction of our customers with the delivering dealers, new vehicles and the service operations based on the previous workshop visit.

The Employee Index is determined using the “employment” and “productivity” indicators as well as results of employee surveys.

The Growth Index is calculated using the “deliveries to customers” and “market share” indicators.

The Return Index is derived from the return on sales and the dividend per ordinary share.

The indices on customer satisfaction, employees and unit sales are aggregated and the result is multiplied by the Return Index. This method ensures that the LTI is only paid out if the Group is also financially successful. If the 1.5% threshold for the return on sales is not exceeded, the Return Index is zero. This would mean that the overall index for the fiscal year concerned is also zero.

The maximum LTI amount is capped at €4.5 million for the Chairman of the Board of Management and €2.0 million for the other members of the Board of Management and is based on the four-year average of the overall indices, i.e. the reporting period and the three preceding years.

#### Other agreements

Members of the Board of Management with contracts entered into on or after January 1, 2010 are entitled to payment of their normal remuneration for six to twelve months in the event of illness. Contracts entered into before that date grant remuneration for six months. In the event of disability, they are entitled to the retirement pension.

Surviving dependents receive a widow's pension of 66 2/3% and orphans' benefits of 20% of the former member of the Board of Management's pension. Contracts with members of the Board of Management whose first term of office begins after April 1, 2015, provide for an entitlement – in line with the principles of the works agreement that also applies to employees of Volkswagen AG covered by collective agreements – to a widow's pension of 60%, an orphan's benefit of 10% for half-orphans and an orphan's benefit of 20% for full orphans, based in each case on the former member of the Board of Management's pension.

#### BENEFITS BASED ON PHANTOM SHARES

At its meeting on April 22, 2016, Volkswagen AG's Supervisory Board accepted the offer made by the members of the Board of Management to withhold 30% of the variable remuneration described above for fiscal year 2015 for the Board of Management members active on the date of the resolution and to make its payment subject to future share price performance.

This will be effected by first converting the amount withheld based on the average share price for the 30 trading

days preceding April 22, 2016 (initial reference price) into phantom preferred shares of Volkswagen AG with a three-year holding period and, at the same time, defining a target reference price corresponding to 125% of the initial reference price. During the holding period, the phantom preferred shares will be entitled to a dividend equivalent in the amount of the dividends paid on real preferred shares.

Following the expiry of the holding period, the average share price for the 30 trading days preceding the last day of the holding period, i.e. April 22, 2019, will be determined (closing reference price). The difference between the target reference price and the initial reference price will be deducted from the closing reference price and the dividends distributed on one real Volkswagen preferred share during the holding period (dividend equivalent) will be added to the closing reference price. This will ensure that – excluding any dividend equivalents accrued – the amount withheld is only paid out in full if the initial reference price of the preferred share has increased by at least 25%. Otherwise, the amount will be reduced accordingly down to €0. The amount thus calculated will be disbursed to the members of the Board of Management. The amount disbursed must not be more than twice the amount originally withheld. Where members of the Board of Management retire from office before the expiry of the holding period, the disbursement amount will be calculated and paid out proportionately based on the date of termination of employment.

#### REMUNERATION OF THE MEMBERS OF THE BOARD OF MANAGEMENT IN ACCORDANCE WITH THE GERMAN COMMERCIAL CODE

€	2016			2015		
	Non-performance-related remuneration	Performance-related remuneration	Total remuneration	Total remuneration	Of which amount withheld (fair value)	Amount withheld (notional)
Matthias Müller (since March 1, 2015) <sup>1</sup>	1,762,651	5,489,278	7,251,929	4,757,924	880,522	1,185,912
Karlheinz Blessing (since January 1, 2016)	1,403,440	1,931,500	3,334,940	–	–	–
Herbert Diess (since July 1, 2015) <sup>2</sup>	1,295,087	1,931,500	3,226,587	7,174,465	359,181	483,720
Francisco Javier Garcia Sanz	1,284,179	1,931,500	3,215,679	4,264,232	718,279	967,440
Jochem Heizmann	1,224,008	1,931,500	3,155,508	4,168,979	718,279	967,440
Christine Hohmann-Dennhardt (January 1, 2016 until January 31, 2017) <sup>2,3</sup>	7,607,621	2,444,000	10,051,621	–	–	–
Andreas Renschler (since February 1, 2015) <sup>2</sup>	1,292,205	1,931,500	3,223,705	15,573,361	658,457	886,820
Rupert Stadler	1,118,817	1,931,500	3,050,317	4,092,306	718,279	967,440
Frank Witter (since October 7, 2015)	1,105,827	1,931,500	3,037,327	939,697	165,571	223,049
Members of the Board of Management who left in the previous year	–	–	–	22,273,497	–	–
<b>Total</b>	<b>18,093,835</b>	<b>21,453,778</b>	<b>39,547,612</b>	<b>63,244,460</b>	<b>4,218,566</b>	<b>5,681,821</b>

1 The 2016 single-entity financial statements of Volkswagen AG show performance-related remuneration of €4,657,500 and total remuneration of €6,420,151.

2 To compensate for lost entitlements resulting from the change in employer, Ms. Hohmann-Dennhardt received €6.3 million in 2016 and Mr. Diess and Mr. Renschler received €5.0 million and €11.5 million respectively in 2015.

3 Includes top-up amount on minimum remuneration of €3.5 million; variable remuneration determined by termination agreement.

The number of shares granted on April 22, 2016 to the members of the Board of Management who were in office in 2015 as part of the benefits based on phantom shares for that year remained unchanged in fiscal year 2016. The fair value as of December 31, 2016 was determined using a recognized valuation technique. The intrinsic value was calculated in accordance with IFRS 2 and corresponds to the amount that the members of the Board of Management would have received if they had stepped down on December 31, 2016. The

intrinsic value was calculated based on the average share price for the 30 trading days (Xetra closing prices) preceding December 31, 2016, taking the initial reference price and the dividend for fiscal year 2016 into account. "Comprehensive income 2016 arising from phantom shares" in accordance with IFRS records the amount withheld (nominal) based on the adoption of the Board of Management statement by the Supervisory Board on April 22, 2016, less the corresponding fair value as of December 31, 2016.

#### INFORMATION ON THE PHANTOM SHARES HELD IN 2016

€	Number of shares	Fair value December 31, 2016	Intrinsic value December 31, 2016	Comprehensive income 2016 arising from phantom shares
Matthias Müller (since March 1, 2015)	10,583	1,046,032	1,058,194	139,880
Herbert Diess (since July 1, 2015)	4,317	426,696	431,657	57,024
Francisco Javier Garcia Sanz	8,633	853,293	863,214	114,147
Jochem Heizmann	8,633	853,293	863,214	114,147
Andreas Renschler (since February 1, 2015)	7,914	782,226	791,321	104,594
Rupert Stadler	8,633	853,293	863,214	114,147
Frank Witter (since October 7, 2015)	1,990	196,693	198,980	26,356
<b>Total</b>	<b>50,703</b>	<b>5,011,525</b>	<b>5,069,793</b>	<b>670,296</b>

As benefits are not received until the three-year holding period has expired or – in the event that members retire prematurely from office – at that time, and no members of the Board of Management retired from office in 2016, the Board of Management (benefits received) tables in accordance with the German Corporate Governance Code do not contain any entries. Since the benefits based on phantom shares were first agreed upon after the end of fiscal year 2015,

consideration of the impact of these agreements will be incorporated into the Board of Management remuneration (benefits granted) tables in accordance with the German Corporate Governance Code in the column for fiscal year 2016. The revised amount listed there is the difference between the fair value of the phantom shares and the amount withheld on the date they were granted (April 22, 2016).

**REMUNERATION OF THE MEMBERS OF THE BOARD OF MANAGEMENT (BENEFITS RECEIVED) IN ACCORDANCE WITH THE GERMAN CORPORATE GOVERNANCE CODE<sup>1</sup>**

*The figures shown here as benefits received under variable remuneration correspond to the amounts paid out for the fiscal year in question.*

€	MATTHIAS MÜLLER	
	Chairman of the Board of Management	
	Joined: March 1, 2015	
	2016	2015
Fixed remuneration	1,584,000	1,020,800
Fringe benefits	178,651	89,474
<b>Total</b>	<b>1,762,651</b>	<b>1,110,274</b>
One-year variable remuneration	1,499,278	629,440
Multiyear variable remuneration	3,990,000	2,137,688
Business performance bonus (two-year period)	1,335,000	387,688
LTI (four-year period)	2,655,000	1,750,000
<b>Total</b>	<b>7,251,929</b>	<b>3,877,402</b>
Pension expense	526,589	295,754
<b>Total remuneration</b>	<b>7,778,518</b>	<b>4,173,156</b>

€	KARLHEINZ BLESSING	
	Human Resources and Organization	
	Joined: January 1, 2016	
	2016	2015
Fixed remuneration	1,056,000	–
Fringe benefits	347,440	–
<b>Total</b>	<b>1,403,440</b>	–
One-year variable remuneration	250,500	–
Multiyear variable remuneration	1,681,000	–
Business performance bonus (two-year period)	501,000	–
LTI (four-year period)	1,180,000	–
<b>Total</b>	<b>3,334,940</b>	–
Pension expense	742,542	–
<b>Total remuneration</b>	<b>4,077,482</b>	–

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

**REMUNERATION OF THE MEMBERS OF THE BOARD OF MANAGEMENT (BENEFITS RECEIVED) IN ACCORDANCE WITH THE GERMAN CORPORATE GOVERNANCE CODE<sup>1</sup>**

*The figures shown here as benefits received under variable remuneration correspond to the amounts paid out for the fiscal year in question.*

€	HERBERT DIESS	
	Chairman of the Brand Board of Management of Volkswagen Passenger Cars	
	Joined: July 1, 2015	
	2016	2015
Fixed remuneration <sup>2</sup>	1,260,000	5,630,000
Fringe benefits	35,087	56,604
<b>Total</b>	<b>1,295,087</b>	<b>5,686,604</b>
One-year variable remuneration	250,500	246,400
Multiyear variable remuneration	1,681,000	882,280
Business performance bonus (two-year period)	501,000	132,280
LTI (four-year period)	1,180,000	750,000
<b>Total</b>	<b>3,226,587</b>	<b>6,815,284</b>
Pension expense	699,856	311,850
<b>Total remuneration</b>	<b>3,926,443</b>	<b>7,127,134</b>

€	FRANCISCO JAVIER GARCIA SANZ	
	Procurement	
	2016	2015
Fixed remuneration	1,079,009	1,102,017
Fringe benefits	205,170	186,576
<b>Total</b>	<b>1,284,179</b>	<b>1,288,593</b>
One-year variable remuneration	250,500	492,800
Multiyear variable remuneration	1,681,000	1,764,560
Business performance bonus (two-year period)	501,000	264,560
LTI (four-year period)	1,180,000	1,500,000
<b>Total</b>	<b>3,215,679</b>	<b>3,545,953</b>
Pension expense	760,864	816,242
<b>Total remuneration</b>	<b>3,976,543</b>	<b>4,362,195</b>

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

2 The previous year includes compensation of lost entitlements resulting from the change in employer in the amount of €5.0 million.



**REMUNERATION OF THE MEMBERS OF THE BOARD OF MANAGEMENT (BENEFITS RECEIVED) IN ACCORDANCE WITH THE GERMAN CORPORATE GOVERNANCE CODE<sup>1</sup>**

*The figures shown here as benefits received under variable remuneration correspond to the amounts paid out for the fiscal year in question.*

€	JOCHEM HEIZMANN	
	China	
	2016	2015
Fixed remuneration	1,102,017	1,102,017
Fringe benefits	121,991	91,323
<b>Total</b>	<b>1,224,008</b>	<b>1,193,340</b>
One-year variable remuneration	250,500	492,800
Multiyear variable remuneration	1,681,000	1,764,560
Business performance bonus (two-year period)	501,000	264,560
LTI (four-year period)	1,180,000	1,500,000
<b>Total</b>	<b>3,155,508</b>	<b>3,450,700</b>
Pension expense	0	0
<b>Total remuneration</b>	<b>3,155,508</b>	<b>3,450,700</b>

€	CHRISTINE HOHMANN-DENNHARDT	
	Integrity and Legal Affairs	
	Joined: January 1, 2016, Left: January 31, 2017	
	2016	2015
Fixed remuneration <sup>2</sup>	7,346,000	–
Fringe benefits	261,621	–
<b>Total</b>	<b>7,607,621</b>	–
One-year variable remuneration	0	–
Multiyear variable remuneration	0	–
Business performance bonus (two-year period)	0	–
LTI (four-year period)	0	–
Other <sup>3</sup>	2,444,000	–
<b>Total</b>	<b>10,051,621</b>	–
Pension expense	704,657	–
<b>Total remuneration</b>	<b>10,756,278</b>	–

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

2 Includes compensation of lost entitlements resulting from the change in employer in the amount of €6.3 million.

3 Top-up amount on minimum remuneration of €3.5 million; variable remuneration determined by termination agreement.

**REMUNERATION OF THE MEMBERS OF THE BOARD OF MANAGEMENT (BENEFITS RECEIVED) IN ACCORDANCE WITH THE GERMAN CORPORATE GOVERNANCE CODE<sup>1</sup>**

*The figures shown here as benefits received under variable remuneration correspond to the amounts paid out for the fiscal year in question.*

€	ANDREAS RENSCHLER	
	Commercial Vehicles	
	Joined: February 1, 2015	
	2016	2015
Fixed remuneration <sup>2</sup>	1,056,000	12,446,000
Fringe benefits	236,205	399,658
<b>Total</b>	<b>1,292,205</b>	<b>12,845,658</b>
One-year variable remuneration	250,500	451,733
Multiyear variable remuneration	1,681,000	1,617,513
Business performance bonus (two-year period)	501,000	242,513
LTI (four-year period)	1,180,000	1,375,000
<b>Total</b>	<b>3,223,705</b>	<b>14,914,904</b>
Pension expense	4,660,006	0
<b>Total remuneration</b>	<b>7,883,711</b>	<b>14,914,904</b>

€	RUPERT STADLER	
	Chairman of the Board of Management of AUDI AG	
	2016	2015
Fixed remuneration	1,056,000	1,056,000
Fringe benefits	62,817	60,667
<b>Total</b>	<b>1,118,817</b>	<b>1,116,667</b>
One-year variable remuneration	250,500	492,800
Multiyear variable remuneration	1,681,000	1,764,560
Business performance bonus (two-year period)	501,000	264,560
LTI (four-year period)	1,180,000	1,500,000
<b>Total</b>	<b>3,050,317</b>	<b>3,374,027</b>
Pension expense	665,679	723,954
<b>Total remuneration</b>	<b>3,715,996</b>	<b>4,097,981</b>

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

2 The previous year includes compensation of lost entitlements resulting from the change in employer in the amount of €11.5 million.

**REMUNERATION OF THE MEMBERS OF THE BOARD OF MANAGEMENT (BENEFITS RECEIVED) IN ACCORDANCE WITH THE GERMAN CORPORATE GOVERNANCE CODE<sup>1</sup>**

*The figures shown here as benefits received under variable remuneration correspond to the amounts paid out for the fiscal year in question.*

€	FRANK WITTER	
	Finance and Controlling	
	Joined: October 7, 2015	
	2016	2015
Fixed remuneration	1,056,000	243,467
Fringe benefits	49,827	10,212
<b>Total</b>	<b>1,105,827</b>	<b>253,679</b>
One-year variable remuneration	250,500	113,618
Multiyear variable remuneration	1,681,000	406,829
Business performance bonus (two-year period)	501,000	60,996
LTI (four-year period)	1,180,000	345,833
<b>Total</b>	<b>3,037,327</b>	<b>774,126</b>
Pension expense	587,216	130,680
<b>Total remuneration</b>	<b>3,624,543</b>	<b>904,806</b>

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

**REMUNERATION OF THE MEMBERS OF THE BOARD OF MANAGEMENT (BENEFITS GRANTED) IN ACCORDANCE WITH THE GERMAN CORPORATE GOVERNANCE CODE<sup>1</sup>**

*The figures shown here as benefits granted under variable remuneration are based on a mean probability scenario.*

€	MATTHIAS MÜLLER			
	Chairman of the Board of Management			
	Joined: March 1, 2015			
	2015	2016	2016 (Minimum)	2016 (Maximum)
Fixed remuneration	1,020,800	1,584,000	1,584,000	1,584,000
Fringe benefits	89,474	178,651	178,651	178,651
<b>Total</b>	<b>1,110,274</b>	<b>1,762,651</b>	<b>1,762,651</b>	<b>1,762,651</b>
One-year variable remuneration	1,276,615	1,313,200	0	3,375,000
Multiyear variable remuneration	5,337,133	6,352,610	0	12,435,912
Business performance bonus (two-year period)	3,003,800	3,283,000	0	6,750,000
LTI (four-year period)	2,333,333	3,375,000	0	4,500,000
Benefits based on phantom shares (three-year period)	–	–305,390	0	1,185,912
<b>Total</b>	<b>7,724,022</b>	<b>9,428,461</b>	<b>1,762,651</b>	<b>17,573,563</b>
Pension expense	295,754	526,589	526,589	526,589
<b>Total remuneration</b>	<b>8,019,776</b>	<b>9,955,050</b>	<b>2,289,240</b>	<b>18,100,152</b>

€	KARLHEINZ BLESSING			
	Human Resources and Organization			
	Joined: January 1, 2016			
	2015	2016	2016 (Minimum)	2016 (Maximum)
Fixed remuneration	–	1,056,000	1,056,000	1,056,000
Fringe benefits	–	347,440	347,440	347,440
<b>Total</b>	<b>–</b>	<b>1,403,440</b>	<b>1,403,440</b>	<b>1,403,440</b>
One-year variable remuneration	–	492,800	0	1,250,000
Multiyear variable remuneration	–	2,732,000	0	4,500,000
Business performance bonus (two-year period)	–	1,232,000	0	2,500,000
LTI (four-year period)	–	1,500,000	0	2,000,000
<b>Total<sup>2</sup></b>	<b>–</b>	<b>4,628,240</b>	<b>3,847,440</b>	<b>7,153,440</b>
Pension expense	–	742,542	742,542	742,542
<b>Total remuneration</b>	<b>–</b>	<b>5,370,782</b>	<b>4,589,982</b>	<b>7,895,982</b>

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

2 Includes top-up amount on minimum remuneration of €3.5 million.

**REMUNERATION OF THE MEMBERS OF THE BOARD OF MANAGEMENT (BENEFITS GRANTED) IN ACCORDANCE WITH THE GERMAN CORPORATE GOVERNANCE CODE<sup>1</sup>**

*The figures shown here as benefits granted under variable remuneration are based on a mean probability scenario.*

HERBERT DIESS				
Chairman of the Board of Management of Volkswagen Passenger Cars				
Joined: July 1, 2015				
€	2015	2016	2016 (Minimum)	2016 (Maximum)
Fixed remuneration <sup>2</sup>	5,630,000	1,260,000	1,260,000	1,260,000
Fringe benefits	56,604	35,087	35,087	35,087
<b>Total</b>	<b>5,686,604</b>	<b>1,295,087</b>	<b>1,295,087</b>	<b>1,295,087</b>
One-year variable remuneration	496,825	492,800	0	1,250,000
Multiyear variable remuneration	2,169,000	2,607,461	0	4,983,720
Business performance bonus (two-year period)	1,169,000	1,232,000	0	2,500,000
LTI (four-year period)	1,000,000	1,500,000	0	2,000,000
Benefits based on phantom shares (three-year period)	–	–124,539	0	483,720
<b>Total</b>	<b>8,352,429</b>	<b>4,395,348</b>	<b>1,295,087</b>	<b>7,528,807</b>
Pension expense	311,850	699,856	699,856	699,856
<b>Total remuneration</b>	<b>8,664,279</b>	<b>5,095,204</b>	<b>1,994,943</b>	<b>8,228,663</b>

FRANCISCO JAVIER GARCIA SANZ				
Procurement				
€	2015	2016	2016 (Minimum)	2016 (Maximum)
Fixed remuneration	1,102,017	1,079,009	1,079,009	1,079,009
Fringe benefits	186,576	205,170	205,170	205,170
<b>Total</b>	<b>1,288,593</b>	<b>1,284,179</b>	<b>1,284,179</b>	<b>1,284,179</b>
One-year variable remuneration	1,169,000	492,800	0	1,250,000
Multiyear variable remuneration	4,338,000	2,482,839	0	5,467,440
Business performance bonus (two-year period)	2,338,000	1,232,000	0	2,500,000
LTI (four-year period)	2,000,000	1,500,000	0	2,000,000
Benefits based on phantom shares (three-year period)	–	–249,161	0	967,440
<b>Total</b>	<b>6,795,593</b>	<b>4,259,818</b>	<b>1,284,179</b>	<b>8,001,619</b>
Pension expense	816,242	760,864	760,864	760,864
<b>Total remuneration</b>	<b>7,611,835</b>	<b>5,020,682</b>	<b>2,045,043</b>	<b>8,762,483</b>

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

2 The previous year includes compensation of lost entitlements resulting from the change in employer in the amount of €5.0 million.

**REMUNERATION OF THE MEMBERS OF THE BOARD OF MANAGEMENT (BENEFITS GRANTED) IN ACCORDANCE WITH THE GERMAN CORPORATE GOVERNANCE CODE<sup>1</sup>**

*The figures shown here as benefits granted under variable remuneration are based on a mean probability scenario.*

€	JOCHEM HEIZMANN			
	China			
	2015	2016	2016 (Minimum)	2016 (Maximum)
Fixed remuneration	1,102,017	1,102,017	1,102,017	1,102,017
Fringe benefits	91,323	121,991	121,991	121,991
<b>Total</b>	<b>1,193,340</b>	<b>1,224,008</b>	<b>1,224,008</b>	<b>1,224,008</b>
One-year variable remuneration	701,400	492,800	0	1,250,000
Multiyear variable remuneration	4,338,000	2,482,839	0	5,467,440
Business performance bonus (two-year period)	2,338,000	1,232,000	0	2,500,000
LTI (four-year period)	2,000,000	1,500,000	0	2,000,000
Benefits based on phantom shares (three-year period)	–	–249,161	0	967,440
<b>Total</b>	<b>6,232,740</b>	<b>4,199,647</b>	<b>1,224,008</b>	<b>7,941,448</b>
Pension expense	0	0	0	0
<b>Total remuneration</b>	<b>6,232,740</b>	<b>4,199,647</b>	<b>1,224,008</b>	<b>7,941,448</b>

€	CHRISTINE HOHMANN-DENNHARDT			
	Integrity and Legal Affairs			
	Joined: January 1, 2016, Left: January 31, 2017			
2015	2016	2016 (Minimum)	2016 (Maximum)	
Fixed remuneration <sup>2</sup>	–	7,346,000	7,346,000	7,346,000
Fringe benefits	–	261,621	261,621	261,621
<b>Total</b>	<b>–</b>	<b>7,607,621</b>	<b>7,607,621</b>	<b>7,607,621</b>
One-year variable remuneration	–	492,800	0	1,250,000
Multiyear variable remuneration	–	2,732,000	0	4,500,000
Business performance bonus (two-year period)	–	1,232,000	0	2,500,000
LTI (four-year period)	–	1,500,000	0	2,000,000
<b>Total<sup>3</sup></b>	<b>–</b>	<b>10,832,421</b>	<b>10,051,621</b>	<b>13,357,621</b>
Pension expense	–	704,657	704,657	704,657
<b>Total remuneration</b>	<b>–</b>	<b>11,537,078</b>	<b>10,756,278</b>	<b>14,062,278</b>

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

2 Includes compensation of lost entitlements resulting from the change in employer in the amount of €6.3 million.

3 Includes top-up amount to reach minimum remuneration of €3.5 million.

**REMUNERATION OF THE MEMBERS OF THE BOARD OF MANAGEMENT (BENEFITS GRANTED) IN ACCORDANCE WITH THE GERMAN CORPORATE GOVERNANCE CODE<sup>1</sup>**

*The figures shown here as benefits granted under variable remuneration are based on a mean probability scenario.*

€	ANDREAS RENSCHLER			
	Commercial Vehicles			
	Joined: February 1, 2015			
	2015	2016	2016 (Minimum)	2016 (Maximum)
Fixed remuneration <sup>2</sup>	12,446,000	1,056,000	1,056,000	1,056,000
Fringe benefits	399,658	236,205	236,205	236,205
<b>Total</b>	<b>12,845,658</b>	<b>1,292,205</b>	<b>1,292,205</b>	<b>1,292,205</b>
One-year variable remuneration	910,846	492,800	0	1,250,000
Multiyear variable remuneration	3,976,500	2,503,637	0	5,386,820
Business performance bonus (two-year period)	2,143,167	1,232,000	0	2,500,000
LTI (four-year period)	1,833,333	1,500,000	0	2,000,000
Benefits based on phantom shares (three-year period)	–	–228,363	0	886,820
<b>Total</b>	<b>17,733,004</b>	<b>4,288,642</b>	<b>1,292,205</b>	<b>7,929,025</b>
Pension expense	0	4,660,006	4,660,006	4,660,006
<b>Total remuneration</b>	<b>17,733,004</b>	<b>8,948,648</b>	<b>5,952,211</b>	<b>12,589,031</b>

€	RUPERT STADLER			
	Chairman of the Board of Management of AUDI AG			
	2015	2016	2016 (Minimum)	2016 (Maximum)
	Fixed remuneration	1,056,000	1,056,000	1,056,000
Fringe benefits	60,667	62,817	62,817	62,817
<b>Total</b>	<b>1,116,667</b>	<b>1,118,817</b>	<b>1,118,817</b>	<b>1,118,817</b>
One-year variable remuneration	935,200	492,800	0	1,250,000
Multiyear variable remuneration	4,338,000	2,482,839	0	5,467,440
Business performance bonus (two-year period)	2,338,000	1,232,000	0	2,500,000
LTI (four-year period)	2,000,000	1,500,000	0	2,000,000
Benefits based on phantom shares (three-year period)	–	–249,161	0	967,440
<b>Total</b>	<b>6,389,867</b>	<b>4,094,456</b>	<b>1,118,817</b>	<b>7,836,257</b>
Pension expense	723,954	665,679	665,679	665,679
<b>Total remuneration</b>	<b>7,113,821</b>	<b>4,760,135</b>	<b>1,784,496</b>	<b>8,501,936</b>

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

2 The previous year includes compensation of lost entitlements resulting from the change in employer in the amount of €11.5 million.

**REMUNERATION OF THE MEMBERS OF THE BOARD OF MANAGEMENT (BENEFITS GRANTED) IN ACCORDANCE WITH THE GERMAN CORPORATE GOVERNANCE CODE<sup>1</sup>**

*The figures shown here as benefits granted under variable remuneration are based on a mean probability scenario.*

€	FRANK WITTER			
	Finance and Controlling			
	Joined: October 7, 2015			
	2015	2016	2016 (Minimum)	2016 (Maximum)
Fixed remuneration	243,467	1,056,000	1,056,000	1,056,000
Fringe benefits	10,212	49,827	49,827	49,827
<b>Total</b>	<b>253,679</b>	<b>1,105,827</b>	<b>1,105,827</b>	<b>1,105,827</b>
One-year variable remuneration	229,092	492,800	0	1,250,000
Multiyear variable remuneration	1,000,150	2,674,522	0	4,723,049
Business performance bonus (two-year period)	539,039	1,232,000	0	2,500,000
LTI (four-year period)	461,111	1,500,000	0	2,000,000
Benefits based on phantom shares (three-year period)	–	–57,478	0	223,049
<b>Total</b>	<b>1,482,920</b>	<b>4,273,149</b>	<b>1,105,827</b>	<b>7,078,876</b>
Pension expense	130,680	587,216	587,216	587,216
<b>Total remuneration</b>	<b>1,613,600</b>	<b>4,860,365</b>	<b>1,693,043</b>	<b>7,666,092</b>

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



#### POST-EMPLOYMENT BENEFITS

In the event of regular termination of their service on the Board of Management, the members of the Board of Management are entitled to a pension, including a surviving dependents' pension, as well as the use of company cars for the period in which they receive their pension. The agreed benefits are paid or made available when the Board of Management member reaches the age of 63. As a departure from this principle, Mr. Renschler is able to start drawing his pension when he reaches the age of 62.

The retirement pension is calculated as a percentage of the basic level of remuneration. Starting at 50%, the individual percentage increases by two percentage points for each year of service. In specific cases, credit is given for previous employment periods and retirement pensions earned. The Supervisory Board has defined a maximum of 70%. These benefits are not broken down any further into performance-related components and long-term incentive components. Mr. Garcia Sanz and Mr. Heizmann have a retirement pension entitlement of 70%, and Mr. Renschler and Mr. Stadler have a retirement pension entitlement of 64% of their basic level of remuneration as of the end of 2016. In a departure from this rule, a retirement pension entitlement of 62% of the basic level of remuneration was set for Mr. Renschler on his appointment. Mr. Müller had a retirement pension entitlement of 53% of the basic level of remuneration as of the end of 2016; this increases by three percentage points every year.

Ms. Hohmann-Dennhardt and Mr. Blessing, Mr. Diess and Mr. Witter received a defined contribution plan, which is based in principle on a works agreement that also applies to the employees of Volkswagen AG covered by collective agreements and includes retirement, invalidity and surviving dependents' benefits. A pension contribution in the amount of 50% of the basic level of remuneration is contributed to Volkswagen Pension Trust e.V. at the end of the calendar year for each year they are appointed to the Board of Management. The annual pension contributions result in modules of what is, in principle, a lifelong pension in line with the arrangements that also apply to employees covered by collective agreements. The individual pension modules vest immediately upon contribution to Volkswagen Pension Trust e.V. Instead of a lifelong pension, benefits can optionally be paid out as a lump sum or in installments when the

beneficiary reaches retirement age – currently 63 at the earliest. Volkswagen AG has assumed responsibility for pension entitlements due to Mr. Witter from the time before his service with the Company, although these cannot be claimed before he reaches the age of 60.

On December 31, 2016, the pension obligations for members of the Board of Management in accordance with IAS 19 amounted to €113.5 (86.6) million; €11.7 (6.4) million was added to the provision in the reporting period in accordance with IAS 19. Other benefits such as surviving dependents' pensions and the use of company cars are also factored into the measurement of pension provisions. The pension obligations measured in accordance with German GAAP amounted to €77.2 (70.2) million; €7.0 (14.6) million was added to the provision in the reporting period in accordance with German GAAP. Current pensions are indexed using the same method as for the highest collectively agreed salary, insofar as the application of section 16 of the Gesetz zur Verbesserung der betrieblichen Altersversorgung (BetrAVG – German Company Pension Act) does not lead to a larger increase.

Retired members of the Board of Management and their surviving dependents received €11.1 (51.3) million, or €11.1 (51.3) million measured in accordance with German GAAP, in the past year. Obligations for pensions for this group of persons measured in accordance with IAS 19 amounted to €270.0 (242.7) million, or €205.6 (209.9) million measured in accordance with German GAAP.

The following rule applies to Board of Management contracts entered into for the first term of office before August 5, 2009: the retirement pension to be granted after a member of the Board of Management leaves the Company is payable immediately if the member's contract is not renewed by the Company, and in other cases when the member reaches the age of 63. Any remuneration received from other sources until the age of 63 is deductible from the benefit entitlement up to a certain fixed amount.

The following general rule applies to contracts for the first term of office of members of the Board of Management entered into after August 5, 2009: the retirement pension to be granted after a member of the Board of Management leaves the Company is payable when the member reaches the age of 63.

**EARLY TERMINATION BENEFITS**

If the appointment to the Board of Management is terminated for cause through no fault of the Board of Management member, the claims under Board of Management contracts entered into since November 20, 2009 are limited to a maximum of two years' remuneration, in accordance with the recommendation in section 4.2.3(4) of the German Corporate Governance Code (severance payment cap). For Board of Management members who are commencing their third or later term of office, existing rights under contracts entered into before November 20, 2009 are grandfathered.

No severance payment is made if the appointment to the Board of Management is terminated for a reason for which the Board of Management member is responsible.

The members of the Board of Management are also entitled to a pension and to a surviving dependents' pension as well as the use of company cars for the period in which they receive their pension in the event of early termination of their service on the Board of Management.

Please refer to notes 43 and 45 to the consolidated financial statements for more detailed individual disclosures relating to members of the Board of Management who left the Company in fiscal year 2015.

**PENSIONS OF THE MEMBERS OF THE BOARD OF MANAGEMENT IN 2016 (PRIOR-YEAR FIGURES IN BRACKETS)<sup>1</sup>**

€	Pension expense	Present values as of December 31 <sup>2</sup>
Matthias Müller (since March 1, 2015)	526,589	27,254,749
	(295,754)	(22,563,065)
Karlheinz Blessing (since January 1, 2016)	742,542	742,542
	–	–
Herbert Diess (since July 1, 2015)	699,856	1,298,635
	(311,850)	(365,736)
Francisco Javier Garcia Sanz	760,864	21,752,138
	(816,242)	(17,622,337)
Jochem Heizmann	–	19,836,613
	–	(18,000,356)
Christine Hohmann-Dennhardt (January 1, 2016 until January 31, 2017)	704,657	704,657
	–	–
Andreas Renschler (since February 1, 2015)	4,660,006	11,231,016
	–	(5,025,366)
Rupert Stadler	665,679	21,530,818
	(723,954)	(16,442,455)
Frank Witter (since October 7, 2015)	587,216	9,100,545
	(130,680)	(6,582,389)
Members of the Board of Management who left in the previous year	(1,097,443)	–
<b>Total</b>	<b>9,347,409</b>	<b>113,451,713</b>
	<b>(3,375,923)</b>	<b>(86,601,704)</b>

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

<sup>2</sup> The amount is reported in the total amount for defined benefit plans reported in the balance sheet (see note 29 to the consolidated financial statements).

### SUPERVISORY BOARD REMUNERATION

Under Article 17 of Volkswagen AG's Articles of Association, the remuneration of Volkswagen AG's Supervisory Board is composed of a fixed component (plus attendance fees) and a variable component that depends on the amount of the dividend paid. The duties performed by the respective member on the Supervisory Board are also taken into account. Several members of the Supervisory Board are also members of the supervisory boards of subsidiaries. The

remuneration received there is based on the provisions of the relevant Articles of Association and also comprises a fixed component and a variable component that is linked to the amount of the dividend paid. This remuneration is contained in the following figures. In fiscal year 2016, the members of the Supervisory Board received €5,396,565 (€696,953). Of this figure, €709,346 (660,976) related to the fixed remuneration components (including attendance fees) and €4,687,220 (35,977) to the variable remuneration components.

### REMUNERATION OF THE MEMBERS OF THE SUPERVISORY BOARD<sup>1</sup>

€	FIXED	VARIABLE	TOTAL	
			2016	2015
Hans Dieter Pötsch	74,500	511,300	585,800	13,400
Jörg Hofmann <sup>2</sup>	22,000	308,333	330,333	3,367
Hussain Ali Al-Abdulla	16,000	154,167	170,167	11,000
Akbar Al Baker (until June 22, 2016)	6,858	73,443	80,302	5,925
Hessa Sultan Al-Jaber (since June 22, 2016)	9,142	80,723	89,865	–
Birgit Dietze (since June 1, 2016)	13,067	130,185	143,252	–
Annika Falkengren	18,000	231,250	249,250	17,000
Hans-Peter Fischer <sup>2</sup>	17,000	154,167	171,167	14,000
Uwe Fritsch <sup>2</sup>	18,642	196,348	214,990	14,000
Babette Fröhlich <sup>2</sup> (until June 1, 2016)	6,763	96,675	103,438	17,000
Uwe Hück <sup>2</sup>	80,500	154,167	234,667	44,750
Johan Järvklo <sup>2</sup>	16,000	154,167	170,167	1,650
Louise Kiesling	17,000	154,167	171,167	11,017
Olaf Lies <sup>3</sup>	19,000	231,250	250,250	14,700
Peter Mosch <sup>2</sup>	34,000	267,850	301,850	33,000
Bernd Osterloh <sup>2</sup>	20,000	231,250	251,250	17,000
Hans Michel Piëch	80,375	186,361	266,736	80,500
Ferdinand Oliver Porsche	73,000	344,933	417,933	65,500
Wolfgang Porsche	108,500	332,733	441,233	109,200
Stephan Weil <sup>3</sup>	19,000	231,250	250,250	17,000
Stephan Wolf <sup>2</sup>	20,000	231,250	251,250	17,000
Thomas Zwiebler <sup>2</sup>	20,000	231,250	251,250	14,342
Members of the Supervisory Board who left in the previous year	–	–	–	175,603
<b>Total</b>	<b>709,346</b>	<b>4,687,220</b>	<b>5,396,565</b>	<b>696,953</b>

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

2 These employee representatives have stated that they will transfer their Supervisory Board remuneration to the Hans Böckler Foundation in accordance with the guidelines issued by the German Confederation of Trade Unions (DGB).

3 Under section 5(3) of the Niedersächsisches Ministergesetz (Act Governing Ministers of the State of Lower Saxony), these members of the Supervisory Board are obliged to transfer their Supervisory Board remuneration to the State of Lower Saxony as soon as and to the extent that it exceeds €6,200 per annum. Remuneration is defined for this purpose as Supervisory Board remuneration and attendance fees exceeding the amount of €200.

The members of the Supervisory Board have declared to the Management Board that they waive their claims for all remuneration payments for fiscal year 2016. Such waiver shall apply to the extent that these claims exceed the amount

that would be due if the stipulations to be resolved by the General Meeting on May 10, 2017 regarding the remuneration for the Supervisory Board for the current and future fiscal years were applied to fiscal year 2016.

# Executive Bodies

## Members of the Board of Management and their appointments

Appointments: as of December 31, 2016 or the leaving date from the Board of Management of Volkswagen AG

### MATTHIAS MÜLLER (63)

Chairman (since September 26, 2015)

March 1, 2015<sup>1</sup>

Member of the Executive Board of

Porsche Automobil Holding SE

October 13, 2010<sup>1</sup>

### DR. RER. SOC. KARLHEINZ BLESSING (59)

Human Resources and Organization

January 1, 2016<sup>1</sup>

#### Appointments:

- Wolfsburg AG, Wolfsburg

### DR. ING. HERBERT DIESS (58)

Chairman of the Brand Board of Management of Volkswagen Passenger Cars

July 1, 2015<sup>1</sup>

#### Appointments:

- Infineon Technologies AG, Neubiberg

### DR. RER. POL. H.C.

#### FRANCISCO JAVIER

#### GARCIA SANZ (59)

Procurement

July 1, 2001<sup>1</sup>

#### Appointments:

- Hochtief AG, Essen
- ⊙ Criteria CaixaHolding S.A., Barcelona

### PROF. DR. RER. POL. DR.-ING. E.H.

#### JOCHEM HEIZMANN (64)

China

January 11, 2007<sup>1</sup>

#### Appointments:

- Lufthansa Technik AG, Hamburg

### DR. JUR. CHRISTINE HOHMANN-DENNHARDT

#### (66)

Integrity and Legal Affairs

January 1, 2016 – January 31, 2017<sup>1</sup>

#### Appointments: (as of January 31, 2017):

- ⊙ Messe Frankfurt GmbH, Frankfurt am Main

### ANDREAS RENSCHLER (58)

Commercial Vehicles

February 1, 2015<sup>1</sup>

#### Appointments:

- Deutsche Messe AG, Hanover

### PROF. RUPERT STADLER (53)

Chairman of the Board of Management of AUDI AG

January 1, 2010<sup>1</sup>

#### Appointments:

- FC Bayern München AG, Munich

### HILTRUD DOROTHEA WERNER (50)

Integrity and Legal Affairs

February 1, 2017

### FRANK WITTER (57)

Finance and Controlling

October 7, 2015

As part of their duty to manage and supervise the Group's business, the members of the Board of Management hold other offices on the supervisory boards of consolidated Group companies and other significant investees.

- Membership of statutory supervisory boards in Germany.
- ⊙ Comparable appointments in Germany and abroad.

<sup>1</sup> Beginning or period of membership of the Board of Management.

## Members of the Supervisory Board and their appointments

Appointments: as of December 31, 2016 or the leaving date from the Supervisory Board of Volkswagen AG

### HANS DIETER PÖTSCH (65)

(Chairman; since October 7, 2015)  
Chairman of the Executive Board and  
Chief Financial Officer of  
Porsche Automobil Holding SE  
October 7, 2015<sup>1</sup>

#### Appointments:

- AUDI AG, Ingolstadt
- Autostadt GmbH, Wolfsburg (Chairman)
- Bertelsmann Management SE, Gütersloh
- Bertelsmann SE & Co. KGaA, Gütersloh
- Dr. Ing. h.c. F. Porsche AG, Stuttgart
- ⊙ Porsche Austria Gesellschaft m.b.H., Salzburg (Chairman)
- ⊙ Porsche Holding Gesellschaft m.b.H., Salzburg (Chairman)
- ⊙ Porsche Retail GmbH, Salzburg (Chairman)
- ⊙ VfL Wolfsburg-Fußball GmbH, Wolfsburg (Deputy Chairman)
- ⊙ Volkswagen Truck & Bus GmbH, Braunschweig

### JÖRG HOFMANN (61)

(Deputy Chairman; since November 20, 2015)  
First Chairman of IG Metall  
November 20, 2015<sup>1</sup>

#### Appointments:

- Robert Bosch GmbH, Stuttgart

### DR. HUSSAIN ALI AL-ABDULLA (59)

Minister of State  
April 22, 2010<sup>1</sup>

#### Appointments:

- ⊙ Gulf Investment Corporation, Safat/Kuwait
- ⊙ Kirnaf Finance, Riyadh (Chairman)
- ⊙ Masraf Al Rayan, Doha (Chairman)
- ⊙ Qatar Holding, Doha
- ⊙ Qatar Investment Authority, Doha

### AKBAR AL BAKER (56)

Minister of State and Group Chief Executive of  
Qatar Airways  
May 5, 2015 – June 22, 2016<sup>1</sup>

#### Appointments (as of June 22, 2016):

- ⊙ Arab Air Carriers Organization, Beirut (Chairman)
- ⊙ Heathrow Airport Holdings Ltd., London
- ⊙ International Air Transport Association, Montreal

### DR. HESSA SULTAN AL-JABER (57)

Minister of State  
June 22, 2016<sup>1</sup>

#### Appointments:

- ⊙ Qatar Satellite Company, Doha
- ⊙ Malomatia, Doha
- ⊙ Trio Investment, Doha

### BIRGIT DIETZE (43)

Secretary to the Board of IG Metall  
June 1, 2016<sup>1</sup>

### ANNIKA FALKENGREN (54)

President and Group Chief Executive of  
Skandinaviska Enskilda Banken AB  
May 3, 2011<sup>1</sup>

#### Appointments:

- ⊙ FAM AB, Stockholm
- ⊙ Scania CV AB, Södertälje

### DR. JUR. HANS-PETER FISCHER (57)

Chairman of the Board of Management of  
Volkswagen Management Association  
January 1, 2013<sup>1</sup>

#### Appointments:

- ⊙ Volkswagen Pension Trust e.V., Wolfsburg

### DR. JUR. KLAUS LIESEN (85)

July 2, 1987 – May 3, 2006<sup>1</sup>  
Honorary Chairman of the Supervisory Board of  
Volkswagen AG (since May 3, 2006)

- Membership of statutory supervisory boards in Germany.
- ⊙ Comparable appointments in Germany and abroad.

<sup>1</sup> Beginning or period of membership of the Supervisory Board.

**UWE FRITSCH (60)**

Chairman of the Works Council of the Volkswagen AG  
Braunschweig plant  
April 19, 2012<sup>1</sup>

**Appointments:**

- ⊙ Eintracht Braunschweig GmbH & Co KGaA, Braunschweig
- ⊙ Basketball Löwen Braunschweig GmbH, Braunschweig

**BABETTE FRÖHLICH (51)**

IG Metall,  
Department head for coordination of Executive Board duties and planning  
October 25, 2007 – June 1, 2016<sup>1</sup>

**UWE HÜCK (54)**

Chairman of the General and Group Works Councils of Dr. Ing. h.c. F. Porsche AG  
July 1, 2015<sup>1</sup>

**Appointments:**

- ⊙ Dr. Ing. h.c. F. Porsche AG, Stuttgart (Deputy Chairman)
- ⊙ Porsche Automobil Holding SE, Stuttgart (Deputy Chairman)

**JOHAN JÄRVKLO (43)**

Chairman of IF Metall at Scania AB  
November 22, 2015<sup>1</sup>

**Appointments:**

- ⊙ Scania CV AB, Södertälje
- ⊙ Volkswagen Truck & Bus GmbH, Braunschweig

**DR. LOUISE KIESLING (59)**

Designer and entrepreneur  
April 30, 2015<sup>1</sup>

**OLAF LIES (49)**

Minister of Economic Affairs, Labor and Transport for the Federal State of Lower Saxony  
February 19, 2013<sup>1</sup>

**Appointments:**

- ⊙ Deutsche Messe AG, Hanover (Chairman)
- ⊙ Container Terminal Wilhelmshaven JadeWeserPort-Marketing GmbH & Co. KG, Wilhelmshaven (Chairman)
- ⊙ Demografieagentur für die niedersächsische Wirtschaft GmbH, Hanover (Chairman)
- ⊙ JadeWeserPort Realisierungs GmbH & Co. KG, Wilhelmshaven (Chairman)
- ⊙ JadeWeserPort Realisierungs-Beteiligungs GmbH, Wilhelmshaven (Chairman)

**PETER MOSCH (44)**

Chairman of the General Works Council of AUDI AG  
January 18, 2006<sup>1</sup>

**Appointments:**

- ⊙ AUDI AG, Ingolstadt
- ⊙ Porsche Automobil Holding SE, Stuttgart
- ⊙ Audi Pensionskasse – Altersversorgung der AUTO UNION GmbH, VVaG, Ingolstadt

**BERND OSTERLOH (60)**

Chairman of the General and Group Works Councils of Volkswagen AG  
January 1, 2005<sup>1</sup>

**Appointments:**

- ⊙ Autostadt GmbH, Wolfsburg
- ⊙ Porsche Automobil Holding SE, Stuttgart
- ⊙ Wolfsburg AG, Wolfsburg
- ⊙ Allianz für die Region GmbH, Braunschweig
- ⊙ Porsche Holding Gesellschaft m.b.H., Salzburg
- ⊙ SEAT, S.A., Martorell
- ⊙ ŠKODA Auto a.s., Mladá Boleslav
- ⊙ VfL Wolfsburg-Fußball GmbH, Wolfsburg
- ⊙ Volkswagen Immobilien GmbH, Wolfsburg
- ⊙ Volkswagen Truck & Bus GmbH, Braunschweig

**DR. JUR. HANS MICHEL PIËCH (74)**

Lawyer in private practice  
August 7, 2009<sup>1</sup>

**Appointments:**

- ⊙ AUDI AG, Ingolstadt
- ⊙ Dr. Ing. h.c. F. Porsche AG, Stuttgart
- ⊙ Porsche Automobil Holding SE, Stuttgart
- ⊙ Porsche Cars Great Britain Ltd., Reading
- ⊙ Porsche Cars North America Inc., Atlanta
- ⊙ Porsche Holding Gesellschaft m.b.H., Salzburg
- ⊙ Porsche Ibérica S.A., Madrid
- ⊙ Porsche Italia S.p.A., Padua
- ⊙ Schmittenhöhebahn AG, Zell am See
- ⊙ Volksoper Wien GmbH, Vienna

⊙ Membership of statutory supervisory boards in Germany.  
⊙ Comparable appointments in Germany and abroad.

<sup>1</sup> Beginning or period of membership of the Supervisory Board.

**DR. JUR. FERDINAND OLIVER PORSCHE (55)**

Member of the Board of Management of Familie Porsche AG Beteiligungsgesellschaft  
August 7, 2009<sup>1</sup>

**Appointments:**

- AUDI AG, Ingolstadt
- Dr. Ing. h.c. F. Porsche AG, Stuttgart
- Porsche Automobil Holding SE, Stuttgart
- ⊙ PGA S.A., Paris
- ⊙ Porsche Holding Gesellschaft m.b.H., Salzburg
- ⊙ Porsche Lizenz- und Handelsgesellschaft mbH & Co. KG, Ludwigsburg
- ⊙ Volkswagen Truck & Bus GmbH, Braunschweig

**DR. RER. COMM. WOLFGANG PORSCHE (73)**

Chairman of the Supervisory Board of Porsche Automobil Holding SE; Chairman of the Supervisory Board of Dr. Ing. h.c. F. Porsche AG  
April 24, 2008<sup>1</sup>

**Appointments:**

- AUDI AG, Ingolstadt
- Dr. Ing. h.c. F. Porsche AG, Stuttgart (Chairman)
- Porsche Automobil Holding SE, Stuttgart (Chairman)
- ⊙ Familie Porsche AG Beteiligungsgesellschaft, Salzburg (Chairman)
- ⊙ Porsche Cars Great Britain Ltd., Reading
- ⊙ Porsche Cars North America Inc., Atlanta
- ⊙ Porsche Holding Gesellschaft m.b.H., Salzburg
- ⊙ Porsche Ibérica S.A., Madrid
- ⊙ Porsche Italia S.p.A., Padua
- ⊙ Schmittenhöhebahn AG, Zell am See

**STEPHAN WEIL (58)**

Minister-President of the Federal State of Lower Saxony  
February 19, 2013<sup>1</sup>

**STEPHAN WOLF (50)**

Deputy Chairman of the General and Group Works Councils of Volkswagen AG  
January 1, 2013<sup>1</sup>

**Appointments:**

- Volkswagen Financial Services AG, Braunschweig
- Wolfsburg AG, Wolfsburg
- ⊙ Volkswagen Pension Trust e.V., Wolfsburg

**THOMAS ZWIEBLER (51)**

Chairman of the Works Council of Volkswagen Commercial Vehicles  
May 15, 2010<sup>1</sup>

**COMMITTEES OF THE SUPERVISORY BOARD AS OF DECEMBER 31, 2016****Members of the Executive Committee**

Hans Dieter Pötsch (Chairman)  
Jörg Hofmann (Deputy Chairman)  
Bernd Osterloh  
Dr. Wolfgang Porsche  
Stephan Weil  
Stephan Wolf

**Members of the Mediation Committee established in accordance with section 27(3) of the Mitbestimmungsgesetz (German Codetermination Act)**

Hans Dieter Pötsch (Chairman)  
Jörg Hofmann (Deputy Chairman)  
Bernd Osterloh  
Stephan Weil

**Members of the Audit Committee**

Dr. Ferdinand Oliver Porsche (Chairman)  
Peter Mosch (Deputy Chairman)  
Birgit Dietze  
Annika Falkengren

**Members of the Nomination Committee**

Hans Dieter Pötsch (Chairman)  
Dr. Wolfgang Porsche  
Stephan Weil

**Special Committee on Diesel Engines**

Dr. Wolfgang Porsche (Chairman)  
Uwe Fritsch  
Olaf Lies  
Bernd Osterloh  
Dr. Ferdinand Oliver Porsche  
Thomas Zwiebler

- Membership of statutory supervisory boards in Germany.
- ⊙ Comparable appointments in Germany and abroad.

<sup>1</sup> Beginning or period of membership of the Supervisory Board.

# Disclosures Required Under Takeover Law

This section contains the Volkswagen Group's disclosures relating to takeover law required by sections 289(4) and 315(4) of the HGB.

## CAPITAL STRUCTURE

Volkswagen AG's share capital amounted to €1,283,315,873.28 (€1,283,315,873.28) on 31 December, 2016. It was composed of 295,089,818 ordinary shares and 206,205,445 preferred shares. Each share conveys a notional interest of €2.56 in the share capital.

## SHAREHOLDER RIGHTS AND OBLIGATIONS

The shares convey pecuniary and administrative rights. The pecuniary rights include in particular the shareholders' right to participate in profits (section 58(4) of the Aktiengesetz (AktG – German Stock Corporation Act)), the right to participate in liquidation proceeds (section 271 of the AktG) and preemptive rights to shares in the event of capital increases (section 186 of the AktG) that can be disapplied by the Annual General Meeting with the approval of the Special Meeting of Preferred Shareholders, where appropriate. Administrative rights include the right to attend the Annual General Meeting and the right to speak there, to ask questions, to propose motions and to exercise voting rights. Shareholders can enforce these rights in particular through actions seeking disclosure and actions for avoidance.

Each ordinary share grants the holder one vote at the Annual General Meeting. The Annual General Meeting elects shareholder representatives to the Supervisory Board and elects the auditors; in particular, it resolves on the appropriation of net profit, formally approves the actions of the Board of Management and the Supervisory Board, and resolves on amendments to the Articles of Association of Volkswagen AG, capitalization measures and authorizations to purchase treasury shares; if required, it also resolves on the performance of a special audit, the removal before the end of their term of office of Supervisory Board members elected at the Annual General Meeting and the winding-up of the Company.

Preferred shareholders generally have no voting rights. However, in the exceptional case that they are granted voting rights by law (for example, when preferred share dividends were not paid in one year and not compensated for in full in the following year), each preferred share also grants the holder one vote at the Annual General Meeting. Furthermore, preferred shares entitle the holder to a €0.06 higher dividend than ordinary shares (further details on this right to preferred and additional dividends are specified in Article 27(2) of the Articles of Association of Volkswagen AG).

The Gesetz über die Überführung der Anteilsrechte an der Volkswagenwerk Gesellschaft mit beschränkter Haftung in private Hand (VW-Gesetz – Act on the Privatization of Shares of Volkswagenwerk Gesellschaft mit beschränkter Haftung) of July 21, 1960, as amended on July 30, 2009, includes various provisions in derogation of the German Stock Corporation Act, for example on exercising voting rights by proxy (section 3 of the VW-Gesetz) and on majority voting requirements at the Annual General Meeting (section 4(3) of the VW-Gesetz).

In accordance with the Volkswagen AG Articles of Association (Article 11(1)), the State of Lower Saxony is entitled to appoint two members of the Supervisory Board of Volkswagen AG for as long as it directly or indirectly holds at least 15% of Volkswagen AG's ordinary shares. In addition, resolutions by the Annual General Meeting that are required by law to be adopted by a qualified majority require a majority of more than four-fifths of the share capital of the Company represented when the resolution is adopted (Article 25(2)), regardless of the provisions of the VW-Gesetz.



**SHAREHOLDINGS EXCEEDING 10% OF VOTING RIGHTS**

Shareholdings in Volkswagen AG that exceed 10% of voting rights are shown in the notes to the annual financial statements of Volkswagen AG, which are available online at [www.volkswagenag.com/ir](http://www.volkswagenag.com/ir). The current notifications of changes in voting rights in accordance with the Wertpapierhandelsgesetz (WpHG – German Securities Trading Act) are also published on this website.

**COMPOSITION OF THE SUPERVISORY BOARD**

The Supervisory Board consists of 20 members, half of whom are shareholder representatives. In accordance with Article 11(1) of the Articles of Association of Volkswagen AG, the State of Lower Saxony is entitled to appoint two of these shareholder representatives for as long as it directly or indirectly holds at least 15% of the Company's ordinary shares. The remaining shareholder representatives on the Supervisory Board are elected by the Annual General Meeting.

The other half of the Supervisory Board consists of employee representatives elected by the employees in accordance with the Mitbestimmungsgesetz (MitbestG – German Codetermination Act). A total of seven of these employee representatives are Company employees elected by the workforce; the other three employee representatives are trade union representatives elected by the workforce.

The Chairman of the Supervisory Board is generally a shareholder representative elected by the other members of the Supervisory Board. In the event that a Supervisory Board vote is tied, the Chairman of the Supervisory Board has a casting vote in accordance with the MitbestG.

The goals for the composition of the Supervisory Board are described on page 62 of the Corporate Governance Report. Information about the composition of the Supervisory Board at the end of the reporting period can be found on pages 85 to 87 of this annual report.

**STATUTORY REQUIREMENTS AND REQUIREMENTS OF THE ARTICLES OF ASSOCIATION WITH REGARD TO THE APPOINTMENT AND REMOVAL OF BOARD OF MANAGEMENT MEMBERS AND TO AMENDMENTS TO THE ARTICLES OF ASSOCIATION**

The appointment and removal of members of the Board of Management are governed by sections 84 and 85 of the AktG, which specify that members of the Board of Management are appointed by the Supervisory Board for a maximum of five years. Board of Management members may be reappointed or have their term of office extended for a maximum of five years in each case. In addition, Article 6 of the Articles of Association of Volkswagen AG states that the number of Board of Management members is stipulated by the Supervisory Board and that the Board of Management must consist of at least three persons.

The Annual General Meeting resolves amendments to the Articles of Association (section 119(1) of the AktG). In accordance with section 4(3) of the VW-Gesetz as amended on July 30, 2009 and Article 25(2) of the Articles of Association of Volkswagen AG, Annual General Meeting resolutions to amend the Articles of Association require a majority of more than four-fifths of the share capital represented.

**POWERS OF THE BOARD OF MANAGEMENT, IN PARTICULAR CONCERNING THE ISSUE OF NEW SHARES AND THE REPURCHASE OF TREASURY SHARES**

According to German stock corporation law, the Annual General Meeting can authorize the Board of Management, for a maximum period of five years, to issue new shares. It can also authorize the Board of Management, for a maximum period of five years, to issue bonds on the basis of which new shares are to be issued. The Annual General Meeting also decides the extent to which shareholders have preemptive rights to the new shares or bonds. The highest amount of authorized share capital or contingent capital available for these purposes is determined by Article 4 of the Articles of Association of Volkswagen AG, as amended.

The Annual General Meeting on April 19, 2012 resolved to authorize the Board of Management, with the consent of the Supervisory Board, to increase the Company's share capital by a total of up to €110.0 million (corresponding to approximately 43 million shares) on one or more occasions up to April 18, 2017 by issuing new ordinary and/or nonvoting preferred bearer shares – including with shareholders' preemptive rights disapplying – against cash and/or noncash contributions. This authorization was partially exercised in June 2014 by way of a capital increase through the issuance of 10,471,204 new preferred shares from authorized capital against cash contributions, while disapplying shareholders' preemptive rights. This increased the share capital by €26.8 million and generated gross proceeds of €2.0 billion.

At the Annual General Meeting on May 5, 2015, a resolution was passed authorizing the Board of Management, with the consent of the Supervisory Board, to increase the Company's share capital by a total of up to €179.2 million (corresponding to 70 million shares) on one or more occasions up to May 4, 2020 by issuing new nonvoting preferred shares against cash contributions.

Further details of the authorization to issue new shares and their permitted uses may be found in the notes to the consolidated financial statements on page 265.

Opportunities to acquire treasury shares are governed by section 71 of the AktG. The Board of Management was most recently authorized to acquire treasury shares up to a maximum of 10% of the share capital at the Annual General Meeting on April 19, 2012. This authorization applies until April 18, 2017 and has not as yet been exercised.

#### **MATERIAL AGREEMENTS OF THE PARENT COMPANY IN THE EVENT OF A CHANGE OF CONTROL FOLLOWING A TAKEOVER BID**

A banking syndicate granted Volkswagen AG a syndicated line of credit amounting to €5.0 billion that runs until April 2020. The syndicate members were granted the right to call their portion of the syndicated line of credit if Volkswagen AG is merged with a third party or becomes a subsidiary of another company. However, this call right does not apply in the event of a merger by absorption of Porsche Holding SE, one of its subsidiaries, or one of its holding companies and Volkswagen AG in which Volkswagen AG is the acquiring legal entity.

In addition, Volkswagen AG agreed a supplementary syndicated line of credit of up to €20.0 billion with a banking syndicate, initially running until December 2016 and in the meantime extended until June 2017. The syndicate members were granted the right to call their portion of the syndicated line of credit if Volkswagen AG is merged with a third party or group of third parties, or becomes a subsidiary of another company or group of other companies. Exceptions to this call right were agreed with regard to various combinations involving the current majority shareholders.

# Diesel Issue

**We worked intensively to clarify the irregularities in emissions and provided effective technical solutions for the affected vehicles. Extensive settlement agreements were reached in the United States.**

## IRREGULARITIES IN EMISSIONS

On September 18, 2015, the US Environmental Protection Agency (EPA) publicly announced in a “Notice of Violation” that irregularities in relation to nitrogen oxide (NO<sub>x</sub>) emissions had been discovered in emissions tests on certain vehicles with Volkswagen Group diesel engines. Volkswagen admitted to irregularities in this context. In its ad hoc release dated September 22, 2015, the Volkswagen Group announced that noticeable discrepancies between the figures achieved in testing and in actual road use had been identified in around eleven million vehicles worldwide with certain diesel engines.

On November 2, 2015, the EPA issued another “Notice of Violation” alleging that irregularities had also been discovered in the software installed in vehicles with type V6 3.0 l TDI diesel engines. Audi has confirmed that at least three auxiliary emission control devices (AECs) were not disclosed in the course of the US approval documentation of vehicles with six-cylinder V6 3.0 l TDI diesel engines.

## EXTENSIVE INVESTIGATIONS BY VOLKSWAGEN

Volkswagen is working intensively to clarify the issue. To this end, Volkswagen ordered both internal inquiries and external investigations. The external investigation is being conducted with the involvement of external lawyers in Germany and the USA. To facilitate the investigations in the course of clarifying the facts, the Group Board of Management established a cooperation program in 2015, which was in place for a limited time and was open to all employees covered by collective agreements.

The Supervisory Board of Volkswagen AG formed a special committee that coordinates all activities relating to the diesel issue for the Supervisory Board. Further information regarding the special committee on diesel engines can be found in the Report

of the Supervisory Board on pages 12 to 17. Volkswagen AG commissioned an external investigation by US law firm Jones Day. This is an independent and comprehensive investigation to address the diesel issue. Jones Day is updating the Company and the Department of Justice (DOJ) on the current results of its investigation on an ongoing basis and supports Volkswagen AG in its cooperation with the judicial authorities. The course of action in clearing up the situation was determined largely by the investigative authorities.

Furthermore, Volkswagen AG filed a criminal complaint in September 2015 with the responsible public prosecutor's office in Braunschweig, which is independently investigating the matter, including allegations of fraud. Searches were carried out in Wolfsburg and elsewhere with the involvement of special agents from the State Office of Criminal Investigation.

We are cooperating with all the responsible authorities to clarify these matters completely and transparently.

Investigations were divided into two parts. The Group Internal Audit function, which involved bringing together experts from various Group companies to form a task force, focused – as instructed by the Supervisory Board and Board of Management – on reviewing relevant processes, reporting and control systems as well as the accompanying infrastructure. This function paid special attention to the processes of software development for the engine control unit. The Group Internal Audit function provided its findings to the external experts from Jones Day. The internationally renowned law firm was engaged by Volkswagen AG to fully clarify the facts and responsibilities in a second investigation. Jones Day has received operational support from the auditing firm Deloitte.

The special investigation has involved conducting interviews with employees and managers who were identified by Jones Day

as relevant sources of information in connection with the diesel issue. In addition, Jones Day has evaluated documents and data (such as emails).

We will discuss the action taken in response to the audit findings at the end of this section.

Employees from affected departments have been dismissed as a further direct consequence of the findings from the internal inquiries and external investigations.

The information that has been viewed so far has helped trace the origin and development of the diesel issue to a large extent. The starting point of the diesel issue at Volkswagen was the strategic decision to launch a large-scale promotion of diesel vehicles in the USA in 2005. To this end, a new diesel powertrain unit featuring high performance and cost-efficient production – the EA 189 engine – was to be developed.

The US emissions limits for emissions of pollutants are strict. Under the strictest standard in the USA at the time, only 31 mg/km of NO<sub>x</sub> was allowed to be emitted, about one-sixth of the Euro 5 standard applicable in Europe at that time. When designing state-of-the-art diesel engines, technicians and engineers face the challenge that there is a conflicting objective between the reduction of NO<sub>x</sub> and other parameters.

In the ensuing period, in order to resolve this conflicting objective satisfactorily within the time frame and budget of the EA 189 project, a group of persons at levels below the Group's Board of Management in the powertrain development division decided to modify the engine management software. In the engine controller of the vehicles with type EA 189 diesel engines there was a software that recognizes the driving curve of the official type test, regardless of whether the vehicle is on a test bench or on the road. Depending on the recognition of the driving curve, the engine controller switches to 2 different modes: mode 1 optimum NO<sub>x</sub> for test bench operation or mode 2 optimum particulate matter for road operation.

As things stand, outside the group of persons mentioned above, the then and current Board of Management of Volkswagen AG had, at any rate, no knowledge of the use of an unlawful “defeat device software” under US law at the time.

In the months after the International Council on Clean Transportation (ICCT) study was published in May 2014, the test set-ups on which the ICCT study was based were repeated in-house at Volkswagen and the unusually high NO<sub>x</sub> emissions confirmed. The US environmental authority of California – the California Air Resources Board (CARB) – was informed of this result, and at the same time the offer was made to recalibrate the type EA 189 diesel engines as part of a service measure that was already planned in the USA. This measure was evaluated and adopted by the Ausschuss für Produktsicherheit (APS – product safety committee), which includes, among others, employees from the technical development, quality assurance, sales, production, logistics, procurement and

legal departments, as part of the existing processes within the Volkswagen Group. The APS thus plays a central role in the internal control system at Volkswagen AG. There are currently no findings to confirm that an unlawful “defeat device software” under US law was reported by the APS as the cause of the discrepancies to the persons responsible for preparing the 2014 annual and consolidated financial statements. Instead, at the time that the annual and consolidated financial statements were being prepared, this group of people remained under the impression that the issue could be solved with comparatively little effort as part of a field measure. By the summer of 2015, however, it was reliably recognized that the cause of the discrepancies was a software modification that would qualify as a “defeat device” as defined by US environmental law. This culminated in the disclosure of the US “defeat device” to EPA and CARB on September 3, 2015. According to the assessment at that time of the members of the Board of Management dealing with the matter, the scope of the costs expected as a result by the Volkswagen Group (recall costs, retrofitting costs and financial penalties) was basically not dissimilar to that of previous cases in which other vehicle manufacturers were involved, and therefore appeared to be controllable overall with a view to the business activities of the Volkswagen Group. This appraisal by Volkswagen AG was based on the assessment of a law firm brought in in the USA for approval issues, according to which similar cases in the past were resolved amicably with the US authorities. Publication of a “Notice of Violation” by the EPA on September 18, 2015, which came as a surprise to the Company, on the facts and possible financial consequences, then presented the situation in a completely different light.

To clarify the issue, Audi set up an internal task force, furnished committees with the necessary resources and launched a program of cooperation for employees covered by collective agreements in 2015. The law firm Jones Day also conducted independent and comprehensive investigations into this matter.

The incumbent members of the Board of Management of AUDI AG have declared as already in the previous year that prior to their notification by the EPA in November 2015, they had no knowledge of the use of an unlawful “defeat device software” under US law in the V6 3.0 l TDI engines.

We are consistently seeking to realize organizational and procedural potential for improvement that has come to light as a result of the diesel issue.

Also, the publications released by the reporting date, as well as the continued investigations and interviews in connection with the diesel issue, did not provide the Group Board of Management with any new reliable findings or assessments regarding the underlying facts and the assessment of the associated risks (e. g. investor lawsuits).

**AFFECTED DIESEL ENGINES**

FOUR-CYLINDER		SIX-CYLINDER
10,741 thousand		113 thousand
EU28	REST OF THE WORLD	USA/CANADA
8,494 thousand	1,639 thousand	721 thousand

**EU28 AND REST OF THE WORLD**

In fiscal year 2016, the Kraftfahrt-Bundesamt (KBA – German Federal Motor Transport Authority) issued official approvals needed for modification of the Volkswagen Group vehicles fitted with four-cylinder EA 189 1.2 l, 1.6 l and 2.0 l diesel engines falling within its remit. Only the approval of the technical solutions for 14 thousand vehicles is still outstanding, which is expected to be granted in the first quarter of 2017.

The KBA ascertained for all approved clusters (groups of vehicles) that implementation of the technical solutions would not bring about any unfavorable changes in fuel consumption, engine power, torque and noise emissions. Once the modifications have been made, these vehicles will thus comply with all legal requirements and the emission standards applicable in each case.

The SEAT brand received approvals in principle from its respective type approval authority, the Ministry of Industry in Spain in fiscal year 2016.

The type approval authority for the ŠKODA brand is the Vehicle Certification Agency in the United Kingdom. The approval process for ŠKODA vehicles is still ongoing.

In some countries outside the EU – among others Switzerland, Australia, South Korea, Taiwan and Turkey – national type approval is based on prior recognition of the EC/ECE type approval. We are also in close contact with the authorities in these countries in order to finalize the approval process.

We are now working expeditiously to implement the technical solutions in the field. In agreement with the relevant authorities, the owners of the affected vehicles will be notified and can then make an appointment for modification in an authorized workshop.

The implementation of the technical solution for the highest-volume variant – the 2.0 l TDI engine – began already in January 2016. The 1.2 l TDI followed in the course of the year. A software update is being performed for these engine versions. The implementation phase for the recall of the 1.6 l TDI engine began in November 2016, which provided additional lead time necessary for the hardware modification. In the 1.6 l TDI engines, a “flow transformer” will be fitted in front of the air mass sensor to improve the sensor’s measuring accuracy. Combined with updated software,

this will optimize the amount of diesel injected. Based on current planning, implementation of measures will take the 2017 calendar year to complete. Volkswagen guarantees that the solutions will be implemented free of charge for our customers.

In addition, Volkswagen AG has, until December 31, 2017, expressly waived citation of the statute of limitations with regard to any claims made in relation to the software installed in vehicles with engines of type EA 189 by vehicle customers outside the United States and Canada.

**USA/CANADA**

On January 4, 2016, the DOJ, on behalf of the EPA, filed a civil complaint against Volkswagen AG, AUDI AG and other companies of the Volkswagen Group. The claims asserted under civil law are based on the alleged use of the defeat device software in violation of the US Clean Air Act. The complaint’s allegations relate to both the four-cylinder and the six-cylinder diesel engines. Volkswagen AG held internal development responsibility for the four-cylinder diesel engines within the Group, and AUDI AG for the six-cylinder diesel engines.

In the USA and Canada, three variants of certain four-cylinder diesel engines are affected. For the vehicles with six-cylinder diesel engines, the software parameters are being revised so that they can be resubmitted for approval in the USA. Due to these considerably stricter NO<sub>x</sub> limits, it is a greater technical challenge to refit the vehicles so that all applicable emissions limits can be met. Volkswagen is in intensive discussions with the EPA and CARB concerning remedial measures. The technical solutions will be implemented as soon as they have been approved by the authorities. The respective US and Canadian companies of the Volkswagen Group have withdrawn all affected new vehicles from sale with pending approval of technical solutions.

In June and December 2016 and January 2017, Volkswagen AG, AUDI AG, Volkswagen Group of America, Inc. and certain affiliates reached settlement agreements in the USA with the DOJ on behalf of the EPA, CARB, and the California Attorney General, the US Federal Trade Commission (FTC), and private plaintiffs represented by a Plaintiffs’ Steering Committee (PSC) in the multidistrict litigation pending in California.

The settlement agreements will resolve certain civil claims made in relation to affected diesel vehicles in the USA: approximately 475,000 vehicles with four-cylinder diesel engines from the Volkswagen Passenger Cars and Audi brands and around 83,000 vehicles with six-cylinder diesel engines from the Volkswagen Passenger Cars, Audi and Porsche brands. In October 2016, the court finally approved the settlement agreements in connection with the four-cylinder diesel engines. A number of class members have filed appeals to an US appellate court from the order approv-

ing the settlements in connection with the four-cylinder diesel engines. The court has yet to approve the settlement agreements in relation to the six-cylinder diesel engines, which were lodged with the court on January 31, 2017.

The settlements with respect to the four-cylinder diesel engine vehicles provide affected customers with the option of a buyback or, for leased vehicles, early lease termination, or a free emissions modification of the vehicles, provided that the EPA and CARB approve the modification. The settlements with respect to the six-cylinder diesel engine vehicles, which remain subject to court approval, provide for a buyback or, for leased vehicles, early lease termination program, or a free emissions modification provided that EPA and CARB approve the modification, for Generation 1 six-cylinder vehicles, and a free emissions recall and modification program (pending EPA and CARB approval) for Generation 2 six-cylinder vehicles. If modifications are not approved for Generation 2 six-cylinder vehicles, the settlements require Volkswagen to offer a buyback or, for leased vehicles, early lease termination for those vehicles. Volkswagen will also make additional cash payments to affected current owners and lessees as well as certain former owners and lessees.

In addition, Volkswagen agreed to support environmental programs. Volkswagen will pay USD 2.7 billion over three years and Audi will make an additional one-time payment in the amount of USD 225 million into an environmental trust, managed by a trustee appointed by the court, to offset excess NO<sub>x</sub> emissions. Volkswagen will also invest a total of USD 2.0 billion over ten years in zero emissions vehicle (ZEV) infrastructure as well as corresponding access and awareness initiatives for such technology.

In addition, the six-cylinder vehicle settlement, if approved by the court, calls for an additional USD 25 million payment to CARB to support the availability of ZEVs in California.

In January 2017, Volkswagen AG agreed with the US government to resolve federal criminal liability relating to the diesel issue. The Volkswagen Group also agreed with the US government to resolve civil penalties and injunctive relief under the Clean Air Act and other civil claims against the Company relating to the diesel issue.

The coordinated resolutions involve four settlements, including a plea agreement between Volkswagen AG and the DOJ.

The plea agreement is accompanied by a published Statement of Facts that lays out relevant facts and has been acknowledged by Volkswagen AG.

As part of its plea agreement, Volkswagen AG has agreed to plead guilty to three felony counts under US law: conspiracy, obstruction of justice and using false statements to import cars into the US. The plea agreement, which is subject to US federal court approval, provides for payment of a criminal fine of USD 2.8 billion and the appointment of an independent monitor for a period of three years. The independent monitor will assess and oversee the Company's compliance with the terms of the resolution. This includes overseeing the implementation of measures to further strengthen compliance, reporting and monitoring systems, and an enhanced ethics program.

Volkswagen AG, AUDI AG and other Volkswagen Group companies have further agreed to pay, subject to court approval, a combined penalty of USD 1.45 billion to resolve US federal environmental and customs-related civil claims in the USA. Furthermore, Volkswagen AG and Volkswagen Group of America, Inc. have agreed to pay a separate civil penalty of USD 50 million to the Civil Division of the DOJ to settle potential claims asserted under the Financial Institutions Reform, Recovery and Enforcement Act (FIRREA). Volkswagen AG and Volkswagen Group of America, Inc. specifically deny any liability and expressly dispute FIRREA claims, which they are settling to avoid the uncertainty and expense of protracted litigation.

By their terms, these agreements resolve liability issues under US law and are not intended to address any liability issues, where such exist, under the laws or regulations of any jurisdiction outside the United States. Volkswagen continues to cooperate in full with investigations by the DOJ into the conduct of individuals.

Furthermore, Volkswagen reached agreements with the attorneys general of 44 US states, the District of Columbia and Puerto Rico to resolve their existing or potential consumer protection and unfair trade practices claims – in connection with vehicles in the USA fitted with four-cylinder and six-cylinder diesel engines – for a settlement amount of USD 603 million.



These settlements do not resolve potential state environmental claims related to the affected vehicles or certain other claims. Moreover, investigations by various US regulatory and government authorities, including in areas relating to securities, financing and tax, are ongoing.

In September 2016, Volkswagen announced that it had finalized an agreement to resolve the claims of Volkswagen-branded franchise dealers in the United States relating to the affected vehicles and other matters asserted concerning the value of the franchise. The settlement agreement includes a cash payment of up to USD 1.208 billion and additional benefits to resolve alleged past, current and future claims of losses in franchise value. The court finally approved the settlement agreement in January 2017. This approval order is subject to appeal before an US appellate court.

In Canada, the NO<sub>x</sub> emissions limits for vehicles are the same as in the USA. Civil consumer claims and regulatory investigations have been initiated for vehicles with 2.0 l and 3.0 l diesel engines. In December 2016, Volkswagen AG and other Canadian and US Volkswagen Group companies reached a class action settlement in Canada with consumers relating to 2.0 l diesel vehicles. The settlement provides for cash payments of up to CAD 564 million to eligible owners and lessees, and many of these affected customers will also have the option of a free emissions modification of their vehicle if approved by regulators, or a buyback or trade-in or – for leased vehicles – early lease termination. The class settlement is subject to court approval, the hearings for which are scheduled for March 2017. Concurrently with the announcement of the class settlement in December 2016, Volkswagen Group Canada agreed with the Commissioner of Competition in Canada to a civil resolution of its regulatory inquiry into consumer protection issues in relation to 2.0 l diesel vehicles. This resolution was reached with the benefits in the class settlement, and Volkswagen Group Canada will also pay a CAD 15 million civil administrative monetary penalty. Civil consumer claims and the Commissioner of Competition's investigation with respect to 3.0 l diesel vehicles remain pending. Also, criminal enforcement-related investigations by the federal environmental regulator and quasi-criminal enforcement-related investigations by a provincial environmental regulator are ongoing in Canada in relation to 2.0 l and 3.0 l diesel vehicles.

#### IMPACT ON THE VOLKSWAGEN GROUP

##### Operating result for 2016

Special items recognized in operating profit relating to the diesel issue amounted to €–6.4 (–16.2) billion in fiscal year 2016, mainly due to higher provisions for legal risks.

##### Legal risks

Various legal risks are associated with the diesel issue. The provisions recognized for this matter and the contingent liabilities disclosed as well as the other latent legal risks are partially subject to substantial estimation risks given the complexity of the individual factors, the ongoing approval process with the authorities and the fact that the independent, comprehensive investigations have not yet been completed. The legal risks include (detailed information on the legal risks can be found on pages 193 to 198):

- > Criminal and administrative proceedings worldwide (excluding the USA/Canada)
- > Product-related lawsuits worldwide (excluding the USA/Canada)
- > Lawsuits filed by investors worldwide (excluding the USA/Canada)
- > Proceedings in the USA/Canada

Should these legal risks materialize, this could result in considerable financial charges.

Further risks from the diesel issue can be found in the Report on Risks and Opportunities on page 183.

#### INTEGRITY

On January 1, 2016, we started to create the organizational framework for a centralized integrity management function by setting up the new Board of Management position for Integrity and Legal Affairs. This Group function is responsible for planning, preparing and implementing programs and projects aimed at raising, clarifying and intensifying a collective awareness of integrity as well as reinforcing a shared culture of integrity in the Company. A continuous exchange of ideas and discussion of issues relating to integrity are key components of the integrity management function.

Volkswagen AG is undergoing the most far-reaching process of change in the Company's history. Particularly the loss of trust as a result of the diesel issue clearly showed that, in terms of integrity, Volkswagen must become a role model for a modern, transparent and successful enterprise. This plan is one of the strategic goals of TOGETHER – Strategy 2025.

Behaving with integrity is a prerequisite for commercial success and for a positive future for the Company. Only with lasting, dependable integrity will our Company gain and strengthen the trust of its staff, customers, shareholders, business partners and the general public.

#### Integrity program

Volkswagen's goal is to enhance the culture of integrity in the Company and create a collective awareness of integrity. To this end, we launched an integrity program in 2016 involving all employees that is based on six action areas:

- > Dialog & communication
- > Sounding board program
- > Executive program
- > Processes & tools
- > Monitoring & reporting
- > Internationalization

#### Dialog & communication

We provided information at regular intervals on the concept of integrity and its importance as well as on the evolution of the integrity program. In addition, we set up an integrity mailbox to create opportunities for direct communication between the integrity management team and the workforce. An exchange in the form of a live chat also took place on the GroupConnect internal social network.

#### Sounding board program

A shared understanding of what integrity means at Volkswagen can only be developed with the involvement and the experience of the entire workforce. This is why we have instituted the sounding board program as a key initiative in the integrity program. It will ensure close collaboration and dialog between the integrity management team and the workforce with the help of integrity ambassadors – voluntary support staff from management and staff circles. Interactive services as part of this program round off the communications portfolio.

#### Executive program

Management's function as a role model in relation to integrity along with managers' special responsibility was clearly illustrated in a letter signed by all members of the Group Board of Management and in further information to management. The topic of integrity was also a fixed part of many management events.

#### Processes & tools

We are continuously examining the possibility of also implementing our principles of integrity into key management elements of the Company, for example in the field of human resources and collaboration with business partners.

#### Monitoring & reporting

Regular monitoring of the integrity program not only helps us to fine-tune and readjust; it also underlines the relevance of the concept of integrity for employees and managers. Here, continuous evaluation of feedback from the integrity ambassadors and from employees and managers on issues relating to the adaptation and refinement of concepts plays just as important a role as the reporting in internal media and publications such as the sustainability report.

#### Internationalization

Once the pilot phase at the Wolfsburg site has ended, we intend to expand the integrity program to all brands, companies and regions. Those responsible in the areas of governance, risk and compliance are an important link in this context.

#### ACTION IN RESPONSE TO AUDIT CONCLUSIONS

Specific corrective action was proposed by Group Internal Audit for the weaknesses it identified in 2015.

In a structured follow-up process, implementation of the corrective action in 2016 was tracked continuously and reported to the relevant bodies. A total of 31 measures were defined by Group Internal Audit and the majority of them were implemented by the end of 2016. The plan is to implement the remaining measures by the middle of 2017.

While the procedural investigations of Group Internal Audit primarily applied to the processes in connection with the diesel technology in 2015, the findings resulting from the investigations in the reporting period were transformed into general guidelines to shore up governance and compliance. The so-called Golden Rules sharpen the focus even more and increase the acceptance for critical process steps. These rules represent minimum requirements in the organization, process and tools & systems categories in the areas of control unit software development, emission classification and escalation management.

Self-assessments were performed in the Volkswagen Passenger Cars, Audi and Porsche brands to ensure structured application of the Golden Rules and thus to optimize the internal control system (ICS) within the areas affected. The results were validated as an integral part of an investigation by the audit departments in the relevant brands or by Group Internal Audit. By applying this consistent methodology across the brands, the implementation status of the guidelines in the Golden Rules was established and transparency created regarding the degree of maturity of the ICS for the relevant processes, also for the Board of Management.



In addition, a cross-brand project that ensures similar implementation of the Golden Rules taking the individual features of the brands into account was initiated under the responsibility of Group Research and Development. As part of this, development departments within the group reviewed their processes. Representatives of the brands work on the optimization of their processes in project groups.

Key elements of the process optimization are:

- › Early documentation and interpretation of legislation around the world and alignment of the product portfolio with the legal requirements
- › Guidelines for the development of software for drive control units with documentation of the features with relevance for registration
- › Introduction of multiple controls for approvals in the product development process
- › Reorganization within development for the purpose of separating the responsibility for the development of drives from official approvals
- › Formation of new bodies for cross-brand management and clarification of compliance issues
- › Uniform process standards and work instructions that give those involved legal certainty in the work process
- › Training programs in which everyone involved in the process is required to participate
- › Regular reporting to the Group Board of Management in order to create transparency in relation to the implementation status of this process optimization

Adaptation of the Golden Rules to other vehicle development processes and other areas of development is being addressed.

#### TO OUR STAKEHOLDERS

Volkswagen does not tolerate any breaches of the law or other wrongdoing. We deeply and sincerely regret the behavior that gave rise to the diesel crisis. Such misconduct runs contrary to all of the values that Volkswagen stands for. We have taken significant steps to strengthen accountability, extend transparency and prevent something like this from happening again.

The trust of our customers, our shareholders, partners, employees and the general public is our most important asset. The Group has substantially elevated its commitment to working ethically and with integrity. Volkswagen can and will set an example in the years ahead as to how a large, global company embodies and takes its social responsibility seriously.

# Business Development

The pace of global economic growth was slightly slower in 2016 than in the previous year. By contrast, global demand for vehicles was higher. Despite a persistently difficult environment, the Volkswagen Group delivered more than 10 million vehicles to customers.

## GLOBAL ECONOMY GROWS MODERATELY

The moderate growth rate of the global economy slowed to 2.5 (2.8)% in fiscal year 2016. While economic momentum decelerated in the industrialized countries as a whole, growth rates in emerging economies remained virtually constant year-on-year. Inflation increased as a result of the expansionary monetary policies pursued by many central banks and due to rising energy and commodity prices.

### Europe/Other Markets

The economy of Western Europe continued to recover in the reporting period. At 1.7 (2.0)%, growth in gross domestic product (GDP) was slightly lower than in the previous year. The picture was mixed as regards economic growth in both Northern and Southern Europe. The UK's Brexit referendum in June, when a small majority voted to leave the EU, had a dramatic effect, with direct consequences including uncertainty in the financial markets and dimmer economic prospects for the United Kingdom and Europe as a whole. The eurozone unemployment rate continued to decrease, falling to an average of 10.6 (11.3)%, though rates remained considerably higher in Greece and Spain.

Although GDP grew by a total of 1.3 (0.8)% in Central and Eastern Europe in the reporting period, it remained at a relatively low level. Whereas the comparatively high rate of growth in Central Europe weakened considerably compared with the previous year, the recessionary period of the previous year in Eastern Europe came to an end. The recovery in energy prices was the main positive factor in this trend, while the unresolved conflict between Russia and Ukraine continued to have a negative impact. The decline in economic output in Russia by 0.6 (-3.7)% was much less pronounced in the reporting period than in 2015.

South Africa's GDP expanded by just 0.4 (1.3)%, thus falling substantially short of the already low figure of the

previous year. In addition to a severe drought, ongoing structural deficits and social unrest weighed on the economy.

### Germany

The German economy continued to profit from positive consumer sentiment and a good labor market, with the 1.8 (1.5)% rise in GDP being somewhat stronger than in the previous year.

### North America

At 1.6 (2.6)%, economic growth in the USA was slightly lower year-on-year. The economy was supported primarily by private consumption and expansionary monetary policy, whereas private investment growth was weak. The average unemployment rate during the reporting period was 4.9 (5.3)%. The US dollar remained strong, putting domestic goods exports under pressure. At 1.3 (0.9)%, GDP growth in Canada showed only little momentum. Mexico's economic output fell to 2.1 (2.6)%.

### South America

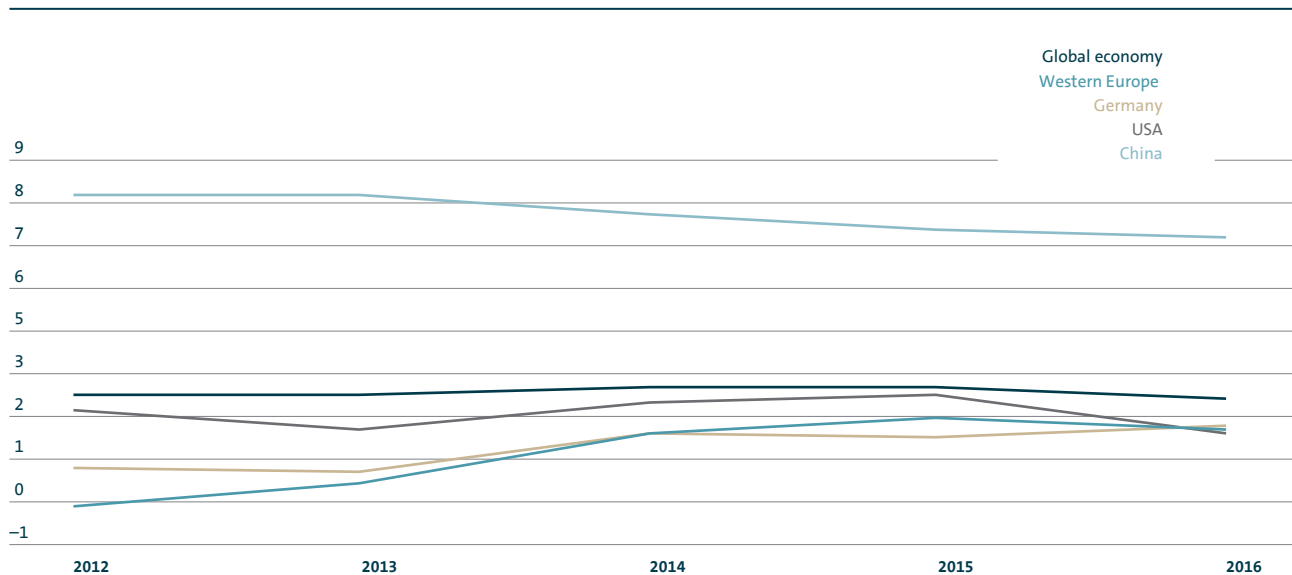
Brazil experienced its second consecutive year of recession, with economic output falling by 3.6 (-3.8)%. Weak domestic demand, continuing relatively low global commodity prices and political uncertainty weighed on the economy. Argentina's GDP declined by 2.3 (+2.6)%, with structural deficits and high inflation continuing to hamper growth.

### Asia-Pacific

Economic growth in China weakened slightly in 2016, mainly due to structural changes. At 6.7 (6.9)%, however, it was still high compared with other countries worldwide. The Indian economy continued its positive trend with a gain of 6.8 (7.5)% and thereby grew somewhat more slowly than in the previous year. Japan once again posted weak GDP growth of just 1.0 (1.2)%.

**ECONOMIC GROWTH**

Percentage change in GDP

**GLOBAL DEMAND FOR PASSENGER CARS REACHES RECORD HIGH**

Worldwide, the number of new passenger car registrations increased to 81.1 million vehicles in fiscal year 2016, exceeding the previous year's record level by 5.4%. Demand rose in the Asia-Pacific, Western Europe, North America and Central Europe regions, while new passenger car registrations in South America, Eastern Europe and Africa failed to match the prior-year levels.

**Sector-specific environment**

The sector-specific environment was influenced significantly by fiscal policy measures, which contributed substantially to the mixed trends in sales volumes in the markets last year. The instruments used were tax cuts or increases, incentive programs and sales incentives, as well as import duties.

In addition, non-tariff trade barriers to protect the respective domestic automotive industry made the free movement of vehicles, parts and components more difficult. Protectionist tendencies were particularly evident where markets were on the decline.

**Europe/Other Markets**

New passenger car registrations in Western Europe rose by 5.8% in the reporting period to 14.0 million vehicles, the highest level since 2007. This better-than-expected trend was mainly attributable to the positive overall economic environment, low interest rates, low fuel prices and manufacturers' incentive programs. Double-digit growth rates were achieved in Italy (+15.4%) and Spain (+10.9%), especially due

to the release of pent-up demand for replacement vehicles. By contrast, growth in new passenger car registrations was relatively moderate in France, at 5.2%. Demand volume in the United Kingdom (+2.3%) was slightly higher than the record level of the previous year.

At 2.7 million vehicles, the number of new passenger car registrations in Central and Eastern Europe was down 2.3% year-on-year. The decline in Eastern Europe was mainly attributable to the Russian market, which contracted for the fourth year in succession (-11.7%) primarily because of the continuing weak economy and ongoing political tensions. By comparison, new passenger car registrations in the EU member states of Central Europe increased by a substantial 15.2% to 1.1 million units.

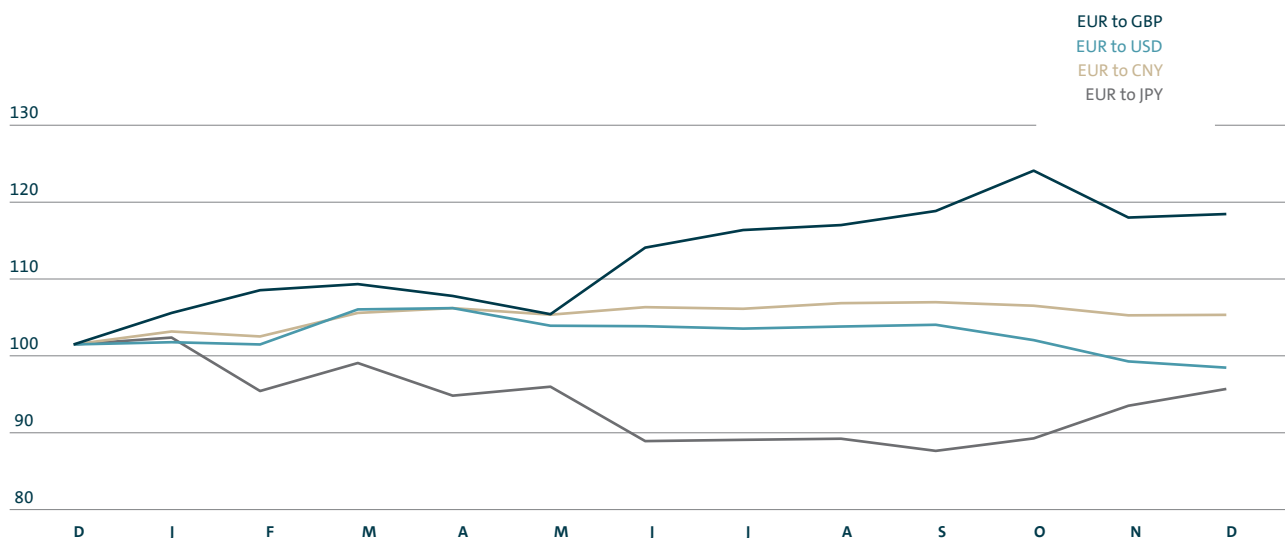
Passenger car sales in the South African market declined by 12.4% in the reporting period to 361 thousand vehicles, the lowest level since 2010. In addition to the weak economic environment, the main reasons for this decrease were low consumer confidence, high interest rates and double-digit growth in new car prices.

**Germany**

In Germany, 3.4 million new passenger vehicles were registered in 2016, 4.5% more than in the previous year. This positive demand trend was due in particular to higher real incomes, the strong labor market and attractive financing options. New passenger car registrations for both private (+6.8%) and commercial (+3.3%) customers contributed to this increase, which resulted in the highest passenger car

## EXCHANGE RATE MOVEMENTS FROM DECEMBER 2015 TO DECEMBER 2016

Index based on month-end prices: as of December 31, 2015 = 100



market volume since 2009. A slight increase in domestic production (up 0.7% to 5.7 million vehicles) contributed to the ongoing recovery of the German passenger car market, whereas passenger car exports (up 0.1% to 4.4 million vehicles) were on a par with the high levels of the previous year.

#### North America

At 21.1 million vehicles, sales of passenger cars and light commercial vehicles (up to 6.35 tonnes) in the North American markets were slightly higher in 2016 (+1.8%) than the record level of the prior year. In the USA, demand reached the record set in the previous year with 17.6 million vehicles sold (+0.5%). In addition to the strong labor market, high consumer confidence, low fuel prices and attractive financing and leasing conditions were the main factors in this stable market trend. Models from the SUV, pickup and van segments were the only ones to benefit from this environment (+7.2%), whereas the passenger car segment contracted substantially (-8.1%).

In both Canada (up 2.6% to 1.9 million vehicles) and Mexico (up 18.6% to 1.6 million vehicles), sales of passenger cars and light commercial vehicles continued to grow, topping the record of the prior year in both markets.

#### South America

The South American markets for passenger cars and light commercial vehicles fell by a substantial 11.5% in the reporting period, to 3.7 million units. This trend was mainly

due to the prolonged slump in Brazil, where the number of new registrations fell by 19.9% to 2.0 million vehicles, the fourth successive year of decline. This, the lowest number of vehicle registrations since 2006, was chiefly due to the recessionary economic environment, characterized by rising unemployment, lower real incomes and restricted access to loans. By contrast, Brazil's vehicle exports rose by 24.7% to 520 thousand units.

In Argentina, new registrations of passenger cars and light commercial vehicles increased by 9.8% from the previous year's low level to 677 thousand vehicles. High manufacturer discounts helped to boost demand.

#### Asia-Pacific

The passenger car market volume in the Asia-Pacific region rose by 11.9% in the reporting period to 35.3 million units. In terms of unit numbers, this was the highest increase in new vehicle registrations worldwide. The Chinese market was by far the biggest driver of this growth. The 22.9 million vehicles sold in China (+17.9%) represented a new record. One of the factors contributing to this growth was the tax relief on the purchase of vehicles with engine sizes of up to 1.6l introduced on October 1, 2015, from which attractively priced entry-level models in the SUV segment benefited most.

The number of new vehicle registrations in the Indian passenger car market reached 2.8 million units, up 7.0% year-on-year. This trend was driven by the positive economic environment and the large number of new models.

In Japan, new passenger cars registrations fell by 1.6% to 4.1 million vehicles, mainly because of a substantial drop in the mini passenger car segment (up to an engine size of 660 cm<sup>3</sup>).

#### MIXED REGIONAL DEMAND FOR COMMERCIAL VEHICLES

In 2016, demand for light commercial vehicles was up slightly overall on the previous year: in total, around 9.6 (9.5) million vehicles were registered worldwide.

In Western Europe, the number of new vehicle registrations rose by 10.0% during the year to 1.8 million units, driven by the region's positive economic performance. The markets in Italy (+28.9%), Spain (+11.6%) and France (+9.4%) recorded high growth rates. In Germany, the 2015 figure was significantly exceeded by 10.2%.

The markets in Central and Eastern Europe saw significant growth on the whole with 303 (287) thousand vehicle registrations. In Russia, ongoing political and economic tensions resulted once again in a decline in demand. The other markets in the region maintained or surpassed their prior-year results, with registrations in Poland in particular rising to 61 (52) thousand units.

In North and South America, the light vehicle market is reported as part of the passenger car market, which includes both passenger cars and light commercial vehicles.

Registrations of light commercial vehicles in the Asia-Pacific region increased to 6.6 million units in the reporting period (+1.9%). In China, the region's dominant market, demand for light commercial vehicles of 4.1 million units was up 4.4% on the prior-year figure. Tax relief for vehicles with engine sizes of up to 1.6l contributed to this growth. As a consequence of the sustained economic growth in India, more vehicles were registered than in 2015; here, 520 (481) thousand new units were registered. The market volume fell in Japan as a result of the persistently weak economic trend (-8.5%).

Global demand for mid-sized and heavy trucks with a gross weight of more than six tonnes was higher in fiscal year 2016 than in the previous year, with 2.3 million new vehicle registrations (+0.9%). The volume of vehicles rose by 0.5% in the markets that are relevant for the Volkswagen Group.

In Western Europe, the number of new truck registrations increased by 8.6% to a total of 280 thousand vehicles on the back of positive economic stimulus. The markets in Italy (+41.9%), France (+13.7%) and Spain (+11.6%) in particular recorded high growth rates. In Germany, Western Europe's largest market, the prior-year figure was exceeded by 3.9%.

Central and Eastern Europe saw demand rise by 10.3% to 129 thousand units. Registrations in Russia moved up 6.9% from a low prior-year level to 48 thousand vehicles, while Poland, among others, generated strong growth (+19.3%).

In North America, the slowdown in the US economy caused demand in the truck market to dwindle slightly; in this region, 488 (531) thousand mid-sized and heavy trucks were registered. The number of new registrations in the US market declined sharply.

South America saw a considerable decline in market volume compared with the previous year. Here, the number of new vehicle registrations fell by 25.0% to 95 thousand units. In Brazil, the region's largest market, demand for trucks, at 48 (68) thousand vehicles, was down substantially on the already low prior-year figure as a result of persistently weak economic output and high inflation rates. New vehicle registrations slumped in Argentina (-22.8%) due to pull-forward effects in 2015 attributable to the introduction of the Euro 5 emission standard in addition to the economic downturn.

At 545 (526) thousand new registrations, the volume of vehicles in the Asia-Pacific region – excluding the Chinese market – was higher than in 2015. Demand in India increased in the reporting period: a total of 292 thousand vehicles were registered, 9.9% more than in the previous year. This was due to the country's positive economic performance, demand for replacement vehicles and the improved investment climate. Demand in China, the world's largest truck market, surged in 2016 to a total of 600 thousand units from a weak prior-year level (+11.4%).

Demand for buses in the markets that are relevant for the Volkswagen Group was perceptibly lower than in the previous year. Negative economic trends in South America led to a marked decline in demand, though the markets in Central and Eastern Europe expanded considerably.

#### TRENDS IN THE MARKETS FOR POWER ENGINEERING

The markets for power engineering are subject to differing regional and economic factors. Consequently, their business growth trends are generally independent of each other.

The merchant shipbuilding market again experienced very muted order activity in the reporting period. Existing and further ongoing overcapacity had a negative impact on utilization levels of the entire merchant fleet. While bulk carriers were particularly affected by low freight rates, low transport rates and fierce competition triggered a further wave of consolidation in the container ship sector as

companies merged or were squeezed out of the market altogether. Despite the slight recovery in oil prices, the persistent overcapacity in the offshore sector continued to discourage investments in oil production, with the result that orders for new ships in this segment dried up almost completely. By contrast, demand for cruise ships and ferries rose. The trend toward gas-powered ships weakened somewhat in the reporting period due to the drop in liquid-fuel prices. Other reasons for this decrease were the lack of refueling infrastructure in some places and uncertainty as to future emission standards. The special market for government vessels continued on a positive trajectory. On the whole, the marine market volume was substantially lower year-on-year. China, South Korea and Japan remained the dominant shipbuilding countries, accounting for a global market share of more than 80% measured in terms of tonnage ordered. On account of reduced market volumes, all market segments are seeing considerably higher competitive pressure and a sharp drop in prices as a result.

Although demand for energy solutions continued to be strong in developing countries and emerging markets throughout the reporting period, the difficult economic environment and financing conditions led to noticeable delays in order placement. Regions such as the Middle East and Southeast Asia, and to an increasing degree South America, continue to be relevant for the regional markets for energy solutions. Overall, there was a slight year-on-year increase in demand for decentralized diesel and gas engine power plants. The shift away from oil-fired power plants toward dual-fuel and gas-fired power plants continued. The increasing pressure through competition and pricing is impacting on the earnings quality of the orders.

The market for the construction of turbomachinery is mainly dominated by investment projects in oil and gas, the processing industry and power generation. The persistently low oil price caused leading oil and gas companies to slash investment yet again, causing order placement to be further postponed or even canceled altogether. Thus far, the slight rise in oil prices recorded in the last months of the reporting period has not led to any recovery in demand. Demand for products from the processing industry and power generation remained generally weak as well. Overcapacity in some industries, such as steel-making, prevented any possible recovery in the corresponding markets. Insufficient capacity utilization at many manufacturers additionally intensified the level of competition. Overall, the market volume for turbomachinery in the reporting period was once again well below the prior-year level. Competition remains fierce and there is considerable pressure on prices.

On the whole, the after-sales market performed well. In particular, after-sales business for large-scale engines in the marine and power plant sector benefited from rising interest in long-term maintenance contracts.

#### DEMAND FOR FINANCIAL SERVICES

Demand for automotive-related financial services remained high in fiscal year 2016. In particular, there was an increase in demand for insurance and service products such as maintenance and servicing agreements, as customers in more advanced automotive-related financial services markets are putting greater focus on optimizing overall running costs. In the fleet segment, some customers moved beyond pure fleet operation to full mobility management using automotive financial service providers. There was also increased demand from both private and business customers for mobility services centered on vehicle usage rather than ownership.

In the European market, automotive-related financial services continued to enjoy rising popularity during the reporting period. The overall market development was positive in most European countries. Sales of financial services rose especially strongly in the UK, France, Spain and Italy. The UK's decision to leave the EU has not yet had a negative impact on local demand for financial services. The financial services business in Europe was also strengthened by a positive cross-border trend in demand for after-sales products such as insurance and products relating to wear and tear.

In 2016, the German market once again recorded growth in the financing and leasing business, mainly driven by the business customer segment. Alongside traditional products, there was a particular focus on automotive services.

In South Africa, demand for financial services products was stable despite a declining market for new vehicles. However, the macroeconomic environment resulted in a slight decline in lending to private customers.

Automotive financial services were also in high demand in North America. In the United States, the overall market once again performed positively. In particular, demand for leasing through captive financial service providers remained at a consistently high level. In Mexico, sales of financial services involving products such as extended warranties continued to be high.

The difficult macroeconomic and political situation in Brazil continued in 2016. This had a negative impact on the consumer credit business for new vehicles and sales of the country-specific financial services product Consorcio, a lottery-style savings plan. However, the negative trend abated slightly in the second half of the year. Despite the reforms initiated, the economic situation in Argentina remained difficult and continued to hold back sales of automotive-related financial services.

The performance of markets in the Asia-Pacific region during the reporting period was mixed. In China, the proportion of loan-financed vehicle purchases rose. Despite increasing restrictions on registrations in metropolitan areas, there is still considerable potential to acquire new customers for automotive-related financial services, particularly in the interior of the country. Demand stagnated in Japan and South Korea. In Australia, meanwhile, the central bank's policy of low interest rates stimulated overall demand for automotive-related financial services and service contracts.

The financial services market in the commercial vehicles business area performed positively again in Europe. Owing to the difficult economic situation in Brazil, the truck and bus business and the related financial services market declined further here. However, this negative trend tapered off slightly in the second half of the year.

#### NEW GROUP MODELS IN 2016

The Volkswagen Group launched a large number of attractive new models on the market in the reporting period, some of them based on the Modular Transverse Toolkit (MQB). The current product portfolio comprises 336 models. It covers almost all key segments and body types, with offerings from small cars to super sports cars in the passenger car segment, and from pickups to heavy trucks and buses in the commercial vehicles segment, as well as motorcycles. Our product portfolio is systematically geared to profitable growth and takes account of regional market and customer needs.

In 2016, the Volkswagen Passenger Cars brand launched the successor to the successful Tiguan SUV model on the market, with a striking design and technical innovations from the MQB. The Beetle family was upgraded and expanded to include the Beetle Dune with an off-road look. The popular up! and e-up! were also rejuvenated. The new flagship model Phideon celebrated its premiere in China. This locally produced luxury saloon for discerning Chinese customers impresses with its cutting-edge technology, elegant design and plush interior. The Magotan now boasts state-of-the-art MQB technology. The portfolio of vehicles offering spacious interiors was extended to include the Touran L and the Golf Sportsvan. The Lamando GTS made its first appearance with a

range of powerful engines and a sporty design. The C-Trek, which is based on the new Bora, complements the crossover portfolio. The Chinese versions of the Passat, Santana and Jetta were all updated. In South America, the product portfolio, which is tailored to the specific needs of the local market, was modernized and made even more attractive. The Voyage and Saveiro models were given an upgrade, while the TSI engine was added as an option for the up!, Golf and Tiguan models as of 2016.

The Audi brand systematically expanded its range of SUVs in 2016. The Q family was extended to include the new sporty compact entry-level model Q2, tapping into another new market segment for the brand. The robust Q7 series was supplemented by the Q7 e-tron, the world's first plug-in hybrid with quattro TDI drive. In addition, the successor to the dynamic A5 Coupé was launched. The A4 family was enhanced through the addition of the sporty S4 Saloon and S4 Avant S models, as well as the A4 allroad quattro. The revamped A3 family hit the market mid-year. In China, the A6 L – the enhanced, long-wheelbase version of the popular luxury class A6 Saloon – was unveiled in 2016. The A4 L and Q3 models produced in China were also upgraded.

ŠKODA launched the Superb Sportline on the European market in the reporting period. The Superb Combi debuted in Russia, while the brand introduced the new-generation Superb and updated Rapid in India.

SEAT started its product offensive in 2016 with the new SUV Ateca, followed in the course of the year by the particularly robust off-road version, the Ateca X-Perience.

Porsche's activities included the introduction of the Targa and Turbo versions of the new 911 generation, which boast, among other features, improved design and equipment levels. Porsche also presented the successors to the Boxster and Cayman models, as well as the second-generation Panamera, which has been redeveloped from the ground up. The dynamic Macan GTS was another model that became available as of 2016.

Bentley unveiled a new series in the reporting period, launching the Bentayga, the most luxurious SUV in the world. The Mulsanne was upgraded and a new version with a lengthened wheelbase was added. Bentley complemented its portfolio with two high-performance models – the Flying Spur V8 S and W12 S.

Super sports car manufacturer Lamborghini premiered the Huracán Spyder, which combines the technology and performance of the Huracán with the emotion of a Spyder. The Aventador Superveloce Roadster, the fastest and most exciting Lamborghini of all time, was also introduced.

Volkswagen Commercial Vehicles launched the updated version of the popular Amarok pickup in the year under review.



In 2016, Scania presented the new generation of its R-series and S-series trucks, boasting newly developed cabs and offering efficiency-enhancing services. The company also launched the automated gear-changing system Scania Opticruise for gas-powered vehicles and the Scania Interlink intercity coach.

MAN presented engines for its TG series that are considerably more fuel-efficient and high-performance, as well as the MAN EfficientLine 3, which has been optimized for efficiency. It also introduced a new modular concept for combined heat and power gas engine power plants in response to the growing demand in Europe for highly efficient, flexible power generation technologies.

Ducati launched two further versions of the Scrambler series: the Sixty2 and Flat Track Pro. The new XDiavel, Hyperstrada 939 and 959 Panigale models, among others, also debuted in 2016, as did the 1200 Enduro and 1200 Pike's Peak versions of the Multistrada series.

#### VOLKSWAGEN GROUP DELIVERIES

In fiscal year 2016, the Volkswagen Group increased its deliveries to customers worldwide by 3.7% and reached a new all-time high of 10,296,997 vehicles. This means that we exceeded the mark of 10 million units sold for the second time since 2014. The chart on the next page shows how deliveries changed from month to month and compares each monthly figure to the same month of the previous year. Deliveries of passenger cars and commercial vehicles are reported separately in the following.

#### VOLKSWAGEN GROUP DELIVERIES<sup>1</sup>

	2016	2015	%
Passenger Cars	9,635,484	9,320,687	+ 3.4
Commercial Vehicles	661,513	609,909	+ 8.5
<b>Total</b>	<b>10,296,997</b>	<b>9,930,596</b>	<b>+ 3.7</b>

<sup>1</sup> Deliveries for 2015 have been updated to reflect subsequent statistical trends. The figures include the Chinese joint ventures.

#### PASSENGER CAR DELIVERIES WORLDWIDE

With its passenger car brands, the Volkswagen Group has a presence in all relevant automotive markets around the world. The Group's key sales markets currently include Western Europe, China, the USA, Mexico and Brazil. Our wide range of attractive and efficient vehicles gives us a strong position in a persistently challenging competitive

environment. The Group recorded encouraging growth in many key markets.

Deliveries of passenger cars to customers rose during the reporting year to 9,635,484 units amid continued difficult conditions in relevant markets such as Brazil and Russia. This was an increase of 314,797 vehicles or 3.4% on 2015. The passenger car market as a whole expanded by 5.4% in fiscal year 2016, which meant that the Volkswagen Group's share of the global market declined slightly to 11.9 (12.2)%. The Group recorded the highest absolute growth in China. Our sales figures in Brazil, Russia and other countries were impacted by low demand. The diesel issue affected the individual markets, mainly in the USA and Canada, in different ways during the reporting year, depending on the brand. Nearly all brands surpassed the previous year's delivery figures, with the Volkswagen Passenger Cars brand recording the strongest growth in absolute terms. Audi, ŠKODA, and Porsche set new records, as did Bentley and Lamborghini.

The table on page 107 gives an overview of passenger car deliveries to customers of the Volkswagen Group in the regions and the key individual markets. The demand trends for Group models in these markets and regions are described in the following sections.

#### Deliveries in Europe/Other markets

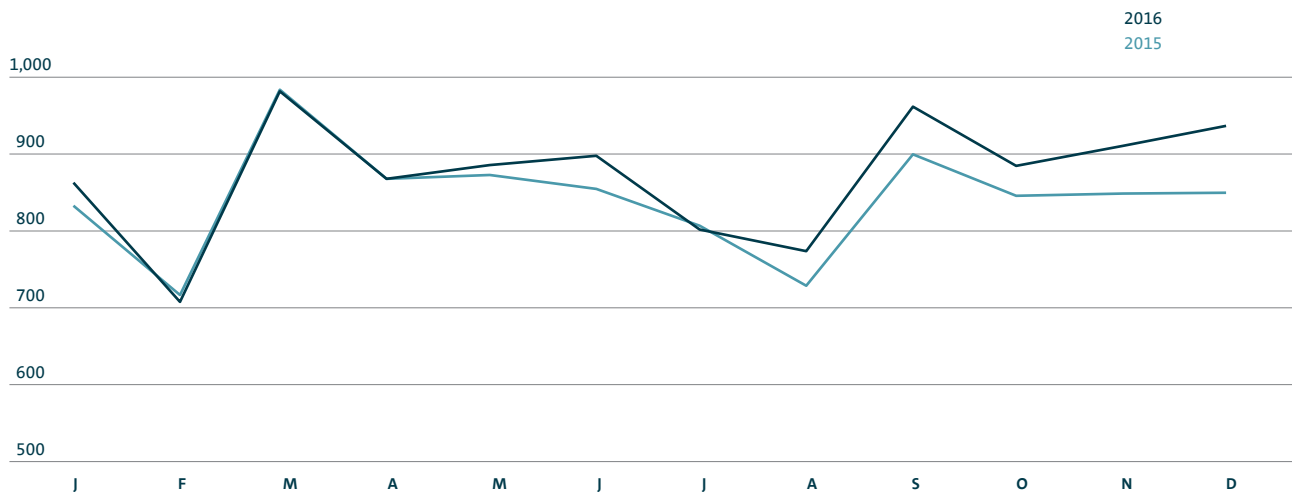
In 2016, the passenger car market as a whole expanded by 5.8% in Western Europe. The Volkswagen Group handed over 3,114,030 vehicles to customers here, 1.7% more than in the previous year. Demand for Group models was up year-on-year in virtually all major markets in this region. The Touran, Audi A4, Audi Q3, Audi Q7, ŠKODA Superb as well as Porsche's Boxster and Cayman models saw the highest growth rates. The ŠKODA Fabia and Porsche Macan models were also very popular. The new Tiguan and the new SEAT Ateca were very well received by the market. The Group's first luxury SUV, the Bentley Bentayga, celebrated its successful market debut. The Group's share of the passenger car market in Western Europe was 22.3 (23.2)%.

In the passenger car markets of Central and Eastern Europe, which declined overall, we handed over 5.8% more vehicles to customers in 2016 than in the previous year. We recorded growth in almost all markets, with the highest increases recorded in Poland and the Czech Republic. In Russia, the continuing weak economic situation and political tensions caused a decline in our deliveries to customers. Demand was highest for the Polo, ŠKODA Rapid and ŠKODA Octavia models. Our share of the passenger car market in Central and Eastern Europe rose to 21.9 (20.2)%.



## VOLKSWAGEN GROUP DELIVERIES BY MONTH

Vehicles in thousands



In South Africa, the number of Volkswagen Group vehicles delivered to customers fell by 13.0% year-on-year in 2016. The passenger car market as a whole declined by 12.4% in the same period. Demand was highest for the Polo.

Demand for Volkswagen Group passenger cars in the markets of the Middle East region in 2016 was up by 0.7% compared with the previous year. The Polo, Golf, Passat and ŠKODA Octavia models were particularly popular.

## Deliveries in Germany

The German passenger car market continued its growth in the 2016 fiscal year, expanding by 4.5%. The Volkswagen Group handed over 1,136,971 vehicles to customers in its home market. This was slightly fewer than in the previous year (-0.9%). The Touran, Audi Q7, Audi Q5 and ŠKODA Superb models saw the highest growth rates. The Tiguan, Audi A4 and SEAT Ateca models were also very popular. In the registration statistics of the Kraftfahrt-Bundesamt (KBA – German Federal Motor Transport Authority), eight Group models led their respective segments at the end of 2016: the up!, Polo, Golf, Tiguan, Touran, Passat, Audi A6 and Porsche 911. The Golf continued to top the list of the most popular passenger cars in Germany in terms of registrations.

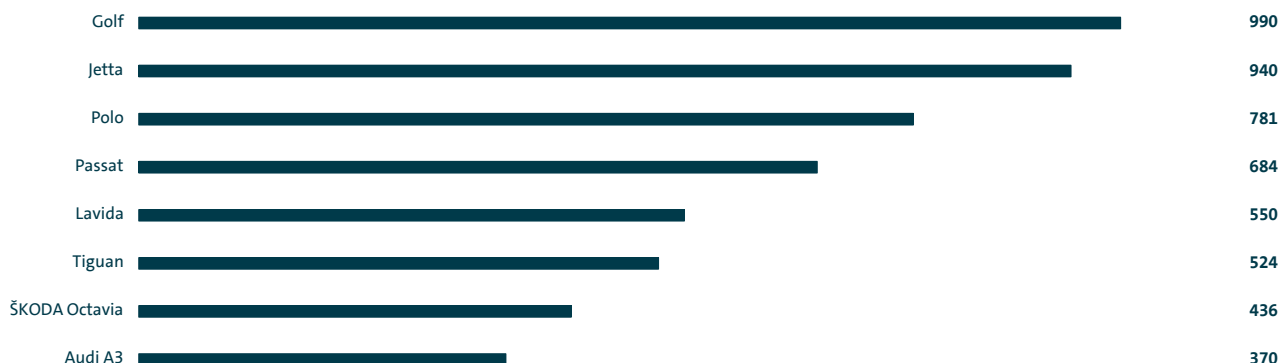
## Deliveries in North America

In North America, the Volkswagen Group delivered 928,033 vehicles to customers in a slightly growing overall market for passenger cars and light commercial vehicles in the reporting year. This was 0.6% more than in the previous year. The Group's market share was 4.4 (4.5)%. The Jetta remained the Group's best-selling model in North America.

Demand for Volkswagen Group models on the US market was down 2.6% year-on-year in 2016, primarily as a result of the diesel issue. The overall market remained steady year-on-year (+0.5%) over this period. Models in the SUV and pickup segments remained in particularly high demand. The Tiguan, Audi A4, Audi Q3, Audi Q7 and Porsche Macan models, among others, registered increases in demand.

In the growing Canadian market, we handed over 5.6% fewer vehicles to customers in the reporting year than in 2015, mainly as a consequence of the diesel issue. The most sought-after Group model was the Jetta, followed by the Golf. The Audi A4, Audi Q7 and Porsche Macan models enjoyed rising demand.

In Mexico, the strong momentum of the market as whole continued in 2016. Group sales were up 12.8% year-on-year. The Vento, Jetta, Gol and SEAT Ibiza models were especially popular.

**WORLDWIDE DELIVERIES OF THE GROUP'S MOST SUCCESSFUL MODEL RANGES IN 2016***Vehicles in thousands***Deliveries in South America**

Conditions in the South American markets for passenger cars and light commercial vehicles were very challenging in 2016. Amid sharp overall declines in markets in this region, the Volkswagen Group delivered 362,343 vehicles to customers, 26.0% fewer than in the already weak previous year. The Volkswagen Group's share of the passenger car market in this region declined to 10.5 (12.5)%.

In the rapidly deteriorating Brazilian market, 2016 saw demand for Group models decline by 34.6% year-on-year. The up!, Fox, Gol and Saveiro witnessed the strongest sales figures.

In Argentina, the market as a whole continued its recovery in the reporting year. The Volkswagen Group sold 5.6% fewer vehicles here than a year earlier. The Group models with the highest numbers of registrations in Argentina remained the Gol and Suran.

**Deliveries in the Asia-Pacific region**

The passenger car markets in the Asia-Pacific region experienced the largest growth in absolute terms of any world region in 2016. Demand for Volkswagen Group models there increased by 9.8% year-on-year to 4,282,656 units; the market share in this region was 12.1 (12.4)%.

China, the world's largest single market, was again the growth driver of the Asia-Pacific region in the reporting year, recording the highest absolute increase. Attractively priced entry-level models in the SUV segment remained highly sought after. The Volkswagen Group delivered 12.2% more vehicles to customers in China than in the prior-year period. The Jetta, Lavida und Sagitar models were particularly popular. The Lamando, Santana, Audi A3, Audi Q3, ŠKODA Superb and Porsche Macan models also recorded encouraging growth rates. The new versions of the Bora, Touran, Magotan, Audi A4 L and Audi A6 L models and the locally produced Golf Sportsvan were successfully launched in the market.

In the growing passenger car market in India, 4.7% fewer Volkswagen Group vehicles were sold in the reporting year than in 2015. The most popular Group model in India was the Polo. The Ameo was successfully launched in the market.

In Japan, sales of Volkswagen Group vehicles were down 8.8% on the prior-year figure. The total market volume declined by 1.6% in the same period. Demand was highest for the Polo and Golf models.

PASSENGER CAR DELIVERIES TO CUSTOMERS BY MARKET<sup>1</sup>

	DELIVERIES (UNITS)		CHANGE
	2016	2015	(%)
<b>Europe/Other markets</b>	<b>4,062,452</b>	<b>4,006,105</b>	<b>+1.4</b>
<b>Western Europe</b>	<b>3,114,030</b>	<b>3,062,371</b>	<b>+1.7</b>
of which: Germany	1,136,971	1,147,484	-0.9
United Kingdom	523,111	521,345	+0.3
France	249,145	252,530	-1.3
Spain	244,990	235,141	+4.2
Italy	238,537	207,821	+14.8
<b>Central and Eastern Europe</b>	<b>592,275</b>	<b>559,946</b>	<b>+5.8</b>
of which: Russia	155,672	164,653	-5.5
Czech Republic	134,926	126,886	+6.3
Poland	122,622	104,772	+17.0
<b>Other markets</b>	<b>356,147</b>	<b>383,788</b>	<b>-7.2</b>
of which: Turkey	173,965	164,787	+5.6
South Africa	78,897	90,659	-13.0
<b>North America</b>	<b>928,033</b>	<b>922,774</b>	<b>+0.6</b>
of which: USA	591,063	607,096	-2.6
Mexico	238,946	211,845	+12.8
Canada	98,024	103,833	-5.6
<b>South America</b>	<b>362,343</b>	<b>489,636</b>	<b>-26.0</b>
of which: Brazil	231,196	353,508	-34.6
Argentina	92,257	97,775	-5.6
<b>Asia-Pacific</b>	<b>4,282,656</b>	<b>3,902,172</b>	<b>+9.8</b>
of which: China	3,975,071	3,542,467	+12.2
Japan	83,109	91,153	-8.8
India	66,046	69,323	-4.7
<b>Worldwide</b>	<b>9,635,484</b>	<b>9,320,687</b>	<b>+3.4</b>
Volkswagen Passenger Cars	5,980,307	5,823,414	+2.7
Audi	1,867,738	1,803,246	+3.6
ŠKODA	1,126,477	1,055,501	+6.7
SEAT	408,703	400,037	+2.2
Bentley	11,023	10,100	+9.1
Lamborghini	3,457	3,245	+6.5
Porsche	237,778	225,121	+5.6
Bugatti	1	23	-95.7

<sup>1</sup> Deliveries for 2015 have been updated to reflect subsequent statistical trends. The figures include the Chinese joint ventures.

**COMMERCIAL VEHICLE DELIVERIES**

The Volkswagen Group delivered a total of 661,513 commercial vehicles to customers worldwide in 2016, 8.5% more than in the previous year. Trucks accounted for 165,806 units (+2.4%) and buses for 17,775 units (+3.7%). Sales by the Volkswagen Commercial Vehicles brand were up 10.9% on the previous year, with 477,932 vehicles delivered. The MAN brand handed over 102,235 vehicles to customers, 0.2% fewer than in 2015, while the Scania brand's deliveries were up 6.2% year-on-year at 81,346 units.

In Western Europe, deliveries were up 13.6% on the previous year at 418,931 vehicles as a result of the sustained economic recovery. Of this total, 327,225 were light commercial vehicles, 86,472 were trucks and 5,234 were buses. The Transporter and Caddy were the most sought-after Group models in Western European markets.

We handed over 65,436 vehicles to customers in Central and Eastern Europe in the period from January to December 2016. This was 18.2% more than in the previous year. Of this figure, 36,484 were light commercial vehicles, 28,184 were trucks and 768 were buses. In Russia, the region's largest market, we delivered 11,300 vehicles. This was 15.4% more than in the previous year. The Transporter and the Caddy were the Group models experiencing the highest demand in Central and Eastern Europe.

In the Other markets, deliveries of Volkswagen Group commercial vehicles fell by 5.3% to a total of 70,927 units: 51,784 light commercial vehicles, 16,227 trucks and 2,916 buses.

Deliveries in North America amounted to 11,140 vehicles (+22.4%), which were handed over almost exclusively to customers in Mexico. Of this figure, 8,479 were light commercial vehicles, 669 were trucks and 1,992 were buses.

The Volkswagen Group sold a total of 59,196 units in South America (-14.2%), of which 32,258 were light commercial vehicles, 22,828 trucks and 4,110 buses. Once again, the Amarok was particularly popular. The persistently difficult economic situation and the difficult financing conditions in Brazil led to a 27.3% decrease in deliveries; 8,441 light commercial vehicles, 16,274 trucks and 1,817 buses were handed over to customers in the country.

In the Asia-Pacific region, the Volkswagen Group delivered 35,883 vehicles to customers in the reporting period; 21,702 light commercial vehicles, 11,426 trucks and 2,755 buses. This was 8.9% more than in the previous year. The Transporter and the Amarok were the most popular Group models. In China, sales were up 14.7% on the previous year at 7,071 vehicles. Of this total, 3,980 were light commercial vehicles, 2,755 were trucks and 336 were buses.

**COMMERCIAL VEHICLE DELIVERIES TO CUSTOMERS BY MARKET<sup>1</sup>**

	DELIVERIES (UNITS)		CHANGE
	2016	2015	(%)
<b>Europe/Other markets</b>	<b>555,294</b>	<b>498,906</b>	<b>+11.3</b>
Western Europe	418,931	368,622	+13.6
Central and Eastern Europe	65,436	55,348	+18.2
Other markets	70,927	74,936	-5.3
<b>North America</b>	<b>11,140</b>	<b>9,099</b>	<b>+22.4</b>
<b>South America</b>	<b>59,196</b>	<b>68,958</b>	<b>-14.2</b>
of which: Brazil	26,532	36,513	-27.3
<b>Asia-Pacific</b>	<b>35,883</b>	<b>32,946</b>	<b>+8.9</b>
of which: China	7,071	6,165	+14.7
<b>Worldwide</b>	<b>661,513</b>	<b>609,909</b>	<b>+8.5</b>
Volkswagen Commercial Vehicles	477,932	430,874	+10.9
Scania	81,346	76,561	+6.2
MAN	102,235	102,474	-0.2

<sup>1</sup> Deliveries for 2015 have been updated to reflect subsequent statistical trends.

#### DELIVERIES IN THE POWER ENGINEERING SEGMENT

Orders in the Power Engineering segment are usually part of major investment projects. Lead times typically range from just under one year to several years, and partial deliveries as construction progresses are common. Accordingly, there is a time lag between incoming orders and sales revenue from the new construction business.

Sales revenue in the Power Engineering segment was largely driven by Engines & Marine Systems and Turbomachinery, which together generated almost three quarters of the overall revenue volume. Eight engines were delivered for a new power plant in Nicaragua, for instance. The power plant will have an output of 140 MW once it has been completed and put into operation and will cover around 10% of Nicaragua's total energy needs.

#### ORDERS RECEIVED IN THE PASSENGER CARS SEGMENT IN WESTERN EUROPE

Due to the positive development of the Western European markets, demand for passenger cars increased in fiscal year 2016 compared with the previous year. Incoming orders in the reporting period were 1.4% higher than in 2015. While orders received in Germany were down slightly (-1.7%), other key markets in this region contributed to this increase.

#### ORDERS RECEIVED FOR COMMERCIAL VEHICLES

Demand for the Volkswagen Group's light commercial vehicles in the Western European markets rose year-on-year in 2016. At 338,858 units, orders received were up 16.5% compared with the previous year.

New orders for mid-sized and heavy trucks and buses witnessed a positive trend overall in 2016, with orders received for 190,573 vehicles (+3.2%). In Western Europe, our main sales market, positive economic stimulus gave a boost to incoming orders. In South America, however, the deterioration in the economic situation had a negative impact on the order intake.

#### ORDERS RECEIVED IN THE POWER ENGINEERING SEGMENT

The long-term performance of the Power Engineering business is determined by the macroeconomic environment. Individual major orders lead to fluctuations in incoming orders during the year that do not correlate with these long-term trends.

Orders received in the Power Engineering segment in 2016 amounted to €3.3 (3.4) billion. Engines & Marine Systems and Turbomachinery generated the most new

orders, together accounting for almost three-quarters of the order volume. For example, a Turkish energy company ordered twelve engines with a combined output of 227 MW for its floating power plants, which provide a flexible solution to energy bottlenecks. A German energy provider awarded a contract for the construction of a gas engine power plant with cogeneration. The plant will be powered by three MAN gas engines. As well as electricity, it will also generate up to 30 MW for district heating.

#### VOLKSWAGEN GROUP FINANCIAL SERVICES

The Financial Services Division combines the Volkswagen Group's dealer and customer financing, leasing, banking and insurance activities, fleet management and mobility offerings. The division comprises Volkswagen Financial Services and the financial services activities of Scania, Porsche and Porsche Holding Salzburg.

The number of new contracts signed worldwide in the Customer Financing/Leasing and Service/Insurance areas rose by 13.1% to 7.1 million contracts in 2016. At 17.4 million, the total number of contracts at the end of 2016 exceeded the figure at the prior-year reporting date by 10.0%. The underlying contract types were modified according to their significance. The number of contracts in the Customer Financing/Leasing area was up by 6.8% to 9.5 million, while it increased by 14.1% to 8.0 million contracts in the Service/Insurance area. The ratio of leased or financed vehicles to Group deliveries (penetration rate) in the Financial Services Division's markets rose to 33.3 (31.5)% in the reporting period.

In Europe/Other markets, 5.2 million new contracts were signed in the reporting period, 14.1% more than in 2015. The number of contracts was up 10.4% to 12.4 million as of December 31, 2016. This included 5.9 million contracts in the Customer Financing/Leasing area, an increase of 7.2% on the figure for 2015. The share of leased or financed vehicles increased from 44.3% to 46.8% of deliveries.

The total number of contracts in the Financial Services Division in North America stood at 2.8 million (+13.0%). Of this figure, 1.8 million contracts were attributable to the Customer Financing/Leasing area, 6.1% more than in the previous year. With 988 thousand new contracts, the number of new contracts rose by 7.6% compared with the previous year. The penetration rate in North America increased to 63.3 (61.8)%.

In South America, 197 thousand new contracts were signed in the reporting period (-27.2%). The number of contracts was down 16.3% year-on-year to 647 thousand

contracts as of year-end 2016. The majority of these were attributable to the Customer Financing/Leasing area. The penetration rate in South America was 30.4 (35.5)%.

In the Asia-Pacific region, 740 thousand new contracts were signed in the reporting year, an increase of 33.6%. The total number of contracts amounted to 1.5 million (+16.6%), of which 1.2 million contracts were attributable to the Customer Financing/Leasing area (+22.5%). The share of leased or financed vehicles in the region rose from 11.6% to 15.1% of deliveries.

**SALES TO THE DEALER ORGANIZATION**

In the reporting period, the Volkswagen Group’s sales to the dealer organization worldwide – including the Chinese joint ventures – amounted to 10,391,113 vehicles, up 3.8% on the prior-year figure. The increase of 4.6% in unit sales outside Germany is primarily attributable to stronger demand in Western Europe and Central Europe, as well as in China. In Germany, the number of vehicles sold decreased by 1.7%. At 12.1%, the proportion of the Group’s sales accounted for by Germany was lower than in 2015 (12.8%).

The Polo, Golf, Jetta and Passat were our biggest sellers last year. The Touran, Lamando, Lavidia, Jetta and Tiguan models, the Audi A4 family, the Audi Q3, Q7, the ŠKODA Fabia, Rapid and Superb as well as the SEAT Alhambra and Ateca saw the fastest growth in demand. The Porsche Cayman, Boxster, 911 and Macan models were also very well received by the market.

**PRODUCTION**

The Volkswagen Group produced 10,405,092 vehicles worldwide in fiscal year 2016, 3.9% more than in the previous year. In total, our Chinese joint ventures produced 13.9% more units than in the year before. The percentage of the Group’s total production accounted for by Germany was lower than in 2015, at 25.8 (26.8)%. Our plants worldwide produced an average of 43,186 vehicles per working day, an increase of 3.1% on the prior-year level. The Volkswagen Group production figures do not include the Crafter models built in the Daimler plants.

**INVENTORIES**

Global inventories at Group companies and in the dealer organization were higher at the end of the reporting period than at year-end 2015, mainly due to demand-induced stock building in China and Western Europe.

**EMPLOYEES**

Including the Chinese joint ventures, the Volkswagen Group employed an average of 619,346 people in fiscal year 2016, an increase of 2.5% year-on-year. Our companies in Germany employed 279,993 people on average in 2016; at 45.2 (45.6)%, their share of the headcount was slightly below the level of the previous year. The Volkswagen Group had 601,443 active employees (+2.8%) as of December 31, 2016. In addition, 5,782 employees were in the passive phase of their partial retirement and 19,490 young people were in vocational traineeships (+4.5%). The Volkswagen Group’s headcount was 626,715 employees (+2.7%) at the end of the reporting period. Significant factors for the increase in employees were the recruitment of specialists, particularly in Germany and China, volume-driven growth outside of Germany and the expansion of the workforce in our new plants in Mexico and Poland. A total of 281,518 people were employed in Germany (+1.0%), while 345,197 were employed abroad (+4.2%).

**EMPLOYEES BY DIVISION/BUSINESS AREA**

as of December 31, 2016



# Shares and Bonds

**Volkswagen AG's ordinary and preferred shares underperformed the market as a whole in 2016 in a volatile market environment.**

## EQUITY MARKETS

Prices on the international equity markets experienced volatility in the reporting period. The DAX recorded a slight increase overall. In particular, recurring concerns about the economic performance of important industrialized nations, whether the United Kingdom would remain in the EU, the development of the oil price and the central banks' monetary policy caused considerable volatility in the markets.

The beginning of the first quarter saw capital market participants become more unsettled due to the low oil price and falling prices on the Chinese stock market in response to a slowdown in Chinese economic growth. In mid-January, prices were temporarily propped up by hopes that the European Central Bank (ECB) would further loosen its monetary policy, but subsequently continued their downward trend in the wake of negative economic data from China. In mid-February, the DAX began to recover on the strength of an expected stabilization in the oil price and positive economic data from the USA. Concerns about whether the United Kingdom would remain in the EU caused prices to drop temporarily. Prices recovered over the further course of the first quarter as the ECB expanded its bond-buying program and cut its key interest rate.

Fears of an appreciation of the euro and deteriorating corporate data from Germany caused prices to decline at the beginning of the second quarter. The German benchmark index staged a temporary recovery in mid-April on the back of the rising oil price, which is usually regarded as a positive indicator for global economic growth, and favorable economic data from China. May saw prices move sideways before rising late in the month, buoyed by a further oil price increase.

Despite uncertainty over the United Kingdom's continued membership of the EU, the DAX was propped up for a time in June by hopes that the US Federal Reserve would continue its loose monetary policy. The referendum at the end of June, which resulted in the British public voting to leave the EU, led to sharp falls in stock prices.

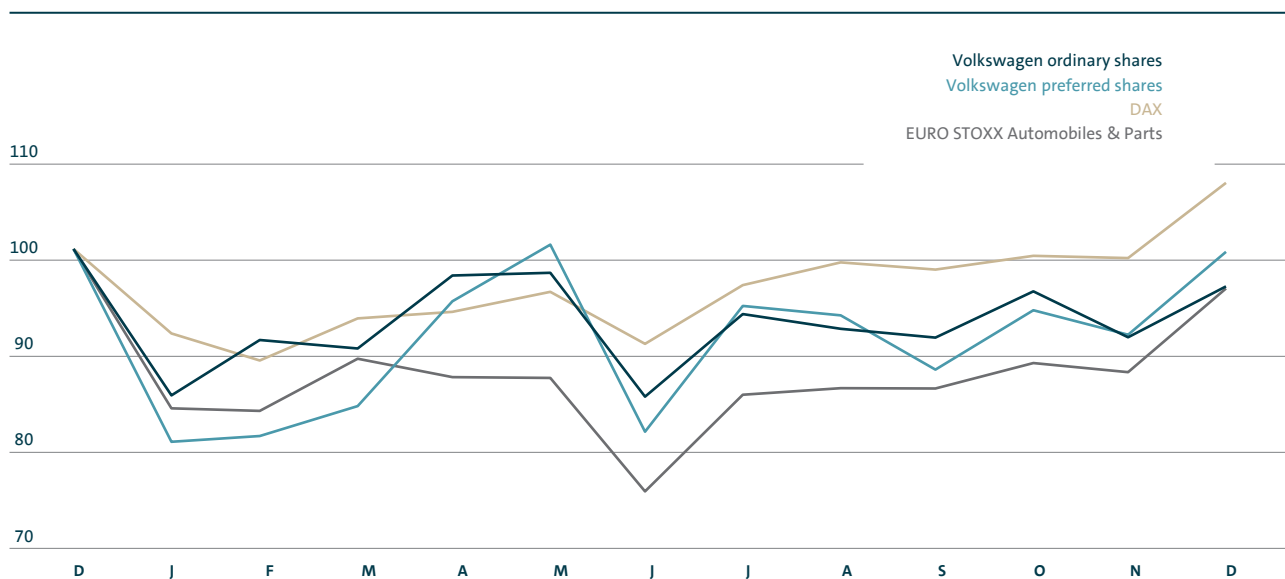
Uncertainties in the Italian banking system prompted a decline in the German benchmark index at the beginning of the third quarter. The DAX rose in mid-July on the back of speculation about rate cuts in the UK, strong labor market data in the US and rumors that the major US bank JP Morgan would prop up Italy's banking system. In August, the Bank of England cut its key interest rate and announced a program to buy up government and corporate bonds. This, along with hopes of a gradual increase in interest rates in the USA, caused share prices to rise. Following a temporary dip, prices climbed over the further course of the third quarter, buoyed by the continued loose monetary policy of the Bank of Japan and the US Federal Reserve.

Reports about the banking sector weighed on the markets at the start of the fourth quarter. Positive economic data from China caused stock prices to recover in mid-October. Further on in the quarter, uncertainty in connection with the US presidential election and the referendum on constitutional changes in Italy generated price volatility. The ECB's continuation of its expansionary monetary policy and the weak euro gave share prices a boost in December.

At the end of 2016, the DAX had reached 11,481 points, an increase of 6.9% on the previous year's figure. The EURO STOXX Automobiles & Parts closed the year at 521 points, 4.1% lower than on the last day of trading in 2015.

**SHARE PRICE DEVELOPMENT FROM DECEMBER 2015 TO DECEMBER 2016**

Index based on month-end prices: December 31, 2015 = 100

**MOVEMENTS IN THE PRICE OF VOLKSWAGEN'S SHARES**

On the whole, Volkswagen AG's ordinary and preferred shares declined in 2016 amid considerable volatility, underperforming the overall market but outperforming the automotive sector.

In the first quarter, both classes of shares lagged the downward market environment in a highly volatile environment. This was due to speculation about the impact of the diesel issue in addition to general economic data. The press release issued at the beginning of February stating that Volkswagen's operating profit before special items for fiscal year 2015 was on a level with the previous year had a stabilizing effect on share prices. In March, positive sales and business figures released by individual Group brands led the shares to gain ground, some of which was lost again towards the end of the first quarter.

In the period from April to June, Volkswagen's shares followed the market trend, which saw a decline overall. This was due to speculation about the impact of the diesel issue in addition to general economic data. In April, prices stabilized following the news that an agreement in principle in connection with the diesel issue had been reached in the USA, as well as the publication of the Volkswagen Group's annual report. In a market environment dominated by

uncertainty, prices were shored up in June by the presentation of the new TOGETHER – Strategy 2025 and the announcement that Volkswagen had reached settlement agreements in the USA.

In the third quarter, the prices of Volkswagen shares tracked the market uptrend but continued to trail the market. Speculation about further developments in the negotiations and the preliminary settlement agreements in the USA in connection with the diesel issue as well as uncertainty about additional legal risks impacted on the price performance of Volkswagen's shares.

In the fourth quarter, both classes of shares largely made up for their losses during the year to date. Strong delivery figures, approval of the settlement agreements reached in the USA, the announcement of the pact for the future and the Volkswagen Passenger Cars brand's Transform 2025+ strategy as well as expectations that the diesel issue will be clarified in relation to 3.0l diesel engines had a positive effect on stock prices.

**■ FURTHER INFORMATION ON VOLKSWAGEN SHARES**  
[www.volkswagenag.com/ir](http://www.volkswagenag.com/ir)



Volkswagen AG's preferred shares reached their highest daily closing price for the year of €138.80 on December 21, 2016. They recorded their lowest closing price for the reporting period of €94.00 on February 11, 2016. The Company's preferred shares closed the end of 2016 at €133.35, down 0.3% on the 2015 closing price.

Volkswagen's ordinary shares reached their highest closing price of €144.20 on December 21, 2016 as well. They also recorded their lowest daily closing price for the year (€108.95) on February 11, 2016. The ordinary shares were trading at €136.75 on the last day of trading in 2016, down 3.9% on the price at the end of 2015.

Additional Volkswagen share data, plus corporate news, reports and presentations can be downloaded from our website at [www.volkswagenag.com/ir](http://www.volkswagenag.com/ir).

#### SHAREHOLDER STRUCTURE AT DECEMBER 31, 2016

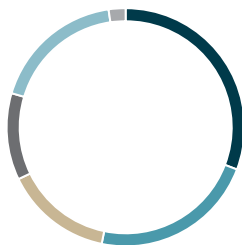
Volkswagen AG's subscribed capital amounted to €1,283,315,873.28 at the end of the reporting period. The shareholder structure of Volkswagen AG as of 31 December, 2016 is shown in the chart on this page.

The distribution of voting rights for the 295,089,818 ordinary shares was as follows at the reporting date: Porsche Automobil Holding SE, Stuttgart, held 52.2% of the voting rights. The second-largest shareholder was the State of Lower Saxony, which held 20.0% of the voting rights. Qatar Holding LLC was the third-largest shareholder, with 17.0%. The remaining 10.8% of ordinary shares were attributable to other shareholders.

Notifications of changes in voting rights in accordance with the Wertpapierhandelsgesetz (WpHG – German Securities Trading Act) are published on our website at [www.volkswagenag.com/ir](http://www.volkswagenag.com/ir).

#### SHAREHOLDER STRUCTURE AT DECEMBER 31, 2016

*as a percentage of subscribed capital*



Porsche Automobil Holding SE	30.8
Foreign institutional investors	22.5
Qatar Holding LLC	14.6
State of Lower Saxony	11.8
Private shareholders/Others	18.1
German institutional investors	2.3

#### DIVIDEND POLICY

Our dividend policy matches our financial strategy. In the interests of all stakeholders, we aim for continuous dividend growth so that our shareholders can participate appropriately in our business success. The proposed dividend amount therefore reflects our financial management objectives – in particular, ensuring a solid financial foundation as part of the implementation of our strategy.

The Board of Management and Supervisory Board of Volkswagen AG are proposing a dividend of €2.00 per ordinary share and €2.06 per preferred share. On this basis, the total dividend for fiscal year 2016 amounts to €1.0 (0.1) billion. The distribution ratio is based on the Group's earnings after tax attributable to Volkswagen AG shareholders. This amounts to 19.7% for the reporting period and was negative in the previous year. In our new Group strategy we aim to achieve a distribution ratio of 30%.

#### DIVIDEND YIELD

Based on the dividend proposal for the reporting period, the dividend yield on Volkswagen ordinary shares is 1.5 (0.1)%, measured by the closing price on the last trading day in 2016. The dividend yield on preferred shares is 1.5 (0.1)%.

The current dividend proposal can be found in the chapter entitled "Volkswagen AG (condensed, according to the German Commercial Code)", on page 137 of this annual report.

#### EARNINGS PER SHARE

Basic earnings per ordinary share were €10.24 (–3.20) in fiscal year 2016. Basic earnings per preferred share were €10.30 (–3.09). In accordance with IAS 33, the calculation is based on the weighted average number of ordinary and preferred shares outstanding in the reporting period. Since the number of basic and diluted shares is identical, basic earnings per share correspond to diluted earnings per share.

See also note 11 to the Volkswagen consolidated financial statements for the calculation of earnings per share.

#### ANNUAL GENERAL MEETING

The 56th Annual General Meeting of Volkswagen AG was held at the Hanover Exhibition Center on June 22, 2016. The ordinary shareholders of Volkswagen AG accepted the proposal of the Board of Management and the Supervisory Board to pay a dividend of €0.11 per ordinary share and €0.17 per preferred share with a majority of 99.98%. With over 90% of the voting capital present, they also formally approved the actions of the Board of Management and Supervisory Board.

In addition, the ordinary shareholders of Volkswagen AG elected PricewaterhouseCoopers AG Wirtschaftsprüfungsgesellschaft (PwC) as the auditors for the single-entity and consolidated financial statements for fiscal year 2016 and as the auditors to review the condensed consolidated financial statements and interim management report for the first six months of 2016, for the period up to September 30, 2016 and for the first quarter of fiscal year 2017.

The Annual General Meeting also rejected the motions added to the agenda concerning the appointment of a special auditor in accordance with section 142(1) of the Aktiengesetz (AktG – German Stock Corporation Act) as well as the further motions raised in the course of the meeting.

Ms. Annika Falkengren's scheduled term of office and the terms of office of the court-appointed members of the Supervisory Board – Dr. Louise Kiesling and Mr. Hans Dieter Pötsch – expired at the end of the Annual General Meeting. The Annual General Meeting elected all three members to a full term of office in the Supervisory Board. Mr. Akbar Al Baker, likewise a shareholder representative on the Supervisory Board of Volkswagen AG, stepped down from his office with effect from the end of the Annual General Meeting. The Annual General Meeting elected Dr. Hessa Sultan Al-Jaber, representing the Qatar Investment Authority (QIA), to replace him for the remainder of his term of office. With Ms. Al-Jaber, Ms. Falkengren and Dr. Kiesling, three of the ten shareholder representative seats on the supervisory body are filled by women.

#### INVESTOR RELATIONS ACTIVITIES

On the one hand, investor relations activities in fiscal year 2016 were dominated mainly by developments in connection with the diesel issue. On the other hand, focal issues were the Volkswagen Group's future program TOGETHER – Strategy 2025, the conclusion of the pact for the future and the Volkswagen Passenger Cars brand's TRANSFORM 2025+ strategy. We also briefed capital market participants on our activities in the Chinese market at the Volkswagen Group China Investor Presentation.

In fiscal year 2016, the Investor Relations team provided extensive information to investors and analysts in all key financial markets worldwide about the strategic focus, current business performance and future prospects of the Volkswagen Group.

At roughly 700 one-on-one discussions, roadshows and conferences, we maintained close contact with capital market participants in 2016. Many of these discussions involved an exchange of ideas between investors and analysts and members of the Board of Management and Group senior executives. With offices in Wolfsburg, London and Beijing and the liaison office in Herndon (USA), the work

of the Investor Relations team benefits from its presence in the most important regions for the capital markets. It allows us to keep close contact with analysts and investors locally, acquire in-depth knowledge of the respective markets and keep a finger on the pulse of operations of the Volkswagen Group.

At events held in the past year, the investor relations team also informed private shareholders about the current situation of the Group and was present at the Annual General Meeting in Hanover.

We also promptly published all presentations given in connection with events that were of interest to investors on our investor relations website.

#### VOLKSWAGEN SHARE DATA

	Ordinary shares	Preferred shares
ISIN	DE0007664005	DE0007664039
WKN	766400	766403
Deutsche Börse/Bloomberg	VOW	VOW3
Reuters	VOWG.DE	VOWG_p.DE
		DAX, CDAX, EURO STOXX, EURO STOXX 50, EURO STOXX Automobiles & Parts, Prime All Share, MSCI Euro, S&P Global 100 Index
Primary market indices		Share, MSCI Euro
		Berlin, Düsseldorf, Frankfurt, Hamburg, Hanover, Munich, Stuttgart, Xetra, Luxembourg, New York <sup>1</sup> , SIX Swiss Exchange
Exchanges		

<sup>1</sup> Traded in the form of "sponsored unlisted American Depositary Receipts" (ADRs). Five ADRs correspond to one underlying Volkswagen ordinary or preferred share.

#### OUR INVESTOR RELATIONS TEAM IS AVAILABLE FOR QUERIES AND COMMENTS AT ALL TIMES:

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 (VOLKSWAGEN GROUP OF AMERICA, INC.)  
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## VOLKSWAGEN SHARE KEY FIGURES

DIVIDEND DEVELOPMENT		2016	2015	2014	2013	2012
Number of no-par value shares at Dec. 31						
Ordinary shares	thousands	295,090	295,090	295,090	295,090	295,090
Preferred shares	thousands	206,205	206,205	180,641	170,148	170,143
Dividend <sup>1</sup>						
per ordinary share	€	2.00	0.11	4.80	4.00	3.50
per preferred share	€	2.06	0.17	4.86	4.06	3.56
Dividend paid <sup>1</sup>						
on ordinary shares	€ million	1,015	68	2,294	1,871	1,639
on preferred shares	€ million	425	35	878	691	606
SHARE PRICE DEVELOPMENT <sup>2</sup>		2016	2015	2014	2013	2012
Ordinary share						
Closing	€	136.75	142.30	180.10	196.90	162.75
Price performance	%	-3.9	-21.0	-8.5	+21.0	+57.0
Annual high	€	144.20	247.55	197.35	196.90	162.75
Annual low	€	108.95	101.15	150.70	132.60	106.20
Preferred share						
Closing	€	133.35	133.75	184.65	204.15	172.15
Price performance	%	-0.3	-27.6	-9.6	+18.6	+48.7
Annual high	€	138.80	255.20	203.35	204.15	172.70
Annual low	€	94.00	92.36	150.25	138.50	118.00
Beta factor <sup>3</sup>	factor	1.22	1.28	1.38	1.32	1.26
Market capitalization at Dec. 31	€ billion	67.9	69.6	86.5	92.8	77.3
Equity attributable to Volkswagen AG shareholders and hybrid capital investors at Dec. 31	€ billion	92.7	88.1	90.0	87.7	77.7 <sup>4</sup>
Ratio of market capitalization to equity	factor	0.73	0.79	0.96	1.06	1.00
KEY FIGURES PER SHARE		2016	2015	2014	2013	2012 <sup>4</sup>
Earnings per ordinary share <sup>5</sup>						
basic	€	10.24	-3.20	21.82	18.61	46.41
diluted	€	10.24	-3.20	21.82	18.61	46.41
Equity <sup>6</sup>	€	184.90	175.67	189.16	188.58	166.98
Price/earnings ratio <sup>7</sup>						
Ordinary share	factor	13.4	x	8.2	10.6	3.5
Preferred share	factor	13.0	x	8.4	10.9	3.7
Dividend yield <sup>8</sup>						
Ordinary share	%	1.5	0.1	2.7	2.0	2.2
Preferred share	%	1.5	0.1	2.6	2.0	2.1
STOCK EXCHANGE TURNOVER <sup>9</sup>		2016	2015	2014	2013	2012
Turnover of Volkswagen ordinary shares						
	€ billion	3.3	6.9	3.2	3.5	3.5
	million shares	25.4	45.4	17.8	21.4	26.8
Turnover of Volkswagen preferred shares						
	€ billion	41.1	72.4	45.1	43.0	40.9
	million shares	347.0	444.4	248.3	252.8	293.3
Volkswagen share of total DAX turnover	%	5.0	7.1	5.4	5.7	5.3

1 Figures for the years 2012 to 2015 relate to dividends paid in the following year. For 2016, the figures relate to the proposed dividend.

2 Xetra prices.

3 See page 133 for the calculation.

4 2012 figures adjusted in the 2013 annual financial statements to reflect application of IAS 19R.

5 See note 11 to the consolidated financial statements (Earnings per share) for the calculation.

6 Based on the total number of ordinary and preferred shares on December 31 (excluding potential shares from the mandatory convertible note).

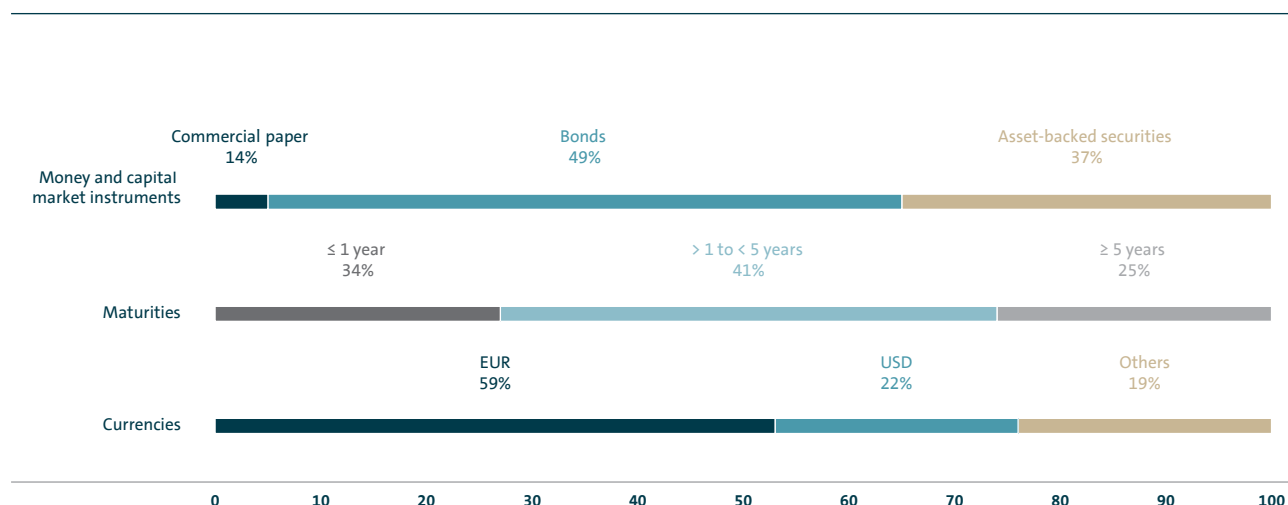
7 Ratio of year-end-closing price to earnings per share.

8 Dividend per share based on the year-end-closing price.

9 Order book turnover on the Xetra electronic trading platform (Deutsche Börse).

## REFINANCING STRUCTURE OF THE VOLKSWAGEN GROUP

as of December 31, 2016



## REFINANCING

As a result of the diesel issue, the Volkswagen Group's ability to access individual refinancing instruments in the money and capital market in 2016 was restricted. Our activities were therefore marked by diversification in certain instruments and markets. One focus was the issue of commercial paper, especially in Europe and in the currency euro.

Asset-backed securities (ABS) transactions were another important element. The Financial Services Division placed ABS transactions with a value of €4.0 billion in the eurozone. An ABS credit facility of USD 9.0 billion was entered into with a banking syndicate in the USA. The Volkswagen Group also issued other ABS transactions in Australia, China, the United Kingdom, Japan and Sweden with a value of €3.6 billion.

A bond was issued for the first time in China's local capital market. Other transactions were executed in currencies such as the Swedish krona, Russian ruble and Indian rupee.

In addition, the Automotive Division issued a public promissory note with a value of €1.1 billion.

The share of fixed-rate instruments was roughly twice as high as the share of variable-rate instruments.

In all refinancing arrangements, risks related to interest rates and currency are generally excluded by entering into derivatives contracts at the same time.

The table below shows how our money and capital market programs were utilized as of 31 December, 2016 and illustrates the financial flexibility of the Volkswagen Group:

PROGRAM	Authorized volume € billion	Amount utilized on Dec. 31, 2016 € billion
Commercial paper	26.8	13.4
Bonds	129.4	47.7
of which hybrid issues	–	7.5
Asset-backed securities	73.2	36.5

The €20.0 billion syndicated credit line for Volkswagen AG that was agreed with a banking syndicate in December 2015 was extended until June 2017. After exercising an extension option in 2015, the syndicated credit line of €5.0 billion agreed in July 2011 was extended to April 2020. Both credit lines were unused as of the end of 2016.

Syndicated credit lines worth a total of €2.4 billion at other Group companies have also not been drawn down. In addition, Group companies had arranged bilateral, confirmed credit lines with national and international banks in various other countries for a total of €8.5 billion, of which €2.6 billion was drawn down.

## RATINGS

	VOLKSWAGEN AG			VOLKSWAGEN FINANCIAL SERVICES AG			VOLKSWAGEN BANK GMBH		
	2016	2015	2014	2016	2015	2014	2016	2015	2014
<b>Standard &amp; Poor's</b>									
Short-term	A-2	A-2	A-1	A-2	A-2	A-1	A-2	A-2	A-1
Long-term	BBB+	BBB+	A	BBB+	BBB+	A	A-	A-	A
Outlook	negative	negative	stable	negative	negative	stable	negative	negative	stable
<b>Moody's Investors Service</b>									
Short-term	P-2	P-2	P-2	P-1	P-1	P-2	P-1	P-1	P-2
Long-term	A3	A3	A3	A2	A1	A3	Aa3	A1	A3
Outlook	negative	negative	positive	negative	negative	positive	negative	negative	positive

## RATINGS

In 2016, rating agencies Standard & Poor's and Moody's Investors Service undertook their regular update of their credit ratings for Volkswagen AG, Volkswagen Financial Services AG and Volkswagen Bank GmbH.

Standard & Poor's confirmed its short-term and long-term ratings for Volkswagen AG and Volkswagen Financial Services AG at A-2 and BBB+, respectively. The short-term and long-term ratings of Volkswagen Bank GmbH were also confirmed at A-2 and A- respectively. The outlook for all three companies was left unchanged at negative.

In August 2016, Moody's Investors Service downgraded its long-term rating for Volkswagen Financial Services AG by one notch, from A1 to A2. At the same time, the long-term rating of Volkswagen Bank GmbH was raised by one notch, from A1 to Aa3. This is due to a change in the perspective of the rating method introduced last year in the event of a wind-up of the two companies. The short-term rating was left unchanged for both companies at P-1. The short-term and long-term ratings for Volkswagen AG remain unchanged at P-2 and A3, respectively. The outlook for all three companies is still classified as negative.

## VOLKSWAGEN IN SUSTAINABILITY RANKINGS AND INDICES

Analysts and investors view sustainability performance as a leading indicator of forward-looking corporate governance and therefore increasingly also base their recommendations and decisions on companies' sustainability profiles. Sustainability ratings are particularly well suited to evaluating a company's environmental, social and economic performance. If a company achieves the highest scores in these ratings, this sends a clear signal to its stakeholders. It also raises its attractiveness as an employer and the motivation of its existing employees.

In sustainability rankings and indices – such as the Dow Jones Sustainability Indices, Carbon Disclosure Project (CDP), Sustainalytics, or oekom research – where we held top positions before the emissions issue, Volkswagen's ratings have been downgraded or removed.

# Results of Operations, Financial Position and Net Assets

The Volkswagen Group's sales revenue recorded further growth in fiscal year 2016. Despite further charges resulting from legal risks, especially in connection with the diesel issue, and restructuring measures, operating profit was up significantly on the previous year.

The Volkswagen Group's segment reporting in compliance with IFRS 8 comprises the four reportable segments Passenger Cars, Commercial Vehicles, Power Engineering and Financial Services, in line with the Group's internal management and reporting.

At Volkswagen, segment profit or loss is measured on the basis of the operating result.

The reconciliation column contains activities and other operations that do not by definition constitute segments. These include the unallocated Group financing activities. Consolidation adjustments between the segments (including the holding company functions) are also contained in the reconciliation. Purchase price allocation for Porsche Holding Salzburg and Porsche, as well as for Scania and MAN, reflects their accounting treatment in the segments.

The Automotive Division comprises the Passenger Cars, Commercial Vehicles and Power Engineering segments, as well as the figures from the reconciliation. The Passenger Cars segment and the reconciliation are combined to form the Passenger Cars Business Area. Effective January 1,

2016, the previously combined Commercial Vehicles/Power Engineering Business Area is presented as two separate business areas in accordance with the segment reporting: the Commercial Vehicles Business Area and the Power Engineering Business Area. The Financial Services Division corresponds to the Financial Services segment.

Activities in the Passenger Cars segment cover the development of vehicles and engines, the production and sale of passenger cars, and the genuine parts business. This segment combines the Volkswagen Group's individual passenger car brands on a consolidated basis. It also includes the Ducati brand's motorcycle business.

The Commercial Vehicles segment primarily comprises the development, production and sale of light commercial vehicles, trucks and buses from the Volkswagen Commercial Vehicles, Scania and MAN brands, the corresponding genuine parts business and related services.

The Power Engineering segment combines the large-bore diesel engines, turbomachinery, special gear units, propulsion components and testing systems businesses.

## KEY FIGURES FOR 2016 BY SEGMENT

€ million	Passenger Cars	Commercial Vehicles	Power Engineering	Financial Services	Total segments	Reconciliation	Volkswagen Group
Sales revenue	177,815	32,080	3,593	31,251	244,739	-27,472	217,267
Segment profit or loss (operating result)	5,235	718	-217	2,435	8,171	-1,068	7,103
as a percentage of sales revenue	2.9	2.2	-6.0	7.8			3.3
Capex, including capitalized development costs	15,891	2,433	194	357	18,875	27	18,902

The activities of the Financial Services segment comprise dealer and customer financing, leasing, banking and insurance activities, fleet management and mobility offerings.

#### SALE OF LEASEPLAN

The final approvals for the sale of LeasePlan to an international consortium of investors were issued by the competent authorities in January 2016. Legal transfer of the LeasePlan shares to the consortium was completed on March 21, 2016. In the reporting period, the transaction had a positive effect of €2.2 billion on investing activities attributable to operating activities and net liquidity and, taking into account the disposal of the equity-accounted investment, resulted in income in €0.2 billion for the Volkswagen Group, which is reported in the financial result.

#### SPECIAL ITEMS IN THE FISCAL YEAR

Special items consist of certain items in the financial statements whose separate disclosure the Board of Management believes can enable a better assessment of our economic performance.

Special items relating to the diesel issue amounted to €-6.4 (-16.2) billion in fiscal year 2016, mainly due to higher

expenses attributable to the recognition of provisions for legal risks.

Additional provisions had to be recognized for the replacement of potentially faulty airbags manufactured and supplied by Takata, which had been imposed by the competent authorities on all affected automobile manufacturers. The special items recognized in the operating result relating to these measures amount to €-0.3 (-0.3) billion in the reporting period.

In addition, special items for restructuring measures weighed on both the passenger cars business, in an amount of €-0.2 (-0.2) billion, and the trucks business, in an amount of €-0.1 (-0.2) billion in South America; in the Power Engineering Business Area, operating profit was impacted in an amount of €-0.2 billion. The measures are aimed at sustainably enhancing competitiveness and safeguarding future viability.

Provisions for legal risks relating to the commercial vehicles antitrust proceedings launched by the European Commission resulted in special items of €-0.4 billion in the Commercial Vehicles Business Area in the reporting period.

#### INCOME STATEMENT BY DIVISION

€ million	VOLKSWAGEN GROUP		AUTOMOTIVE <sup>1</sup>		FINANCIAL SERVICES	
	2016	2015	2016	2015	2016	2015
<b>Sales revenue</b>	<b>217,267</b>	<b>213,292</b>	<b>186,016</b>	<b>183,936</b>	<b>31,251</b>	<b>29,357</b>
Cost of sales	-176,270	-179,382	-150,860	-155,553	-25,410	-23,829
<b>Gross profit</b>	<b>40,997</b>	<b>33,911</b>	<b>35,156</b>	<b>28,382</b>	<b>5,841</b>	<b>5,528</b>
Distribution expenses	-22,700	-23,515	-21,453	-22,281	-1,248	-1,234
Administrative expenses	-7,336	-7,197	-5,730	-5,646	-1,606	-1,552
Net other operating result	-3,858	-7,267	-3,306	-6,761	-552	-506
<b>Operating result</b>	<b>7,103</b>	<b>-4,069</b>	<b>4,668</b>	<b>-6,305</b>	<b>2,435</b>	<b>2,236</b>
<b>Operating return on sales (%)</b>	<b>3.3</b>	<b>-1.9</b>	<b>2.5</b>	<b>-3.4</b>	<b>7.8</b>	<b>7.6</b>
Share of profits and losses of equity-accounted investments	3,497	4,387	3,433	4,366	64	21
Finance costs and Other financial result	-3,308	-1,620	-3,217	-1,695	-91	75
<b>Financial result</b>	<b>189</b>	<b>2,767</b>	<b>216</b>	<b>2,671</b>	<b>-27</b>	<b>97</b>
<b>Earnings before tax</b>	<b>7,292</b>	<b>-1,301</b>	<b>4,884</b>	<b>-3,634</b>	<b>2,408</b>	<b>2,333</b>
Income tax expense	-1,912	-59	-1,149	527	-763	-586
<b>Earnings after tax</b>	<b>5,379</b>	<b>-1,361</b>	<b>3,735</b>	<b>-3,107</b>	<b>1,645</b>	<b>1,747</b>
Noncontrolling interests	10	10	-81	-10	91	19
Earnings attributable to Volkswagen AG hybrid capital investors	225	212	225	212	-	-
<b>Earnings attributable to Volkswagen AG shareholders</b>	<b>5,144</b>	<b>-1,582</b>	<b>3,591</b>	<b>-3,310</b>	<b>1,553</b>	<b>1,728</b>

1 Including allocation of consolidation adjustments between the Automotive and Financial Services divisions.

**SHARE OF SALES REVENUE BY MARKET 2016**

in percent



Overall, negative special items recognized in the operating result amounted to €- 7.5 (-16.9) billion in fiscal year 2016.

**RESULTS OF OPERATIONS****Results of operations of the Group**

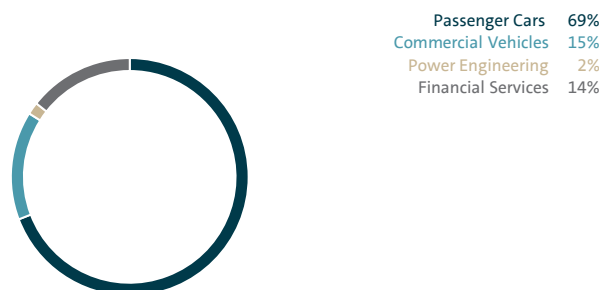
The Volkswagen Group generated sales revenue of €217.3 billion in fiscal year 2016, thus surpassing the prior-year figure by €4.0 billion. Improvements in the mix and the good business development in the Financial Services Division were offset by negative exchange rate effects and a slight decline in vehicle unit sales, excluding the Chinese joint ventures. At 79.9 (80.2)%, a large majority of sales revenue was recorded outside Germany.

At €41.0 (33.9) billion, gross profit was up year-on-year. Adjusted for the special items recognized here in both periods, gross profit was on a level with the previous year, at €42.5 (42.4) billion. The gross margin amounted to 18.9 (15.9)%; excluding special items it was 19.6 (19.9)%.

At €14.6 (12.8) billion, the Volkswagen Group's operating profit before special items was up year-on-year, while the operating return on sales before special items increased to 6.7 (6.0)%. In addition to optimized product costs, improvements in the mix had a positive effect, while exchange rate effects, the decline in unit sales (excluding the Chinese joint ventures) and higher depreciation and amortization charges had a negative impact. Negative special items of €7.5 (16.9) billion, particularly for legal risks, weighed on operating profit; of this total, €6.9 (16.7) billion was attributable to the Passenger Cars Business Area, €0.5 (0.2) billion to the Commercial Vehicles Business Area and €0.2 billion to the Power Engineering Business Area.

**SHARE OF SALES REVENUE BY DIVISION/BUSINESS AREA 2016**

in percent



At €7.1 (-4.1) billion, the Volkswagen Group's operating profit was up significantly on the previous year. The operating return on sales rose to 3.3 (-1.9)%.

At €0.2 billion, the financial result was €2.6 billion lower than in 2015. In the previous year, the income from the sale of the Suzuki shares had a clearly positive effect. The decline was also the result of a year-on-year decrease in income from the equity-accounted Chinese joint ventures, higher finance costs due to interest-related and remeasurement effects as well as higher expenses from derivative financial instruments. The income from the sale of the LeasePlan shares had a positive effect.

At €7.3 billion, the Volkswagen Group's profit before tax was €8.6 billion higher than in the previous year. The return on sales before tax improved from -0.6% to 3.4%. The income tax expense amounted to €1.9 (0.1) billion, resulting in a tax rate of 26.2% in the reporting period. Compared with the previous year, profit after tax grew by €6.7 billion to €5.4 billion.

**Results of operations in the Automotive Division**

The Automotive Division's sales revenue in the reporting period was up slightly compared with the previous year, at €186.0 (183.9) billion. Improvements in the mix had a positive effect, while negative exchange rate effects and the slight decline in vehicle unit sales (excluding the Chinese joint ventures) had an opposing impact. As our Chinese joint ventures are accounted for using the equity method, the Group's performance in the Chinese passenger car market is mainly reflected in consolidated sales revenue only by deliveries of vehicles and vehicle parts.



Cost of sales declined year-on-year. A significant decline in special items from the diesel issue, optimized product costs, exchange rate effects and lower research and development expenditures recognized in profit or loss more than offset the rise in depreciation and amortization charges and negative special items from the replacement of procured airbags. The ratio of cost of sales to sales revenue declined year-on-year. As a result, gross profit in the Automotive Division exceeded the 2015 figure, at €35.2 (28.4) billion.

Distribution expenses declined in fiscal year 2016 due to lower special items from the diesel issue as well as positive exchange rate effects. The ratio of distribution expenses to sales revenue also decreased. Administrative expenses rose year-on-year, although the ratio of administrative expenses to sales revenue was unchanged. A year-on-year decline in special items resulting from legal risks in connection with the diesel issue and lower negative exchange rate effects were positive factors, while the main negative factor was negative special items from legal risks in the Commercial Vehicles Business Area; as a result, the other operating result, at €-3.3 billion, improved by €3.5 billion compared with the previous year.

At €4.7 billion, the Automotive Division's operating profit in fiscal year 2016 was €11.0 billion higher than in the previous year. The operating return on sales rose to 2.5 (-3.4)%. Negative special items contained in this figure amounted to a total of €7.5 (16.9) billion. Excluding the special items, the Automotive Division's operating profit rose to €12.2 (10.6) billion. The operating return on sales before special items was 6.6 (5.8)%. Optimized product costs and favorable mix developments were able to more than offset negative exchange rate effects, declining vehicle unit sales if our Chinese joint ventures are excluded, as well as higher depreciation and amortization charges. Since the profit recorded by our Chinese joint ventures is accounted for in the financial result using the equity method, their business growth is primarily reflected in the Group's operating result only by deliveries of vehicles and vehicle parts, and license income.

The financial result declined by €2.5 billion to €0.2 billion; this figure contains lower investment income from the Chinese joint ventures, higher finance costs due to interest-related and remeasurement effects as well as increased expenses from derivative financial instruments. The income from the sale of the LeasePlan shares was a positive factor in the reporting period; in the prior-year period, the sale of the Suzuki shares had a clearly positive effect.

#### RESULTS OF OPERATIONS IN THE PASSENGER CARS BUSINESS AREA

€ million	2016	2015
Sales revenue	150,343	149,716
Gross profit	29,660	23,023
Operating result	4,167	-7,013
Operating return on sales (%)	2.8	-4.7

Sales revenue in the Passenger Cars Business Area in 2016 was on a level with the previous year, at €150.3 (149.7) billion. At €29.7 billion, gross profit exceeded the prior-year figure by 28.8%. At €4.2 billion, operating profit improved by €11.2 billion. The special items contained in this figure from the diesel issue, from the replacement of procured airbags and from restructuring measures in South America amounted to €6.9 (16.7) billion. Optimized product costs and favorable mix developments were able to more than offset negative exchange rate effects and declining vehicle unit sales, as well as higher depreciation and amortization charges. The operating return on sales was 2.8 (-4.7)%.

#### RESULTS OF OPERATIONS IN THE COMMERCIAL VEHICLES BUSINESS AREA

€ million	2016	2015
Sales revenue	32,080	30,445
Gross profit	4,899	4,589
Operating result	718	586
Operating return on sales (%)	2.2	1.9

Sales revenue in the Commercial Vehicles Business Area was €32.1 billion in 2016 and hence €1.6 billion higher than in 2015. At €4.9 (4.6) billion, gross profit improved compared with the previous year. At €0.7 billion, the Commercial Vehicles Business Area's operating profit was up €0.1 billion year-on-year; the operating return on sales rose to 2.2 (1.9)%. Higher unit vehicle sales and the expansion of the service business were positive factors, while special items from restructuring measures to sustainably enhance competitiveness and provisions for legal risks relating to the commercial vehicles antitrust proceedings launched by the European Commission weighed on operating profit.

#### RESULTS OF OPERATIONS IN THE POWER ENGINEERING BUSINESS AREA

€ million	2016	2015
Sales revenue	3,593	3,775
Gross profit	597	770
Operating result	-217	123
Operating return on sales (%)	-6.0	3.2

The Power Engineering Business Area recorded sales revenue of €3.6 billion in fiscal year 2016, a decline of 4.8% year-on-year due to volume-related factors. Gross profit was €0.6 (0.8) billion. Operating profit declined by €0.3 billion to €-0.2 billion due to volume- and margin-related factors, as well as to the special items from restructuring measures to safeguard future viability; the operating return on sales decreased from 3.2% to -6.0%.

#### Results of operations in the Financial Services Division

The Financial Services Division generated sales revenue of €31.3 billion in 2016; the year-on-year increase of 6.5% was attributable primarily to the higher business volume. Exchange rate effects had a negative impact.

Despite sustained pressure on margins, a negative exchange rate trend and higher depreciation and amortization charges, the higher volumes increased gross profit to €5.8 (5.5) billion.

Distribution expenses in the reporting period were on a level with the previous year. Administrative expenses rose slightly. The ratios of both figures to sales revenue declined. The net other operating result amounted to €-0.6 (-0.5) billion.

Operating profit at the Financial Services Division increased by 8.9% year-on-year to €2.4 billion, with the division again making a significant contribution to consolidated profit. The operating return on sales rose to 7.8 (7.6)%. The return on equity before tax was 10.8 (12.2)%.

#### PRINCIPLES AND GOALS OF FINANCIAL MANAGEMENT

Financial management at the Volkswagen Group covers liquidity management, currency, interest rate and commodity risk management, as well as credit and country risk management. It is performed centrally for all Group companies by Group Treasury, based on internal directives and risk parameters. The MAN and Porsche Holding Salzburg subgroups are integrated into the main financial management functions, while Scania is integrated to a limited extent. Additionally,

these subgroups have their own financial management structures.

The goal of liquidity management is to ensure that the Volkswagen Group remains solvent at all times and at the same time to generate an adequate return from the investment of surplus funds. We use cash pooling to optimize the use of existing liquidity between the significant companies in Europe. To do this, the – positive or negative – balances accumulating on the cash pooling accounts are swept daily into a target account at Group Treasury and thus pooled. Currency, interest rate and commodity risk management is designed to hedge the prices on which investment, production and sales plans are based using derivative financial instruments. Credit and country risk management aims to use diversification to avoid exposing the Volkswagen Group to the risk of loss or default. To achieve this, internal limits are defined on the basis of various credit risks for the volume of business per counterparty when entering into financial transactions. These primarily focus on the capital resources of potential counterparties, as well as the ratings awarded by independent agencies. The relevant risk limits and the authorized financial instruments, hedging methods and hedging horizons are approved by the Executive Committee for Liquidity and Foreign Currency.

For additional information on the principles and goals of financial management, please refer to page 199 and to the notes to the 2016 consolidated financial statements on pages 291 to 299.

#### FINANCIAL POSITION

##### Financial position of the Group

The Volkswagen Group generated gross cash flow of €26.0 billion in fiscal year 2016, up 59.7% on the prior-year figure. Funds tied up in working capital increased by €14.0 billion to €16.6 billion. The new special items recognized in the reporting period had a negative impact on gross cash flow and a positive effect on the change in working capital. Cash flows from operating activities declined by €4.2 billion to €9.4 billion.

At €16.8 billion, the Volkswagen Group's investing activities attributable to operating activities in 2016 were up 8.2% on the previous year. Within this item, investments in property, plant and equipment, investment property and intangible assets, excluding capitalized development costs (capex) of €13.2 (13.2) billion were on a level with the previous year, while capitalized development costs increased to €5.8 (5.0) billion. The "acquisition and disposal of equity investments" item comprises primarily the cash inflow from

## CASH FLOW STATEMENT BY DIVISION

€ million	VOLKSWAGEN GROUP		AUTOMOTIVE <sup>1</sup>		FINANCIAL SERVICES	
	2016	2015	2016	2015	2016	2015
<b>Cash and cash equivalents at beginning of period</b>	<b>20,462</b>	<b>18,634</b>	<b>15,294</b>	<b>16,010</b>	<b>5,168</b>	<b>2,624</b>
Earnings before tax	7,292	-1,301	4,884	-3,634	2,408	2,333
Income taxes paid	-3,315	-3,238	-3,526	-2,985	211	-254
Depreciation and amortization expense <sup>2</sup>	20,924	19,693	14,331	13,516	6,593	6,176
Change in pension provisions	235	309	224	295	11	14
Other noncash income/expense and reclassifications <sup>3</sup>	871	817	556	325	316	493
<b>Gross cash flow</b>	<b>26,007</b>	<b>16,280</b>	<b>16,468</b>	<b>7,518</b>	<b>9,539</b>	<b>8,762</b>
<b>Change in working capital</b>	<b>-16,576</b>	<b>-2,601</b>	<b>3,803</b>	<b>16,278</b>	<b>-20,379</b>	<b>-18,880</b>
Change in inventories	-3,637	-3,149	-3,313	-2,706	-324	-444
Change in receivables	-2,155	-1,807	-1,876	-1,001	-280	-805
Change in liabilities	5,048	2,807	4,474	2,641	574	166
Change in other provisions	5,732	18,019	5,616	17,989	116	30
Change in lease assets (excluding depreciation)	-12,074	-10,808	-1,157	-765	-10,917	-10,043
Change in financial services receivables	-9,490	-7,663	58	120	-9,547	-7,784
<b>Cash flows from operating activities</b>	<b>9,430</b>	<b>13,679</b>	<b>20,271</b>	<b>23,796</b>	<b>-10,840</b>	<b>-10,117</b>
<b>Cash flows from investing activities attributable to operating activities</b>	<b>-16,797</b>	<b>-15,523</b>	<b>-15,941</b>	<b>-14,909</b>	<b>-856</b>	<b>-614</b>
of which: investments in property, plant and equipment, investment property and intangible assets, excluding capitalized development costs	-13,152	-13,213	-12,795	-12,738	-357	-476
capitalized development costs	-5,750	-5,021	-5,750	-5,021	-	-
acquisition and disposal of equity investments	1,754	2,178	2,283	2,361	-528	-183
<b>Net cash flow<sup>4</sup></b>	<b>-7,367</b>	<b>-1,845</b>	<b>4,330</b>	<b>8,887</b>	<b>-11,696</b>	<b>-10,731</b>
Change in investments in securities, loans and time deposits	-3,882	-5,628	-3,125	-3,506	-757	-2,122
<b>Cash flows from investing activities</b>	<b>-20,679</b>	<b>-21,151</b>	<b>-19,066</b>	<b>-18,415</b>	<b>-1,613</b>	<b>-2,736</b>
<b>Cash flows from financing activities</b>	<b>9,712</b>	<b>9,068</b>	<b>-2,298</b>	<b>-6,333</b>	<b>12,009</b>	<b>15,401</b>
of which: capital transactions with noncontrolling interests	-3	-0	-3	-0	-	-
Capital contributions/capital redemptions	-	2,457	-1,454	140	1,454	2,317
Effect of exchange rate changes on cash and cash equivalents	-91	232	-76	236	-15	-4
<b>Net change in cash and cash equivalents</b>	<b>-1,628</b>	<b>1,828</b>	<b>-1,169</b>	<b>-717</b>	<b>-460</b>	<b>2,544</b>
<b>Cash and cash equivalents at Dec. 31<sup>5</sup></b>	<b>18,833</b>	<b>20,462</b>	<b>14,125</b>	<b>15,294</b>	<b>4,709</b>	<b>5,168</b>
Securities, loans and time deposits	28,036	24,613	17,911	14,812	10,125	9,801
<b>Gross liquidity</b>	<b>46,869</b>	<b>45,075</b>	<b>32,036</b>	<b>30,105</b>	<b>14,833</b>	<b>14,969</b>
Total third-party borrowings	-154,819	-145,604	-4,856	-5,583	-149,963	-140,021
<b>Net liquidity<sup>6</sup></b>	<b>-107,950</b>	<b>-100,530</b>	<b>27,180</b>	<b>24,522</b>	<b>-135,130</b>	<b>-125,052</b>

1 Including allocation of consolidation adjustments between the Automotive and Financial Services divisions.

2 Net of impairment reversals.

3 These relate mainly to the fair value measurement of financial instruments, application of the equity method and reclassification of gains/losses on disposal of noncurrent assets and equity investments to investing activities.

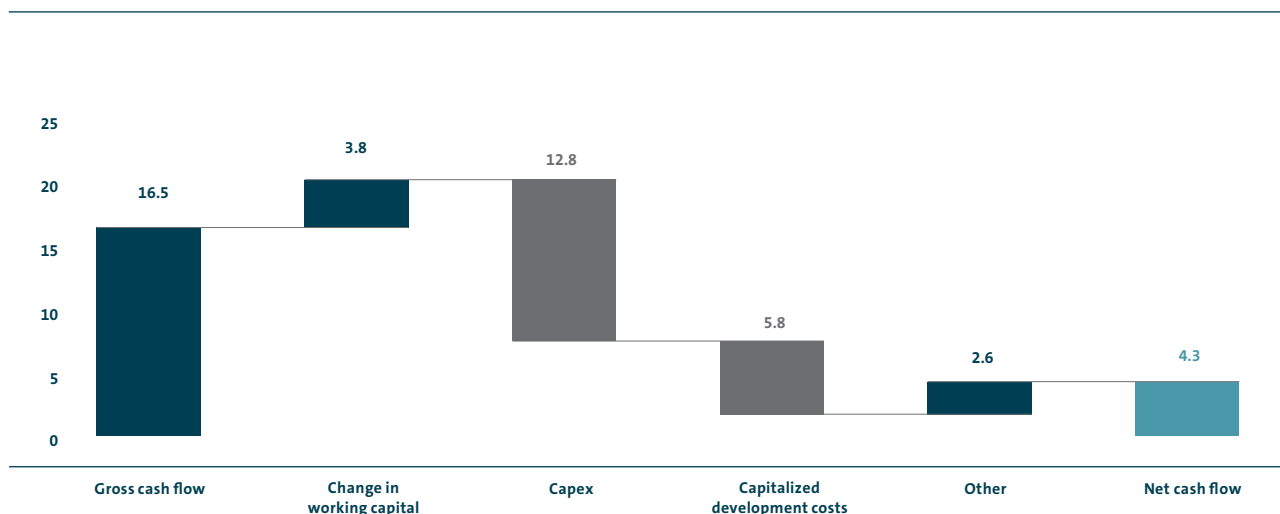
4 Net cash flow: cash flows from operating activities, net of investing activities attributable to operating activities (investing activities excluding change in investments in securities, loans and time deposits).

5 Cash and cash equivalents comprise cash at banks, checks, cash-in-hand and call deposits.

6 The total of cash, cash equivalents, securities, loans from related parties and time deposits net of third-party borrowings (noncurrent and current financial liabilities).

**AUTOMOTIVE DIVISION NET CASH FLOW 2016**

€ billion



the sale of the LeasePlan shares; in the previous year, the item reflected the sale of the Suzuki shares. Net cash flow declined to €-7.4 (-1.8) billion.

Cash inflows from financing activities amounted to €9.7 (9.1) billion. These mainly include dividend payments and the issuance and redemption of bonds and other financial liabilities. In the previous year, they also included the issuance of hybrid notes.

At €18.8 (20.5) billion, the Volkswagen Group's cash and cash equivalents reported in the cash flow statement decreased year-on-year.

The Volkswagen Group recorded net liquidity of €-107.9 billion as of 31 December, 2016, compared with €-100.5 billion at year-end 2015.

**Financial position in the Automotive Division**

At €16.5 billion, the Automotive Division's gross cash flow was €9.0 billion higher in fiscal year 2016 than in the previous year. The increase is attributable primarily to lower special items compared with the previous year and the higher operating profit before special items, while lower dividend payments by the Chinese joint ventures were a negative factor. The change in working capital of €3.8 (16.3) billion was significantly down on the previous year. The new special items recognized in the reporting period had a negative impact on gross cash flow and a positive effect on the change in working capital. Legal risks and vehicle recalls attributable to the diesel issue resulted in cash outflows in the reporting period. Cash flows from operating activities decreased by €3.5 billion to €20.3 billion.

Investing activities attributable to operating activities increased to €15.9 (14.9) billion. At €12.8 (12.7) billion, capex was on a level with the previous year. The ratio of capex to sales revenue was unchanged year-on-year, at 6.9 (6.9)%. We invested mainly in our production facilities and in models that we launched in 2016 or are planning to launch in 2017. These are primarily vehicles in the Tiguan, Atlas, Audi A4, Audi A6, Audi A8, Audi Q5, ŠKODA Kodiaq, SEAT Ibiza and SEAT Arona series, as well as the Porsche Panamera and the Porsche Cayenne. Other investment priorities were the ecological focus of our model range, growing drivetrain electrification and our modular toolkits. Capitalized development costs increased by €0.7 billion to €5.8 billion. Investing activities in the reporting period included the sale of the LeasePlan shares amounting to €2.2 billion, and in the previous year the sale of the Suzuki shares.

The Automotive Division's net cash flow of €4.3 billion was down €4.6 billion compared with 2015.

In financing activities, a capital increase carried out by Volkswagen AG at Volkswagen Financial Services AG in fiscal year 2016 to finance the growth in business volumes and comply with the increase in regulatory capital requirements resulted in outflows of €1.2 billion. At the end of June, a total dividend of €0.1 (2.3) billion, which was considerably lower than in the previous year due to the diesel issue, was distributed to the shareholders of Volkswagen AG. In addition, the Automotive Division's financing activities include the issuance and redemption of bonds and other financial liabilities and amounted to €-2.3 (-6.3) billion.

Net liquidity in the Automotive Division as of December 31, 2016 amounting to €27.2 billion was €2.7 billion higher than at the end of the previous fiscal year. This represents 12.5% of consolidated sales revenue.

#### FINANCIAL POSITION IN THE PASSENGER CARS BUSINESS AREA

€ million	2016	2015
Gross cash flow	13,920	4,722
Change in working capital	3,454	15,469
Cash flows from operating activities	17,374	20,191
Cash flows from investing activities attributable to operating activities	-13,353	-12,434
Net cash flow	4,021	7,757

At €13.9 billion, gross cash flow in the Passenger Cars Business Area in fiscal year 2016 was €9.2 billion higher than in the previous year. The increase was mainly attributable to higher earnings before special items and the considerable year-on-year decline in negative special items; negative factors were the lower dividends paid by the Chinese joint ventures. At €3.5 (15.5) billion, funds released from working capital were significantly lower than in the previous year. The new special items recognized in the reporting period had a negative impact on gross cash flow and a positive effect on the change in working capital. The diesel issue gave rise to cash outflows in the reporting period. Cash flows from operating activities decreased by 14.0% to €17.4 billion. Investing activities attributable to operating activities recorded a cash outflow of €13.4 (12.4) billion in the reporting period. At €10.9 (10.9) billion, capex was on a level with the previous year, while capitalized development costs rose by €0.8 billion to €5.0 billion. Transactions in the reporting period included the sale of the LeasePlan shares and in the previous year the sale of the Suzuki shares. Net cash flow declined by €3.7 billion to €4.0 billion.

#### FINANCIAL POSITION IN THE COMMERCIAL VEHICLES BUSINESS AREA

€ million	2016	2015
Gross cash flow	2,496	2,455
Change in working capital	238	786
Cash flows from operating activities	2,734	3,241
Cash flows from investing activities attributable to operating activities	-2,407	-2,285
Net cash flow	327	956

At €2.5 (2.5) billion in the fiscal year, gross cash flow in the Commercial Vehicles Business Area was on a level with the previous year. The higher earnings before special items more than offset negative special items. €0.2 (0.8) billion was released from working capital, less than in the previous year. The new special items recognized in the reporting period had a negative impact on gross cash flow and a positive effect on the change in working capital. Cash flows from operating activities declined to €2.7 (3.2) billion. Investing activities attributable to operating activities recorded a cash outflow of €2.4 (2.3) billion, resulting in particular from investments for the new plant in Wrzesnia, Poland, the successor to the Volkswagen Crafter being built there starting in 2016, and the new generation of Scania trucks. At €0.3 billion, net cash flow in the reporting period was down €0.6 billion year-on-year.

#### FINANCIAL POSITION IN THE POWER ENGINEERING BUSINESS AREA

€ million	2016	2015
Gross cash flow	52	340
Change in working capital	111	24
Cash flows from operating activities	163	364
Cash flows from investing activities attributable to operating activities	-182	-191
Net cash flow	-19	173

The Power Engineering Business Area generated gross cash flow of €0.1 billion in the reporting period, thus falling short of the prior-year figure by €0.3 billion. The decrease was primarily attributable to the special items from restructuring expenses, which at the same time had a positive effect on working capital. At €0.1 (0.0) billion, this increased as against the previous year. Cash flows from operating activities declined to €0.2 (0.4) billion. Investing activities attributable to operating activities decreased by 4.9% to €0.2 billion. Net cash flow declined to €-0.0 (0.2) billion in the reporting period.

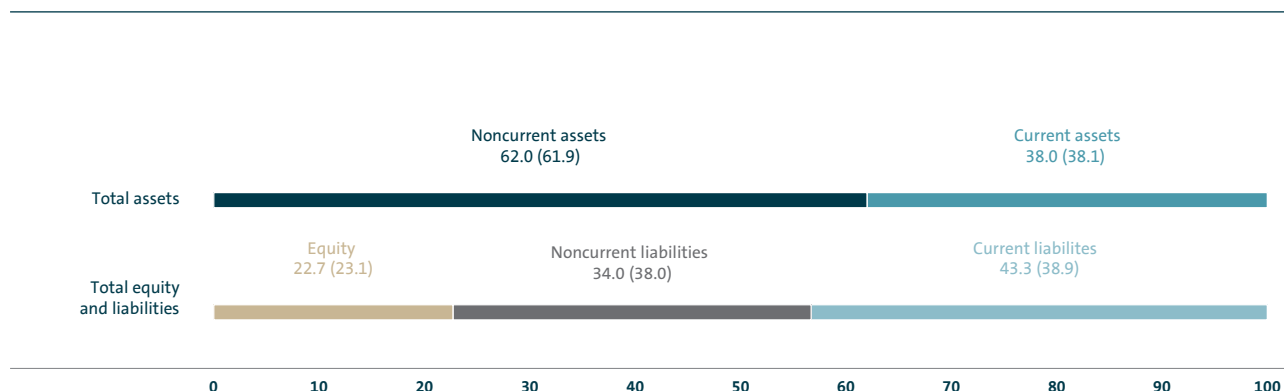
## CONSOLIDATED BALANCE SHEET BY DIVISION AS OF DECEMBER 31

€ million	VOLKSWAGEN GROUP		AUTOMOTIVE <sup>1</sup>		FINANCIAL SERVICES	
	2016	2015	2016	2015	2016	2015
<b>Assets</b>						
<b>Noncurrent assets</b>	<b>254,010</b>	<b>236,548</b>	<b>139,003</b>	<b>132,812</b>	<b>115,007</b>	<b>103,736</b>
Intangible assets	62,599	61,147	62,372	60,918	227	228
Property, plant and equipment	54,033	50,171	51,415	47,768	2,619	2,403
Lease assets	38,439	33,173	3,385	2,931	35,054	30,242
Financial services receivables	68,402	63,185	9	–	68,393	63,185
Investments, equity-accounted investments and other equity investments, other receivables and financial assets	30,537	28,873	21,822	21,195	8,715	7,678
<b>Current assets</b>	<b>155,722</b>	<b>145,387</b>	<b>81,083</b>	<b>74,019</b>	<b>74,640</b>	<b>71,367</b>
Inventories	38,978	35,048	34,947	31,369	4,031	3,679
Financial services receivables	49,673	46,888	–660	–614	50,333	47,502
Other receivables and financial assets	30,286	27,572	17,561	15,315	12,726	12,257
Marketable securities	17,520	15,007	14,703	12,261	2,817	2,747
Cash, cash equivalents and time deposits	19,265	20,871	14,532	15,688	4,733	5,183
<b>Total assets</b>	<b>409,732</b>	<b>381,935</b>	<b>220,085</b>	<b>206,831</b>	<b>189,647</b>	<b>175,103</b>
<b>Equity and liabilities</b>						
<b>Equity</b>	<b>92,910</b>	<b>88,270</b>	<b>69,130</b>	<b>67,366</b>	<b>23,780</b>	<b>20,905</b>
Equity attributable to Volkswagen AG shareholders	85,122	80,500	61,714	59,898	23,408	20,603
Equity attributable to Volkswagen AG hybrid capital investors	7,567	7,560	7,567	7,560	–	–
Equity attributable to Volkswagen AG shareholders and hybrid capital investors	92,689	88,060	69,281	67,458	23,408	20,603
Noncontrolling interests	221	210	–151	–92	373	302
<b>Noncurrent liabilities</b>	<b>139,306</b>	<b>145,175</b>	<b>69,982</b>	<b>73,568</b>	<b>69,324</b>	<b>71,607</b>
Financial liabilities	66,358	73,292	5,876	9,557	60,483	63,735
Provisions for pensions	33,012	27,535	32,464	27,119	549	415
Other liabilities	39,936	44,349	31,643	36,892	8,293	7,457
<b>Current liabilities</b>	<b>177,515</b>	<b>148,489</b>	<b>80,973</b>	<b>65,898</b>	<b>96,542</b>	<b>82,591</b>
Put options and compensation rights granted to noncontrolling interest shareholders	3,849	3,933	3,849	3,933	–	–
Financial liabilities	88,461	72,313	–1,019	–3,974	89,481	76,286
Trade payables	22,794	20,460	20,753	18,709	2,041	1,751
Other liabilities	62,411	51,783	57,391	47,229	5,021	4,554
<b>Total equity and liabilities</b>	<b>409,732</b>	<b>381,935</b>	<b>220,085</b>	<b>206,831</b>	<b>189,647</b>	<b>175,103</b>

1 Including allocation of consolidation adjustments between the Automotive and Financial Services divisions, primarily intragroup loans.

**CONSOLIDATED BALANCE SHEET STRUCTURE 2016**

in percent

**Financial position in the Financial Services Division**

The Financial Services Division generated gross cash flow of €9.5 (8.8) billion in the reporting period due to earnings-related factors. Funds tied up in working capital amounted to €20.4 (18.9) billion due to growth in business volumes. Cash flows from operating activities amounted to €-10.8 (-10.1) billion.

The acquisition of the interest in ride hailing service Gett amounting to €0.3 billion was one of the factors behind the increase in investing activities attributable to operating activities to €0.9 (0.6) billion.

Volkswagen AG contributed a capital increase of €1.2 billion to the Financial Services Division's financing activities in the reporting period to finance the expected growth in business in existing and new markets as well as to comply with the continued increase in regulatory requirements. Cash inflows from financing activities amounted to €12.0 (15.4) billion overall.

The Financial Services Division's negative net liquidity, which is common in the industry, amounted to €-135.1 billion at the end of the reporting period, compared with €-125.1 billion at the end of December 2015.

**NET ASSETS****Consolidated balance sheet structure**

At €409.7 billion, the Volkswagen Group's total assets at the end of fiscal year 2016 exceeded the prior-year figure by 7.3%, due above all to the increased business volume of the Financial Services Division. The structure of the consolidated balance sheet as of the reporting date is shown in the chart on this page. At €92.9 billion, the Volkswagen Group's equity increased by €4.6 billion compared with December 31, 2015. The equity ratio was 22.7 (23.1)%.

As of the end of the fiscal year, the Group had off-balance-sheet commitments in the form of contingent liabilities in the amount of €6.8 (3.5) billion, financial guarantees in the amount of €0.2 (1.6) billion and other financial obligations in the amount of €25.9 (25.4) billion. Contingent liabilities relate primarily to legal risks in connection with the diesel issue. The other financial obligations primarily result from purchase commitments for property, plant and equipment, as well as obligations under long-term leasing and rental contracts and irrevocable credit commitments to customers. In addition, as part of the settlement agreements in the USA, Volkswagen announced investments in the infrastructure for zero-emission vehicles and in initiatives to promote access to and awareness of this technology. Other financial obligations include an amount of €1.6 billion for this purpose.

**Automotive Division balance sheet structure**

The Automotive Division's intangible assets and its property, plant and equipment were up on the year-end 2015 figure as of December 31, 2016. Equity-accounted investments decreased, mainly as a result of the sale of the LeasePlan shares. There was a significant increase in other receivables and financial assets. Noncurrent assets rose by a total of 4.7%.

Current assets rose by a total of 9.5%; inventories contained in this item rose by 11.4% because of production-related factors. Receivables were up on year-end 2015. Marketable securities increased to €14.7 (12.3) billion as compared with December 31, 2015, while cash and cash equivalents stood at €14.5 (15.7) billion.



The Automotive Division's equity was €69.1 billion at the end of 2016, and thus 2.6% higher year-on-year. It was lifted by the good earnings growth before special items and positive effects from the measurement of derivatives recognized outside profit or loss. Expenses from special items and higher actuarial losses from the measurement of pension provisions reduced the Automotive Division's equity. The capital increase implemented in the Financial Services Division also reduced equity in the Automotive Division, where the deduction was recognized. The noncontrolling interests are mainly attributable to RENK AG and AUDI AG. As these were lower overall than the noncontrolling interests attributable to the Financial Services Division, the figure for the Automotive Division, where the deduction was recognized, was negative. The equity ratio decreased to 31.4 (32.6)%.

Noncurrent liabilities decreased by 4.9% year-on-year to €70.0 (73.6) billion. Pension provisions contained in this figure increased because of the change in the discount rate. Financial liabilities declined by €3.7 billion and other provisions were also down.

At €81.0 (65.9) billion, current liabilities were 22.9% higher overall than at the end of 2015. Reclassifications from noncurrent to current liabilities, due to shorter remaining maturities, as well as short-term borrowings led to an increase in current financial liabilities. The figures for the Automotive Division also contain the elimination of intra-group transactions between the Automotive and Financial Services divisions. As the current financial liabilities for the primary Automotive Division were lower than the loans granted to the Financial Services Division, a negative amount was disclosed. The item "Put options and compensation rights granted to noncontrolling interest shareholders" primarily comprises the liability for the obligation to acquire the shares held by the remaining free float shareholders of MAN. Current other provisions increased because of special items.

The Automotive Division's total assets amounted to €220.1 billion at the end of the reporting period, up 6.4% on the prior-year figure.

#### PASSENGER CARS BUSINESS AREA BALANCE SHEET STRUCTURE

€ million	2016	2015
Noncurrent assets	109,918	105,028
Current assets	61,600	57,289
<b>Total assets</b>	<b>171,518</b>	<b>162,317</b>
Equity	54,789	54,598
Noncurrent liabilities	56,703	61,195
Current liabilities	60,026	46,524

Noncurrent assets in the Passenger Cars Business Area amounted to €109.9 billion as of December 31, 2016, 4.7% higher than a year before. While intangible assets and property, plant and equipment increased, equity-accounted investments declined primarily as a result of the sale of the LeasePlan shares. Current assets rose by 7.5% to €61.6 billion, mainly due to the increase in inventories. Total assets at the end of 2016 amounted to €171.5 (162.3) billion.

At €54.8 (54.6) billion, equity was on a level with the previous year. Noncurrent liabilities declined by 7.3%. The financial liabilities and provisions contained in this item decreased significantly, while pension provisions rose. The 29.0% increase in current liabilities is attributable to, among other factors, reclassifications resulting from shorter maturities and short-term borrowings. In addition, current provisions increased significantly because of special items, in particular relating to the diesel issue.



**COMMERCIAL VEHICLES BUSINESS AREA**  
**BALANCE SHEET STRUCTURE**

€ million	2016	2015
Noncurrent assets	26,206	24,749
Current assets	16,197	13,421
<b>Total assets</b>	<b>42,403</b>	<b>38,170</b>
Equity	11,185	9,512
Noncurrent liabilities	12,531	11,532
Current liabilities	18,687	17,126

As of December 31, 2016, the Commercial Vehicles Business Area's intangible assets were slightly below and its property, plant and equipment above the year-end 2015 figures. Overall, noncurrent assets rose by €1.5 billion to €26.2 billion. Current assets increased by 20.7% to €16.2 billion because of higher inventories and considerably higher cash and cash equivalents. Total assets increased by 11.1% to €42.4 billion.

At €11.2 billion, equity at the end of fiscal year 2016 was up 17.6% year-on-year. Noncurrent liabilities rose by 8.7%; the other provisions contained in this figure increased largely because of special items resulting from legal risks. Driven by the increase in financial liabilities, current liabilities rose by 9.1% compared with the 2015 reporting date.

**POWER ENGINEERING BUSINESS AREA**  
**BALANCE SHEET STRUCTURE**

€ million	2016	2015
Noncurrent assets	2,879	3,035
Current assets	3,285	3,310
<b>Total assets</b>	<b>6,165</b>	<b>6,345</b>
Equity	3,157	3,255
Noncurrent liabilities	748	842
Current liabilities	2,260	2,248

The Power Engineering Business Area's noncurrent assets declined compared with the previous year. Current assets were on a level with the previous year. The Power Engineering Business Area recorded total assets of €6.2 billion as of December 31, 2016, 2.8% lower than at year-end 2015.

Due to earnings-related factors and special items from the restructuring program, the Power Engineering Business Area's equity at the end of the fiscal year was 3.0% lower than the figure of €3.2 billion recorded in the previous year. Non-current liabilities fell by 11.1%, while current liabilities were on a level with the previous year.

**Financial Services Division balance sheet structure**

The Financial Services Division's total assets amounted to €189.6 billion at the end of December 2016, a 8.3% increase over the figure as of December 31, 2015.

Both lease assets and noncurrent financial services receivables increased because of the growth in business. Noncurrent assets rose by 10.9% overall.

Current assets were up 4.6% year-on-year, primarily as a result of higher financial services receivables.

The Financial Services Division accounted for 46.3 (45.8)% of the Volkswagen Group's assets at the end of fiscal year 2016.

At €23.8 billion, the Financial Services Division's equity as of December 31, 2016 exceeded the prior-year figure by 13.8%. In addition to good earnings growth, equity was pushed up by capital increases implemented by Volkswagen AG in the reporting period to finance the growth in business and meet regulatory capital requirements. The equity ratio was 12.5 (11.9)%.

Driven by the decline in financial liabilities, noncurrent liabilities were down by 3.2%.

Current liabilities increased by 16.9% compared with year-end 2015. This increase is attributable to the funding of volume growth. At €33.8 (26.5) billion, deposits from direct banking business were higher than in the previous year.

## FINANCIAL KEY PERFORMANCE INDICATORS

%	2016	2015	2014	2013	2012
<b>Volkswagen Group</b>					
Gross margin	18.9	15.9	18.0	18.1	18.2
Personnel expense ratio	17.0	17.0	16.7	16.1	15.3
Operating result as a percentage of sales revenue	3.3	-1.9	6.3	5.9	6.0
Return on sales before tax	3.4	-0.6	7.3	6.3	13.2
Return on sales after tax	2.5	-0.6	5.5	4.6	11.4
Equity ratio	22.7	23.1	25.7	27.8	26.5
Dynamic gearing <sup>1</sup> (years)	0.1	0.1	0.1	0.1	0.1
<b>Automotive Division<sup>2</sup></b>					
Change in unit sales year-on-year <sup>3</sup>	+ 3.8	-2.0	+ 5.0	+ 4.1	+ 11.8
Change in sales revenue year-on-year	+ 1.1	+ 3.6	+ 1.4	+ 1.3	+ 21.6
Research and development costs as a percentage of sales revenue	7.3	7.4	7.4	6.7	5.5
Operating result as a percentage of sales revenue	2.5	-3.4	6.1	5.6	5.7
EBITDA (in € million) <sup>4</sup>	18,999	7,212	23,100	20,594	19,895
Return on investment (ROI) <sup>5</sup>	8.2	-0.2	14.9	14.5	16.6
Cash flows from operating activities as a percentage of sales revenue	10.9	12.9	12.2	11.8	9.4
Cash flows from investing activities attributable to operating activities as a percentage of sales revenue	8.6	8.1	8.7	9.3	9.5
Capex as a percentage of sales revenue	6.9	6.9	6.5	6.3	5.9
Net liquidity as a percentage of sales revenue	12.5	11.5	8.7	8.6	5.5
Ratio of noncurrent assets to total assets <sup>6</sup>	23.4	23.1	22.3	21.3	21.0
Ratio of current assets to total assets <sup>7</sup>	15.9	15.2	14.3	13.4	14.3
Inventory turnover <sup>8</sup>	5.5	5.8	6.2	6.5	6.4
Equity ratio	31.4	32.6	36.9	39.8	37.9
<b>Financial Services Division</b>					
Increase in total assets	8.3	13.9	15.1	3.9	19.5
Return on equity before tax <sup>9</sup>	10.8	12.2	12.5	14.3	13.1
Equity ratio	12.5	11.9	11.3	10.5	10.4

1 Ratio of cash flows from operating activities to current and noncurrent financial liabilities.

2 Including allocation of consolidation adjustments between the Automotive and Financial Services divisions.

3 Including the Chinese joint ventures. These companies are accounted for using the equity method.

4 Operating result plus net depreciation/amortization and impairment losses/reversals of impairment losses on property, plant and equipment, capitalized development costs, lease assets, goodwill and financial assets as reported in the cash flow statement.

5 For details, see Value-based management on page 133.

6 Ratio of property, plant and equipment to total assets.

7 Ratio of inventories to total assets at the balance sheet date.

8 Ratio of sales revenue to average monthly inventories.

9 Earnings before tax as a percentage of average equity.

**VALUE ADDED STATEMENT**

The value added statement indicates the added value generated by a company in the past fiscal year as its contribution to the gross domestic product of its home country, and how it is appropriated. The value added generated by the Volkswagen Group in the year under review was up 20.6% year-on-

year, mainly as a result of considerably lower negative special items in connection with the diesel issue. Added value per employee increased to €94.5 thousand (+18.0%) in 2016. Employees in the passive phase of their partial retirement as well as vocational trainees are not included in the calculation.

**VALUE ADDED GENERATED BY THE VOLKSWAGEN GROUP**

Source of funds in € million	2016	2015
Sales revenue	217,267	213,292
Other income	17,907	20,092
Cost of materials	-140,307	-143,700
Depreciation and amortization	-20,924	-19,693
Other upfront expenditures	-23,990	-28,578
<b>Value added</b>	<b>49,953</b>	<b>41,413</b>

Appropriation of funds in € million	2016	%	2015	%
to shareholders (dividend, 2016 dividend proposal)	1,015	2.0	68	0.2
to employees (wages, salaries, benefits)	37,017	74.1	36,268	87.6
to the state (taxes, duties)	3,486	7.0	3,033	7.3
to creditors (interest expense)	4,070	8.1	3,472	8.4
to the Company (reserves)	4,365	8.7	-1,428	-3.4
<b>Value added</b>	<b>49,953</b>	<b>100.0</b>	<b>41,413</b>	<b>100.0</b>

## FIVE-YEAR REVIEW

	2016	2015	2014	2013	2012
<b>Volume Data (thousands)</b>					
<b>Vehicle sales (units)</b>	<b>10,391</b>	<b>10,010</b>	<b>10,217</b>	<b>9,728</b>	<b>9,345</b>
Germany	1,257	1,279	1,247	1,187	1,207
Abroad	9,135	8,731	8,970	8,541	8,137
<b>Production (units)</b>	<b>10,405</b>	<b>10,017</b>	<b>10,213</b>	<b>9,728</b>	<b>9,255</b>
Germany	2,685	2,681	2,559	2,458	2,321
Abroad	7,720	7,336	7,653	7,270	6,934
<b>Employees (yearly average)</b>	<b>619</b>	<b>604</b>	<b>583</b>	<b>563</b>	<b>533</b>
Germany	280	276	265	255	237
Abroad	339	329	318	308	296
<b>Financial Data (in € million)</b>					
<b>Income Statement</b>					
<b>Sales revenue</b>	<b>217,267</b>	<b>213,292</b>	<b>202,458</b>	<b>197,007</b>	<b>192,676</b>
Cost of sales	176,270	179,382	165,934	161,407	157,522
<b>Gross profit</b>	<b>40,997</b>	<b>33,911</b>	<b>36,524</b>	<b>35,600</b>	<b>35,154</b>
Distribution expenses	22,700	23,515	20,292	19,655	18,850
Administrative expenses	7,336	7,197	6,841	6,888	6,220
Net other operating result	-3,858	-7,267	3,306	2,613	1,415
<b>Operating result</b>	<b>7,103</b>	<b>-4,069</b>	<b>12,697</b>	<b>11,671</b>	<b>11,498</b>
Financial result	189	2,767	2,097	757	13,989
<b>Earnings before tax</b>	<b>7,292</b>	<b>-1,301</b>	<b>14,794</b>	<b>12,428</b>	<b>25,487</b>
Income tax expense	1,912	59	3,726	3,283	3,606
<b>Earnings after tax</b>	<b>5,379</b>	<b>-1,361</b>	<b>11,068</b>	<b>9,145</b>	<b>21,881</b>
<b>Cost of materials</b>	<b>140,307</b>	<b>143,700</b>	<b>132,514</b>	<b>127,089</b>	<b>122,450</b>
<b>Personnel expenses</b>	<b>37,017</b>	<b>36,268</b>	<b>33,834</b>	<b>31,747</b>	<b>29,504</b>
<b>Balance Sheet (at December 31)</b>					
Noncurrent assets	254,010	236,548	220,106	202,141	196,457
Current assets	155,722	145,387	131,102	122,192	113,061
<b>Total assets</b>	<b>409,732</b>	<b>381,935</b>	<b>351,209</b>	<b>324,333</b>	<b>309,518</b>
Equity	92,910	88,270	90,189	90,037	81,995
of which: noncontrolling interests	221	210	198	2,304	4,313
Noncurrent liabilities	139,306	145,175	130,314	115,672	121,996
Current liabilities	177,515	148,489	130,706	118,625	105,526
<b>Total equity and liabilities</b>	<b>409,732</b>	<b>381,935</b>	<b>351,209</b>	<b>324,333</b>	<b>309,518</b>
<b>Cash flows from operating activities</b>	<b>9,430</b>	<b>13,679</b>	<b>10,784</b>	<b>12,595</b>	<b>7,209</b>
<b>Cash flows from investing activities attributable to operating activities</b>	<b>16,797</b>	<b>15,523</b>	<b>16,452</b>	<b>14,936</b>	<b>16,840</b>
<b>Cash flows from financing activities</b>	<b>9,712</b>	<b>9,068</b>	<b>4,645</b>	<b>8,973</b>	<b>13,712</b>

#### RETURN ON INVESTMENT (ROI) AND VALUE CONTRIBUTION

The Volkswagen Group's financial target system centers on continuously and sustainably increasing the value of the Company. In order to ensure the efficient use of resources in the Automotive Division and to measure the success of this, we have been using a value-based management system for a number of years, with return on investment (ROI) as a relative indicator and value contribution<sup>1</sup>, a key performance indicator linked to the cost of capital, as an absolute performance measure.

The return on investment serves as a consistent target in strategic and operational management. If the return on investment exceeds the market cost of capital, there is an increase in the value of the invested capital and a positive value contribution. The concept of value-based management allows the success of the Automotive Division and individual business units to be evaluated. It also enables the earnings power of our products, product lines and projects – such as new plants – to be measured.

#### Components of value contribution

Value contribution is calculated on the basis of the operating result after tax and the opportunity cost of invested capital. The operating result shows the economic performance of the Automotive Division and is initially a pre-tax figure.

Using the various international income tax rates of the relevant companies, we assume an overall average tax rate of 30% when calculating the operating result after tax.

The cost of capital is multiplied by the average invested capital to give the opportunity cost of capital. Invested capital is calculated as total operating assets reported in the balance sheet (property, plant and equipment, intangible assets, lease assets, inventories and receivables) less non-interest-bearing liabilities (trade payables and payments on account received). Average invested capital is derived from the balance at the beginning and the end of the reporting period.

As the concept of value-based management only comprises our operating activities, assets relating to investments in subsidiaries and associates and the investment of cash funds are not included when calculating invested capital. Interest charged on these assets is reported in the financial result.

#### Determining the current cost of capital

The cost of capital is the weighted average of the required rates of return on equity and debt. The cost of equity is determined using the Capital Asset Pricing Model (CAPM).

This model uses the yield on long-term risk-free Bunds, increased by the risk premium attaching to investments in the equity market. The risk premium comprises a general market risk and a specific business risk.

The general risk premium of 6.5% reflects the general risk of a capital investment in the equity market and is oriented on the Morgan Stanley Capital International (MSCI) World Index.

The specific business risk – price fluctuations in Volkswagen preferred shares – has been modeled in comparison to the MSCI World Index when calculating the beta factor. The MSCI World Index is a global capital market benchmark for investors.

The analysis period for the beta factor calculation spans five years with annual beta figures on a daily basis and an average subsequently being calculated. A beta factor of 1.22 (1.28) was determined for 2016.

#### COST OF CAPITAL AFTER TAX AUTOMOTIVE DIVISION

%	2016	2015
Risk-free rate	0.7	1.2
MSCI World Index market risk premium	6.5	6.5
Volkswagen-specific risk premium	1.5	1.8
(Volkswagen beta factor)	(1.22)	(1.28)
<b>Cost of equity after tax</b>	<b>8.7</b>	<b>9.5</b>
Cost of debt	1.7	2.0
Tax	-0.5	-0.6
<b>Cost of debt after tax</b>	<b>1.2</b>	<b>1.4</b>
Proportion of equity	66.7	66.7
Proportion of debt	33.3	33.3
<b>Cost of capital after tax</b>	<b>6.2</b>	<b>6.8</b>

The cost of debt is based on the average yield for long-term debt. As borrowing costs are tax-deductible, the cost of debt is adjusted to account for the tax rate of 30%.

A weighting on the basis of a fixed ratio for the fair values of equity and debt gives an effective cost of capital for the Automotive Division of 6.2 (6.8)% for 2016.

<sup>1</sup> The value contribution corresponds to the Economic Value Added (EVA®). EVA® is a registered trademark of Stern Stewart & Co.

**RETURN ON INVESTMENT (ROI) AND VALUE CONTRIBUTION IN THE REPORTING PERIOD**

The operating result after tax of the Automotive Division, including the proportionate operating result of the Chinese joint ventures, was €7,419 (–203) million in fiscal year 2016. The increase was primarily due to the year-on-year decline in special items, as well as improvements in the mix and optimized product costs. Profit was negatively impacted by higher depreciation and amortization charges due to the high volume of capital expenditures and exchange rate effects. Effects on earnings and assets from purchase price allocation are not taken into account as they cannot be influenced operationally by management.

Invested capital rose to €91,020 (84,289) million, primarily due to increased investments in property, plant and equipment, investment property and intangible assets, excluding capitalized development costs (capex), and higher capitalized development costs.

The return on investment (ROI) is the return on invested capital for a particular period based on the operating result after tax. It rose year-on-year to 8.2 (–0.2)% as a result of the improved operating profit. We did not meet the minimum required rate of return on invested capital of 9% due to the adverse effects of the special items on earnings.

At €5,643 (5,732) million, the opportunity cost of capital (invested capital multiplied by cost of capital) was down on the prior-year level due to decreased cost of capital. Operating result after tax was negatively impacted by special items and led to a positive value contribution of €1,775 (–5,935) million after the opportunity cost of invested capital.

More information on value-based management is contained in our publication entitled “Financial Control System of the Volkswagen Group”, which can be downloaded from our Investor Relations website: [www.volkswagenag.com/ir](http://www.volkswagenag.com/ir).

**RETURN ON INVESTMENT (ROI) AND VALUE CONTRIBUTION IN THE AUTOMOTIVE DIVISION<sup>1</sup>**

€ million	2016	2015
<b>Operating result after tax</b>	<b>7,419</b>	<b>–203</b>
Invested capital (average)	91,020	84,289
<b>Return on investment (ROI) in %</b>	<b>8.2</b>	<b>–0.2</b>
Cost of capital in %	6.2	6.8
<b>Cost of invested capital</b>	<b>5,643</b>	<b>5,732</b>
<b>Value contribution</b>	<b>1,775</b>	<b>–5,935</b>

<sup>1</sup> Including proportionate inclusion of the Chinese joint ventures (including the relevant sales and component companies) and allocation of consolidation adjustments between the Automotive and Financial Services divisions.

**SUMMARY OF BUSINESS DEVELOPMENT AND ECONOMIC POSITION**

The Board of Management of Volkswagen AG considers business development and the economic position to have been satisfactory overall. In spite of the challenges resulting from the diesel issue and the persistently difficult conditions on the vehicle markets in Brazil and Russia, we were able to reach our forecast in 2016 and also set a new record, with 10.3 million vehicles delivered (+3.7%). The Group's sales revenue ultimately grew at a faster pace than expected over the course of the year and was higher than in the previous year, due among other factors to mix-related factors and the good business growth recorded by the Financial Services Division. As a result, operating profit before special items rose year-on-year to €14.6 billion and the operating return on sales before special items was 6.7%, exceeding expectations. As expected, operating profit and the operating return on sales after special items resulting in particular from the diesel issue were also clearly positive.

Sales revenue in the Passenger Cars Business Area was better than expected, exceeding the figure for 2015. Operating profit and the operating return on sales were within the fore-

cast ranges and exceeded the original expectations before special items. The Commercial Vehicles, Power Engineering and Financial Services Business Areas are confirming the current sales forecasts. The operating profit and operating return on sales recorded by the Commercial Vehicles Business Area was within the range originally forecasted, despite special items. In the Power Engineering Business Area, operating profit declined significantly because of special items. The Financial Services Division increased its operating profit markedly year-on-year.

The Automotive Division's ratio of capex to sales revenue was 6.9%, as in the previous year, and was thus inside the expected corridor. As forecast, the net cash flow in the Automotive Division was significantly lower than in the previous year, among other things because of expenses from the diesel issue. The Automotive Division's net liquidity at the end of the reporting period was a robust €27.1 billion. The return on investment (ROI) rose significantly as a result of the improved operating profit in the Automotive Division; however, the minimum rate of return on invested capital was not achieved because of the special items.

**FORECAST VERSUS ACTUAL FIGURES**

	Actual 2015	Original Forecast for 2016	Adjusted Forecast for 2016	Actual 2016
Deliveries to customers	9.9 million	on the prior-year level	slight increase	10.3 million
<b>Volkswagen Group</b>				
Sales revenue	€213.3 billion	decline up to 5%	on the prior-year level	€217.3 billion
Operating return on sales before special items	6.0%	5.0 – 6.0%	~ 6%	6.7%
Operating return on sales	-1.9%	5.0 – 6.0%	clearly positive, up to 5.0%	3.3%
Operating result before special items	€12.8 billion	within the forecast range	within the forecast range	€14.6 billion
Operating result	€-4.1 billion	within the forecast range	within the forecast range	€7.1 billion
<b>Passenger Cars Business Area</b>				
Sales revenue	€149.7 billion	noticeable decline	slight decline	€150.3 billion
Operating return on sales	-4.7%	5.5 – 6.5%	clearly positive, up to 5.5%	2.8%
Operating result	€-7.0 billion	within the forecast range	within the forecast range	€4.2 billion
<b>Commercial Vehicles Business Area</b>				
Sales revenue	€30.4 billion	on the prior-year level	moderate increase	€32.1 billion
Operating return on sales	1.9%	2.0 – 4.0%	slightly positive, up to 2%	2.2%
Operating result	€0.6 billion	within the forecast range	within the forecast range	€0.7 billion
<b>Power Engineering Business Area</b>				
Sales revenue	€3.8 billion	noticeable decline	noticeable decline	€3.6 billion
Operating Result	€0.1 billion	significant decline	significant decline	€-0.2 billion
<b>Financial Services Division</b>				
Sales revenue	€29.4 billion	on the prior-year level	noticeable increase	€31.3 billion
Operating result	€2.2 billion	on the prior-year level	noticeable increase	€2.4 billion
Capex/sales revenue in the Automotive Division	6.9%	6 – 7%	6 – 7%	6.9%
Net cash flow in the Automotive Division	€8.9 billion	significant decline	significant decline	€4.3 billion
Return on investment (RoI) in the Automotive Division	-0.2%	significant increase, > 9%	significant increase, > 9%	8.2%

# Volkswagen AG

(Condensed, in accordance with the German Commercial Code)

Production and unit sales at prior-year level.

Profit rises; further charges from the diesel issue, but at a lower level.

## ANNUAL RESULT

Special items relating to the diesel issue, and in particular provisions for technical measures and legal risks, had an impact of €-0.8 (-7.5) billion on cost of sales and of €-4.5 (-6.7) billion on the net other operating result. In addition, special items of €-0.4 (-0.8) billion affected distribution expenses.

In fiscal year 2016, sales were 2.5% higher than in the previous year, at €75.3 billion. This includes an amount of €2.0 billion, relating in particular to rental and leasing, which had been recognized in the other operating result in the previous year. Adjusted for this amount, sales fell slightly compared with 2015. Sales generated abroad accounted for a share of 61.2 (62.1)%. Cost of sales fell by 7.3% to €70.2 billion. In deviation from the previous year, expenditure of €1.4 bil-

lion, primarily for rental and leasing, was recognized for 2016 in cost of sales. Gross profit improved to €5.1 (-2.2) billion, of which €0.6 billion was attributable to the reclassifications explained earlier.

At €8.4 billion, selling, general and administrative expenses were €1.0 billion down on the prior-year figure.

The net other operating result improved by €5.0 billion to €-2.0 (-7.1) billion.

Driven by lower net investment income, the financial result declined to €8.7 (13.8) billion.

Including the income tax expense of €0.7 (0.7) billion, net income for the year amounted to €2.8 billion in the year under review, compared with a net loss of 5.5 billion in the previous year.

## INCOME STATEMENT OF VOLKSWAGEN AG

€ million	2016	2015
Sales	75,310	73,510
Cost of sales	-70,180	-75,693
<b>Gross profit on sales</b>	<b>5,131</b>	<b>-2,184</b>
Selling, general and administrative expenses	-8,352	-9,364
Net other operating result	-2,035	-7,084
Financial result <sup>1</sup>	8,725	13,813
Taxes on income	-670	-697
<b>Earnings after tax</b>	<b>2,799</b>	<b>-5,515</b>
<b>Net income/net loss for the fiscal year</b>	<b>2,799</b>	<b>-5,515</b>
Retained profits brought forward	2	5
Appropriation to/release of revenue reserves	-1,399	5,580
<b>Net retained profits</b>	<b>1,402</b>	<b>69</b>

1 Including write-downs of financial assets.

## BALANCE SHEET OF VOLKSWAGEN AG AS OF DECEMBER 31

€ million	2016	2015
Fixed assets	101,973	94,919
Inventories	4,387	4,073
Receivables <sup>1</sup>	26,386	26,563
Cash-in-hand and bank balances	9,117	7,941
<b>Total assets</b>	<b>141,863</b>	<b>133,496</b>
Equity	27,100	24,368
Special tax-allowable reserves	23	26
Long-term debt	26,457	26,973
Medium-term debt	30,082	32,003
Short-term debt	58,200	50,126

1 Including prepaid expenses.



**NET ASSETS AND FINANCIAL POSITION**

Total assets amounted to €141.9 billion at December 31, 2016, €8.4 billion up on the prior-year figure. Investments in tangible and intangible fixed assets declined to €2.0 (2.7) billion. At €9.1 (9.1) billion, investments in financial assets remained at the prior-year level. Fixed assets accounted for a share of 71.9 (71.1)% of total assets.

Current assets (including prepaid expenses) increased slightly compared with 2015.

Equity amounted to €27.1 billion at the end of the reporting period; the increase was due in particular to the improved net income for the year. The equity ratio was 19.1 (18.3)%.

At €30.8 (28.6) billion, other provisions remained at the previous year's high level. This was due to the previous year's increase in provisions in connection with the diesel issue, which largely continued to be recognized. Provisions for pensions and similar obligations declined by €0.7 billion to €13.6 billion, primarily as a result of a change in the interest rate, while provisions for taxes decreased by €0.7 billion to €3.9 billion.

The €4.8 billion rise in total liabilities (including deferred income) to €66.4 billion is mainly attributable to higher liabilities to affiliated companies.

Volkswagen AG's cash funds, comprising cash instruments with a maturity of less than three months, less bank and cash pooling liabilities repayable on demand, declined year-on-year from €-5.1 billion to €-6.2 billion. The interest-bearing portion of debt amounted to €55.1 (51.4) billion. In our assessment, the economic position of Volkswagen AG is just as satisfactory overall as that of the Volkswagen Group.

**DIVIDEND PROPOSAL**

Including net income for the year, net retained profits amounted to €1.4 billion. The Board of Management and Supervisory Board are proposing to pay a total dividend of €1.0 billion, i.e. €2.00 per ordinary share and €2.06 per preferred share.

**PROPOSAL ON THE APPROPRIATION OF NET PROFIT**

€	2016
Dividend distribution on subscribed capital (€1,283 million)	1,014,962,852.70
of which on: ordinary shares	590,179,636.00
preferred shares	424,783,216.70
Appropriation to other revenue reserves	385,000,000.00
Balance (carried forward to new account)	1,709,231.84
<b>Net retained profits</b>	<b>1,401,672,084.54</b>

**EMPLOYEE PAY AND BENEFITS AT VOLKSWAGEN AG**

€ million	2016	%	2015	%
Direct pay including cash benefits	7,138	71.2	7,126	71.8
Social security contributions	1,337	13.3	1,227	12.4
Compensated absence	1,099	11.0	1,108	11.2
Retirement benefits	456	4.6	461	4.6
<b>Total expense</b>	<b>10,030</b>	<b>100.0</b>	<b>9,922</b>	<b>100.0</b>

**VEHICLE SALES**

Volkswagen AG sold a total of 2,632,144 (2,676,629) vehicles in fiscal year 2016. Vehicles sold abroad accounted for a share of 69.7 (69.4)%.

**PRODUCTION**

Volkswagen AG produced a total of 1,241,217 vehicles at its vehicle production plants in Wolfsburg, Hanover and Emden in the reporting period (−1.2%). Volkswagen AG's average daily production was up on the previous year, at 5,423 units.

**EMPLOYEES**

As of December 31, 2016, a total of 113,928 people were employed at the sites of Volkswagen AG, excluding staff employed at subsidiaries. Of this figure, 4,999 were vocational trainees. 2,936 employees were in the passive phase of their partial retirement. The size of the workforce decreased by 0.1% as against the prior-year reporting date.

Female employees accounted for 17.0% of the workforce. Volkswagen AG employed 4,721 part-time workers (4.1%). The percentage of foreign employees was 6.1%. The proportion of employees in the production area who have completed vocational training relevant for Volkswagen was 83.5%. 18.8% of the employees were graduates. The average age of employees in fiscal year 2016 was 43.2 years.

**RESEARCH AND DEVELOPMENT**

Research and development costs for Volkswagen AG under the German Commercial Code declined to €4.7 (5.3) billion in the reporting period. 12,380 people were employed in this area at the end of the reporting period.

**EXPENDITURE ON ENVIRONMENTAL PROTECTION**

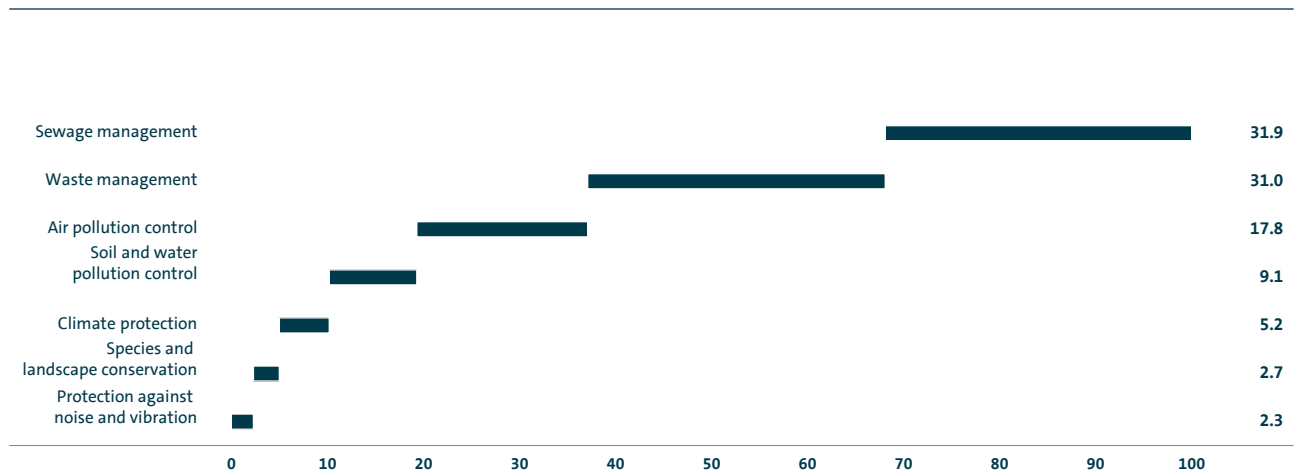
When measuring expenditure on environmental protection, a distinction is made between investments and operating costs for production-related environmental protection measures. Of our total investments, only those that are spent exclusively or primarily on environmental protection are included in environmental protection investments. We distinguish here between additive and integrated investments. Additive environmental protection measures are separate investments that are independent of other investments relating to the production process. They can be upstream or downstream of the production process. Unlike additive environmental protection measures, integrated measures involve reducing the environmental impact during the production phase. In 2016 we invested primarily in soil, water and air pollution control.

The operating costs recognized for environmental protection relate exclusively to production-related measures that protect the environment against harmful factors by avoiding, reducing, or eliminating emissions by the Company. Resources are also conserved. For example, these include expenditures incurred to operate equipment that protects the environment as well as expenditures for measures not relating to such equipment. The emphasis in 2016 was on sewage and waste management.

The fields of environmental protection were redefined in 2016 due to a change in legislation.

**VOLKSWAGEN AG EXPENDITURE ON ENVIRONMENTAL PROTECTION**

€ million	2016	2015	2014	2013	2012
Investments	11	21	19	14	9
Operating costs	223	244	226	224	216

**OPERATING COSTS FOR ENVIRONMENTAL PROTECTION AT VOLKSWAGEN AG 2016***Share of environmental protection areas in percent***BUSINESS DEVELOPMENT RISKS AND OPPORTUNITIES AT VOLKSWAGEN AG**

The business development of Volkswagen AG is exposed to essentially the same risks and opportunities as the Volkswagen Group. These risks and opportunities are explained in the Report on Risks and Opportunities on pages 180 to 201 of this annual report.

**RISKS ARISING FROM FINANCIAL INSTRUMENTS**

Risks for Volkswagen AG arising from the use of financial instruments are generally the same as those to which the Volkswagen Group is exposed. An explanation of these risks can be found on pages 199 to 200 of this annual report.

**DEPENDENT COMPANY REPORT**

The Board of Management of Volkswagen AG has submitted to the Supervisory Board the report required by section 312 of the AktG and issued the following concluding declaration:

“We declare that, based on the circumstances known to us at the time when the transactions with affiliated companies within the meaning of section 312 of the German Stock Corporation Act (AktG) were entered into, our Company received appropriate consideration for each transaction. No transactions with third parties or measures were either undertaken or omitted on the instructions of or in the interests of Porsche or other affiliated companies in the reporting period.”

# Sustainable Value Enhancement

Our goal is to run our business responsibly along the entire value chain. Everyone should benefit from this – our customers, our employees, the environment and society. Our future program TOGETHER – Strategy 2025 is ushering in the biggest change process in the Company's history. The starting point is our vision of becoming one of the world's leading providers of sustainable mobility.

The main financial key performance indicators for the Volkswagen Group are described in the "Results of Operations, Financial Position and Net Assets" chapter. Nonfinancial key performance indicators also attest to the efficiency of our Company's value drivers. These include the processes in the areas of research and development, procurement, production, marketing and sales, information technology and quality assurance. In all of these processes, we are aware of our responsibility towards our customers, our employees, the environment and society. In this chapter we provide examples of how we are increasing the value of our Company in a sustainable way.

## SUSTAINABILITY

The Volkswagen Group is committed to sustainable, transparent and responsible corporate governance. The biggest challenge we face in implementing this at all levels and at every step in the value chain is the complexity of our Company, with its twelve brands, more than 626 thousand employees and 120 production locations. In order to tackle this challenge in the best way possible, we follow the recommendations of the German Corporate Governance Code and coordinate our sustainability activities across the entire Group. We have also put in place a forward-looking system of risk management and a clear framework for dealing with environmental issues in a future-oriented manner, employee responsibility and social commitment across our brands and in the regions in which we operate. The remuneration paid to the Group Board of Management also takes the Company's long-term success into account.

For us, sustainability means simultaneously striving for economic, social and environmental goals in a way that gives them equal priority. We want to create enduring value, provide good working conditions and handle the environment and resources with care. In connection with the

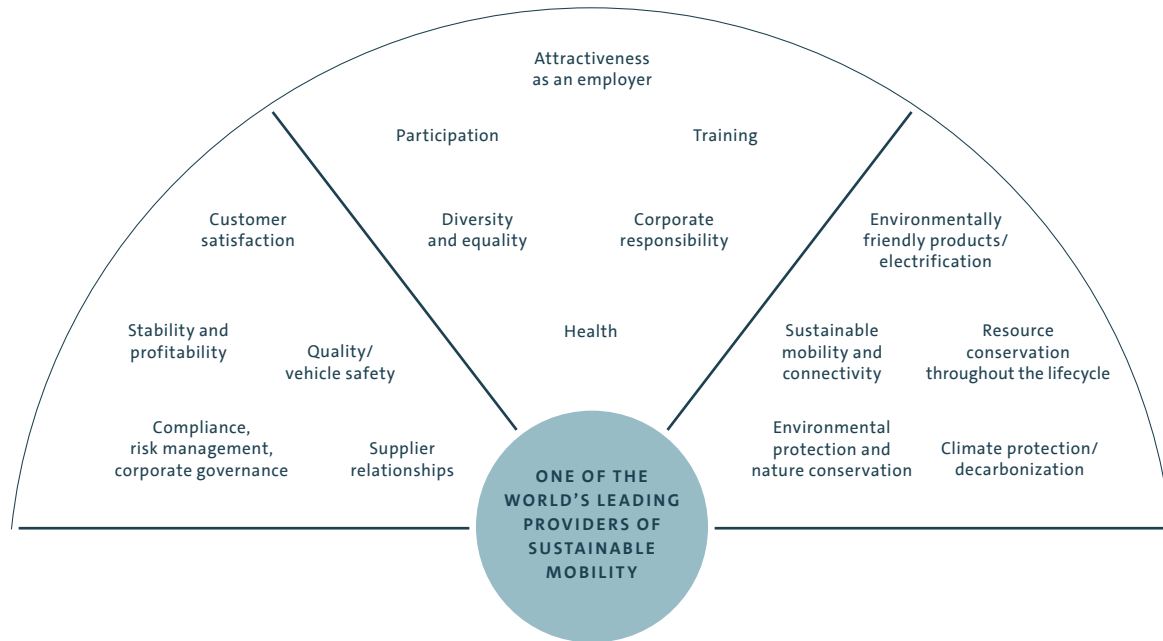
diesel issue, we failed to meet our own standards in several respects. The irregularities in our handling of emissions figures are contrary to everything we stand for. We are doing everything within our power both to prevent it happening again and to regain lost trust from our stakeholders. Our sustainability concept is under extensive revision to ensure that we recognize risks and opportunities in the areas of environment, society and governance at an early stage at every step along the value chain. In this way, our corporate social responsibility (CSR) activities will contribute toward enhancing our Company's reputation and value in the long term.

## Management und coordination

The Volkswagen Group has created a clear management structure to coordinate the Group's activities as regards sustainability and CSR. Its highest committee is the Group Board of Management (Sustainability Board), which is regularly informed by the Group Sustainability steering group on issues related to sustainability and corporate responsibility. The members of the Group Sustainability steering group include executives from central Board of Management business areas and representatives of the Group Works Council and the brands. The steering group's tasks include identifying the key action areas, making decisions on the strategic sustainability goals, monitoring the extent to which these goals are being met by means of indicators and approving the sustainability report.

The sustainability office supports the steering group. Its duties include coordinating all sustainability activities within the Group and the brands. It is also responsible for stakeholder dialog at Group level, for example with sustainability-driven analysts and investors. In addition, CSR project teams work across business areas on topics such as reporting, stakeholder management and sustainability in supplier

VOLKSWAGEN GROUP'S KEY ACTION AREAS



relationships. In parallel, this coordination and working structure is also largely established across the brands and is constantly expanding. Since 2009, the Sustainability & CSR coordinators for all brands and regions have come together once a year to promote communication across the Group, create uniform structures and learn from one another. This Group CSR meeting has proven its worth as an integral part of the Group-wide coordination structure.

**Sustainability Council**

As part of its efforts to continuously improve and expand its sustainability management, the Volkswagen Group appointed an international Sustainability Council in 2016 made up of renowned experts from the academic world, politics and society. The members of the council establish their own working methods and areas of focus independently and consult with the Board of Management, senior managers and the employee representatives regularly. The council's role is to keep a watchful, critical eye on developments within the Company and in society.

The proven expertise of the council members guarantees a comprehensive approach. The topics addressed are social responsibility and integrity, sustainable mobility and climate protection, and the future of work and digitalization.

The Sustainability Council is vested with rights of information, consultation and initiative. This involves receiving timely, comprehensive information so that the council can fulfill its consulting mandate. Dialog between the Company and the council is ensured through the active offering of consultations. In addition, the council is authorized to proactively propose topics and it or its members can implement projects with the Company subject to prior agreement.

The first key issues in 2017 will be not only the challenges created by global CO<sub>2</sub> emissions and the corresponding regulations to be met post-2025, but also the Company's transformation process. The Volkswagen Group is initially providing €20 million in funding for projects proposed and promoted by the Sustainability Council in its first two years.

**Materiality analysis**

Two developments in 2016 influenced the detailed analysis as to which issues are material to the Volkswagen Group: the realignment of the Group via the future program TOGETHER – Strategy 2025, and dealing with the consequences of the diesel issue.

After analyzing and identifying topics that are material to the Company, we derived 16 key action areas that we will use to achieve our goal of becoming one of the world's leading providers of sustainable mobility. The analysis was based on external studies, industry analyses and stakeholder surveys carried out by our brands, internal guidelines such as our corporate strategy and Group environmental strategy as well as key factors identified by the Volkswagen Group's strategy committee.

As the details of the new Group strategy have not yet been finalized, we are still in the process of specifying the content of the key action areas and defining corresponding values, targets and indicators. As an enterprise with global operations, we will also take account of the options available to us for influencing and implementing the Sustainable Development Goals (SDGs) formulated by the United Nations.

#### Code of Conduct and guidelines

Voluntary commitments and principles that apply throughout the Group form the backbone of our strategic sustainability goals. Such principles include the seven Volkswagen Group values, namely customer focus, top performance, value creation, the ability to realign, respect, responsibility and sustainability. In addition, our sustainability model provides the framework for sustainable and responsible action. The Code of Conduct introduced by the Volkswagen Group in 2010 also applies to the entire Group and helps managers and employees alike to deal with legal and ethical challenges in their day-to-day work.

We expressly support the United Nations Global Compact, an agreement between the UN and the business world aimed at enhancing the social and ecological aspects of globalization. As long ago as 2002, the Volkswagen Group made a commitment to promoting human rights, labor standards and environmental protection and combating corruption. In 2013, this commitment was extended to include the CEO Water Mandate, the aim of which is to ensure the careful management of water resources. Until such time as the diesel issue has been finally resolved, we have agreed to put our membership on hold. We ensure that our actions are in line with the declarations of the International Labor Organization (ILO), the principles and conventions of the Organisation for Economic Co-operation and Development (OECD) and the international covenants of the United Nations on basic rights and freedom.

We have also established our own internal guidelines in the shape of the Volkswagen Social Charter, the Charter on Labor Relations, the Charter on Vocational Education and Training, and the Charter on Temporary Work, all of which apply to the Group as a whole. Environmental protection activities are shaped by the environmental policy and principles for products and production, which both apply throughout the Group.

#### Strategic stakeholder management

Every day, we are confronted by the multifarious demands, expectations and attitudes of our many different stakeholders. These stakeholders may be individuals, groups or organizations with a legitimate interest in how the Volkswagen Group reaches its corporate decisions and in the implications of those decisions. Our customers and our employees are our key stakeholders. They form the core around which twelve other stakeholder groups are positioned – from the business and academic worlds, society and politics, and the media. The relationships our companies entertain with their stakeholders enrich the work we do together. At the same time, the diverse interests of these groups can lead to conflicts of interests.

That is why, day in and day out, we have to strike a balance between acting efficiently and satisfying a wide array of social expectations. Our customers expect a high-quality range of mobility products and first-class service. Performance-related remuneration, secure jobs and co-determination are key issues for our employees. Investors and analysts, on the other hand, want to see constantly rising unit sales and solid earnings growth, whereas civil society stakeholders are focused on social commitment and supporting social and environmental projects.

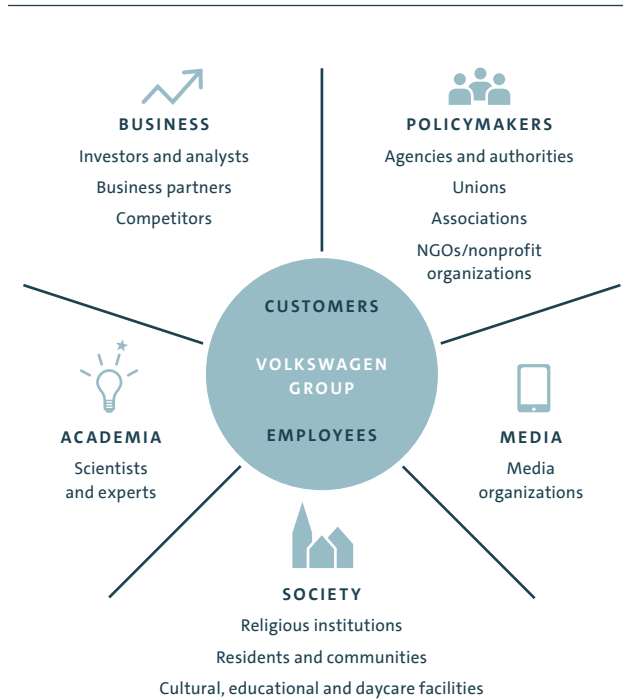
It is important to us that our stakeholders interact with us as equal partners. We know that we can achieve long-term success only if we take a proactive approach and are fully acquainted with the interests, needs and expectations of our stakeholders. That includes:

- > systematically capturing, analyzing and understanding the stakeholders' expectations of Volkswagen;
- > solving problems jointly and sharing and utilizing the knowledge of both sides;
- > openly addressing conflicts and recognizing potential conflicts and the risks arising from them; and
- > improving the quality of our decisions through transparency, openness and participation.

In addition to actively sharing information, we are also promoting a more in-depth and trust-based form of collaboration with selected stakeholders, the goal being to provide support to society, solve problems jointly and to draw on their expertise in the decision-making process. Examples include our cooperation with the German Red Cross (DRK) and our efforts to help refugees.

Humanity, public spirit and a sense of responsibility are the values on which the work of the DRK is based, and they are values we share. As part of the strategic partnership, the Volkswagen Group helps the DRK to find more people who are willing to volunteer their time. This goal is central to the partnership, in conjunction with strengthening the Red Cross's rescue service.

STAKEHOLDERS OF THE VOLKSWAGEN GROUP



The slogan “Helping Together” sums up how we are joining in the collective task of receiving and integrating the refugees who come to Europe and Germany. This is accomplished through a wide variety of projects, such as immediate aid in the initial accommodation facilities, local integration and education projects as well as providing vehicles and non-monetary resources.

However, our long-standing cooperation and consultancy agreement with the German Nature and Biodiversity Conservation Union (NABU) expired on December 31, 2015. Extension of the contract and further collaboration are suspended for the time being as a result of the diesel issue. Nevertheless, we would like to continue our strategic partnership with NABU and are working hard to create the conditions needed to resume our successful project work of the past.

Not only do we provide support for projects that address future trends or that aid education or society as a whole, but we also want to drive the economy by helping to promote structural development and equal opportunities. In the

reporting period we were involved in around 200 projects worldwide. In these, we pay special attention to the continuity and sustainability of our activities. We want not only our employees, but also our shareholders, neighbors and customers to benefit from what we do. Furthermore, we provide rapid assistance to victims of natural disasters and support the volunteer work of our own employees.

RESEARCH AND DEVELOPMENT

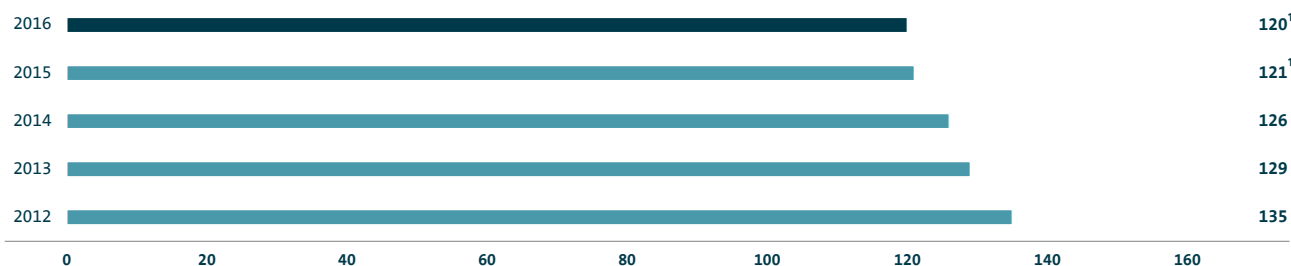
An important basis for innovation and thus the success of our business hinges on the early detection of future-oriented developments and trends in the ever-more complex areas of society, politics, technology, the environment and the economy. The Volkswagen Group’s research institutes in the world’s key automotive markets directly monitor pioneering developments in the local environment, thus gaining important insights that will safeguard the Group’s future.

In the reporting period, our research activities were focused on designing forward-looking mobility solutions that will safeguard the Company’s future and on establishing innovative technological expertise to strengthen our competitiveness. Our development activities focused on expanding our product range and enhancing the functionality, quality, safety and environmental compatibility of our products.

The future program TOGETHER – Strategy 2025 provides the framework for the realignment of our Group-wide research and development work: together with the brands, we have formulated an R&D strategy for the Group and already launched our first projects. This enables the brands to focus on developing future trends and systematically strengthening the development network – for example, so as to tap synergies and make efficiency gains even in the early phase of product development.

The Volkswagen Group’s technology management team is supporting the Group’s transformation into a provider of sustainable mobility solutions by ensuring that early development activities are aligned with future trends in the automotive sector and by creating links between innovation areas such as service design and more traditional product-related topics. All our mobility concepts are systematically tailored to our customers’ needs.



**CO<sub>2</sub> EMISSIONS OF THE VOLKSWAGEN GROUP'S EUROPEAN (EU28) NEW PASSENGER CAR FLEET***in grams per kilometer*

<sup>1</sup> Subject to official publication by the European Commission in the annual CO<sub>2</sub> fleet monitoring report.

**Fuel and drivetrain strategy**

The Volkswagen Group's new passenger car fleet in the EU (excluding Lamborghini and Bentley) emitted an average of 120 g CO<sub>2</sub>/km<sup>1</sup> in the reporting period and was thus well below the 2016 European limit of 130 g CO<sub>2</sub>/km. As small-volume manufacturers, the Lamborghini and Bentley brands each have an independent fleet for the purposes of the European CO<sub>2</sub> legislation and complied with their individual targets.

Starting in autumn 2017, the test procedure for emissions and fuel consumption used in the EU will gradually be replaced by the Worldwide Harmonized Light-Duty Vehicles Test Procedure (WLTP). The purpose of the new test cycle is to state more practice-oriented levels for CO<sub>2</sub> emissions and fuel consumption and also to take account of higher speeds and driving dynamics as well as the optional equipment chosen by customers.

The Volkswagen Group's fuel and drivetrain strategy is paving the way for sustainable, carbon-neutral mobility. The goal is to increase drive system efficiency with each new model generation – irrespective of whether the means of propulsion are combustion engines, hybrids, plug-in hybrids, pure electric drives, or fuel cell drive systems.

The drivetrain portfolio will expand and coexist between traditional drivetrains and e-mobility will increase in the future. The current modular toolkits are designed so that the full range of drive systems can be deployed and flexibly fitted on product lines across our global locations.

From today's perspective, the combustion engine looks set to serve as the broad basis for drive technology in the coming years. In the interest of using resources responsibly, it is therefore essential for combustion engines to be further optimized.

As far as conventional combustion engines are concerned, we are continually working on technologies for the efficient purification of exhaust gases and clean combustion in order

to reduce harmful emissions even further. From mid-2017 onwards, we will progressively fit all Group direct-injection TSI and TFSI engines with petrol particulate filters.

When it comes to vehicles with conventional drive systems, we have taken several efficiency-increasing measures to significantly reduce average fuel consumption. In 2016, the new V6 and V8 petrol engines were deployed for the first time in series production in the premium and sports car segment, for example in the new Porsche Panamera. These engines are not only highly responsive, but have high levels of comfort and efficiency.

Volkswagen continued to refine the TSI engine family in the reporting period. In spring 2017, the new generation made its debut with the 1.5 TSI evo engine in the new Golf. It will be followed by a BlueMotion variant with an output of 96 kW (130 PS), among others. The TSI evo underscores the Company's strategy of using modular technology toolkits in series-production to make cutting-edge technologies available to customers.

We are expanding our traditional range of engines through drivetrain electrification. The percentage of drivers traveling predominantly short distances is growing all the time, and includes not only commuters and residents of big cities, but also drivers of delivery vehicles in urban areas. Zero-emissions, purely electric vehicles like the e-up! and e-Golf are highly suited for short-distance travel and are thus an interesting proposition, especially for this target group. In the medium-to-long term, opportunities to recharge privately – e.g. using a charging station installed on the customer's premises – must be supplemented by good public recharging infrastructure.

However, most customers also want to be able to drive longer distances. Hybrid vehicles, particularly plug-in hybrids, combine highly efficient combustion engines with zero-emission electric motors. We consider this combination of drive concepts to be one way of offering electrified models for



all mobility needs to customers of a wide range of vehicle classes, building trust in the new technologies and thus helping e-mobility gain acceptance.

All Group brands are driving the development of electric traction forwards. We have expanded our expertise in this area with the help of additional technical specialists and experts. On the basis of the experience gained with existing vehicle architectures, we designed the Modular Electric Toolkit (MEB) for the compact segment. This can be deployed across our brands in passenger cars and light commercial vehicles alike. The MEB enables us to develop very exciting vehicles and allows ranges of 300 to 600 km in purely electrical mode. It also makes it possible to factor in vehicle-specific requirements and achieve savings by combining purchasing volumes. Thanks to the Volkswagen Group's modular toolkit strategy, modules can be deployed across different model series and brands, thus achieving substantial synergies. This applies in particular to models that share the same platform. We have integrated the production of electrified vehicles into the manufacturing processes at our existing plants, e.g. in Wolfsburg, Emden, Bratislava, Ingolstadt and Leipzig. The electric motors are manufactured at our plant in Kassel.

The battery is the heart of an electric vehicle and its energy content is the deciding factor in determining the vehicle's range and performance. In light of the gains in market volume and unit sales of electric vehicles over the coming years, the Volkswagen Group will establish battery technology as a new competency. At the moment, we use lithium-ion cells in our all-electric and plug-in hybrid vehicles. We assemble these cells into battery systems in our Braunschweig factory. Battery types based on solid electrolytes, which have a higher energy density and offer higher intrinsic safety, are currently being researched. The next generation of electric and plug-in hybrid vehicles will be fitted with enhanced lithium-ion technology.

In 2016, we presented the visionary I.D. concept car, a zero-emissions vehicle that we intend to launch in 2020. It will have a range of up to 600 km and will be the first representative of an entirely new fleet of highly innovative electric vehicles based on the MEB. In 2016, Audi extended its range of e-tron models with the Audi Q7 3.0 TDI e-tron quattro. In addition to this, Volkswagen Commercial Vehicles presented its e-Crafter study in the reporting period. With a driving range of more than 200 km, the first electrically powered Crafter is a near production-ready solution for zero-emis-

sions urban delivery situations. MAN presented an all-electric MAN Lion's City articulated bus as a modular concept vehicle, a TGS semitrailer tractor with an electric drive for inner-city night deliveries, as well as a variety of concepts for the recharging infrastructure in 2016.

As part of our future program TOGETHER – Strategy 2025, we plan to be producing more than 30 different types of purely battery-powered electric vehicles across the Group as a whole by 2025.

Alongside electric vehicles, natural-gas engines play a key role in achieving the goal of carbon-neutral mobility. Due to the chemical composition of natural gas, its CO<sub>2</sub> emissions are around 25% below those of petrol. Volkswagen is expanding its range of eco-friendly drive concepts with the new 1.0 l three-cylinder TGI engine, which has an output of 66 kW (90 PS) and achieves impressive consumption figures and compelling performance, thanks to the systematic refinement of its combustion process and supercharging.

Renewable fuels can play a big part in further reducing the CO<sub>2</sub> emissions of combustion engines and can complement e-mobility, e.g. on long-distance trips. They are also a fast way to cut the overall CO<sub>2</sub> emissions of vehicles already on the road. Volkswagen plans to deploy and refine existing fuel solutions in a model region and to test new approaches. Beyond that, the Company is taking part in joint projects that examine the potential to produce petrol, diesel and gas from renewable energy sources. In 2016, Audi expanded its production capacity for sustainably generated e-gas and set a milestone with Germany's first power-to-gas facility using industrial-scale biological methanation. Furthermore, Audi unveiled another g-tron model. Like the A3 g-tron and the A4 g-tron, the Audi A5 Sportback g-tron can be operated with either climate-friendly Audi e-gas or natural gas (CNG) or with petrol.

Hydrogen will not be widely available as a fuel in the medium term. Both hydrogen filling stations and renewable hydrogen production plants will have to be constructed. Volkswagen has been working on fuel cell technologies for many years and has gained extensive experience operating test fleets. In the reporting period, Audi provided a concrete perspective of its hydrogen drives, presenting the h-tron quattro concept car, a hydrogen-powered sports SUV that can be completely refilled with hydrogen in about four minutes and has a range of 600 km.

#### Life cycle engineering and recycling

Innovations and new technologies for reducing fuel consumption are not enough on their own to minimize the effect of vehicles on the environment. That is why we examine the entire product life cycle of our vehicles – including the production of both raw materials and components – and prepare life cycle assessments in accordance with ISO standards 14040 and 14044. On this basis, we can determine where improvements have the greatest effect and develop innovations that target these points directly. We call this life cycle engineering.

The Volkswagen Passenger Cars brand reports on the results in so-called environmental ratings. These ratings show the ecological advances in new vehicle models compared with their immediate predecessors. Audi publishes this information under the term “environmental footprint”, while SEAT provides corresponding data in its product catalog. We also use life cycle assessments for the special subject of water, using them to calculate and analyze the amount of water consumed by a vehicle throughout its entire life cycle (water footprint). This enables us to take targeted action to reduce water consumption. We also use the results of our life cycle assessments to generate the Scope 3 inventory. We report on CO<sub>2</sub> emissions in twelve out of a total of 15 Scope 3 categories in accordance with the Scope 3 standard published by the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute. As a result, we are one of the leading companies in the automotive industry. You can find further information on this in the Volkswagen Group’s Sustainability Report 2016.

As we wish to minimize our vehicles’ impact on the environment in collaboration with our suppliers, Volkswagen joined the CDP supply chain program in 2015; this records greenhouse gas emissions throughout the value chain. We seek direct contact with our suppliers in specific workshops, where together we discuss and develop innovative approaches to the ecological optimization of particular components.

Recycling, too, is central to reducing the impact of our products on the environment and conserving resources. It is not just a matter of recycling vehicles at the end of their service life: we already pay attention to the recyclability of the required materials, the use of high-quality recycled material and the avoidance of pollutants when developing new vehicles. Therefore, our end-of-life vehicles are 85% recyclable and 95% recoverable. We also factor in aspects of the use phase, for instance the treatment and disposal of service fluids or high-wear components.

Building on the findings of the LithoRec research project (lithium-ion battery recycling), we are working on extending the useful life of such batteries and the recirculation of battery materials so as to conserve resources and cut costs. There is also the Volkswagen Passenger Cars brand’s Genuine Exchange Parts program, whereby industrial reconditioning produces high-quality exchange parts that conserve resources and offer the same quality, functionality and warranty, but are on average 40% cheaper than the corresponding new parts.

#### Sustainable mobility and connectivity

Mobility is one of the key conditions for economic growth. The latest challenge is to cater to the growing demand for mobility despite diminishing resources and, in the process, reduce its negative effects on the environment. Holistic mobility concepts have to be efficient, sustainable, customer-oriented and, above all else, designed in such a way that they are accessible anytime and anywhere. We at Volkswagen are researching and developing groundbreaking mobility solutions for our customers that will shape the future in this area. We do not limit our focus to automotive mobility, but take in other modes of transport as well and examine structural issues such as urbanization, urban development and the quality of transport infrastructure. We also take account of demand trends, such as the shared use of vehicles. One building block of our future program TOGETHER – Strategy 2025 is the establishment of a cross-brand mobility solutions business. Part of this is the new MOIA business unit, which will develop, participate in or acquire services that are tailored to customer requirements, such as ride hailing services.

Volkswagen is working on a wide range of approaches, from novel vehicle concepts right through to research into innovative urban developments. We are sharing ideas with universities and associations, and presenting potential solutions to the specialized public for discussion. However, these measures can be fully effective only if they are inter-linked and deployed in the right place at the right time. They require the efficient interplay of people, technologies, means of transport and infrastructure. With the aid of scientists and tests in model cities, we helped to derive indicators for sustainable mobility in cities within the WBCSD’s Sustainable Mobility Project 2.0. In spring 2016, the European Commission announced that it would actively support the application of these 19 indicators throughout cities. Together with the SEAT brand, Volkswagen Group Research set up the interdisciplinary research platform CARNET (Cooperative

Automotive Research Network) in Barcelona. In over 20 joint projects, CARNET is working on concepts for efficient urban mobility, e.g. the SEAT Ateca Smart City Car, which connects with its environment through Smart City Connectivity, or the Barcelona Smart Shuttle.

The connection of vehicles to other vehicles, to the environment, to infrastructure and to mobile devices is advancing and increasing the safety, comfort and driving enjoyment of drivers, passengers and other road users. The latest generation of the Modular Infotainment Toolkit (MIB) has already brought corresponding innovations to numerous models of our Group brands.

Volkswagen has developed a self-learning, context-sensitive, personalized voice command system that can adapt to individual users and situations. We are also constantly refining the gesture control systems we install in our vehicles. Volkswagen's newest infotainment systems already use a proximity sensor. The new Golf is the first in its class to offer a cockpit with gesture control: without actually touching a screen, it is possible to operate the display and controls in virtual space with hand movements. This represents a clear gain in comfort and safety. Eye tracking is a further refinement of gesture control: the system tracks the driver's point of gaze, adapting the vehicle to suit the condition of the driver or his/her intended operations and preparing it for critical situations before they occur.

Audi is advancing the development of intelligent networking with the Audi Connect car-to-x services, with new infotainment modules and with high-precision digital maps from HERE. Audi is the first manufacturer to connect its models to the city infrastructure: the "time to green" feature is the world's first car-to-x service and provides information on the duration of the red light and the optimum speed for the "green wave" directly on the vehicle display.

Scania continued to refine its connected services in 2016. Examples include the fleet management service, which is based on data from 230,000 connected Scania vehicles, or the flexible maintenance program, which ensures that every truck receives exactly the right maintenance based on the actual usage.

Volkswagen Truck & Bus presented the new RIO brand in 2016. This cloud-based, multi-vendor platform serves the entire transport and logistics ecosystem and will be available in the second quarter of 2017. It combines and analyzes diverse data from the logistics value chain, using it to make specific recommendations to customers on how to optimize their transport and reloading processes and thus enhance efficiency and transparency.

#### Driver assistance systems and automated driving

In 2016, we extended the use of innovative driver assistance systems to further vehicles, systematically pursuing the strategy of making innovations from the luxury vehicle segments available in the volume segments. The gradual expansion of assistance systems and automated driving functions paves the way for autonomous driving and increasingly takes the pressure off the driver. Volkswagen's aim is to become the leader in this area of innovation.

The new Porsche Panamera is fitted with Porsche InnoDrive including Adaptive Cruise Control. This innovative driver assistance system uses navigation data and radar-video sensors to enhance vehicle efficiency, anticipating and factoring in speed limits, road gradients and the radius of bends. The new Tiguan and the SEAT Ateca are fitted, for example, with the driver assistance systems Traffic Jam Assist, Emergency Assist and Front Assist with Pedestrian Monitoring and City Emergency Braking. The new Golf with Traffic Jam Assist can drive in a semi-automated manner at speeds of up to 60 km/h thanks to the combination of Adaptive Cruise Control (ACC) and Lane Assist.

The new Blind Spot Monitor with Rear Traffic Alert represents another safety gain: when the vehicle is in motion, the sensor warns of any vehicles in the driver's blind spot; when the driver is backing out of a parking spot, the system even recognizes any vehicle or pedestrian approaching from the side near the rear of the vehicle and brakes automatically if there is danger of a collision.

Volkswagen is also working on an online driver assistance system. Users can deploy current or future mobile technologies to enter data in the system, which is then made available to the other online participants. The data in question, which is recorded on extremely detailed maps, can enhance both driving safety and convenience, and includes information on traffic signs and traffic lights, unoccupied parking spaces, or the road surface.

Driver assistance systems and automated driving functions are also gaining ground in heavy commercial vehicles. Scania presented its first studies on self-driving trucks and buses in 2016. A further variant is driving in a convoy, also known as platooning. Still in the development phase, platooning involves two or more trucks driving closely behind one another with the aid of driver assistance and control systems as well as truck-to-truck communication. Platooning not only reduces fuel consumption and CO<sub>2</sub> emissions, but also enhances safety and traffic efficiency. MAN and Scania gave an impressive demonstration of this technology at the European Truck Platooning Challenge 2016.

In November 2016, DB Schenker and MAN agreed on their first project devoted to platooning.

#### Leveraging synergies increases efficiency

When developing vehicles, we cooperate closely with our brands to leverage synergies. The research and development strategy elaborated in our development alliance aims, for example, to keep the Group competitive in the long term by deploying resources more efficiently in the research and development of mobility-related technologies and concepts. The brands work together on key technologies in our development alliance and form Group-wide expertise networks addressing potential topics of the future. Moreover, the individual brands are making increasing use of the modular toolkits making synergies possible both between the various models of a product line and across product lines. The brands benefit from an intensive exchange of best practices, for example in the field of virtual development. A further aim is to reduce IT costs by developing IT tools jointly.

In 2016, MAN and Scania formulated clear principles for their joint development work and signed a corresponding memorandum of understanding. Going forward, teams of engineers from both brands will work together to develop core drivetrain components. This will result in shared platforms for engines, gearboxes, axles and exhaust gas aftertreatment systems, which can then be modified for each specific brand.

#### Pooling strengths with strategic alliances

One goal of our research and development strategy is to continue building and consolidating a partnership culture, and we have designed corresponding initiatives to achieve this goal. In order to attain the goal expressed in our future program TOGETHER – Strategy 2025, namely of transforming our core automotive business and establishing a new mobility solutions business, it is essential that we intensify our traditionally excellent innovative strength and place it on an even broader footing. That is why we will rely to a greater extent than previously on partnerships, acquisitions and venture capital investments. Investment selection will be

managed centrally so as to generate maximum value for the Group and its brands.

We are collaborating with experienced battery manufacturers in the research and further development of high-voltage battery systems for electric and plug-in hybrid drives. We not only continued, but also intensified, these cooperative projects in the reporting period. Our research community with Varta Microbattery GmbH made further progress with traction batteries in 2016.

Audi is developing the battery for an all-electric SUV on the basis of powerful cell modules from South Korean suppliers LG Chem and Samsung SDI. The partners wish to invest in cell technology in Europe and will supply Audi from their European plants.

We are also carrying out research into economical lightweight construction technologies for series production as part of the public-private partnership with Open Hybrid LabFactory in collaboration with the Lower Saxony Research Center for Vehicle Technology at the Technical University of Braunschweig, the Fraunhofer Gesellschaft and various other industry partners. LeichtbauCampus Open Hybrid LabFactory was inaugurated in September 2016 and research activities were commenced.

In the reporting period, AUDI AG, the BMW Group and Daimler AG continued their joint work on the HERE maps and positioning services business acquired from the Nokia Corporation in 2015. In combination with real-time vehicle data, HERE's high-precision digital maps create the basis for the next generation of mobility and positioning services, which in turn underpin the new driver assistance systems – right through to autonomous driving.

Audi is also pressing ahead with crucial key issues in the field of digitalization and is involved, for example, in six projects related to structural measures and communication technologies for the Digital Motorway Test Bed, a joint initiative of Germany's Federal Ministry of Transport and Digital Infrastructure with the state of Bavaria, the automotive and supplier industry, and the IT sector. Transmitters and sensors installed along several stretches of the A9 motorway connect vehicles with their surroundings as well as with each other.

**Key R&D figures**

In fiscal year 2016, we filed 6,465 (6,244) patent applications worldwide for employee inventions, around half of them in Germany. An increasing share of these applications is for driver assistance systems, conventional and alternative drive systems, and lightweight construction, thus underscoring our outstanding power to innovate.

In the reporting period, the Automotive Division's total research and development costs were 0.4% higher than in the previous year; total research and development expenditure as a percentage of the Automotive Division's sales revenue

(the R&D ratio) came to 7.3 (7.4)%. Along with new models, the main focus was on the electrification of our vehicle portfolio, a more efficient range of engines, lightweight construction, digitalization and the development of modular toolkits. The capitalization ratio rose to 42.1 (36.9)%. Research and development expenditure recognized in profit or loss in accordance with IFRS decreased to €11.5 (11.9) billion.

As of December 31, 2016, the research and development function – including the equity-accounted Chinese joint ventures – employed 48,063 people (–1.4%) Group-wide or 7.7% of the total headcount.

**RESEARCH AND DEVELOPMENT COSTS IN THE AUTOMOTIVE DIVISION**

€ million	2016	2015
Total research and development costs	13,672	13,612
of which capitalized development costs	5,750	5,021
Capitalization ratio in %	42.1	36.9
Amortization of capitalized development costs	3,587	3,263
Research and development costs recognized in profit or loss	11,509	11,853
Sales revenue	186,016	183,936
Total research and development costs	13,672	13,612
<b>R&amp;D ratio</b>	<b>7.3</b>	<b>7.4</b>

# Future in Motion

## Researching and shaping the future of mobility: a look ahead to the year 2025.

In the automotive industry, as in other sectors, the current decade has seen the scale of changes affecting the environment and competition reach unprecedented complexity. This is posing new challenges for research work at the Company and transforming the way we understand the future, turning it from something predictable into an exploratory and participatory space for creativity. The results of our research work are giving us an insight into the current and future trends in innovative areas of technology. This knowledge is of crucial importance to the direction of our research and development activities. Only armed with a reliable idea of technological possibilities and their limits, can we position the Group in a way that ensures sustainable growth.

Together with renowned research partners, we have identified key areas that will have an effect far beyond 2025. This is giving us the chance to help shape the answers to the questions of the future. The changes are also bringing challenges in the form of competitive pressure. We regard this as an opportunity to proactively build the future.

The issues we will face in the run-up to 2025 are challenging, and cooperation will be required over the next decade if we are to solve them. Such cooperative solutions are essential to answering the questions that will be asked of the mobility of the future and meeting the needs that will arise. We are reorienting our activities and strategic investment plans towards tomorrow's mobility. The Group faces the largest transformation in its history, which offers us great potential to mold and safeguard the future together and in a sustainable way.

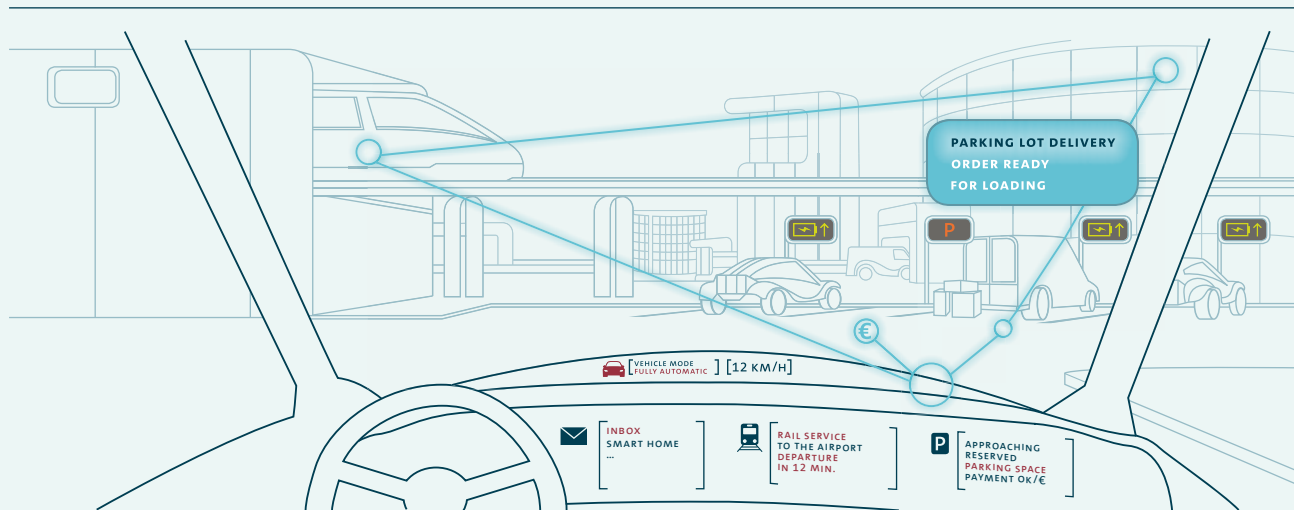
Recently, trends such as digitalization and the fusion of individual technologies have led to innovations in the field of automation. They have also created the environment needed to expand these innovations into further industries and areas of our lives. We are now gaining first-hand experience of the application of these technologies on a large scale thanks to Industry 4.0, digital assistants and the networking of everyday objects in the Internet of things. The relationship between people and technology will develop over the coming decades from one of interaction to a synchronized interplay. Service robots, smart traffic management systems and information technologies will mutually reinforce each other. Growing knowledge and new techniques in the area

of artificial intelligence in particular are enabling new innovative applications to emerge from these technologies. Predictive analyses reveal relationships and patterns within large quantities of data, allowing behavior and events to be predicted with a high degree of certainty. They provide a basis for customized solutions with global variations. The future world of mobility will enable people and goods to be transported by largely autonomous systems and optimize flows of traffic and travel in order to meet the sharp rise in demand for mobility. From 2020, highly and fully automated vehicles will be put to a range of uses in many regions.

The premises of 21<sup>st</sup> century mobility systems differ radically from those of the 20<sup>th</sup> century. The ways in which we move people, materials and products are shifting with new technological possibilities, changing values and economic innovations. Intelligent and integrated systems will have an impact on our mobility habits, lifestyles, urban communities and global supply chains. These systems will set the benchmarks against which the mobility providers of the future will be measured. Demand for mobility tailored to many different locations and deployment scenarios will also grow in future. However, industry cannot shape mobility alone. Cities, regions and politicians must develop strategies together. Smart cities are the first step towards rethinking the future shape of urban life. Integrating relevant infrastructure and optimizing the flow of supplies and transport are the key action areas.

Making sure that the highly digitalized mobility systems of the future are secure will require comprehensive strategies for resilient infrastructures and consistent protection of sensitive data on people, technology and systems. These systems must respond effectively to changes and threats (such as cyberattacks, power cuts or hardware failure), recover swiftly from complications and even withstand disasters. The rapid growth of the Internet of things, which also includes vehicles, is expanding not only opportunities for value generation using digital data, but also creating potential targets. The resilience of these systems will be key, particularly where autonomous systems and the flow of digital data are concerned.

In the future, mobility will not only mean moving from place to place, but will be expected to create health benefits, too.



People's understanding of health will undergo a fundamental shift, with ever more of us taking responsibility for it into our own hands. Health will be understood not only in the physiological sense, but will encompass our all-round personal well-being. The design of future mobility systems will take this broader concept of health into account.

Above all, future mobility will involve a change in business models. Value creation in numerous industries is currently in a state of flux, and this transformation has already manifested itself in the mobility sector in a variety of ways. Shared use of goods, consideration of customer specifications in the product development process and the influence of social networks on products are all becoming increasingly important. Different regional solutions will also develop. Advancing digitalization is increasingly translating economic processes into algorithms, giving rise to completely new customer experiences. Developing new competencies in the area of agile and scalable business models will be a competitive factor over the next decade. These new business models must address the measures needed to ensure sustainable growth and reduce the impact on environmental systems.

An awareness of sustainability and the realization of social, environmental and economic goals to ensure the world remains livable for generations to come: these are the major challenges that we are facing. Though there have been positive developments such as the Paris climate agreement, many questions concerning the realization of set goals remain unresolved. To limit the adverse effects of climate change, consistent measures and regulations will have to be implemented in all areas in the near future. As it can also be assumed that purely technological solutions will be unable to meet this challenge – given that some environmentally

friendly technologies cannot be produced without an impact on the climate, and therefore involve feedback effects – it will also be essential for individuals to change their behavior. Strong, progressive regulation of the mobility sector can therefore be expected in the near future, and will shape the mobility of the future in a way that reaches beyond the question of how vehicles are powered. Proposals, models and strategies by individuals, cities and regions all around the world are already leading this development.

Our future program TOGETHER – Strategy 2025 is addressing forward-looking topics, thus laying the foundations needed to achieve our global sustainability goals. Over the coming years, we will make major investments in the technologies of the future that are necessary to realize our vision. This will include the electrification of the model range, the digitalization offensive throughout the Group, safe autonomous driving and the offering of mobility services.

The Volkswagen Group has achieved important milestones and embarked on new initiatives in these areas in 2016. We want to make a decisive contribution to shaping not only today's mobility, but tomorrow's as well.



## PROCUREMENT

The main tasks for procurement in fiscal year 2016 were to cover the Company's needs and safeguard its vehicle start-ups as well as to help ensure the competitiveness of its products. Beyond that, procurement calculated opportunities in new markets and shaped the Company's future partnerships with its suppliers through the Volkswagen FAST (Future Automotive Supply Tracks) initiative.

### Procurement policy and strategy

The vision of Volkswagen Group procurement finds expression in the phrase: Together – best in customer value and cost. Procurement makes a key contribution to innovation and cost optimization by playing an active part in early project phases, through its price leadership with new technologies and through marketable concepts. Our mission is to have the world's highest performing and most attractive procurement organization.

At the time the new Group strategy was being developed, the strategy of Volkswagen Group procurement was refined accordingly. Key elements concern digitalization, future-proof process and organizational structures, and the ever-changing supplier base. Sustainability plays an even more important role in the new strategy.

As the digital transformation gathers pace in the years ahead, we expect to see a sharp increase in procurement volumes of digital products and services. Examples of these are the components for autonomously driving vehicles, software and also services, especially in the area of new mobility. In this context, it is important to review and refine the decision-making parameters and methods we employ so that we can ensure that we achieve optimum prices, quality and data security in the digital world as well. Procurement will also harness the digital transformation to continue to optimize its own processes and structures, e.g. through the deployment of artificial intelligence or Big Data.

In the coming years, digitalization will further change the way we collaborate with our suppliers. When it comes to our traditional suppliers, we expect to see a sustained concentration of those companies that deliver directly to us. Suppliers that deliver upstream components such as processors or software will continue to gain in importance, and the number of suppliers from Asia, particularly China, will rise substantially.

Volkswagen Group procurement's Strategy 2025, which has been developed further within this framework in consultation with the brands, has six target dimensions:

- > Access to supplier innovations
- > Active cost structures
- > Forward-looking structures
- > People, expertise and attractiveness
- > Supply chain excellence
- > Group-wide synergies

The content of each of these target dimensions is described concisely, and specific KPIs have been assigned to the targets. The first initiatives were already successfully launched at the end of 2016.

### Volkswagen FAST – progress and milestones

FAST is the central initiative of Group procurement, introduced in 2015 with the aim of making the Volkswagen Group and its supply network future-proof. The goal of FAST is to successfully implement the key topics of innovation and globalization by involving suppliers at an earlier stage and more intensively. The FAST initiative enhances the quality and speed of collaboration with our key partners, and thus enables us to coordinate global strategies and points of technological focus even more closely. The common goal is to make impressive technologies available to our customers even more quickly and to implement worldwide vehicle projects more effectively and efficiently.

Key milestones were reached in 2016. We held strategic dialogs with 55 suppliers for 61 competencies and agreed on joint targets. At our first strategy conference, these selected suppliers talked with members of the Board of Management and other representatives of the Volkswagen Group and its brands about the key topics and projects of the coming years. After its successful launch, the FAST initiative will now be expanded to include suppliers for other product groups, e.g. components for vehicle connectivity. We carried out an initial review of these strategic partnerships in 2016 and will continuously adapt the group of FAST suppliers where necessary. This means that suppliers who have not yet been selected still have an opportunity to qualify for the initiative.

We are continually adapting our methods for involving suppliers in the innovation process so that our customers get to experience impressive technologies even more quickly. One example is the Innovation Days introduced within the scope of FAST. We created this multi-step process to identify and assess our suppliers' innovative ideas at an early stage and integrate them in the Company's technology planning. We made good use of the very first Innovation Days in 2015 to discuss and design innovations for compact-class vehicles together with our suppliers. In 2016, we took this concept to



the next level, identifying with our suppliers innovations for a new generation of electric vehicles on the basis of the Modular Electric Toolkit (MEB). By inviting our suppliers to take part in competitions for new concepts, we are systematically supporting the cost-effective implementation of new technologies. We discuss and flesh out promising topics with our suppliers in our “Innovation Forum”.

Procurement has responded to the impact of new technologies, adapting the issues it addresses and its organization accordingly. For example, for the first time, we have defined fixed contact persons within procurement who support their designated suppliers at every step in the innovation process. Close collaboration has been established with the e-mobility unit and additional competencies have been established in new product groups for electric drives, autonomous driving, new display and operating concepts as well as vehicle connectivity.

#### Procurement processes and procedures

Standardized procurement processes and systems that apply across the Group are the basis of all of our activities in procurement. We were able to build on this sound basis in the reporting period, continuing to work hand in hand with our suppliers to refine our systems, with the aim of creating a worldwide digital network of all of the procurement work processes. We also continued to enhance our variant-management processes: we want to help achieve cost-optimized product design and firmly anchor the idea of economic efficiency in our vehicle projects. In the reporting period, we largely completed our revision of the product development process, especially of the early phase, with the result that concept development and feasibility studies are to proceed in parallel in future.

#### Digitalization of supply

We are striving to develop an entirely digital supply chain, and our partners have a crucial role to play in this. In 2016, our process optimization program, supplier interaction management, provided us with additional supplier feedback across all brands and regions of the Volkswagen Group on the potential for efficiency gains and digitalization. Subsequently, we used that feedback to come up with ideas and approaches for further optimize and digitalize the points of contact in our collaboration, for example by deploying artificial intelligence when dealing with bottlenecks in the supply of purchase parts and raw materials. The Group Business Platform constituted an important milestone in 2016 with regards to optimizing and digitalizing our collaboration with

our suppliers. Thanks to the latest technical developments, the Volkswagen Group will be in a position going forward to make fast, cost-effective use of the most innovative technological trends offered by mobile and internet-based collaboration. By bringing together internal and external partners on a digital platform, we are making it possible for all those involved to communicate with each other in real time.

#### Supply situation for purchase parts and upstream materials

The systematic tracking of purchase parts so as to avoid bottlenecks continued to gain importance in 2016. Natural disasters such as earthquakes and floods impacted the availability of upstream materials, which Group demand management countered with comprehensive measures. In the reporting period, we were also able to avoid any large-scale stoppages in vehicle production apart from a few exceptions.

#### Management of purchase parts and suppliers

At the Volkswagen Group, purchase parts management comprises the technical unit within procurement that is responsible for ensuring the availability of purchase parts by means of an international network of tool and industrialization experts. Purchase parts management involves two aspects: preventive action before the start of series production in new vehicle and engine projects through the inspection of selected purchase parts volumes for the toolmaking process; and a reactive support when problems arise in the supply of purchase parts during series production. Purchase parts management's international network enables its experts to draw on the knowledge and experience of colleagues at various locations during global projects, thus enhancing the efficiency of start-ups. The purchase parts management experts work in close cooperation with their quality assurance colleagues across all divisions in the plants and carry out performance tests of suppliers at the individual milestones in the product development process in order to ensure that the required supplier capacities are available in the right quality for vehicle start-ups.

#### Sustainability in supplier relationships

As far as sustainability in supplier relationships is concerned, our activities in 2016 focused on exercising and implementing our corporate due diligence at all points in our supply chains.

In this context, we expanded Volkswagen Group's requirements for sustainability in relations with business partners (Code of Conduct for Business Partners) in 2016 to include a passage regarding our duty to promote responsible supply chains for minerals from countries beset by conflict or classified as high-risk. We also made corresponding revisions to the Volkswagen Guideline on Raw Materials from Conflict Regions. Our suppliers were informed of these changes through appropriate forms of communication.

In the reporting period, we continued to enhance the knowledge of both our own staff, and also our suppliers' staff, as regards sustainability in supplier relationships – both online and face-to-face. As of the end of the reporting period, 25,000 supplier locations had completed our online training program. In addition, more than 900 employees from procurement and around 1,300 employees from more than 800 suppliers completed face-to-face training sessions in fiscal year 2016. The face-to-face training sessions for suppliers generally took place in cooperation with other automotive manufacturers and targeted suppliers in the Czech Republic, China and South Africa, as well as suppliers from the logistics industry.

In line with our established sustainability concept and processes, a total of 45 suppliers were audited by an external service provider in fiscal year 2016. In 19 of these cases, the audit findings prompted us to perform an immediate structured process for in-depth analysis. As a result, we agreed upon action plans with the suppliers in question with a view to improving their sustainability performance.

Around the world, we take care to enforce minimum sustainability standards especially with regard to human rights, occupational health and safety, environmental protection and the fight against corruption. In addition to that, we track the sustainability performance of our suppliers. The longstanding business relationships that result from this are beneficial to all the parties involved, namely the Group and its suppliers. We ensure the consistent quality of the goods and services provided and avoid disruptions to supplies and reputational risks.

**Structure of key procurement markets**

Through the procurement units in our markets and eight regional offices across the globe, we assist local suppliers

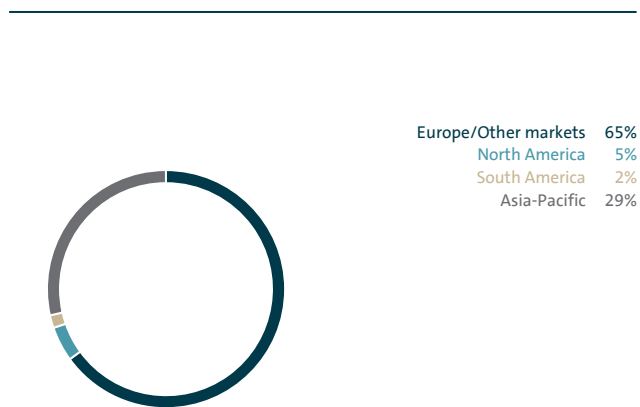
close to our production plants in meeting our high quality requirements. Suppliers who meet our requirements also have an opportunity to move beyond their local markets and deliver their products to other Group locations around the world. In key regions, quality assurance, technical development and logistics provide support in this task, and are organized in procurement-led project teams. This approach is crucial in safeguarding the Company's global supplies and keeping purchasing prices at competitive levels. One example of the development of new procurement markets is the regional office opened in Bangkok in the reporting period. The objective of the new office is to continue expanding our supplier portfolio in the region and to increase the flow of goods from the ASEAN countries.

Procurement is present not only in new growth markets, but also in well-known and established ones such as Japan, South Korea and Israel. In this way, the department ensures that the Company has access at all times to the latest innovations and technologies of tomorrow.

**Purchasing volume of Volkswagen Group procurement**

Procurement purchases production materials, services and capex items. In 2016, the incoming goods and order volume amounted to €166.5 billion, including the figures for the Chinese joint ventures.

**GROUP PROCUREMENT VOLUME**  
*in percent*



## PRODUCTION

We are creating and managing a global cross-brand production network. This is designed to safeguard the processes from the supplier to the factory and assembly line, and from the factory to dealers and customers. Enduring efficiency is a prerequisite for our competitiveness. We meet challenges of the future with holistic optimizations, pioneering innovations, flexible supply streams and structures, and an agile team. In fiscal year 2016, the global production volume passed the ten-million mark again. Productivity increased by around 4% year-on-year despite the continuing difficult conditions in many markets.

### “Intelligently networked” production strategy

Production is supporting the future program TOGETHER – Strategy 2025 with the “intelligently networked” functional area strategy. This is the logical development of the Production Strategy 2018. It is based on the Company’s strategic development into a world-leading provider of sustainable mobility as well as on current trends such as digitalization, electrification and the changing world of work. The Production Strategy 2018 began to define key action areas and carry out successful work in these fields already in 2010. Some of the measures and topics this covered have now become part of our day-to-day business or are managed through group-wide working groups, while others have been integrated into the Production Strategy 2025 and given a new direction.

Our aim is to intelligently connect people, brands and machines, and to combine the strength and potential of our global manufacturing and logistics partnerships in order to take long-term advantage of the resulting synergies. In doing so, we can make our business even more fit for the future and competitive in the long term.

The four strategic target areas – versatile production network, efficient production, intelligent production processes and future-ready production – guide our strategic work.

Nine strategic initiatives of our production strategy incorporate aspects such as the competitive design of our global production network, the reduction and offsetting of environmental pollution along the production process, and digitalization and its impact on the processes involved in production as well as in other work and collaboration. The fundamental aim is to increase productivity and profitability.

### Production locations

The Group began the 2016 fiscal year with 119 production locations. Sitech opened a new component production site in Wrzesnia, Poland, in August. In late September, the Audi brand opened the vehicle plant in San José Chiapa, its first production facility in Mexico. In October, Scania and MAN combined their production in Saint Petersburg, while the Volkswagen Commercial Vehicles brand opened a new manufacturing site for the Crafter in Wrzesnia, Poland. MAN moved its bus production in Poland from Poznan to Starachowice. The Volkswagen Group’s global production network thus comprised 120 locations at the end of the reporting period, divided into 68 locations for passenger cars, commercial vehicles and motorcycles, and 52 locations for powertrains and components.

With 71 locations, Europe remains our most important production region for vehicle and component production; 28 of these sites are located in Germany alone. The Asia-Pacific region has 31 locations. In North America, we now have five locations, while the number of locations in South America remained unchanged during the reporting period at nine. The Group operates four locations in Africa.

In Europe, the plant in Wrzesnia, newly opened in 2016, is manufacturing the Crafter and has an annual capacity of 100,000 vehicles. The Portuguese plant in Palmela will also begin producing 150,000 Volkswagen T-Roc vehicles annually from the middle of the year. In Bratislava, production of the Audi Q8 will start at the beginning of 2018 with an annual capacity of 40,000 vehicles.

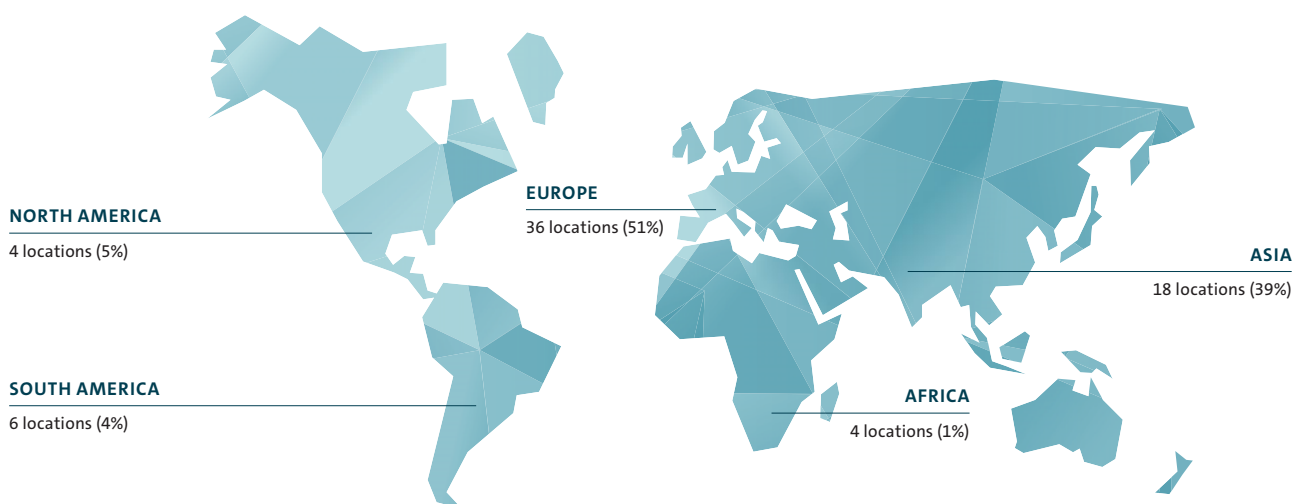
In order to secure and expand our market position in China, we increased capacity at the Chengdu site by 100,000 vehicles up until 2016. A further increase is planned for 2019. The new Ningbo II vehicle plant with a capacity of 150,000 vehicles per year will be opened at the end of 2017. In late 2017, capacity at one of the three vehicle plants in Anting will be increased by 75,000 units to 300,000 vehicles.

In the North America region, we plan to produce the long-wheelbase Tiguan for the US market from the first quarter of 2017.

Capacity utilization of the locations in the Volkswagen Group’s production network is further enhanced by supplying them with complete knock-down (CKD) kits for local assembly.

## VEHICLE PRODUCTION LOCATIONS OF THE VOLKSWAGEN GROUP

Share of total production 2016 in percent



In September 2016, Volkswagen entered into a collaboration with Kenyan importer DT Dobie to advance the development of further emerging markets in Africa. Partial assembly of the Polo Vivo at the Kenya Vehicle Manufacturers plant began in late 2016.

At engine and transmission plants, a wide range of new, more efficient powertrains will be integrated into existing production capacity in 2017. The new evo generation of the EA211 series, for example, will launch with the four-cylinder turbo petrol engine. This is the first in a series of highly efficient petrol engines that will be produced in the medium term by at least four engine plants, largely replacing the existing generation.

### New start-ups and production milestones

In 2016, the Volkswagen Group implemented a total of 62 vehicle production starts in 31 locations across 16 countries; of these, 25 were new or successor product start-ups, while 37 start-ups were attributable to derivatives and product upgrades.

The Volkswagen Group passed some significant milestones in 2016. Volkswagen Passenger Cars produced the two millionth Touran. The 25,000th e-Golf also rolled off the production line in Wolfsburg. Audi began the year by celebrating the production of 30 million vehicles worldwide and one million units of the Q5 model in Ingolstadt. At ŠKODA, the five millionth Octavia left the factory at the start of the year. The Kassel plant celebrated two milestones: the completion of three million DQ200 gearboxes helped take the

total number of gearboxes produced at the site to 125 million. The MQB platform used across the Group was installed in the eight millionth vehicle in late 2016.

### The Group's production system

To help us become the world's most sustainable, most powerful and most fascinating automotive production platform, we optimize and standardize our production processes. The Group's value-driven, synchronous production system provides us with the necessary methodologies and instruments for this. Our goal is to further expand the Group production system throughout the world at all brand and regional locations so as to achieve sustainable and continuous improvement.

We have already made substantial progress towards achieving this goal. In the future, we will increase the amount of attention we give to further strengthening the Group's production system and increasing its presence. Implementation is focusing on leadership, responsibility and corporate culture. As a first step in this direction, we are measuring the extent to which the methodologies and instruments are being implemented at the locations. The target/actual comparisons are used to identify fields of action. These are then defined in a project plan and worked through in a structured manner in the second step. As a synchronous company, we are including all business areas so as to systematically optimize processes.

As the complexity of products increases, a factory must work at optimal capacity so as to continue manufacturing high-quality products that give customers maximum

benefits at competitive prices. This is all made possible by the standardization of production processes and operating equipment at an early stage. The basis for this is consistent construction and design principles that are defined in the form of product standards. “Concept consistency” ensures that common design principles, joining techniques and joining sequences, but also installation and connection concepts, are applied in the brands’ development and production areas. The principle of concept consistency is a fundamental component of the creation of efficient logistics and manufacturing processes.

#### Global production network

With twelve brands and 120 production locations, multi-brand projects are an important aspect of the Volkswagen Group’s forward-looking production. The corporate objective is to generate maximum synergies based on the platform strategy and enable several brands to use the same production locations.

The modular platforms and toolkits allow us to design our production sites to be flexible. They generate synergy effects that enable us to reduce capital expenditure and make better use of existing capacities. With these toolkits, we have created the conditions for using the production sites for several brands at the same time. Our so-called multibrand locations can respond flexibly to market requirements and further raise the Group’s competitiveness. The Bratislava site, for example, produces vehicles for the Volkswagen Passenger Cars, Audi, Porsche, SEAT and ŠKODA brands. It will be joined by further multibrand locations in future, including in Tianjin, China. Currently, almost half of the 40 passenger car locations are already multibrand locations.

Another concept for volume flexibility is the “turntable”. This is used, among other things, to compensate for fluctuations in demand or in segment shifts. One such “turntable” is formed by Volkswagen’s sites in Emden (Passat), Zwickau (Passat and Golf) and Wolfsburg (Golf).

The Volkswagen Group is aiming to become one of the world’s leading providers of battery-powered electric vehicles by 2025. We will therefore expand the product range and launch a new family of electric cars based on the Modular Electric Toolkit (MEB). We are also tackling this challenge in our production processes with the aim of integrating these new vehicles into existing conventional factories as efficiently as possible. In 2016, we prepared to adapt the production network to new products and technologies in vehicle and component manufacturing.

In order to design multibrand projects and e-mobility to be cost-effective in conjunction with existing concepts, it is important to make production highly flexible and efficient.

We have begun the targeting process, standardization 2.0 and a reduction in the number of different options offered, and have hardwired these measures into the strategy. The targeting process serves the transparency and monitoring of cost types in the individual projects. Standardization 2.0 involves readjusting processes to formulate standards with an application- and user-based focus.

#### New technologies and product innovations

Modern, highly efficient car production like that at the Volkswagen Group would be inconceivable without reliable and extensive automation technology. Networking and digitalization in production already played an important role well before the term Industry 4.0 was coined. Volkswagen is exploring new technological solutions in many evaluation and implementation projects, including for identifying and localizing components and equipment, for energy management and predictive maintenance, for data-driven analysis and control of production processes, and for the use of wearables such as smartglasses in logistics processes. The aim is to increase equipment availability, flexibility and productivity, while also reducing the use of resources.

An important topic for the manufacturing of the future is human-robot collaboration (MRK). Volkswagen plans to support employees using robots equipped with special safety sensor technology, helping them to perform tasks that are physically uncomfortable or particularly monotonous. Assembly and logistics processes present a large potential field of application for MRK. Volkswagen is systematically analyzing the existing tasks in production lines and examining the technical abilities of the new robot systems. As part of a strategic cooperation with a renowned robot manufacturer in 2016, Volkswagen has defined a series of application projects and successfully implemented the first solutions in series production. The results of the pilot projects enable us to verify the expected ergonomic and economic benefits, and to take subsequent decisions on this basis. Volkswagen’s approach is to build its own planning expertise for workplaces with MRK.

The design and introduction of new production technologies involve the affected staff in the redesign of workplaces and processes from the very outset. This is an important prerequisite if new technologies and solutions are to find the necessary acceptance.

#### Environmentally efficient production

The Volkswagen Group has set itself the goal of reducing the five key environmental indicators of energy and water consumption, waste for disposal, and CO<sub>2</sub> and VOC emissions in production by 25% for each vehicle produced – starting from

2010 levels – by 2018. This objective applies to all of the Group’s production locations and is derived from our environmental requirements for production processes, which are anchored in the Group’s environmental principles. As the charts on page 159 show, we have already made considerable progress towards reducing all these key indicators.

The Volkswagen Group’s brands contribute to achieving these goals with their own frameworks that reflect the specific features of their corporate culture and their brand image. Volkswagen Passenger Cars and Volkswagen Commercial Vehicles have established “Think Blue.Factory”, Audi has its “ultra strategy”, ŠKODA calls its program “Green Factory”, SEAT calls its program “ECOMOTIVE Factory” and Bentley’s program is called “Environmental Factory”. Porsche has introduced “resource-efficient production”. Scania and MAN are giving their commitment to the environment the names “Blue Rating” and “climate strategy”, respectively.

We are encouraging close integration and communication between the brands worldwide in order to leverage synergies. Our environmental experts meet regularly in working groups; in addition, they train our employees on the topic of environmental protection.

Volkswagen uses various analytical techniques to examine and evaluate the flow of resources and energy in production as well as the resulting environmental impact. Processes can be made more transparent with the aid of material flow analyses. These identify action recommendations to reduce both the environmental burden and production costs. Various agents can use material flow analyses. The approach can assist in planning new, more resource-efficient equipment, and act as a decision-making aid when implementing measures, and help to raise awareness among staff regarding the resource-efficient use of process materials.

We record and catalog environmental measures in an IT system and make these available for a Group-wide exchange of best practice. In the reporting period, more than 1,600 implemented measures in the area of environment and energy were documented in this system. They serve to improve passenger car and light commercial vehicle production processes. These activities are not only worthwhile from an environmental perspective; they also lead to annual savings of around €49 million.

With a series of effective, innovative measures, we once again promoted the reduction of environmental indicators in the reporting period, while at the same time improving production processes. The following examples show the extent to which the measures contribute to improvement of the production processes and achievement of the target values for the five key environmental indicators:

One important lever for reducing energy consumption is tailoring the operation of all facilities to demand. In 2016, we reinforced the energy efficiency gains from the first pilot projects on load-dependent operation of paint dryers by rolling out the technology at further locations. The change has cut energy requirements by around 7,300 MWh a year, reducing CO<sub>2</sub> emissions by approximately 1,900 tonnes and saving some €290,000 annually.

At the Foshan factory, the biological treatment plant was expanded to include an additional membrane step. This modern technology cleans wastewater especially thoroughly, enabling it to be reused on site. The facility cleans more than 70,000 m<sup>3</sup> of wastewater a year, reducing the factory’s environmental impact.

The Bratislava plant introduced an advanced waste management system in January 2016 to optimize waste logistics processes. Transponder technology (Data Matrix code) is used to identify waste at the point of origin and track it completely all the way to the final disposal location. At each stage of the disposal process in the factory, this documents the volume, fill level, degree of sorting, any wrongly disposed materials and the condition of container spaces. The specialist waste management department uses the information collected to develop effective measures together with the waste producers so that container volumes, collection intervals, container locations and disposal routes can be tailored optimally to production. This has achieved a 15% reduction in the quantity of cost-incurring residual waste within the space of nine months. Moreover, the time required for internal and external reporting of waste statistics has been considerably reduced and data quality increased. This waste management system also supports compliance with legal requirements for the transport and disposal of waste.

A new, environmentally friendly top coat paint line came on stream in Ingolstadt. This features ultramodern technology such as air circulation, dry scrubbing and waste air cleaning. The facility has reduced heat energy and water consumption by 20% per car. In addition, the air circulation system helps to reduce CO<sub>2</sub> emissions per painted car by 30%. Meanwhile, the cleaning of waste air reduces VOC emissions by 90%.

Measures have also been implemented in energy generation and consumption. We have set a particularly positive example in Brazil, switching to 100% renewable energy despite the current economic difficulties in the country. This measure reduces CO<sub>2</sub> emissions by approximately 21,000 tonnes per year.

KEY ENVIRONMENTAL INDICATORS FOR PRODUCTION IN THE VOLKSWAGEN GROUP <sup>1</sup>**ENERGY CONSUMPTION**  
in kilowatt hours per vehicle-17.0%<sup>2</sup>**CO<sub>2</sub> EMISSIONS**  
in kilograms per vehicle-19.5%<sup>2</sup>**VOC EMISSIONS<sup>3</sup>**  
in kilograms per vehicle-41.3%<sup>2</sup>**DISPOSABLE WASTE**  
in kilograms per vehicle-34.6%<sup>2</sup>**FRESH WATER CONSUMPTION**  
in cubic meters per vehicle-14.2%<sup>2</sup>

- 1 Production of passenger cars and light commercial vehicles. Prior-year figures adjusted.
- 2 Change 2016 as against 2010.
- 3 Volatile organic compounds (VOCs).

**Green logistics**

Together, our brands, regions and plants are designing the logistics of tomorrow in a digital automotive world and using new technologies. The massive rise in available information is making processes from the supplier to the production plant to the customer more and more transparent. We use animated planning tools for designing factories and supply streams and have already implemented the tracking of loaded trucks by GPS. Our production plants work in an automated and digitalized manner with driverless transport systems in logistics.

Throughout all this, the traditional logistics objective still applies: information, material and vehicles are to be in the right place at the right time in the right quality and quantity – at the optimum cost.

Logistics is contributing to the Volkswagen Group's increased focus on the environment, for example by analyzing the entire transport chain in respect of CO<sub>2</sub> emissions. The objective is to avoid transports or to shift to more environmentally friendly modes of transport and to reduce fuel consumption. We are working on measures and areas of action for optimizing the logistics processes across the brands.

An important starting point for reducing CO<sub>2</sub> emissions is the selection of the mode of transport. One of the most efficient options here is maritime transport. The Volkswagen Group is therefore involved in the Clean Shipping Network (CSN), an association of marine cargo owners. With the aid of the Clean Shipping Index rating tool, environmental efficiency figures can be compared, for example the emissions of individual ships on particular routes. This allows the environmental footprint of maritime transport to be analyzed and reduced.

The successful use of alternative drive technologies is of decisive importance in environmental and economic terms. E-mobility, gas and hybrid drives, fuel cells and other novel fuels offer interesting problem-solving approaches that are being examined for future use in logistics. To improve the environmental compatibility of vehicle transports by ship for the long term, the Volkswagen Group will use two car-carrying vessels powered by LNG (liquefied natural gas) between Europe and North America. Compared to conventional vessels, the LNG ships will reduce emissions of CO<sub>2</sub> by up to 25%, NO<sub>x</sub> by up to 30%, soot particles by up to 60% and SO<sub>x</sub> (sulphur oxide) by up to 100% per ship and year. Furthermore, use of an ultramodern dual-fuel marine engine



with direct injection and exhaust aftertreatment will deliver an additional emissions reduction.

The Volkswagen Group is constantly looking for alternatives and more environmentally friendly transport options both in vehicle and materials logistics. Materials from Turkey for the Volkswagen factory in Palmela, Portugal, have been transported by sea since late 2015. Previously, the materials travelled by truck. The change saves 240 tonnes of CO<sub>2</sub> emissions a year and is also cutting costs for the Company.

The new logistics center in Bratislava, Slovakia, is another element in the optimization of materials transport in the Group. Optimal thermal insulation reduces heating costs, while the use of double doors in loading areas guarantees that less heat is lost. LED lighting reduces electricity consumption by some 50%. At the same time, consolidating loads enables a reduction in traffic of an average of 90 trucks for incoming goods and around 65 trucks for outgoing goods.

#### SALES AND MARKETING

Our unique product portfolio is comprised of twelve successful brands including innovative financing services.

##### Brand diversity in the Volkswagen Group

At the Volkswagen Passenger Cars brand, the customer's wishes are the driving force behind our developments and decisions. This enables us to offer innovations and automotive solutions that excite our customers, and are at the same time affordable. The brand's vision is "Moving people and driving them forwards". Its medium-to-long-term objective is to become a world market leader in e-mobility. In light of the diesel issue in particular, the Volkswagen Passenger Cars brand has defined four areas of innovation: first, intelligent and attractive sustainability; second, automated driving; third, connecting customers, manufacturer and product; and fourth, intuitive usability. Our aim is to implement these innovations in an inspiring, future-oriented way. In addition, we are doing everything in our power to restore trust and to continue to convince our customers of the Volkswagen Passenger Cars brand.

"Vorsprung" is an active brand promise that is delivered throughout the world, making Audi one of the most highly desired brands in the premium segment. For the progressive target group, "Vorsprung" will also mean greater personal freedom for self-determined mobility in the future. Audi creates this freedom for its customers by giving them a simplified, surprising, interconnected brand experience.

Intelligent concepts and excellent value for money are the hallmarks of the successful ŠKODA brand. "Simply Clever" combines future-oriented functionality with an impressive space concept that is technically simple but delivers sophisticated and practical features.

Design, passion, quality and ongoing evolution are the distinctive characteristics of the youthful, dynamic Spanish brand SEAT. Its goal of combining technological precision and superb engineering with emotional design is expressed in SEAT's "TECHNOLOGY TO ENJOY" slogan.

Exclusivity and social acceptance, tradition and innovation, performance and everyday usability, design and functionality – these are the brand values of sports car manufacturer Porsche. True to its philosophy of "achieving maximum output from minimum input", Porsche skillfully turns its work into speed and success.

Exclusivity, elegance and power – these are the defining qualities of our Bentley, Bugatti and Lamborghini brands in the luxury vehicle segments. They round off the Volkswagen Group's brand diversity in the passenger cars segment.

Volkswagen Commercial Vehicles stands for superior mobility with its three core values – reliability, economy and partnership. The vehicles are tailored to meet the respective transport needs of customers in trade and industry, as well as civil authorities and service providers, whilst private customers value our family-friendly MPVs and recreational motor homes.

The Swedish brand Scania's core values are "customer first", "respect for the individual" and "quality". This successful company has been manufacturing high-performance and technologically highly innovative trucks and buses for more than 100 years, offering its customers efficient transport solutions that are complemented by excellent service offerings and financial services.

Customer focus, enthusiasm for the product and efficiency are the core values at MAN. Alongside trucks and buses, the company is a leading manufacturer of diesel engines, turbomachinery, turnkey power plants and special gear units.

Ducati is one of the most renowned manufacturers of premium motorcycles. Its emotionally charged products thrill the Italian brand's customers with their premium quality craftsmanship, uncompromising performance and challenging dynamics.

Offering appropriate products and services across all vehicle classes, Volkswagen Financial Services provides the key to mobility for the Volkswagen Group's private and business customers worldwide.



#### E-mobility and digitalization in Group Sales

The Volkswagen Group plans to launch over 30 new electric vehicles by 2025. Our e-mobility strategy also encompasses the development of customer-oriented products and business models around the vehicle, including arranging customer-specific charging infrastructure solutions. With such innovative products and services and our mobile online services, the Volkswagen Group will evolve from an automotive manufacturer into a mobility provider.

In sales, we make use of the opportunities that increasing digitalization offers. Our actions are guided by a clearly defined strategy that requires extensive cooperation between the brands to achieve the greatest possible synergies.

Digitalization will be decisive in creating a completely new product experience for our customers – one which captivates with seamless customer communications, from the initial interest in purchasing a vehicle to servicing and ultimately to the sale of the used car. At the same time we thus open up new business models and opportunities – relating in particular to mobility and other services – around the connected vehicle. This will increasingly make us an integral part of the customer's digital world of experience. We take great care to make all processes transparent so that customers always retain control of their own data.

We also gear our internal processes and structures to the speed of digital innovation. The result is project teams operating across different business areas, new forms of cooperation, a more intensive relationship with the international start-up scene, a consolidation of venture capital expertise as a form of supporting innovative ideas and business models as well as new lean systems and cloud-based IT solutions.

#### Customer satisfaction and customer loyalty

The Volkswagen Group's sales activities focus consistently on increasing customer satisfaction – this is our top priority. Aided by the digitalization offensive in sales, we are placing even greater emphasis on customer requirements and on service; this offensive will sustainably shape our business.

The Group's brands regularly seek to identify customer satisfaction levels, focusing on products and services. They derive new measures from survey results to achieve even greater customer satisfaction.

In terms of customer satisfaction with their products, Audi and Porsche are leaders in the core European markets when compared with other Group brands and competitors. The other brands in the Group also score higher than competing brands. All Group brands achieve figures at or

above the level of the competition with regard to customer satisfaction with dealers.

The Volkswagen Passenger Cars brand has maintained a high level of customer loyalty in its core European markets for several years in a row. However, the emissions issue had a negative impact on brand image, brand trust, and customer satisfaction with products compared with 2015. The loyalty of Audi, Porsche and ŠKODA customers has kept these brands in the upper rankings in comparison with competitors for a number of years.

#### The Group sales structure

The Volkswagen Group's multibrand structure helps to promote the independence of its brands. Nevertheless, we use overarching sales activities to increase sales volumes and market share, cut costs and improve earnings contributions.

We intensified our efforts to improve dealer profitability during the reporting period, increasing the business volume per dealer and putting new cost-cutting programs into action. Here, the focus was always on maintaining a close working relationship with dealers and ensuring their profitability. We use Group companies to manage our wholesale business in over 20 markets. A central department provides transparency and ensures that sales activities are cost effective. By creating synergies between the brands, this is making a major contribution to achieving the aims of our Strategy 2025. This makes it possible for the remaining wholesale companies to learn quickly and efficiently from the Group-wide benchmarking process and from the best practices adopted by individual companies. In the reporting period, we focused on optimizing structures with a view to further decentralization and improving logistics costs at our sales companies.

#### Fleet customer business

Our business relationships with fleet customers are often long-term partnerships. In a volatile environment, this customer group guarantees more stable vehicle sales than the private customer segment.

The Volkswagen Group has an established base of business fleet customers in Germany and the rest of Europe in particular. Our extensive product range enables us to satisfy their individual mobility needs from a single source.

At 14.1 (14.1)%, the share of fleet customers in total registrations in Germany remained stable in fiscal year 2016 amid 4.6% growth in the market. The Volkswagen Group's share of this customer segment decreased to 47.1 (48.5)%. Registrations by fleet customers in Europe were 6.2% higher in total

than in the previous year; the Group's share of this was 28.5 (28.9)%. The clarification of the CO<sub>2</sub> issue and implementation of technical solutions for the diesel issue helped to ensure that there were no significant declines in volumes for the Volkswagen Group's fleet customer business in 2016.

#### After Sales and Service

In After Sales, individual service and the timely provision of genuine parts are essential in ensuring passenger car customer satisfaction. We use a worldwide after-sales network with more than 120 of our own warehouses for this purpose. This ensures that we can supply almost all service partners around the globe within 24 hours. The genuine parts supplied by our passenger cars brands and the expertise of our service centers represent the highest level of quality and ensure the safety and value retention of our customers' vehicles.

The Volkswagen Group regards itself as a complete provider of all parts and services relevant to customers in the after-sales business. Together with our partners, we ensure the worldwide mobility of our customers. The partner businesses offer the entire portfolio of services, for example oil and tire changes, inspection, maintenance and repair, in all vehicle classes. We are continuously expanding our range of tailored services in order to improve convenience for our customers and increase customer satisfaction.

Around the world, our commercial vehicles business also prides itself on products of the highest quality and on strong customer focus. Fuel efficiency, maintenance and operating costs, the residual resale value of vehicles, and the purchase price – these are all critical buying criteria for our customers, in addition to availability.

Scania is adding services to its range of trucks, buses and engines that guarantee fuel efficiency, reliability and good vehicle availability. Among these are the Scania Rent Truck & Trailer service that helps to overcome short-term fleet capacity problems. Thanks to Scania Parts and the Genuine Parts Warranty, most replacement parts are available within 24 hours almost anywhere in the world. Driver behavior is the key factor influencing operating efficiency, service life of tires and parts, as well as road safety. Scania driver training teaches drivers how to drive more safely and efficiently. Scania's workshop service and service contracts offer customers a high degree of safety in addition to consistently high quality. Scania introduced Scania Maintenance during the reporting period, a new flexible maintenance service for trucks. Vehicles are called to the maintenance workshop whenever operating data shows that intervention is required. This

solution reduces the time spent in service workshops and enables maintenance work to be optimized.

MAN offers service packages optimally geared to customer requirements. These reduce total operating costs and help vehicles retain their value. As well as contracts for servicing and repairs, the packages include proactive maintenance management (MAN ServiceCare), which enables optimized planning of maintenance work, thereby increasing vehicle availability. Active data exchange between vehicles, customers and the MAN service points is handled via the integrated MAN Telematic System. The comprehensive services enable downtimes to be minimized. MAN has more than 1,400 state-of-the-art service points worldwide with modern diagnostic systems and high-quality specialist tools.

In the Power Engineering segment, MAN PrimeServ ensures the availability of machinery. The global network of more than 100 PrimeServ locations guarantees excellent customer proximity and offers, among other things, replacement parts in original quality, qualified technical service and long-term maintenance contracts. The product range is continually improving and expanding. A comprehensive program at the numerous MAN PrimeServ Academies meets the high demand for customer training worldwide.

#### QUALITY ASSURANCE

The quality of our products and services plays a key role in maintaining customer satisfaction. Customers are particularly satisfied and remain loyal when their expectations of a product or service are met or even exceeded. Appeal, reliability and service determine quality as it is perceived by the customer throughout the entire product experience. Our objective is to positively surprise and excite our customers in all areas and thus win them over with our outstanding quality. We continued to aspire to this objective in the reporting period. The diesel issue has shown, however, that we must broaden our previous understanding of quality. Quality assurance now checks the compliance of our products more intensively.

We are also placing greater emphasis on our quality management system than before, thereby reinforcing the process-driven approach Group-wide across all business areas. Quality management in the Volkswagen Group is based on the standard ISO 9001: the requirements of this standard must be met to obtain the type approval for producing and selling our vehicles. Following the revision to the standard in 2015, we applied the new requirements to all the Group's locations and brands during the reporting period. One key change in content concerns the risk assessment for non-

compliance with defined processes. To ensure that these and other new requirements as well as official regulations are implemented and complied with, we have developed guidelines, recommendations and tips for quality management consultants, and provide them with support in their everyday work.

As a further step, we have reinforced application of the internal control principle – mutual support and control between the divisions – and built up important additional expertise, including in software security. This particularly affects the control mechanisms between technical development and quality assurance before and after the start of production. In product development, for example, we have introduced the same principle for the approval of powertrains. At the series production stage, too, we are working even harder to carry out conformity checks on our products with the participation of all business units involved and to perform assessments and make decisions on this basis. This applies particularly to exhaust emissions and fuel consumption.

With these and other measures, quality assurance makes sure that we not only meet all legal requirements imposed on us as a manufacturer but that our products do as well.

#### Observing regional requirements

Our customers in the different regions of the world have very diverse needs as far as new vehicle models are concerned. Identifying these specific regional factors and prioritizing them is an important task for quality assurance, so that they can then be reflected in the development of new products and the production of established vehicle models. Factors such as the available fuel quality, road conditions, traffic density, country-specific usage patterns and, last but not least, local legislation play a key role in this process. We mainly use market studies and customer surveys to determine region-specific customer requirements.

#### Product and supplier quality

In the reporting period, the large number of product start-ups made high demands on quality assurance. We nevertheless managed to maintain the high quality of the previous years. Our suppliers also made important contributions in helping us achieve this goal. We expect them to use sustainable practices, and to deliver the highest product quality and reliability of supply.

One of our key concerns is to integrate innovative technologies into new vehicles without harming customer satisfaction. We are therefore placing even greater emphasis than before on software quality and data security. Long before customers are able to experience a new product, quality assurance supports and analyzes new vehicle projects. The aim is to make our products even better and more

reliable, while taking into account as many customer wishes and special regional demands as possible.

In addition, quality assurance defines the quality targets and standards for the Volkswagen Group, and monitors compliance with them. It also identifies the cause of any faults and defines the process for removing them. In 2016, we continued to standardize our fault removal process, so that we can respond even more quickly and effectively to any problems. As a result, we can increase customer satisfaction, and at the same time reduce warranty and ex-gratia repair costs.

#### Service quality

We also continue to improve the quality of our service scope worldwide. As in previous years, this involved the further optimization of our warranty and ex-gratia instruments in 2016. Additional opportunities also presented themselves at our authorized dealers, who represent the direct interface with our customers: together we are working on identifying and preventing any problems that may occur in the emotional moment of vehicle handover at an early stage. The so-called dealer-plant teams – a proven concept, whose use in the reporting period included the market launch of the new Tiguan – are one measure taken in this area. Employees from various working areas inspect the quality of the vehicles delivered to the dealer on the forecourt and provide detailed feedback about any problems to the manufacturing plant in question.

#### Group quality standards

Whether they are buying a passenger car, commercial vehicle or motorcycle, our customers expect perfect quality from the Volkswagen Group. For more than 40 years now, auditors have therefore been deployed around the world to carry out an assessment from the customer's perspective of the vehicles ready for delivery. As the requirements are constantly changing, we continually revise the quality benchmarks used for such audits. Based on the guiding principles of precision and perfection, we successfully transferred the Group's audit system to the Commercial Vehicles Business Area in 2016, and trained and certified the brands' product auditors accordingly.

#### EMPLOYEES

The Volkswagen Group is one of the world's largest employers in the private sector. As of December 31, 2016, the Group, including the Chinese joint ventures, employed 626,715 people, 2.7% more than at the end of fiscal year 2015. The ratio of Group employees in Germany to those abroad remained stable in the reporting period. At the end of 2016, 44.9 (45.7)% were employed in Germany.

### Pact for the future

In the 2016 reporting period, the Volkswagen brand signed a pact for the future with the General Works Council for greater economic viability and a more secure future at the Company's German locations. Among other things, this envisages losses of up to 23,000 jobs in Germany over the coming years, which will be accomplished in a socially compatible way and without compulsory redundancies. The job cuts will take the demographic curve into account, which means that some of the positions that become vacant as a result of employees entering retirement will not be filled. At the same time, we are planning to build up new competencies at different locations and create about 9,000 additional jobs with a secure future, which will mainly be filled with existing employees.

### Human resources strategy

The Volkswagen Group has long been providing stimulus for innovation in its employment policy. In its pursuit of personnel management excellence, the Company has been implementing an individualized approach to human resources management since 2008 with the primary objective of ensuring supreme performance by providing optimal personal support for employees.

EMPLOYEES BY CONTINENT  
in percent, as of December 31, 2016



In October 2016, when adopting its program for the future TOGETHER – Strategy 2025, the Volkswagen Group also approved a new human resources strategy with five overarching objectives:

- > The Volkswagen Group aims to be an excellent employer with all of its brands and companies worldwide.
- > Highly competent, dedicated employees strive for excellence in terms of innovation, added value and customer focus.
- > A sustainable work organization ensures optimal working conditions in factories and offices.

- > An exemplary corporate culture creates an open work climate that is characterized by mutual trust and collaboration.
- > The Board of Management department of the Volkswagen Group responsible for Human Resources ensures the greatest possible efficiency in its own structures and processes, meeting the requirements of high-quality personnel management at the same time.

Many of the goals of the human resources strategy are underpinned by measurable indicators, and the extent to which these are achieved is reviewed on a regular basis. They include the Group's attractiveness as an employer and diversity factors such as the proportion of women in management.

With its new human resources strategy, the Volkswagen Group is continuing the successful key approaches of its human resources policy. These include the pronounced stakeholder focus, the granting of comprehensive participation rights for employees, outstanding training opportunities and long-term service through systematic employee retention as well as the aspiration to appropriately balance performance and remuneration. The new human resources strategy is also setting innovative trends: modern forms of working such as agile work – whereby executives and team members work together to increase the efficiency with which all tasks are completed – will be expanded on a broad front in many areas.

Before 2020, the Volkswagen Group will introduce a diversity management system to prevent forms of discrimination such as of people with diminished capabilities. In addition, cultural change initiatives are currently concerned with anchoring flatter hierarchies, a more open form of collaboration and a greater focus on the big picture in the Company's divisions. Furthermore, working times and places of work will be designed to provide greater flexibility. We plan to give social sustainability more weight and tie it in with our human resources strategy: In the future, social and cultural megatrends such as the desire for employee participation in decisions will be implemented faster and more systematically in personnel management. A new "Human Resources Strategy and Sustainability" organizational unit has been established for this purpose.

The Code of Collaboration, which is part of the program for the future TOGETHER – Strategy 2025, defines the rules for working relationships in the Group and is therefore a key pillar of this strategy. A cross-functional team from different brands, countries, divisions and generations supported the development and implementation process from the outset. The Code of Collaboration was initiated at the Global Top Management Conference in June 2016. It describes the form of collaboration in the brand alliance with the terms "open and honest", "uncomplicated", "without prejudice", "on an equal footing" and "for one another".

The traditional focus areas of personnel management such as providing optimal support and training opportunities for employees as well as careful planning and

deployment of human resources will continue to apply in the new strategy.

#### Training within the vocational groups

Training at Volkswagen is organized very systematically on the basis of vocational groups. A vocational group includes all employees whose work activities are based on similar technical skills and who need related expertise in order to perform their job. The skills profiles lay down the functional and interdisciplinary skills for each job.

A broad range of qualification opportunities is available to employees. This enables them to continue to develop throughout their working lives and continuously deepen their knowledge. In this process, they also learn from more experienced colleagues, who act as experts in the vocational group academies – the learning centers of the vocational groups – and pass on their knowledge to others.

In the reporting period, the Governance Academy was established and the foundation of the Academy of Technical Development anchored in the pact for the future. Staff from the new model line organization will be supported by the existing Product Academy. From 2017 onward, skills development and training for all vocational groups at Volkswagen will be supported by an academy.

#### Dual vocational training

Dual vocational training, where theory and practice are closely interwoven and which meets the Group's high standards of expertise and quality, creates the basis for first-class performance. As with staff training, here, too, the content is developed based on the expertise required within each vocational group. The "Volkswagen Group Charter on Vocational Education and Training" adopted in June 2015 shows the high value Volkswagen places on education and training. In addition to high-quality education and training, good training conditions will be created and/or developed further at the relevant Group locations.

Volkswagen has introduced dual vocational training at many of the Group's international locations in the past few years and is continuously working on improvements. Over three-quarters of all the Group's vocational trainees now learn their trade through dual vocational training. As of the end of 2016, the Volkswagen Group had trained 19,490 young people in approximately 60 trades and 50 dual study programs.

After completing their vocational training, young people at the start of their career have the opportunity to take part in the "Wanderjahre" (Years Abroad) program, spending twelve months at one of the Group's international locations. In the reporting period, 42 trainees at 15 Volkswagen Group locations around the world took part in this development program, including employees from Volkswagen Truck & Bus and MAN Truck & Bus in Germany for the first time.

Once a year, Volkswagen honors its highest-achieving vocational trainees in the Group with the "Best Apprentice

Award". In 2016, nine young women and 36 young men at a total of 43 Group locations received this award for their excellent performance and technical expertise.

#### Developing university graduates

We offer structured programs for joining Volkswagen that are specially geared to university graduates. At Volkswagen AG, two trainee programs are available. In the StartUp Direct program, the trainees work in the target area from the outset, attending supplementary training seminars so as to get an excellent overview of the Company. In the StartUp Cross program, university graduates interested in working internationally are assigned to different locations at home and abroad. They get to know the various specialist areas throughout the value chain, broadening their knowledge and practical experience in the process. Volkswagen took on 114 trainees under the two programs in 2016; around 26% of them were young women.

Trainee programs are also offered at the international Group locations, among others at ŠKODA in the Czech Republic and at Scania in Sweden. In addition, the Volkswagen Group's StartUp Europe trainee program offers young engineers from Southern Europe an opportunity to gain international work experience.

Volkswagen uses a differentiated approach to ensure the loyalty of its young academic talent, which consists of two elements: the Student Talent Bank and the Academic Talent Pool.

Through the Student Talent Bank, Volkswagen supports particularly high-achieving students in both functional and interdisciplinary areas. The aim here is to persuade former interns to join the Company and, by inviting them to specialist lectures, seminars, or visits, for example, to give them the best possible preparation for entering a profession in the world of Volkswagen.

Talented young high potentials are added to the Academic Talent Pool just before they complete their degree or doctorate. This puts selected high potentials on the radar at the Company, allowing them to be considered for an entry-level position in one of the functional areas.

#### Professional development, leadership and management programs

The Volkswagen Group Academy offers a broad range of qualification routes for specialists – from advanced training on general Company-related issues to training within the vocational groups to personal development programs. Here, too, the focus is on the basic dual training principle, which combines learning of theoretical content with practical experience.

We have standardized a large number of our development programs and selection processes for executives, foremen and managers across the Group. The Volkswagen Group Academy carried out a total of around 615 training programs



and assessment centers for executives, foremen and managers in 15 countries in the reporting period.

#### Impact of digitalization on training

New technologies can usefully complement learning and the transfer of expertise. As the central training organization in the Group, the Volkswagen Group Academy incorporates this idea into different projects. In the digitalXperience program, the content and learning formats of the dual vocational training are reviewed for digitalization opportunities with a view to making vocational training fit for the future. These measures are flanked by skills development among the teaching staff at the Volkswagen Group Academy.

In parallel, the Volkswagen Group Academy is setting up an Education Lab designed to create stronger ties with education start-ups and translate the findings of the educational research into new technologies. These will then be tested in conjunction with the teaching staff and the students at Volkswagen to aid learning and the transfer of expertise.

#### Professional development at university level

Within the Volkswagen Group Academy, the AutoUni makes knowledge that is relevant for the future available to the Group by integrating internal senior experts and collaborating with universities. Its events are offered as programs and as cooperative study modules in a blended learning format, which combines classroom training with online content, and are supplemented by lectures and conferences. The 2016 offering included digitalization, sustainability, e-mobility, autonomous driving and Industry 4.0 as well as the workplace of the future. Around 9,200 interested employees from 59 locations attended over 160 AutoUni events around the world.

The AutoUni cooperates with internationally renowned universities, institutes and research centers on research projects, dissertations and theses and offers doctoral students in the Group a platform for exchanging ideas in addition to interdisciplinary training programs. At the end of 2016, more than 400 doctoral students were engaged in research at the various Volkswagen Group companies in Germany, investigating forward-looking, Company-related issues.

#### Advancement of women and family-friendly HR policies

For Volkswagen, family-friendly human resources policies are a key aspect of being an attractive employer and go a long way to achieving greater equality between the sexes. We therefore work continuously on further increasing the proportion of women in leadership positions. Targets have been set for every division in the company to encourage women with high potential in their decision to aim for a career in management in the Company.

This approach is supported by many different measures including the cross-brand "Management Mentoring Pro-

gram", which is designed to support women on the way to management positions. Volkswagen has also launched the "Career with Children" project that supports young mothers and fathers during and on their return from parental leave, helping them to continue their career as effectively as possible. Volkswagen offers the "Compass" program specifically to encourage women with high potential in their decision to aim for a career in management.

We use our Germany-wide Woman DrivINGAward and the Woman Experience Day to focus on female engineering and computer science students and graduates, so as to recruit them for technical positions at Volkswagen. We use target group-specific events to help the participants understand our products and give them an insight into the attractive tasks in our Company.

In the reporting period, Volkswagen AG reached the target quotas it had set for the proportion of women in management in accordance with the German law regarding the equal participation of women and men in leadership positions in the private and public sectors: by the end of the year, the proportion of women was 9.8% (target: 9.8%) in the first management level and 13.5% (target: 13.3%) in the second management level. For the new period up to the end of 2021, Volkswagen AG is aiming to have 13.0% women in the first management level and 16.9% women in the second management level.

#### PROPORTION OF WOMEN VOLKSWAGEN GROUP IN GERMANY<sup>1</sup> as of December 31, 2016

%	2016	2015
<b>Total vocational trainees</b>	<b>29.5</b>	<b>28.3</b>
Industrial vocational trainees	23.3	22.6
Commercial vocational trainees	58.6	57.0
Students in traineeship schemes	33.5	33.4
<b>Total management</b>	<b>11.0</b>	<b>10.3</b>
Management	12.8	11.9
Senior management	8.7	8.6
Top management	4.7	3.8

1. Excluding Scania, MAN and Porsche.

In addition, Volkswagen intends to raise the proportion of female skilled workers and forewomen in Germany to 10%; in fiscal year 2016, the proportion of women in the Volkswagen Group in Germany (without Scania, MAN and Porsche) was 7.6% working as skilled workers and 5.1% as forewomen. In order to increase the proportion of female vocational trainees in the industrial and technical area from the current 23.3% to 30%, Volkswagen specifically targets the recruitment of women, for example by arranging special work experience and orientation days for young women.

In the Volkswagen Group, a large number of operational arrangements are in force to enable individuals to combine the demands of work and home. These include working time flexibility, variable part-time working and shift models, leave of absence to care for close family members, as well as on-site, company-run childcare facilities.

Volkswagen is continuously working on further improving these options. In September 2016, Volkswagen AG introduced a far-reaching collective agreement for work performed outside the facility (mobile work). At AUDI AG, staff have had the opportunity to work in any location and with flexible working hours since October 2016, if this is compatible with the job tasks at hand. The collective agreements have fulfilled employees' request for greater flexibility with regard to working time and the place of work.

#### Employee participation

Codetermination and employee participation are important pillars of our human resources strategy. Volkswagen aims to promote high levels of technical expertise and a strong team spirit. We therefore invest in our people, offer employees attractive opportunities for development and promote a good working climate. This includes employees' opinions, assessments and constructive criticism being heard. Differentiated pay systems that reward individual and team effort are a further component of employee participation.

With our opinion survey, a uniform, Group-wide poll, we regularly gather information about employee satisfaction and open up feedback channels to receive suggestions for improvement. We conducted the opinion survey in a revised format in 2016, adding further questions for employees: new tools now systematically support managers and employees when discussing the results. The survey was carried out at 172 sites and companies in 45 countries. Of the 540,000

employees whom we asked to participate, some 440,000, or 81%, took part. The mood index – an important parameter in the opinion survey – was at 78 of a possible 100 index points in 2016.

Since 2007, Volkswagen AG has been using a tool for involving its workforce in improving the Company's efficiency: the "Volkswagen Way". Our overarching goal here is to increase Volkswagen's competitiveness and safeguard employment. In fiscal year 2016, a particular focus was on improving collaboration and communication within the Company and on strengthening our leadership and participation culture. The evolution of the "Volkswagen Way" thus actively supports the Volkswagen Group's program for the future TOGETHER – Strategy 2025.

Ideas Management is an important leadership and motivational instrument for line supervisors because it facilitates active participation in planning and organizing work and is also underpinned by prizes with monetary incentives. Employees use their creativity, knowledge and initiative to take responsibility for process and product improvement at many of the Group's locations.

#### IDEAS MANAGEMENT IN THE VOLKSWAGEN GROUP<sup>1</sup> as of December 31, 2016

	2016	2015
Ideas for improvement suggested	583,017	536,081
Ideas for improvement implemented	482,453	360,454
Savings in € million	435.6	374.9
Bonuses in € million	40.0	38.7

1 46 (41) participating production locations.

**AGE STRUCTURE IN YEARS OF VOLKSWAGEN GROUP EMPLOYEES***as of December 31, 2016; in percent***Preventive healthcare and occupational safety**

Volkswagen's holistic healthcare management system extends beyond traditional preventive healthcare and occupational safety; it also covers aspects of work organization, workplace design, behavioral ergonomics, psychosocial aspects, rehabilitation and reintegration into working life as well as programs for preventing widespread diseases. The Group's Health Department performs standardized health audits for this purpose. The Overall Factory White Paper for vehicle production plants serves as the basis for planning new factories in the Group. In the latest edition of the White Paper, released in 2016, international requirements were added, which means that the topic of health now applies to all locations worldwide.

To maintain and improve employees' health and performance and help keep them fit, a free and comprehensive voluntary screening (check-up) is provided for all employees at almost all production facilities. In some cases, country-specific supplementary examinations, such as HIV and tuberculosis tests, have been added.

In light of the general increase in mental illness and stress, we also offer a broad range of services in this area to employees in the Group. This includes psychological training for managers and psychological support in emergencies – such as at SAIC Volkswagen in China – as well as a project for collecting information about psychosocial stress factors at SEAT in Spain and a psychosocial risk assessment and consultation at Audi in Hungary.

Another important action area in the Volkswagen Group is the continuous improvement of ergonomics. Volkswagen is aiming to ensure that the ergonomic quality of the workstations is taken into account throughout all production and work processes. With this in mind, we collaborate with scientists to combine state-of-the-art ergonomic workplaces with innovative work processes. As regards occupational safety, all Group companies covered by Group occupational safety management system used this to analyze their occupational safety organizations and processes. The results have been incorporated into a Group-wide benchmark and now provide the foundation for further improvements of the system.



**EMPLOYEE BREAKDOWN<sup>1</sup>**

as of December 31, 2016

	2016	2015	2014	2013	2012
Vocational trainees in the Group	19,490	18,651	18,459	17,703	16,714
Industrial	14,276	13,673	13,577	13,174	12,508
Commercial	5,214	4,978	4,882	4,529	4,206
Passive phase of partial retirement	5,782	6,183	7,129	9,501	7,804
Group's active employees	601,443	585,242	566,998	545,596	525,245
<b>Employees</b>	<b>626,715</b>	<b>610,076</b>	<b>592,586</b>	<b>572,800</b>	<b>549,763</b>
Europe	464,199	451,257	438,631	424,964	410,427
America	58,491	59,329	59,790	61,796	63,193
Africa	6,082	6,388	6,330	6,356	6,461
Asia	96,823	91,991	86,752	78,672	68,704
Australia	1,120	1,111	1,083	1,012	978
Percentage of female employees in the Group	16.0	16.0	15.7	15.5	15.2
Female graduate recruits <sup>2</sup> (in %)	26.0	37.0	30.9	35.3	29.2

1 Including the Chinese joint venture companies.

2 Volkswagen AG

**INFORMATION TECHNOLOGY (IT)**

With digitalization and networking in the ascendant on the whole, all of our business processes must also be supported digitally from end to end. At the same time, the establishment of new locations is posing high demands in terms of networking and coordination. A modern, tailor-made infrastructure and efficient application landscape are essential to meeting these requirements. The centerpiece is the Group-wide "Fertigungs-, Informations- und Steuerungssystem" (FIS – Production, Information and Control System). This enables us to efficiently produce vehicles at currently 43 plants worldwide – at the right time and with the right equipment. FIS is a key success factor for flexible, cross-brand manufacturing in the global production network.

In 2016, we have increased the Group-wide level of IT standardization for managing our plants to 88 (84)%. The "digital factory" is an example of an application launched only recently: even before the Company breaks ground on the construction of a new plant, our planners are able to take a virtual walk through the building, check their plans and thus ensure production can begin as intended.

The growing convergence of production and IT is opening up new opportunities. Big data processes help us to analyze faulty machinery and take action at an early stage.

Volkswagen is addressing the trend towards digitalization in the Group's own IT labs. At these innovation centers, new IT solutions are developed in close cooperation between departments, research institutions and technology partners. The innovation centers act as test laboratories for the Group, as advisors on questions concerning the future of information technology and as liaison offices for start-up companies.

Our first IT lab, Data:Lab in Munich, is the center of expertise and innovation on topics involving big data, advanced analytics (process for systematic analysis of data in electronic form), machine learning and artificial intelligence.

Another center of innovation opened in Berlin in the reporting period – Digital:Lab. Among other things, the experts there are working on a digital platform that will enable us to provide our customers with mobility services, including information on fuel prices, parking and weather conditions.

We established the Smart.Production:Lab at the Wolfsburg location in August 2015. This acts as a center of expertise for Industry 4.0-related topics and is making an important contribution towards progressively turning the Volkswagen Group's production plants into smart factories.

Activities covering the Internet of things, data analytics, human-robot collaboration and wearables aim to comprehensively digitalize production and logistics. At the Smart.Production:Lab, we are helping to shape the future of car manufacturing.

We are also constantly increasing our efforts to network employees. Internal communities and the Company's internal Group Connect network are helping to establish new methods, means and ways of working within the Group and to put experts in touch with one another.

Volkswagen also actively seeks open discussions with start-ups in order to turn innovative ideas from young entrepreneurs into products suitable for series production. Internal and external hackathons (programming competitions) additionally create ideas for new products and services. At the CeBIT, for example, Group IT and SAP arranged the "InnoJam++" in which around 100 international mathematics, computer science, natural science, and technology students took part.

#### THE VOLKSWAGEN GROUP'S ENVIRONMENTAL STRATEGY

Climate change, resource availability and urbanization are some of the major global challenges faced by the Volkswagen Group. These challenges are also reflected in the growing demands placed on the Group – from politicians enforcing ambitious environmental regulations around the world, from investors who expect us to anticipate and manage the resulting risks, and from customers who are increasingly interested in low-emission, environmentally friendly vehicles.

Our goal is to become a role model in all things related to the environment and to actively support the implementation of the United Nations' Sustainable Development Goals (SDGs).

#### Targets and guidelines

The Volkswagen Group's future program, TOGETHER – Strategy 2025, reveals how Volkswagen plans to excel. By taking responsibility, we intend to become a role model in all things related to the environment. To this end, we have defined the following targets:

- > To continuously reduce our carbon footprint
- > To continuously reduce the harmful emissions
- > To continuously reduce the resource consumption

In our quest to become a role model in all things related to the environment, we have drawn up several guidelines:

- > In addition to addressing the global challenge of climate change (reducing CO<sub>2</sub> emissions), our approach covers all other environmental resources, especially conserving water, soil and air quality as well as energy and raw materials. Our decades of experience and the expertise we have built up as a result will come to fruition both globally and locally.

- > We employ a holistic approach by researching, developing and democratizing environmentally friendly innovations, significantly reducing the environmental burden in the process.
- > We significantly reduce the environmental burden throughout the entire product life cycle by setting ourselves ambitious goals and acting as a driving force in both the production phase (supply chain) and the usage phase of our products.
- > We communicate our measures, achievements and projects as transparently as possible.
- > Our achievements are substantiated by high rankings in environmental awards.

We can only reach our goals if we firmly entrench environmentally relevant issues in our organizational and decision-making processes. Our long-established environmental management system provides the basis for this.

All environmental protection activities in the Volkswagen Group are centered around our global principles, which have been expanded and improved over the years, and which are binding for all Group brands:

- > Group Environmental Principles for Locations/Production (2007)
- > Group Environmental Principles for Product (2008)
- > Mission Statement on Biodiversity (2008)
- > Group Environmental Policy (2010)

#### Group environmental protection bodies

The Group Board of Management is the highest internal decision-making authority on environmental matters. Since 2012, it has simultaneously functioned as the Group's Sustainability Board. The Group-wide management of environmental protection is the responsibility of the Group Steering Committee for the Environment and Energy, with support from numerous specialist bodies such as:

- > the Group Life Cycle Engineering working group
- > the Group Steering Committee for CO<sub>2</sub>
- > the Vehicle Recycling Steering Committee
- > the Group Energy working group

These committees assess and analyze environmental opportunities and risks. To cover the entire value chain (life cycle approach), the corresponding divisions of the Group are represented in the Group Steering Committee for the Environment and Energy.

The brands and companies are independently responsible for environmental organization at their headquarters and locations, but base their environmental policies on the targets, guidelines and principles that apply throughout the Group.

2014 saw the inception of the Environmental Task Force, mandated with identifying and implementing potential savings at the locations. This team of analysts from Group research environment acts as a networking intermediary in the Company between departments, such as planning, main-

tenance and operations. The broad-based knowledge of the Environmental Task Force, the many solutions and ideas from the locations and the transfer of measures via the `massnahmen@web` IT tool all help to promote a lively Group-wide dialog.

#### Engaging the workforce

Only a well-informed, qualified workforce can implement the specific measures derived from our environmental strategy and achieve the set targets. Already since 1976, environmental officers at our European locations have regularly convened to share their knowledge and experience. Regular Group Environmental Conferences were introduced in 1998 as a forum for the Group's Environmental Officers and experts to discuss strategies, measures and projects, and draw up joint action plans.

2013 saw the introduction of environmental protection ambassadors, as specially trained environmental experts. Worldwide, more than 1,000 ambassadors are now operating as front-line contacts and opinion leaders for production employees. Also, so-called Energy Experts receive special advanced training. The Wolfsburg facility alone has more than 70 of those experts helping their colleagues to save energy. Cross-brand, inter-departmental steering committees and working groups also operate at both management and expert level. Employee engagement is supported by an intranet portal showcasing best-practice examples and facilitating direct contact with all the relevant colleagues. The portal also outlines fundamental energy-saving guidelines and tips, including a number generated by the central ideas management program.

#### Biodiversity

Biodiversity means the variety of life on our planet, and covers the variety of species, the genetic differences within species and the diversity of ecosystems. We rely on it as the basis for our continued existence: healthy food, clean water, fertile soils and a balanced climate. Protecting biological diversity is one of the greatest challenges of our time. The United Nations has therefore declared the current decade to be the "UN Decade on Biodiversity".

Volkswagen has been committed to protecting biodiversity since 2007 and is a founder member of the Biodiversity in Good Company e.V. initiative. In our mission statement, we have committed to supporting the protection of species at all locations. For this, we are collaborating with local suppliers. As a consequence of the diesel issue, our membership in the Biodiversity in Good Company e.V. initiative is on hold until this issue has been clarified.

Protecting biodiversity is a component of our environmental management. We have, among other things, appointed Volkswagen AG's environmental management officer as the Biodiversity Officer. We contribute to achieving the targets of the UN Convention on Biological Diversity (CBD) by reducing greenhouse gas emissions and utilizing resources as efficiently as possible. Volkswagen supports networking between the various players in the fields of business, politics, society and academia with a view to increasing public awareness of biodiversity conservation and to increase knowledge about the issue.

The thirteenth meeting of the Conference of the Parties (COP 13) on the Convention on Biological Diversity was held in Cancún in December. A representative of Volkswagen de México was invited to speak at the 2016 CBD Business and Biodiversity Forum in the run-up to the event. A statement in which the participating companies reaffirm their commitment to protecting biodiversity was also published for the first time. Volkswagen de México is one of the signatories of this Business and Biodiversity Pledge.

Our long-standing cooperation agreement with the Naturschutzbund Deutschland e.V. (NABU – German Nature and Biodiversity Conservation Union) expired on December 31, 2015. Nevertheless, the collaboration between Volkswagen Financial Services AG and NABU continued in 2016 under an agreement on a moorland conservation project and another agreement on environmentally friendly fleet management. Rewetting of moorland is an efficient measure for climate protection and nature conservation and serves to protect biotopes with highly specialized species.

At our international sites, we support the protection of nature with various partners. Volkswagen de México, for example, has been sponsoring reforestation in the Iztacihuatl-Popocatepetl National Park since 2008. Volkswagen has made around €1.4 million available for planting a total of 490,000 conifers. 39 suppliers have provided funding for the project. One of the aims of this project is to channel rainwater and meltwater into Puebla's aquifers.

In Xinjiang, Volkswagen supports the SuMaRiO (Sustainable Management of River Oases along the Tarim River) project, making – also from the perspective of the United Nations – an important contribution to environmental protection, to biodiversity and to combating desertification.

#### External environmental awards

The Volkswagen Group's models and its brands received numerous awards for environmentally friendly features in 2016. Here are some examples:

Vehicles from the Passenger Cars brand received top marks for energy efficiency in a test conducted by Brazil's "Quatro Rodas" magazine. Of all the automobiles with petrol-powered drives, the speed up! was the most fuel-efficient, followed by the take up! and the Fox BlueMotion. The new Gol Comfortline with its 1.0 MPI engine and the Audi A1 Sport 1.4 TFSI also made the list of the most fuel-efficient vehicles.

In the China Eco-Car Assessment Program (C-ECAP), the Golf TSI was awarded a platinum medal and the ŠKODA Octavia 1.4 TSI DSG and the Volkswagen Lamando 230 TSI with DSG were awarded gold medals. The vehicles were rated in six categories, including energy savings and the recycling rate.

The eco up! and its sisters Mii from SEAT and Citigo from ŠKODA repeated earlier success by winning in the environmentally friendly car list (Switzerland). The Audi A3 TFSI g-tron and the Golf TGI, which came second and third, rounded off the successful performance of the Group's efficient natural gas models in the top ten.

The editorial team from Engadget, a leading online technology magazine in the United States, conferred on the

BUDD-e this year's "Best of CES" award in the Best Innovation category. Special mention was made of the vehicle's range and quick charging mode. The online guide SlashGear, which mainly rates smartphones, cars, computers and digital life, also named the BUDD-e the overall winner.

In the competition organized by Verkehrsrundschau and Trucker magazines, the Volkswagen Caddy came out on top among the vans, receiving the "Green Van 2016" award. The Caddy delivered the best overall result regarding fuel consumption, payload and load capacity. The EfficientLine 2 fuel-efficient package for the MAN TGX received the "Green Truck Innovation" accolade for proven reduction of emissions in air pollutants, greenhouse gases and noise. Scania received the "Green Truck Future Innovation 2016" environmental award in the category of promising innovations for its hybrid module for distribution trucks. The 235 kW (320 PS) hybrid truck achieves fuel savings of up to 18% compared with trucks run solely on diesel. It can operate solely in electric mode, or the electric power can be combined with pure biodiesel.

#### REPORT ON POST-BALANCE SHEET DATE EVENTS

There were no significant events after the end of fiscal year 2016.

# Report on Expected Developments

The momentum of the global economy is expected to be somewhat stronger in 2017 than in the previous year. We assume that global demand for vehicles will be mixed and increase at a slightly slower rate than in the reporting period. Thanks to its brand diversity, global presence and pioneering technologies, the Volkswagen Group is well prepared to deal with the diverse conditions in the regional markets.

In the following, we describe the expected development of the Volkswagen Group and the general framework for its business activities. Risks and opportunities that could represent a departure from the forecast trends are presented in the Report on Risks and Opportunities.

Our assumptions are based on current estimates by third-party institutions. These include economic research institutes, banks, multinational organizations and consulting firms.

## GLOBAL ECONOMIC DEVELOPMENT

In our forecasts, we assume that global economic growth in 2017 will be slightly above the previous year's level. We believe risks will arise from protectionist tendencies, turbulence in the financial markets and structural deficits in individual countries. In addition, growth prospects will continue to be hurt by geopolitical tensions and conflicts. We expect the economic upturn to continue in the large majority of industrialized nations, with stable rates of expansion overall. Most emerging markets will probably see faster growth than in the previous year. We expect the strongest rates of expansion in Asia's emerging economies.

Furthermore, we anticipate that the global economy will also continue to grow in the period 2018 to 2021.

### Europe/Other Markets

In Western Europe, the economic recovery is expected to decelerate to some extent in 2017 compared with the reporting period. Resolving structural problems and the uncertain outcome of the Brexit negotiations between the EU and the United Kingdom represent major challenges.

For Central Europe, we estimate that growth rates in 2017 will be similar to those of the past fiscal year. In Eastern Europe, the economic situation should stabilize further, providing the smoldering conflict between Russia and Ukraine does not worsen. Following its decline in recent years, Russia's economic output is likely to increase slightly.

Political uncertainty and social tensions resulting primarily from high unemployment levels will probably continue to weigh on the South African economy in 2017 and keep growth down.

### Germany

In Germany, GDP is slated to rise in 2017 at a similar pace as in the reporting period. The situation in the labor market is expected to remain stable, bolstering consumer spending.

### North America

For North America, we expect that the economy will expand in 2017 at a faster rate than in the previous year. Growth in the USA and in Canada is forecast to rise year-on-year, while the rate of growth in the Mexican economy is projected to decrease.

### South America

Brazil is very likely to come out of recession in 2017, showing a modest growth trend. In spite of persistently high inflation, the Argentinian economy should pick up speed again.

#### Asia-Pacific

In 2017, the Chinese economy is expected to continue growing on a high level, but year-on-year this growth will lose momentum. For India, we anticipate an expansion rate at around the prior-year level. The economic situation in Japan is likely to remain essentially unchanged compared to the reporting period.

#### TRENDS IN THE PASSENGER CAR MARKETS

We expect trends in the passenger car markets in the individual regions to be mixed in 2017. Overall, growth in global demand for new vehicles will probably be slower than in the reporting period.

The Volkswagen Group is well positioned to deal with the mixed developments in automotive markets around the world. Our broad, selectively expanded product range featuring the latest generation of engines as well as a variety of alternative drives puts us in a good position globally compared with our competitors. Our goal is to offer all customers the mobility and innovations they need, sustainably strengthening our competitive position in the process.

We estimate that demand for passenger cars worldwide will continue to increase in the period 2018 to 2021.

#### Europe/Other Markets

For 2017, we anticipate that unit sales volumes in Western Europe will fall somewhat short of the level seen in the reporting period. Pre-crisis levels are not expected to be reached, even in the medium term. The continuing uncertainty among consumers precipitated by the debt crisis is likely to be exacerbated by the uncertain outcome of the Brexit negotiations between the EU and the UK, putting a damper on demand. In Italy and Spain, the recovery will probably continue in 2017 but at a much slower pace; for France, we expect growth to be only slightly positive. We anticipate that the market volume in the United Kingdom will be considerably lower than the high level seen in the previous year.

In the Central and Eastern European markets, demand for passenger cars in 2017 should exceed the weak prior-year figure. Following significant declines in some of the previous years, the volume of demand in Russia is estimated to increase moderately. We expect to see further growth in demand in the Central European markets.

We are projecting that the volume of demand in the South African passenger car market in 2017 will be up slightly year-on-year.

#### Germany

Following the positive trend of recent years, we forecast that the volume of the German passenger car market in 2017 will be slightly lower than in the previous year.

#### North America

We expect that the market volume for passenger cars and light commercial vehicles (up to 6.35 tonnes) in North America as a whole and in the USA will be a little lower in 2017 than in the prior year. Demand will probably remain highest for models in the SUV, pickup and van segments. In the Canadian market, the number of new registrations is likely to be slightly below the previous year's high level as well. This stands in contrast to Mexico, where we anticipate that demand will be noticeably higher than in the reporting period.

#### South America

Owing to their dependence on demand for raw materials, the South American markets for passenger cars and light commercial vehicles are heavily influenced by developments in the global economy. Protectionist tendencies are adversely affecting the performance of the region's vehicle markets, especially in Brazil and Argentina, which have imposed restrictions on vehicle imports. Nevertheless, compared with the previous year, demand in the South American markets as a whole will probably edge up in 2017. In Brazil, the largest market in South America, the volume is expected to rise moderately following substantial losses in the previous years. We anticipate that volumes in the Argentinian market in 2017 will be up slightly year-on-year.

#### Asia-Pacific

The passenger car markets in the Asia-Pacific region look set to continue their growth trajectory in 2017, however at a weaker pace. In China, the steady increase in individual mobility requirements will push up demand, though the rate of growth is likely to be slower than in the previous year because the tax break for vehicles with engine sizes of up to 1.6 l was reduced by half at the end of 2016. Strong demand is still forecast for attractively priced entry-level models in the SUV segment in particular. In India, we expect demand for passenger cars to slightly exceed the previous year. We believe that demand in the Japanese passenger car market will continue to taper off in 2017.

#### TRENDS IN THE MARKETS FOR COMMERCIAL VEHICLES

We expect trends in the markets for light commercial vehicles in the individual regions to be mixed again in 2017. Overall, we envisage modest growth in demand, a trend that is likely to continue in the period 2018 to 2021.

Due to the uncertainty caused by the United Kingdom's European Union membership referendum in June 2016, we estimate that demand for light commercial vehicles in Western Europe in 2017 will be slightly below the previous year's level. The United Kingdom is expected to register the biggest decline in the region. We anticipate that registrations in Germany will be around the previous year's level.



In the Central and Eastern European markets, registrations of light commercial vehicles in 2017 will probably be higher than in the previous year. Also in Russia we expect the market volume to rise compared with 2016.

In North and South America, the light vehicle market is reported as part of the passenger car market, which includes both passenger cars and light commercial vehicles.

The market volume in the Asia-Pacific region in 2017 will probably record a slight increase year-on-year. We are expecting demand in the Chinese market to match the prior-year level. For India we are forecasting a considerably higher volume in 2017 than in the reporting period. In the Japanese market, the downward trend is likely to continue in 2017 at a slower pace.

In the markets for mid-sized and heavy trucks that are relevant for the Volkswagen Group, new registrations in 2017 are set to be somewhat up on the level in 2016. For the period 2018 to 2021 we anticipate a positive trend.

We expect to see demand in Western Europe and Germany decrease slightly year-on-year in 2017.

Central and Eastern European markets should record a significant increase in demand. For Russia, we anticipate a substantial recovery in demand in 2017, in contrast to the low level recorded in 2016.

Owing to a cyclical decline in the truck market, registrations in North America will probably be down substantially in 2017 on the figure for 2016.

Demand in the Brazilian market will recover in 2017 from the low level of the previous year, as the first signs of an economic recovery suggest.

Registrations in China, the world's largest truck market, are projected to be moderately higher in 2017 than in 2016. In India, we expect significant growth in the market on the strength of the positive economic climate and the implementation of numerous infrastructure measures.

In the bus markets that are relevant for the Volkswagen Group, we expect to see a moderate increase in demand in 2017. We anticipate that demand in Western Europe in 2017 will be below the 2016 level. For Central and Eastern Europe, we are forecasting higher demand than in the previous year. In South America, new registrations will probably be noticeably higher than the prior-year level.

For the period 2018 to 2021, we expect moderate growth overall in the demand for buses in the markets that are relevant for the Volkswagen Group.

#### TRENDS IN THE MARKETS FOR POWER ENGINEERING

We expect the overall difficult market environment and thus the price pressure in the power engineering segment to persist undiminished in 2017.

We anticipate that the order volume in 2017 for two-stroke engines used in merchant shipping will be similar to the prior-year figure. Calls for greater energy efficiency and low pollutant emissions will have a significant influence on ship designs in the future. We expect to see continuing high demand for special-purpose ships such as cruise ships, ferries and government vessels. In the offshore segment, new orders are expected to be at a very low level due to overcapacities, despite the recent slight increase in the oil price. Our assumption is that the volume of the marine market will persist at last year's level on the whole. The competitive pressure will continue unabated.

Demand for energy correlates strongly with macroeconomic and demographic trends, especially in developing countries and emerging markets. The global trend toward decentralized power stations and gas-based applications shows no sign of slowing down. We predict that demand will increase slightly year-on-year in 2017, but will remain at a low overall level.

In spite of the slight increase in the oil price, the market for turbomachinery is expected to experience a persistently difficult market environment in fiscal year 2017, resulting in high prices and competitive pressure. This is due to expectations that unfavorable economic and political conditions will prevail in some relevant markets. We consequently envisage that in 2017 the market for turbomachinery will also settle at the previous year's low level.

Due to the fact that new construction capacity is not being utilized in full, the after-sales area is also expected to witness mounting competitive pressure.

For the period 2018 to 2021, we expect to see growing demand in the power engineering markets. The extent and timing of this growth will vary in the individual business fields, however.

#### DEMAND FOR FINANCIAL SERVICES

We believe that automotive financial services will continue to be very important for vehicle sales worldwide in 2017. We expect to witness further increasing demand in emerging markets in which market penetration is currently low, such as China. Regions with developed automotive financial services markets will see a continuation of the trend towards enabling

mobility at a manageable total cost. Integrated end-to-end solutions, comprising mobility-related service modules such as insurance and innovative packages of services, will become increasingly important. In addition, demand for new mobility services such as carsharing will also grow; we estimate that this trend will continue in the period 2018 to 2021.

In the mid-sized and heavy commercial vehicles category, we expect rising demand for financial services products in emerging markets. There in particular, financing solutions support vehicle sales and are thus an essential component of the sales process. We anticipate increased demand in 2017 in the developed markets for services that reduce the total cost of ownership. This trend is also expected to continue in the period 2018 to 2021.

#### EXCHANGE RATE TRENDS

The global economy lost a little of its momentum in 2016. Energy and commodity prices recovered as the reporting period went on, albeit at a relatively low level. Confidence in the economic stability of crisis-hit emerging markets partially returned and led to a gradual appreciation of the currencies of these countries. The euro lost ground slightly against the US dollar, but gained ground slightly against the Chinese renminbi. In the wake of the United Kingdom's Brexit referendum in June 2016, the sterling slumped against the European single currency. The Russian ruble and the Brazilian real turned around their preceding downtrend at the beginning of the reporting period and have since recorded significant price gains. For 2017, we are forecasting that the euro will gain some strength against the US dollar, Chinese renminbi, sterling and other key currencies. The expectation is that the Russian ruble and Brazilian real will remain relatively weak. We currently assume that these trends will continue in the period 2018 to 2021. There is still a general event risk – defined as the risk arising from unforeseen market developments.

#### INTEREST RATE TRENDS

Interest rates remained extremely low in fiscal year 2016 due to the continuation of expansionary monetary policy and the challenging overall economic environment. In the major Western industrialized nations, key interest rates persisted at a historic low level. While it became apparent in the USA that the extremely loose monetary policy was gradually drawing to an end, the European Central Bank continued to pursue this course. In light of further expansionary monetary policy measures in the eurozone, we therefore consider it unlikely that interest rates will rise in 2017. In the USA, however, we can expect to see a moderate increase in interest rates. For the

period 2018 to 2021, we anticipate a successive rise in interest rates, though the pace will vary from region to region.

#### COMMODITY PRICE TRENDS

Political and economic uncertainty in different forms caused the prices for many raw and input materials, such as crude oil, steel and rare earths, to move sideways or upwards in 2016 amid high volatility in some cases. In light of these individual factors, we expect mixed developments in the commodity markets in 2017 with an increase in most commodity prices. We believe that this trend will continue in the period 2018 to 2021. Forward-looking, system-based and individual procurement methods enable us to mitigate risks arising from this volatility in commodity prices. Long-term supply agreements ensure that the Group's needs are satisfied and thus ensure a high degree of supply reliability.

#### NEW MODELS IN 2017

In the course of transforming our core business, we will define the positioning of our Group brands more clearly and further optimize the vehicle and drive portfolio with a view to the most attractive and fastest-growing market segments. We will unveil additional SUV models, integrate digitalization into our products more systematically and provide important stimuli for the future with e-mobility offerings.

The Volkswagen Passenger Cars brand will launch the revamped Golf on the market in 2017. The brand's best-selling model, which will also be available as the Golf Estate, Golf GTI and Golf GTE, boasts a polished design, efficient engine technology, innovative driver assist systems and a new generation of infotainment systems. The latest battery technology extends the range of the new e-Golf by around 50% to up to 300 km in the New European Driving Cycle. The Polo was completely overhauled based on the MQB and now offers customers an even greater level of comfort. Its features include a wide range of affordable innovations, more spacious interior and outstanding design. The already large up! family will be joined by the sporty up! GTI in late 2017. The brand will continue its SUV initiative with the T-Roc, a compact crossover model. In addition, Volkswagen will demonstrate the brand's value, quality and power of innovation in 2017 with the sporty four-door coupé Arteon, which will complete the portfolio above the Passat. Three new electric vehicles will be rolled out in China – the plug-in versions of the Phideon and the Passat Estate as well as the e-Golf. The Teramont, a mid-class SUV that comfortably seats seven passengers, will also be introduced to the market, setting new standards in the segment with the latest driver assist systems and a masculine off-road design. In addition, Volkswagen will



introduce the long version of the new Tiguan in China. In the USA, we aim to win over customers with the new Tiguan, which features a longer wheelbase. Volkswagen will cater to one of the largest segments in the American market with the SUV Atlas produced at our Chattanooga plant. The vehicle concept is specially tailored to meet the special demands of our customers here. In Brazil the face-lifted up! will be launched in 2017. The Golf and Golf Estate will also be refreshed. The new Polo is also expected to boost sales figures in Brazil.

At the new Audi plant in San José Chiapa, Mexico, production of the second generation of the best-selling SUV, the Q5, began at the end of 2016. This will be successively launched on the markets in 2017. The A5 family will be supplemented by the revamped A5 Sportback and A5 Cabriolet. Audi's new flagship will be launched towards the end of the year: the successor to the Audi A8 thrills with numerous new driver assist systems and infotainment features, raising the bar in its segment. The RS 3 Saloon will be launched in North America in 2017 along with the R8 Spyder and the TT RS. The new A5 Sportback will also make its debut in the US market.

ŠKODA will launch the bold, powerful Kodiaq in 2017 – a new series based on the MQB. The SUV combines all qualities that are synonymous with the ŠKODA brand: an exceptional amount of space, strong design and excellent value for money. In addition, the new generation of the robust Yeti will be unveiled. The popular Octavia will receive an upgrade. The Citigo, the Rapid and the Rapid Spaceback will also be given a face-lift.

SEAT will continue its product initiative with the new Leon. The fifth generation of the Ibiza will also be presented. SEAT is making its debut in the crossover segment with the Arona.

Starting in 2017, Porsche will produce the Panamera 4 E-Hybrid and the Panamera Executive models. The Panamera Sport Turismo will complement the model series in the second half of the year. The new generation of the 911 GT3 and the GTS models from the 911 series will also be delivered to customers.

In 2017, Bentley will launch the Bentayga – the first model with a diesel engine in Europe and selected international markets as well as the Continental GT Supersports high-performance variant. The next generation of the Continental GT will be unveiled in the second half of the year.

Lamborghini will launch the new Huracán Spyder RWD and the Huracán Performante in 2017, along with the upgraded Aventador S Coupé.

Bugatti will commence delivery of its new Chiron, the world's most powerful, fastest, most luxurious and most exclusive production super sports car. With a power output of 1,500 PS, a torque value of 1,600 Nm and a wide variety of

technical innovations, the Chiron will set new standards in every respect.

In 2017, Volkswagen Commercial Vehicles will start selling the completely redeveloped Crafter, which was designed with customers' specific preferences in mind. Boasting a large variety of drives and derivatives, the new Crafter offers customer-oriented functionality and everyday solutions for individual transport tasks in all areas of use.

Scania will launch further variants of its new generation of trucks.

MAN will enter the world of vans for the first time in 2017 with the TGE. The light commercial vehicle will be MAN's primary solution in future for everyday lighter tasks in the transport and haulage sector. The models from the TG series will be redesigned. In the bus segment, the NEOPLAN Tourliner will be launched. Furthermore, new services and product innovations will be presented in all business areas in 2017.

Ducati will roll out a total of seven new models in 2017: the Ducati SuperSport, the Monster 797 and Monster 1200, the Multistrada 950, two new Scrambler models – the Scrambler Café Racer and the Scrambler Desert Sled – and the 1299 Superleggera, of which only 500 will be produced.

#### STRATEGIC SALES FOCUS

The multibrand structure, comprising largely independent, strong brands that nevertheless achieve maximum synergies, is one of the defining features of the Volkswagen Group. The structures in the Group have been designed for managing a multibrand organization.

To facilitate the entry into new markets for more Group brands, we will further expand our multibrand structure, particularly in the growth markets. We will also strengthen our customer focus across all sales levels and in customer service, for which we are continually enhancing employee qualifications in addition to optimizing our processes and systems to reflect shifts in customer requirements as well as changing markets and technologies, in particular digitalization. The focus of our sales strategy remains the same – the integrated marketing of new and used vehicles, financial and other services, as well as genuine parts and accessories. Mobility services are gradually being added.

#### TECHNICAL EXPERTISE AND MOTIVATION IN THE TRANSFORMATION PROCESS

Our staff's dedication and high level of expertise provide important prerequisites for the transformation process to one of the world's leading providers of sustainable mobility, while ensuring our professional excellence in the field of classical automobile manufacturing.

The dual vocational training and a university degree are the basis for professional development in the vocational groups at Volkswagen. Employees then obtain further qualifications throughout their working lives. To always meet current requirements, the broad offering of qualifications is continuously being enhanced. For example, employees are prepared for the changes associated with the advancing digitalization and the use of new technologies under Industry 4.0. An important pillar of this strategy is the transfer of knowledge and experience by internal experts to other staff. Qualifications are provided in the form of dual vocational training that closely integrates theoretical and practical forms of learning.

#### INVESTMENT AND FINANCIAL PLANNING

In our current planning for 2017, investments of a total of €18 billion will be made in the Automotive Division.

Scheduled capex (investments in property, plant and equipment, investment property and intangible assets, excluding capitalized development costs) will amount to €13 billion. The ratio of capex to sales revenue in 2017 will be at a level of 6–7%. The majority of capex will be spent on new products and the continued rollout and development of the modular toolkit. The focus is on the electrification and digitalization of our vehicles, in particular through the advancement of the Modular Electric Toolkit (MEB). At the same time, primarily the SUV range will be further expanded.

Besides capex, investing activities will include additions of €5 billion to capitalized development costs. Among other things, these reflect upfront expenditures in connection with environmental standards and the extension and updating of our model range.

The investments in our facilities and models, as well as in the development of alternative drives and modular toolkits, are laying the foundations for profitable, sustainable growth at Volkswagen. These investments also include commitments arising from decisions taken in previous fiscal years.

We anticipate significant cash outflows in 2017 because of expenses from the diesel issue. Cash flows from operating activities are not expected to cover the Automotive Division's investment requirements. We therefore expect a negative net cash flow in 2017.

These plans are based on the Volkswagen Group's current structures. They do not take into account the possible settlement payable to other shareholders associated with the control and profit and loss transfer agreement with MAN SE. Our joint ventures in China are not consolidated and are therefore also not included in the above figures. These joint

ventures will invest €4 billion in capex in 2017, to be financed from the companies' own funds.

In the Financial Services Division we are planning lower investments in 2017 than in the previous year. We expect the growth in lease assets and in receivables from leasing, customer and dealer financing to lead to funds tied up in working capital, of which around 55% will be financed from the gross cash flow. As is common in the sector, the remaining funds needed will be met primarily through unsecured bonds on the money and capital market, asset-backed securities, customer deposits from direct banking business, as well as through the use of international credit lines.

#### TARGETS FOR VALUE-BASED MANAGEMENT

Based on long-term interest rates derived from the capital market and the target capital structure (fair value of equity to debt = 2:1), the minimum required rate of return on invested capital defined for the Automotive Division remains unchanged at 9%. Due in particular to the adverse effects of the special items on earnings, we did not achieve the minimum required rate of return in the reporting period, with a return on investment (ROI) of 8.2% (see also page 133). Invested capital will increase in 2017 as a result of investments in new models, the development of alternative drives and modular toolkits, as well as in future technologies. The return on investment will be up substantially year-on-year, above the minimum required rate of return on invested capital of 9%.

#### FUTURE ORGANIZATIONAL STRUCTURE OF THE GROUP

As part of the future program TOGETHER – Strategy 2025, we are setting up a new mobility solutions business with which we will press ahead with our transformation into a global leader in sustainable mobility. We will develop and market mobility services independently or in partnership with others. In addition to ride provision via an app (ride hailing), the focus will be on holistic transport solutions that shape personal and public transport more efficiently. The mobility solutions business will be reported in the Financial Services segment.

#### SUMMARY OF EXPECTED DEVELOPMENTS

The Volkswagen Group's Board of Management expects the global economy to record slightly higher growth in 2017 than in the previous year. We believe risks will arise from protectionist tendencies, turbulence in the financial markets and structural deficits in individual countries. In addition, growth prospects will continue to be hurt by geopolitical

tensions and conflicts. We expect the economic upturn to continue in the large majority of industrialized nations, with stable rates of expansion overall. Most emerging markets will probably see faster growth than in the previous year. We expect the strongest rates of expansion in Asia's emerging economies.

The trend in the automotive industry closely follows global economic developments. We expect competition in the international automotive markets to intensify further.

We expect trends in the passenger car markets in the individual regions to be mixed in 2017. Overall, growth in global demand for new vehicles will probably be slower than in the reporting period. We anticipate that sales volume in Western Europe and the German passenger car market will be slightly lower than in the previous year. In the Central and Eastern European markets, demand for passenger cars should exceed the weak prior-year figure. We expect that the market volume for passenger cars and light commercial vehicles (up to 6.35 tonnes) in North America in 2017 will be a little lower than the prior-year figure. On the South American market for passenger cars and light commercial vehicles, overall demand is expected to rise slightly compared with the previous year. The passenger car markets in the Asia-Pacific region look set to continue their growth trajectory at a slightly weaker pace.

We expect trends in the markets for light commercial vehicles in the individual regions to be mixed again in 2017. Overall, we envisage a slight increase in demand.

In the markets for mid-sized and heavy trucks that are relevant for the Volkswagen Group, new registrations in 2017 are set to rise slightly above the prior-year level, while a moderate year-on-year increase is expected in new registrations of buses in the relevant markets.

We believe that automotive financial services will continue to be very important for vehicle sales worldwide in 2017.

The Volkswagen Group is well positioned to deal with the mixed developments in automotive markets around the world. Our broad, selectively expanded product range featuring the latest generation of engines as well as a variety of alternative drives puts us in a good position globally compared with our competitors. The Group's further strengths include in particular its unique brand portfolio, its steadily growing presence in all major world markets and its wide selection of financial services. Our range of models covers almost all key segments, with offerings from small cars to super sports cars in the passenger car segment, and from pickups to heavy trucks and buses in the commercial vehicles segment, as well as motorcycles. The Volkswagen Group brands will further optimize their vehicle and drivetrain portfolio in 2017 to concentrate on the most attractive and fastest-growing market segments.

The Group's new structure with more decentralized responsibility will strengthen our brands and regions and increase our proximity to customers. In addition, we are working to make even more focused use of the advantages of our multi-brand group by continuously developing new technologies and our toolkits. Our goal is to offer all customers the mobility and innovations they need, sustainably strengthening our competitive position in the process.

We expect that deliveries to customers of the Volkswagen Group in 2017 will moderately exceed the prior-year volume amid persistently challenging market conditions.

Challenges will arise particularly from the economic situation, intense competition in the market, exchange rate volatility and the diesel issue.

We expect the sales revenues of the Volkswagen Group and of the Passenger Cars Business Area and Commercial Vehicles Business Area to grow up to 4% year-on-year in 2017. In terms of the Group's operating result, we anticipate an operating profit on sales of between 6.0% and 7.0% in 2017. In the Passenger Cars Business Area, we expect an operating return on sales in the range of 6.5 – 7.5%. For the Commercial Vehicles Business Area, we anticipate an operating return on sales of between 3.0 and 5.0%. In the Power Engineering Business Area, we expect a substantial year-on-year decline in sales revenue but also a lower operating loss. For the Financial Services Division, we are forecasting sales revenue and the operating profit at the prior-year level.

In the Automotive Division, the R&D ratio and the ratio of capex to sales revenue will fluctuate in the range of 6 – 7% in 2017. As a result of the effects of the diesel issue, net cash flow will be negative and significantly lower than in the previous year. Net liquidity will decline considerably as a result. The return on investment (ROI) will be up markedly year-on-year and will exceed our minimum required rate of return on invested capital of 9%. Our unchanged stated goal is to continue our solid liquidity policy.

The commitment and considerable technical expertise of our staff are key prerequisites to successfully shaping the transformation into a leading international provider of sustainable mobility. With our future program, TOGETHER – Strategy 2025, we are attaching even greater importance to our responsibility in relation to the environment, safety and society. We are also aiming for operational excellence in all business processes and intensifying our focus on profitable growth.

# Report on Risks and Opportunities

(CONTAINS THE REPORT IN ACCORDANCE WITH SECTION 289(5) OF THE HGB)

Promptly identifying the risks and opportunities arising from our operating activities and taking a forward-looking approach to managing them is crucial to our Company's long-term success. A comprehensive risk management and internal control system helps the Volkswagen Group deal with risks in a responsible manner.

In this section, we first explain the objective and structure of the Volkswagen Group's risk management system (RMS) and internal control system (ICS) and describe the system relevant for the financial reporting process. We then outline the main risks and opportunities arising in our business activities.

## OBJECTIVE OF THE RISK MANAGEMENT SYSTEM AND INTERNAL CONTROL SYSTEM AT VOLKSWAGEN

Only by promptly identifying, accurately assessing and effectively and efficiently managing the risks and opportunities arising from our business activities can we ensure the Volkswagen Group's sustainable success. The aim of the RMS/ICS is to identify potential risks at an 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.

Assessing the probability and extent of future events and developments is, by its nature, subject to uncertainty. We are therefore aware that even the best RMS cannot foresee all potential risks and even the best ICS can never completely prevent irregular acts.

## STRUCTURE OF THE RISK MANAGEMENT SYSTEM AND INTERNAL CONTROL SYSTEM AT VOLKSWAGEN

The organizational design of the Volkswagen Group's RMS/ICS is based on the internationally recognized COSO framework for enterprise risk management (COSO: Committee of Sponsoring Organizations of the Treadway Commission). In the reporting period, Volkswagen again pursued a holistic, integrated approach that combines a risk management

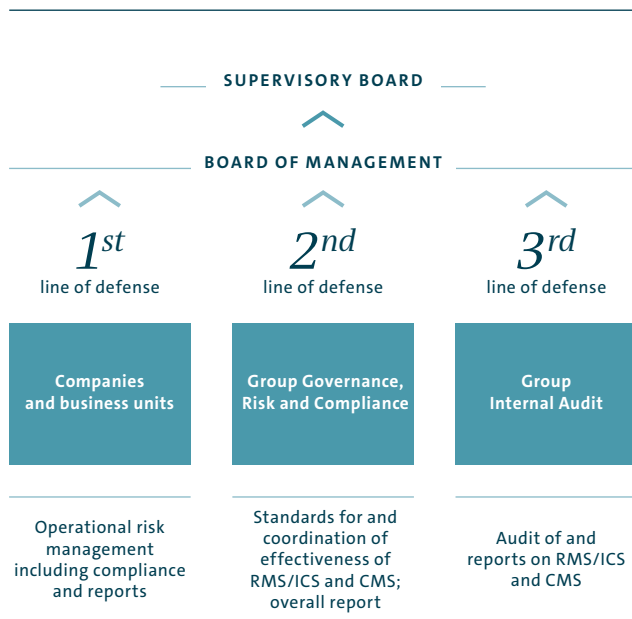
system, an internal control system and a compliance management system (CMS) within a single management strategy (governance, risk and compliance strategy). Structuring the RMS/ICS in accordance with the COSO framework for enterprise risk management ensures that potential risks are covered in full; opportunities are not recorded. Uniform Group principles are used as the basis for managing risks in a consistent manner.

With this approach we not only fulfil legal requirements, particularly with regard to the financial reporting process, but we are also able to manage significant risks to the Group holistically, i.e. by incorporating both tangible and intangible criteria.

We further enhanced our RMS/ICS in the reporting period. In addition to the ad hoc and annual risk assessment, the Board of Management also receives quarterly risk reports. This additional reporting on the current risk situation raises awareness of risks in the Company and encourages an open approach to dealing with them. We continued to reinforce the internal control system in the area of product compliance in 2016. This includes what are known as the Golden Rules, which we describe in the chapter on the diesel issue on page 96.

Another key element of the RMS/ICS at Volkswagen is the three lines of defense model, a basic element required, among others, by the European Confederation of Institutes of Internal Auditing (ECIIA). In line with this model, the Volkswagen Group's RMS/ICS has three lines of defense that are designed to protect the Company from significant risks occurring.

## THE THREE LINES OF DEFENSE MODEL



## First line of defense: operational risk management

The primary line of defense comprises the operational risk management and internal control systems at the individual Group companies and business units. The RMS/ICS is an integral part of the Volkswagen Group's structure and workflows. Events that may give rise to risk are identified and assessed locally 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 operational risk management process are incorporated into budget planning and financial control on an ongoing basis. The targets agreed in the budget planning rounds are continually reviewed in revolving planning updates.

At the same time, the results of risk mitigation measures that have already been taken are incorporated into the monthly forecasts on further business development without delay. This means that the Board of Management also has access to an overall picture of the current risk situation via the documented reporting channels during the year.

The minimum requirements for the operational risk management and internal control system are set out for the entire Group in uniform guidelines. These also include a process for the timely reporting of material risks.

## Second line of defense: identifying systemic risks using the regular Governance, Risk and Compliance process

In addition to the ongoing operational risk management, the Group Governance, Risk and Compliance (GRC) department each year sends standardized surveys on the risk situation and the effectiveness of the RMS/ICS to the significant Group companies and units worldwide (regular GRC process). The feedback is used to update the overall picture of the potential risk situation and assess the effectiveness of the system.

Each systemic risk reported is assessed using the expected likelihood of occurrence and various risk criteria (financial and nonfinancial). In addition, the measures taken to manage and control risk are documented at management level. This means that risks are assessed in the context of any risk management measures initiated, i.e. in a net analysis. In addition to strategic, operational and reporting risks, risks arising from potential compliance violations are also integrated into this process. Moreover, the effectiveness of key risk management and control measures is tested and any weaknesses identified in the process are reported and rectified.

All Group companies and units selected from among the entities in the consolidated Group on the basis of materiality and risk criteria were subject to the regular GRC process in fiscal year 2016.

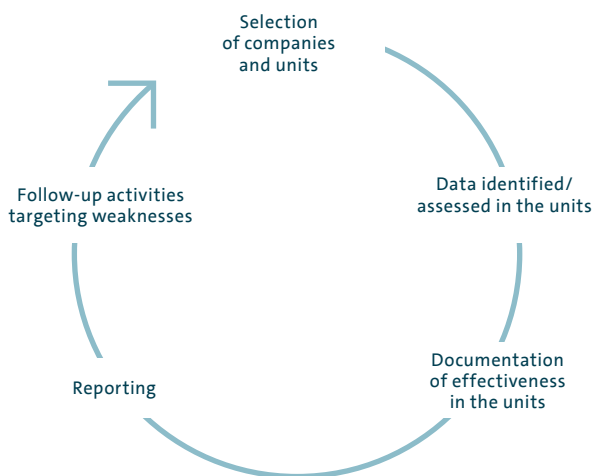
The Scania brand had not yet been included in the Volkswagen Group's risk management system due to various provisions of Swedish company law. Scania was integrated into quarterly risk reporting in 2016. In future, it will also be included in the regular GRC process. According to Scania's corporate governance report, risk management and risk assessment are integral parts of corporate management. Risk areas at Scania are evaluated by the brand's Controlling department and reflected in the financial reporting.

The RMS was expanded in the reporting period to include quarterly risk reporting. The aim is to raise awareness of significant risks currently faced by the Volkswagen Group and to encourage these to be dealt with openly. All Group brands are included in this new process along with Volkswagen Financial Services AG.

## Third line of defense: checks by Group Internal Audit

Group Internal Audit helps the Board of Management to monitor the various divisions and corporate units within the Group. It regularly checks the risk early warning system and the structure and implementation of the RMS/ICS and the CMS as part of its independent audit procedures.

## ANNUAL STANDARD GOVERNANCE, RISK AND COMPLIANCE PROCESS



## RISK EARLY WARNING SYSTEM IN LINE WITH THE KONTRAG

The Company's risk situation is ascertained, assessed and documented in accordance with the requirements of the Gesetz zur Kontrolle und Transparenz im Unternehmensbereich (KonTraG – German Act on Control and Transparency in Business). The requirements for a risk early warning system are met through the elements of the RMS/ICS described above (first and second lines of defense). Independently of this, the external auditors check both the processes and procedures implemented in this respect and the adequacy of the documentation on an annual basis. The plausibility and adequacy of the risk reports are examined on a random basis in detailed interviews with the divisions and companies concerned that also involve the external auditors. The latter assessed our risk early warning system based on this volume of data and established that the risks identified were presented and communicated accurately. The risk early warning system therefore meets the requirements of the KonTraG.

In addition, the Financial Services Division is subject both to scheduled examinations as part of the audit of the annual financial statements and to also unscheduled audits, in particular by the Banking Supervision Committee of the European Central Bank (ECB SSM, Single Supervisory Mechanism) and by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin – the German Federal Financial Supervisory Authority) within the meaning of section 44 of the Kreditwesengesetz (KWG – German Banking Act), as well as examinations by the Prüfungsverband deutscher Banken (Auditing Association of German Banks).

Monitoring the effectiveness of the risk management system and the internal control system

To ensure its effectiveness, the RMS/ICS is regularly optimized as part of our continuous monitoring and improvement processes. In the process, equal consideration is given to both internal and external requirements. External experts assist in the continuous enhancement of our RMS/ICS on a case-by-case basis. The results culminate in both regular and event-driven reporting to the Board of Management and Supervisory Board of Volkswagen AG.

## THE RISK MANAGEMENT AND INTEGRATED INTERNAL CONTROL SYSTEM IN THE CONTEXT OF THE FINANCIAL REPORTING PROCESS

The accounting-related part of the RMS/ICS that is relevant for the financial statements of Volkswagen AG and the Volkswagen Group comprises measures that are intended to ensure the complete, accurate and timely transmission of the information required for the preparation of the financial statements of Volkswagen AG, the consolidated financial statements and the combined Group management report. These measures are designed to minimize the risk of material misstatement in the accounts and in the external reporting.

## Main features of the risk management and integrated internal control system relevant for the financial reporting process

The Volkswagen Group's accounting is essentially organized along decentralized lines. For the most part, accounting duties are performed by the consolidated companies themselves or entrusted to the Group's shared service centers. In principle, the audited financial statements of Volkswagen AG and its subsidiaries prepared in accordance with IFRSs and the Volkswagen IFRS accounting manual are transmitted to the Group in encrypted form. A standard market product is used for encryption.

The Volkswagen IFRS accounting manual, which has been prepared using external expert opinions in certain cases, ensures the application of uniform accounting policies based on the requirements applicable to the parent. In particular, it includes more detailed guidance on the application of legal requirements and industry-specific issues. Components of the reporting packages required to be prepared by the Group companies are also set out in detail there and requirements established for the presentation and settlement of intragroup transactions and the balance reconciliation process that builds on this.



Control activities at Group level include analyzing and, if necessary, adjusting the data reported in the financial statements presented by the subsidiaries, taking into account the reports submitted by the auditors and the outcome of the meetings on the financial statements with representatives of the individual companies. These discussions address both the reasonableness of the single-entity financial statements and specific significant issues at the subsidiaries. Alongside reasonableness reviews, control mechanisms applied during the preparation of the single-entity and consolidated financial statements of Volkswagen AG include the clear delineation of areas of responsibility and the application of the dual control principle.

The Group management report is prepared – in accordance with the applicable requirements and regulations – centrally but with the involvement of and in consultation with the Group units and companies.

In addition, the accounting-related internal control system is independently reviewed by Group Internal Audit in Germany and abroad.

#### Integrated consolidation and planning system

The Volkswagen consolidation and corporate management system (VoKUs) enables the Volkswagen Group to consolidate and analyze both Financial Reporting's backward-looking data and Controlling's budget data. VoKUs offers centralized master data management, uniform reporting, an authorization concept and maximum flexibility with regard to changes to the legal environment, providing a future-proof technical platform that benefits Group Financial Reporting and Group Controlling in equal measure. To verify data consistency, VoKUs has a multi-level validation system that primarily checks content plausibility between the balance sheet, the income statement and the notes.

#### RISKS AND OPPORTUNITIES

In this section, we outline the risks and opportunities that arise in the course of our business activities. We have grouped them into categories. Unless explicitly mentioned, there were no material changes to the specific risks and opportunities compared with the previous year.

The diesel issue gives rise to its own risks for the Volkswagen Group and also has an impact on existing risks. These are described under the respective risk category.

We use competitive and environmental analyses and market studies to identify not only risks but also opportu-

nities with a positive impact on the design of our products, the efficiency with which they are produced, their success in the market and our cost structure. Where they can be assessed, risks and opportunities that we expect to occur are already reflected in our medium-term planning and our forecast. The following therefore reports on internal and external developments as risks and opportunities that may result in a negative or positive deviation from our forecast.

#### Risks from the diesel issue

The Volkswagen Group has recognized provisions arising from the diesel issue, in particular for the upcoming service campaigns, recalls and customer-related measures as well as for legal risks, but also for residual value risks.

Due to existing estimation risks particularly from legal risks, criminal and administrative proceedings, higher expenses for technical solutions, lower market prices, repurchase obligations and customer-related measures, further significant financial liabilities may emerge.

Demand may decrease – possibly exacerbated by a loss of reputation or insufficient communication. Other potential consequences include lower margins in the new and used car businesses and a temporary increase in funds tied up in working capital.

The funding needed to cover the risks may lead to assets having to be sold due to the situation and equivalent proceeds for them not being achieved as a result.

As a result of the diesel issue the ability to use refinancing instruments may possibly be restricted or precluded for the Volkswagen Group. A downgrade of the Company's rating could adversely affect the terms associated with the Volkswagen Group's borrowings.

We are cooperating with all the responsible authorities to clarify these matters completely and transparently.

#### Macroeconomic risks and opportunities

We believe that the risks to continued global economic growth arise primarily from turbulence in the financial markets, protectionist tendencies and structural deficits, which pose a threat to the performance of individual industrialized nations and emerging economies. In the southern part of the eurozone, a sustained economic recovery is being hindered by the situation of some financial institutions whose ability to withstand a crisis is still not assured. Risks are also associated with the effects of the UK's planned withdrawal from the EU. Persistently high private- and public-

sector debt in many places is also clouding the outlook for growth and may cause markets to respond negatively. Declines in growth in key countries and regions often have an immediate impact on the state of the global economy and therefore pose a central risk.

The economic development of some emerging economies is being hampered primarily by dependence on energy and commodity prices, capital inflows and socio-political tensions. Corruption, inadequate government structures and a lack of legal certainty also pose risks.

Geopolitical tensions and conflicts are a further major risk to the performance of individual economies and regions. As the global economy becomes increasingly interconnected, it is also vulnerable to local developments. Any escalation of the conflicts in Eastern Europe, the Middle East, or Africa, for example, could cause upheaval on the global energy and commodity markets and exacerbate migration trends. The same applies to armed conflicts, terrorist activities, or the spread of infectious diseases, which may prompt unexpected, short-term responses from the markets.

Overall, we consider the probability of a global recession to be low. Due to the risk factors mentioned, however, the possibility of a decline in global economic growth or a period of below-average growth rates cannot be ruled out.

The macroeconomic environment may also give rise to opportunities for the Volkswagen Group if actual developments differ in a positive way from expected developments.

#### Sector-specific risk and market opportunities

The growth markets of Asia, South America, and Central and Eastern Europe are particularly important to the Volkswagen Group in terms of the global trend in demand for passenger cars and commercial vehicles. Although these markets harbor considerable potential, the underlying conditions in some countries in these regions make it difficult to increase unit sales figures there. Some have high customs barriers or minimum local content requirements for production, for example. The political crisis and its economic consequences again inhibited market development in Russia in fiscal year 2016. In South America, structural deficits continued to have a negative impact. Restrictions on vehicle registrations could enter into force in further Chinese metropolitan areas in the future. Additionally, a global economic slowdown could negatively impact consumer confidence. Furthermore, we cannot entirely rule out the possibility of freight deliveries being shifted from trucks to other means of transport, and of demand for the Group's commercial vehicles falling as a result.

At the same time, wherever the economic and regulatory situation permits, there are opportunities above and beyond current projections resulting from faster growth in the emerging markets where vehicle densities are still low. The demand that built up in individual established markets during the crisis could also bring a more marked recovery in these markets if the economic environment eases more quickly than expected. Price pressure in established automotive markets due to high market saturation is a particular challenge for the Volkswagen Group as a supplier of volume and premium models. As the global economy is still under strain, competitive pressures are likely to remain high in the future. Some manufacturers may respond by offering incentives in order to meet their sales targets, putting the entire sector under additional pressure, particularly in Western Europe, the USA and China.

Western Europe is one of our main sales markets. A drop in prices due to the economic climate triggered by falling demand in this region would have a particularly strong impact on the Company's earnings. We counter this risk with a clear, customer-oriented and innovative product and pricing policy. Outside Western Europe, delivery volumes are widely spread worldwide, with the Chinese market accounting for a large share. In numerous existing and developing markets, we either already have a strong presence or are working hard to build one. Moreover, strategic partnerships are helping us to increase our presence in these countries and regions and cater to requirements there.

Economic performance varied from region to region in fiscal year 2016. While the situation in Western Europe stabilized further, China remained on its growth trajectory and the US economy continued to expand, market conditions in Eastern Europe and South America remained under strain. The resulting challenges for our trading and sales companies, such as efficient inventory management and a profitable dealer network, are considerable and are being met by appropriate measures on their part. However, financing business activities through bank loans remains difficult. Our financial services companies offer dealers financing on attractive terms with the aim of strengthening their business models and reducing operational risk. We have installed a comprehensive liquidity risk management system so that we can promptly counteract any liquidity bottlenecks at the dealers' end that could hinder smooth business operations.

We continue to approve loans for vehicle finance on the basis of the same cautious principles applied in the past, taking into account the regulatory requirements of section 25a(1) of the Kreditwesengesetz (KWG – German Banking Act).



Volkswagen may be exposed to increased competition in aftermarkets for two reasons in particular: firstly, because of the provisions of the block exemption regulations, which have applied to after-sales services since June 2010, and, secondly, because of the amendments included in EU Regulation 566/2011 of June 8, 2011 regarding access by independent market participants to technical information.

In addition, the European Commission is currently evaluating the market with regard to existing design protection. If the proposed abolition of design protection for visible replacement parts were to be approved, this could adversely affect the Volkswagen Group's genuine parts business.

The automotive industry faces a process of transformation with far-reaching changes. Electric drives, connected vehicles and autonomous driving are associated with both opportunities and risks for our sales. In particular, more rapidly evolving customer requirements, swift implementation of legislative initiatives and the market entry of new competitors from outside the industry will require changed products, a faster pace of innovation and adjustments to business models.

Below, we outline the market opportunities for the Volkswagen Group. We see the greatest potential for growth in the markets of the Asia-Pacific region and in North America.

#### China

China, the largest market in the Asia-Pacific region, continued to grow in the reporting period. The Chinese demand for vehicles will continue to rise in the coming years, albeit at a slower pace than in the past, due to the need for individual mobility. Demand will also shift from the large coastal cities to the interior of the country. In order to leverage the considerable opportunities offered by the Chinese market – also with regard to e-mobility – and to defend our strong market position in China over the long term, we are continuously expanding our product range to include models that have been specially developed for this market. We are further extending our production capacity in this growing market through additional production facilities.

#### India

The political and economic situation in India further stabilized in 2016. The vehicle markets continued their recovery. We expect this trend to continue. Against this backdrop, the Group is currently consolidating its activities, as India remains an important strategic future market for the Group.

#### USA

The volume of the US vehicle market in 2016 marginally exceeded that of the strong previous year. For 2017, we expect the market to fall slightly below the 2016 level. In the USA, Volkswagen Group of America is systematically pursuing our strategy of becoming a full-fledged volume supplier. An engine plant and the development of additional production capacity in the North America region will allow the Group to better serve the market in the future. We are also pressing forward with additional products tailored specifically to the US market. Our success here will largely depend on how transparently, thoroughly and quickly we deal with the diesel issue and restore customer confidence.

#### Brazil

The economic environment remained weak in the reporting period and the volume of demand on the vehicle market fell once again. The ongoing recession, coupled with high unemployment, falling real incomes and restrictive lending policies, prevented the hoped-for recovery. In 2017, we expect the vehicle market to stabilize slightly above its 2016 level. The growing number of automobile manufacturers with local production has resulted in a sharp increase in price pressure and competition. The Brazilian market plays a key role for the Volkswagen Group. To strengthen our competitive position here, we offer vehicles that have been specially developed for this market and are locally produced, such as the Gol and the Fox.

#### Russia

Russia has the potential to grow into one of the largest automotive markets in the world. However, the heavy reliance on oil revenues that are lower than in the past, a substantial fall in real incomes, and high vehicle prices as a result of the weak currency led to a decline in the market as a whole in 2016. Demand for vehicles also continued to be impacted by the political crisis and the related sanctions imposed by the EU and the USA. The market remains strategically important to the Volkswagen Group, which is why we are working intensively there.

#### The Middle East

Despite economic and political instability, the Middle East region offers growth opportunities. We are leveraging the potential for growth with a range of vehicles that has been specifically tailored to this market, but do not have our own production facilities.

#### Power Engineering

The underlying trends in the global economy such as sustained growth and a greater international division of labor are set to continue, as are the resulting increase in global transport routes and volumes, a growing demand for energy and the required forces for innovation in relation to global climate policy.

We are working systematically to leverage these market opportunities across the world. In the medium term, significant potential can be leveraged by enhancing the after-sales business through the introduction of new products and the expansion of our service network. Going forward, stricter requirements with respect to reliability, the availability of the plants that are already in operation, the increase in environmental compatibility and efficient operation, together with the large number of engines and plants, will provide the basis for growth.

As part of the capital goods industry, the Power Engineering Business Area is affected by fluctuations in the investment climate. Even minor changes in growth rates or growth forecasts, resulting from geopolitical uncertainties or volatile commodities and foreign exchange markets, for example, can lead to significant changes in demand or the cancellation of existing orders. The measures we use to counter the considerable economic risks include flexible production concepts and cost flexibility by means of temporary employment, working time accounts and short-time work, and – where necessary – structural adjustments.

#### Research and development risk

We conduct trend analyses, customer surveys and scouting activities so as to reflect our customers' requirements during product development as well as possible. In this way, we identify trends at an early stage and examine their relevance for our customers in good time.

We counter the risk that it may not be possible to develop products or modules within the specified timeframe, to the required quality standards, or in line with cost specifications by continuously and systematically monitoring the progress of all projects and analyzing third-party industrial property rights, increasingly including in relation to communication technologies. We regularly compare this progress with the project's original targets; in the event of variances, we introduce appropriate countermeasures in good time. Our end-to-end project organization supports effective cooperation among all areas involved in the process, ensuring that specific requirements are incorporated into the development process as early as possible and that their implementation is planned in good time. This is why we implemented a product line organization in the Volkswagen Passenger Cars, Audi,

ŠKODA and SEAT brands in 2016 modeled on that of Porsche, to increasingly promote an entrepreneurial mindset and approach.

#### Opportunities arising from the Modular Transverse Toolkit

The Modular Transverse Toolkit (MQB) and the Modular Production Toolkit (MPB) enable us to cut both development costs and the necessary one-time expenses and manufacturing times, as well as making usage possible over several vehicle generations. The toolkits also allow us to produce different models from different brands in various quantities, using the same system in a single plant. This means that our capacities can be used with greater flexibility throughout the entire Group, enabling us to achieve efficiency gains.

In addition to conventional petrol and diesel engines, the MQB also affords us the opportunity to integrate alternative drivetrains, such as natural gas, hybrid, or electric drives. Previously, individual, vehicle-specific adaptations were necessary for each model. The MQB has created an extremely flexible vehicle architecture that permits dimensions determined by the concept – such as the wheelbase, track width, wheel size and seat position – to be harmonized throughout the Group and utilized flexibly. Other dimensions, for example the distance between the pedals and the middle of the front wheels, are always the same and ensure a uniform system in the front of the car, enabling synergies to be achieved.

#### Procurement risks and opportunities

The trend in procurement is to bundle contracts to a greater extent and to ensure worldwide availability of uniform components. This is resulting in an increased need for financing and further consolidation in the supply industry. The Volkswagen Group's procurement risk management system therefore assesses suppliers before they are commissioned to perform projects. Among other things, the procurement function considers the risk of there being insufficient competition if it concentrates on a few financially strong suppliers when awarding contracts.

The procurement risk management system continuously and globally monitors the financial situation of our suppliers and takes targeted measures to avoid supply bottlenecks.

The positive economic trend in Europe, North America and China strengthened our supplier base at an overall good level of capacity utilization and good margin situation. Financing offered on attractive terms and low interest rates provided suppliers with favorable conditions. This reduced the number of insolvencies among our suppliers.

Consolidation of the supplier base continued at the same time, fueled by the globalization of regional suppliers, especially from China, as well as the trends toward e-mobility

and increasing connectivity between the vehicle and its equipment. The political and economic tensions in Russia and South America led to capacity adjustments by suppliers and to a concentration in the supplier base.

Quality problems may necessitate technical measures involving a considerable financial outlay where costs cannot be passed on to the supplier or can only be passed on to a limited extent. It is not possible at the present time to rule out a potential further increase in the recalls of a range of models produced by various manufacturers in which certain airbags manufactured by Takata were installed. This could also affect Volkswagen Group models.

In addition to financial difficulties, supply risks may, for example, arise as a result of fires or accidents at suppliers. The supplier risks are automatically identified without delay in the procurement function through early warning systems and mitigated immediately by applying inferred measures.

Additional measures were taken to safeguard supply and avert future assembly line stoppages caused by suspensions of deliveries.

#### Production risk

Volatile developments in the global automotive markets, accidents at suppliers, storms and earthquakes, as well as the emissions issue caused production volumes of several vehicle models to fluctuate at some plants. We address such fluctuations using tried-and-tested tools, such as flexible working time models. The technical design of the production network enables us to respond dynamically to varying changes in demand at the sites. "Turntable concepts" even out capacity utilization between production facilities. At multibrand sites, volatile demand can also be smoothed across brands.

Short-term changes in customer demand for specific equipment features in our products and the decreasing predictability of demand may lead to supply bottlenecks. We minimize this risk, among other things, by continuously comparing our available resources against future demand scenarios. If we identify bottlenecks in the supply of materials, we can introduce countermeasures far enough in advance.

Production capacity is planned several years in advance for each vehicle project on the basis of expected sales trends. These are subject to market changes and generally entail a degree of uncertainty. If forecasts are too optimistic, there is a risk that capacity will not be fully utilized. However, forecasts that are too pessimistic pose a risk of undercapacity, as a

result of which it may not be possible to meet customer demand.

Particular events beyond our control such as natural disasters or other events, for example fires, explosions or the leakage of substances hazardous to health and/or the environment, may adversely affect production to a significant extent. As a consequence, bottlenecks or even outages may occur, thus preventing the planned volume of production from being achieved. We address such risks with, among other things, fire protection measures and hazardous goods management and cover them – where financially viable – using insurance.

The range of our models is growing, while at the same time product lifecycles are becoming shorter; the number of new vehicle start-ups at our sites worldwide is therefore increasing. The processes and technical systems we use for this are complex and there is thus a risk that vehicle deliveries may be delayed. We address this risk by drawing on experience of past start-ups and, identifying weaknesses at an early stage, so as to ensure that production volumes and quality standards are met during our new vehicle start-ups throughout the Group.

In order to prevent downtime in general, lost output, rejects and reworking, we use the TPM (Total Productive Maintenance) method at our production facilities. TPM is a continuous process involving the entire workforce. Round-the-clock maintenance of the technical facilities means that they are always operational and guaranteed to function reliably.

#### Risks arising from long-term production

In the case of large projects, risks may arise that are often only identified in the course of the project. They may result in particular from contract drafting errors, miscosting, post-contract changes in economic and technical conditions, weaknesses in project management, or poor performance by subcontractors. In particular, omissions or errors made at the start of a project are usually difficult to compensate for or correct and often entail substantial additional expenses.

We endeavor to identify these risks at an even earlier stage and to take appropriate measures to eliminate or minimize them before they occur by constantly optimizing the project control process across all project phases and by using a lessons learned process and regular project reviews. We can thus further reduce risk, particularly during the bidding and planning phase for large upcoming projects.

#### Risks arising from changes in demand

As a result of the diesel issue, the Volkswagen Group may experience decreases in demand, possibly exacerbated by media reports. When dealing with the issue, our highest priority is to provide customers with solutions, both from a technical perspective and in financial matters. In addition, we are pressing ahead with the systematic clarification of the misconduct in the Company.

Consumer demand is shaped not only by real factors such as disposable income, but also by psychological factors that cannot be planned for. Unexpected buyer reluctance, possibly further exacerbated by press reports, could stem from households' worries about the future economic situation, for example. This is particularly the case in saturated automotive markets such as Western Europe, where demand could drop as a result of owners holding on to their vehicles for longer. In the reporting period, it became evident that the effects of the eurozone debt crisis have not yet been overcome. Some automotive markets, particularly in Southern Europe, were able to further recover from their record lows, however, and exhibited positive growth rates. We are countering this buyer reluctance with our attractive range of models and systematic customer orientation.

A combination of buyer reluctance as a result of the crisis and increases in some vehicle taxes based on CO<sub>2</sub> emissions – as is already the case in some European countries – is driving a shift in demand towards smaller segments and engines in individual markets. We counter the risk that such a shift will negatively impact the Volkswagen Group's earnings by constantly developing new, fuel-efficient vehicles and alternative drive technologies, based on our drivetrain and fuel strategy.

Automotive markets around the world are exposed to risks from government intervention such as tax increases, which curb private consumption or from protectionist tendencies.

Commercial vehicles are capital goods: even minor changes in growth rates or growth forecasts can significantly affect transport requirements and thus demand. The production fluctuations arising as a result require a high degree of flexibility from manufacturers. Although production volumes are significantly lower, the complexity of the trucks and buses range in fact significantly exceeds the already very high complexity of the passenger cars' range. The priorities for commercial vehicle customers are total cost of ownership, vehicle reliability and the service provided.

MAN Power Engineering's two-stroke engines are produced exclusively by licensees, particularly in South Korea,

China and Japan. Due to volatile demand in new ship construction and heavy investment by some licensees, there is excess capacity in the market for marine engines, resulting in risks ranging from a decline in license revenues through to bad debt losses. There is also a risk that market share will be lost as a result of Chinese state-owned licensees merging with competitors. We address these risks by constantly monitoring the markets and working closely together with all licensees. This also includes receivables management in order to safeguard our license revenues.

#### Dependence on fleet customer business

The fleet customer business is generally more stable than the business with retail customers. The clarification of the CO<sub>2</sub> issue and implementation of technical solutions for the diesel issue helped to ensure that there were no significant declines in volumes for the Volkswagen Group's fleet customer business in 2016. Only the Volkswagen Passenger Cars brand in Europe saw slight losses. The shrinking market in Brazil led to a fall in volume in that country.

The fleet customer business continues to be characterized by increasing concentration and internationalization. The Volkswagen Group is well positioned with its broad portfolio of products and drive systems, as well as its target-group-focused customer care. There is no concentration of default risks at individual fleet customers or markets.

#### Quality risk

Right from the product development stage, we aim to identify and rectify quality problems at the earliest possible point, so as to avoid delays to the start of production. As we are using an increasing number of modular components as part of our modular toolkit strategy, it is very important when defects do occur to identify the cause and eliminate the defect as quickly as possible. We further optimized the processes with which we can prevent these defects at our brands and improved our organizational processes during the reporting period so that we are able to counter the associated risks more effectively.

Increasing technical complexity and the use of the toolkit system in the Group mean that the need for high-grade supplier components of impeccable quality is rising. To ensure the continuity of production, it is also extremely important that our own plants and our suppliers deliver components on time. We ensure long-term quality and supply capability from the very start of the supply chain using a risk management system that we first tested internally and then introduced among suppliers. In this way, Quality Assurance helps to

fulfill customer expectations and consequently to boost our Company's reputation, sales figures and earnings.

Assuring quality is of fundamental importance especially in the Brazilian, Russian, Indian and Chinese markets, for which we develop dedicated vehicles and where local manufacturers and suppliers have been established, particularly as it may be very difficult to estimate regulatory or official decisions. We continuously analyze the conditions specific to each market and adapt quality requirements to them. We counter the local risks we identify by continuously developing measures and implementing them locally, thereby effectively preventing quality defects from arising.

Vehicle registration and operation criteria are defined and monitored by national and, in some cases, international authorities. Some countries also have special – and in some cases new – rules aimed at protecting customers in their dealings with vehicle manufacturers. With our established and revised quality assurance processes, we ensure that the Volkswagen Group brands and their products fulfill all applicable requirements and that local authorities receive timely notification of all issues requiring reporting. By doing so, we reduce the risk of customer complaints and other negative consequences.

#### Personnel Risk

We counter economic risks as well as changes in the market and competitive situation with a range of instruments that help the Group to remain flexible, even with fluctuating order intake – whether orders decline or demand for our products increases. These include time accounts which are filled when overtime is necessary and reduced through time off in quiet periods, enabling our factories to adjust their capacity to the production volume and to “breathe” with measures such as extra shifts, closure days and flexible shift models. The use of temporary workers also allows us to plan more flexibly. All of these measures help the Volkswagen Group to generally maintain a stable permanent workforce even when orders fluctuate.

The technical expertise and individual commitment of employees are essential prerequisites for the success of the Volkswagen Group. Our strategic, end-to-end human resources development strategy gives all employees attractive training and development opportunities, with particular emphasis being placed on increasing technical expertise in the Company's different vocational groups. By boosting our training programs, particularly at our international locations,

we are able to adequately address the challenges of technological change.

We are continuously expanding our recruitment tools. Our systematic talent relationship management, for example, enables us to make contact with talented candidates from strategically relevant target groups at an early stage and to build a long-term relationship between them and the Group.

In addition to the standard dual vocational training, programs such as our StIP integrated degree and traineeship scheme ensure a pipeline of highly qualified and motivated employees. We counter the risk that knowledge will be lost as a result of employee fluctuation and retirement with intensive, department-specific training. We have also established a base of senior experts in the Group. With this additional measure, we use the valuable knowledge of our experienced specialists who have retired from Volkswagen. Organizing efficient knowledge hubs – for example the academies dedicated to the various vocational groups under the umbrella of the Volkswagen Group Academy – is becoming increasingly important, particularly where retiring staff are not directly replaced by young specialists. Volkswagen is working on knowledge relays to ensure experience is passed on even when the chain of succession is broken.

#### IT Risk

At Volkswagen, a global company geared towards further growth, the information technology (IT) used in all divisions Group-wide is assuming an increasingly important role. IT risks include unauthorized access to and extraction of sensitive electronic corporate data as well as limited systems availability as a consequence of downtime or disasters.

We address the risk of unauthorized access to or extraction of corporate data with IT security technologies (e.g. fire-wall and intrusion prevention systems) and a dual authentication procedure. We achieve additional protection by restricting the allocation of access rights to systems and information and by keeping backup copies of critical data resources. We use technical resources that have been tried and tested in the market, adhering to standards applicable throughout the Company. Redundant IT infrastructures protect us against risks that occur in the event of a systems failure or natural or other disaster.

One of our focuses is on continuously enhancing our security measures. The current IT security program, for example, is built on structured rights management, optimization of IT infrastructure, application security and the IT

security command center. The role of the latter is to detect cyber-attacks at an early stage and help to successfully defeat them using the latest hardware and software. The command center is staffed around the clock in three regions (Europe, America, Asia). Volkswagen complements these technical measures with consistent awareness raising and training for all employees.

Volkswagen AG, Allianz SE, BASF SE and Bayer AG jointly founded the German cybersecurity organization (Deutsche Cyber-Sicherheitsorganisation GmbH – DCSO) in 2015. The company aims to serve as a competence center, accumulate specialist knowledge on cybersecurity and become the preferred service provider in this field to German business. DCSO conducts security audits and certifies key suppliers and technologies in order to help German businesses detect and defend against cyber-attacks and to predict them in future. It is hoped that close exchange of information with the Federal Ministry of the Interior and the Federal Office for Information Security will aid the compilation of an anonymized status report on national cybersecurity. Small and medium-sized enterprises – including many of our suppliers – can obtain security services offered by DCSO, which they would otherwise be unable to afford. Volkswagen also benefits from this, as it makes our supply chain more secure.

The high standards we set for the quality of our products also apply to the way in which we handle our customers' data. Our guiding principles are data security and transparency as well as informational self-determination.

#### Environmental protection regulations

The specific emission limits for all new passenger car and light commercial vehicle fleets for brands and groups in the EU for the period up to 2019 are set out in Regulation (EC) No 443/2009 on CO<sub>2</sub> emissions from passenger cars and Regulation (EU) No 510/2011 on light commercial vehicles of up to 3.5 tonnes, which came into effect in April 2009 and June 2011 respectively. These regulations are an important component of European climate protection legislation and therefore form the key regulatory framework for product design and marketing by all vehicle manufacturers operating in the European market.

The average CO<sub>2</sub> emissions of manufacturers' new European passenger car fleets have not been allowed to exceed 130 g CO<sub>2</sub>/km since 2012. Compliance with this requirement was introduced in phases; from 2015 the entire fleet had to meet this limit. Regulation (EC) No 333/2014, which was adopted in 2014, states that the average emissions of European passenger car fleets may be no higher than just 95 g CO<sub>2</sub>/km from 2021 onwards; in 2020, this emissions limit will already apply to 95% of the fleet.

The EU's CO<sub>2</sub> regulation for light commercial vehicles requires limits to be met from 2014 onwards, with targets being phased in over the period to 2017. Under this regulation, the average CO<sub>2</sub> emissions of new vehicle registrations in Europe may not exceed 175 g CO<sub>2</sub>/km, a target required to be met by 75% of the fleet in 2015 and 80% of the fleet in 2016. From 2020 onwards, the limit under EU Regulation No 253/2014, which was adopted in 2014, is 147 g CO<sub>2</sub>/km.

The European Commission intends to publish a regulatory proposal for the CO<sub>2</sub> regime after 2020 in the second half of 2017. Policymakers are already discussing reduction targets for the transport sector for the period to 2050, such as the 60% reduction in greenhouse gas emissions from 1990 levels cited in the EU White Paper on transport published in March 2011. It will only be possible to meet these long-term goals by making additional, extensive use of nonfossil sources of energy, in particular in the form of renewable electricity.

At the same time, regulations governing fleet fuel consumption are also being developed or introduced outside the EU28, for example in India, Japan, Canada, Mexico, Saudi Arabia, Switzerland, South Korea and Taiwan. Brazil has introduced a fleet efficiency target as part of a voluntary program for granting a tax advantage. To achieve a 30% tax advantage in this country, vehicle manufacturers are required to achieve, among other things, average fleet efficiency of around 1.82 megajoules/km by 2017. The fuel consumption regulations in China, which set a fleet target of 6.9 liters/100 km for the period 2012–2015 (Phase III), were continued into Phase IV for the period 2016–2020, with a target of 5.0 liters/100 km at the end of this period. Preparations for legislation up to 2025 (Phase V) have begun. Due to the extension of greenhouse gas legislation in the USA, uniform fuel consumption and greenhouse gas standards will continue to apply in all federal states in the period from 2017 to 2025. The law was signed by the US president in mid-2012.

The increased regulation of fleet-based CO<sub>2</sub> emissions and fuel consumption makes it necessary to use the latest mobility technologies in all key markets worldwide. Electrified and pure-play electric drives will also become increasingly common. The Volkswagen Group closely coordinates technology and product planning with its brands so as to avoid breaches of fleet fuel consumption limits, since these would entail severe sanctions. Volkswagen continues to regard diesel technology as an important element in the fulfillment of CO<sub>2</sub> emissions targets.



EU legislation permits some flexibility in fulfilling the emissions targets, for example:

- > Excess emissions and emission shortfalls may be offset between vehicle models within a fleet of new vehicles
- > Emission pools may be formed
- > Relief may be provided in the form of credits that are granted for additional innovative technologies contained in the vehicle and that apply outside the test cycle (eco-innovations)
- > Special rules are in place for small series producers and niche manufacturers
- > Particularly efficient vehicles qualify for super-credits.

Whether the Group meets its fleet targets, however, depends crucially on its technological and financial capabilities, which are reflected, among other things, in our drivetrain and fuel strategy (see page 144).

In the EU, a new test procedure for determining pollutant and CO<sub>2</sub> emissions as well as fuel consumption in passenger cars and light commercial vehicles known as the Worldwide Harmonized Light-Duty Vehicles Test Procedure (WLTP) will be applied to new vehicle types from fall 2017 and to all new vehicles from fall 2018.

A further important European regulation pertains to Real Driving Emissions (RDE) for passenger cars and light commercial vehicles. The packages of legislation are currently being elaborated; uniform limits for nitrogen oxide and particulate emissions will then apply across the EU from September 2017. These limits must be complied with in real road traffic, making the RDE test procedure fundamentally different from the Euro 6 standard still in force, which stipulates that the limits are compulsory on the test bed. The RDE regulation is intended primarily to improve air quality in urban areas and areas close to traffic. It will lead to stricter requirements for exhaust gas aftertreatment in passenger cars and light commercial vehicles.

The other main EU regulations affecting the automotive industry include:

- > EU Directive 2007/46/EC establishing a framework for the approval of motor vehicles
- > EU Directive 2009/33/EC on the promotion of clean and energy-efficient road transport vehicles (Green Procurement Directive)
- > EU Directive 2006/40/EC relating to emissions from air-conditioning systems in motor vehicles
- > The Car Labeling Directive 1999/94/EC
- > The Fuel Quality Directive (FQD) 2009/30/EC updating the fuel quality specifications and introducing energy efficiency specifications for fuel production
- > The Renewable Energy Directive (RED) 2009/28/EC introducing sustainability criteria

- > The revised Energy Taxation Directive 2003/96/EC updating the minimum tax rates for all energy products and power.

The implementation of the above-mentioned directives by the EU member states serves to support the CO<sub>2</sub> regulations in Europe. These are aimed not only at vehicle manufacturers, but also at other sectors such as the mineral oil industry. Vehicle taxes based on CO<sub>2</sub> emissions are having a similar steering effect; many EU member states have already incorporated CO<sub>2</sub> elements into their rules on vehicle taxation.

Heavy commercial vehicles first put into operation from 2014 onwards are already subject to the stricter emission requirements of the Euro 6 standard in accordance with Regulation (EU) No 582/2011. At the same time as the CO<sub>2</sub> legislation for passenger cars and light commercial vehicles, the EU is also preparing more comprehensive regulation of CO<sub>2</sub> emissions in heavy commercial vehicles. Simply setting an overarching limit for these vehicles – such as that in place for passenger cars and light commercial vehicles – would require an extremely complex set of rules because of the wide range of variants. For this reason, the European Commission is working with independent scientific institutions and the European Automobile Manufacturers' Association (ACEA), to prepare a simulation-based method called the Vehicle Energy Consumption Calculation Tool (VECTO). This can be used to determine the CO<sub>2</sub> emissions of heavy commercial vehicles of over 7.5 tonnes based on their typical use (short-haul, regional, distribution and long-haul trips, service on construction sites and as municipal vehicles, city buses, intercity buses and coaches). A legislative proposal for the CO<sub>2</sub> certification of heavy commercial vehicles and regulations on the reporting and monitoring of CO<sub>2</sub> figures are expected in the first half of 2017. A compulsory CO<sub>2</sub> declaration is expected for selected vehicle categories, probably from 2018 (initially long-haul and regional distribution vehicles, later also buses and other segments), with the captured data initially being used to enable the customer to compare information, and for certification and monitoring purposes. Further vehicle categories are likely to be included as time progresses. As part of its strategy to decarbonize transport, the European Commission has also announced that it will be presenting a proposal regarding the introduction of CO<sub>2</sub> standards for heavy commercial vehicles by the end of 2019. A public consultation that constitutes the basis for further regulatory measures ended in the fall of 2016. The European Commission placed particular emphasis on the role of the public sector in procuring low-emission or zero-emission vehicles, for example city buses.

Manufacturers of heavy commercial vehicles are urging the adoption of a system for quantifying CO<sub>2</sub> figures that

looks at the vehicle as a whole and not simply at the engine or the tractor, and thus also includes the trailers and bodywork. This transparency should increase competition for more fuel-efficient and thus more CO<sub>2</sub>-efficient commercial vehicles and as a result decrease CO<sub>2</sub> emissions.

As part of its efforts to reduce the CO<sub>2</sub> emissions of heavy commercial vehicles, the European Commission has also adjusted the provisions regarding the maximum permissible dimensions and weights of trucks (Directive 1996/53/EC, the Weights and Dimensions Directive) and revised them through EU Directive 2015/719. According to these, cabs with a rounded shape and air conduction devices at the rear of the vehicle will make it possible to improve aerodynamics in future. At the same time, the driver's field of vision is to be extended by increasing the length of the cab in order to improve safety. In addition, the legislators increased the overall weight permitted for vehicles with alternative drive technologies by up to one tonne. The specific technical requirements for the development of aerodynamic and safe cabs are currently being examined.

The European commercial vehicles industry supports the goals of reducing CO<sub>2</sub> emissions and improving transport safety. However, it is not just the vehicles themselves that affect future CO<sub>2</sub> emissions; individual components also play an important role, such as reduced rolling resistance tires and the aerodynamic trim of the trailer, and so do driving behavior, alternative fuels, transport infrastructure and transport conditions. As part of a field trial that took place up to the end of 2016, longer and heavier vehicles that can decrease fuel consumption and thus CO<sub>2</sub> emissions by up to 25% according to scientific studies by the Federal Highway Research Institute, were also driving on German roads. Since the beginning of 2017, these longer vehicles have been used in regular operations in a certified road network. Digitalizing the transport system will also eliminate existing inefficiencies such as inadequate utilization of available load capacities, empty trips or unnetworked route planning: vehicles that move in networked, intermodal transport systems in which flows of traffic are optimized through the use of artificial intelligence save fuel and hence reduce CO<sub>2</sub> emissions.

In the Power Engineering segment, the International Maritime Organization (IMO) has introduced the International Convention for the Prevention of Pollution from Ships (MARine POLLution – MARPOL), with which limits on emissions from marine engines will be lowered in phases. A significant reduction of the sulfur content in marine fuel has been confirmed with effect from January 1, 2020. In addition, the IMO has decided on a number of emission control areas in Europe and in the United States/Canada that will be subject to special environmental regulations. Expansion to other regions such as the Mediterranean or Japan is already being

planned; further regions such as the Black Sea, Alaska, Australia or South Korea are also in discussion. In addition, emission limits also apply, for example, under EU Directive 1997/68/EC and in accordance with the regulations of the US Environmental Protection Agency (EPA). As regards stationary equipment, there are a number of national rules in place worldwide that limit permitted emissions. On December 18, 2008, the World Bank Group set limits for gas and diesel engines in its “Environmental, Health, and Safety Guidelines for Thermal Power Plants”, which are required to be applied if individual countries have adopted no national requirements of their own, or ones that are less strict than those of the World Bank Group. In addition, the United Nations adopted the Convention on Long-range Transboundary Air Pollution back in 1979, setting limits on total emissions as well as nitrogen oxide for the signatory states (including all EU states, other countries in Eastern Europe, the USA and Canada). Enhancements to the product portfolio in the Power Engineering segment focus on improving the efficiency of the equipment and systems.

The allocation method for emissions certificates changed fundamentally when the third emissions trading period (2013–2020) began. As a general rule, all emission allowances for power generators have been sold at auction since 2013. For the manufacturing industry and certain power generation installations (e.g. combined heat and power installations), a portion of the certificates are allocated free of charge on the basis of benchmarks applicable throughout the EU. The portion of certificates allocated free of charge will gradually decrease as the trading period progresses: the remaining quantities required will have to be bought, and thus paid for, at auction. Furthermore, installation operators can partly fulfill their obligation to hold emission allowances using certificates from climate change projects (Joint Implementation and Clean Development Mechanism projects).

In certain (sub-)sectors of industry, there is a risk that production will be transferred to countries outside Europe due to the amended provisions governing emissions trading, a phenomenon referred to as “carbon leakage”. A consistent quantity of certificates will be allocated to these sectors free of charge for the period from 2013 to 2020 on the basis of the pan-EU benchmarks. The automotive industry was included in the new carbon leakage list that came into effect in 2015. As a result, individual plants at European locations of the Volkswagen Group will receive additional certificates free of charge by the end of the third trading period.

Back in 2013, the European Commission decided to initially withhold a portion of the certificates to be auctioned and not to release them for auction until a later date during the third trading period (backloading). This temporary scarcity of certificates, which could lead to a price increase, will be directed into a market stability reserve, to be estab-



lished in 2018. The reserve will serve to correct any imbalance between the supply of and demand for certificates in emissions trading in the fourth trading period.

In addition to the EU member states, other countries in which the Volkswagen Group has production sites are also considering introducing an emissions trading system. Seven pilot projects are running in China, for example, although they have not so far affected the Volkswagen Group. The Chinese government is planning a national emissions trading system that it says will enter into force as early as 2017. Experts consider this to be unrealistic, however. So far, no detailed information is available on the form the trading system will take.

#### Litigation

In the course of their operating activities, Volkswagen AG and the companies in which it is directly or indirectly invested become involved in a great number of legal disputes and official proceedings in Germany and internationally. In particular, such legal disputes and other proceedings may occur in relation to suppliers, dealers, customers, employees, or investors. For the companies involved, these may result in payment or other obligations. Above all in cases in particular where US customers assert claims for vehicle defects individually or by way of a class action, highly cost-intensive measures may have to be taken and substantial compensation or punitive damages paid. Corresponding risks also result from US patent infringement proceedings.

Risks may also emerge in connection with the adherence to regulatory requirements. This particularly applies in the case of regulatory vagueness that may be interpreted differently by Volkswagen and the agencies responsible for the respective regulations. In addition, legal risks can arise from the criminal activities of individual persons, which even the best compliance management system can never completely prevent.

Where transparent and economically viable, adequate insurance coverage is taken out for these risks. For the identifiable and measurable risks, provisions considered appropriate are recognized and information about contingent liabilities is disclosed. As some risks cannot be assessed or can only be assessed to a limited extent, the possibility of loss or damage not being covered by the insured amounts and provisions cannot be ruled out. This particularly applies to legal risk assessment regarding the diesel issue.

#### Diesel Issue

On September 18, 2015, the US Environmental Protection Agency (EPA) publicly announced in a "Notice of Violation" that irregularities in relation to nitrogen oxide (NO<sub>x</sub>) emissions had been discovered in emissions tests on certain vehicles with Volkswagen Group diesel engines. It has been alleged that we had used undisclosed engine management software installed in certain four-cylinder diesel engines used in certain 2009 to 2015 model year vehicles to circumvent NO<sub>x</sub> emissions testing regulations in the United States of America in order to comply with certification requirements. The US environmental authority of California – the California Air Resources Board (CARB) – announced its own enforcement investigation in this context.

Volkswagen admitted to irregularities in this context. In its ad hoc release dated September 22, 2015, the Volkswagen Group announced that noticeable discrepancies between the figures achieved in testing and in actual road use had been identified in around eleven million vehicles worldwide with certain diesel engines. The vast majority of these engines are Type EA 189 Euro 5 engines. On November 2, 2015, the EPA issued another "Notice of Violation" alleging that irregularities had also been discovered in the software installed in vehicles with type V6 TDI 3.0 l diesel engines. CARB also issued a letter announcing its own enforcement investigation in this context. Audi has confirmed that at least three auxiliary emission control devices were inadequately disclosed in the course of the US approval documentation. Around 113 thousand vehicles from the 2009 to 2016 model years with certain six-cylinder diesel engines are affected in the USA and Canada, where regulations governing NO<sub>x</sub> emissions limits for vehicles are stricter than those in other parts of the world.

On January 4, 2016, the US Department of Justice (DOJ), on behalf of the EPA, filed a civil complaint against Volkswagen AG, AUDI AG and other companies of the Volkswagen Group. The claims asserted under civil law are founded on the alleged use of illegal (defeat device) software in violation of the American Clean Air Act. The complaint's allegations relate to both the four-cylinder and the six-cylinder diesel engines. On January 12, 2016, it was announced that CARB intends to seek civil fines for alleged violations of the California Health & Safety Code and various CARB regulations.

In addition to internal inquiries, Volkswagen AG commissioned an external investigation by US law firm Jones Day.

This is an independent and comprehensive investigation addressing the diesel issue. The Supervisory Board of Volkswagen AG is ensuring that Jones Day can carry out its clarification work independently. Jones Day is updating the Company and the DOJ on the current results of its investigation on an ongoing basis and supports Volkswagen AG in its cooperation with the judicial authorities.

The Supervisory Board of Volkswagen AG has formed a special committee to coordinate all activities in this context for the Supervisory Board.

Based on decisions dated October 15, 2015, the Kraftfahrt-bundesamt (KBA – German Federal Motor Transport Authority) ordered the Volkswagen Passenger Cars, Volkswagen Commercial Vehicles and SEAT brands to recall all of the diesel vehicles that had been issued with vehicle type approval by the KBA from among the eleven million vehicles affected. The recall concerns the member states of the European Union (EU28). On December 10, 2015 a similar decision was issued regarding Audi vehicles with the EA 189 engine. The timetable and action plan forming the basis for the recall order correspond to the proposals presented in advance by Volkswagen. Depending on the technical complexity of the remedial actions, this means that the Volkswagen Group has been recalling the affected vehicles, of which there are around 8.5 million in total in the EU28 countries, to the service workshops since January 2016. The remedial actions differ in scope depending on the engine variant. The technical solutions cover software and in some cases hardware modifications, depending on the series and model year. The details of the remedial actions for the Volkswagen Group vehicles falling within its jurisdiction have been agreed in close cooperation with the KBA, which had to approve all fixes in advance. Only the approval of the technical solutions for 14 thousand vehicles is still outstanding.

In fiscal year 2016, the SEAT brand received approvals in principle from its respective type approval authority, the Ministry of Industry in Spain.

The type approval authority for the ŠKODA brand is the Vehicle Certification Agency in the United Kingdom. The approval process for ŠKODA vehicles is still ongoing.

In some countries outside the EU – among others Switzerland, Australia, South Korea, Taiwan and Turkey – national type approval is based on prior recognition of the EC/ECE type approval. We are also in close contact with the authorities in these countries in order to finalize the approval process. In addition, there is an intensive exchange of information with the authorities in the USA and Canada, where Volkswagen's planned actions in relation to the four-cylinder and the six-cylinder diesel engines will also have to be approved. Due to considerably stricter NO<sub>x</sub> limits in the

USA and Canada, it is a greater technical challenge to refit the vehicles so that all applicable emissions limits can be met.

Potential consequences for Volkswagen's results of operations, financial position and net assets could emerge primarily in the following legal areas:

1. Criminal and administrative proceedings worldwide (excluding the USA/Canada)

In addition to the described approval processes with the responsible registration authorities, in some countries criminal investigations/misdemeanor proceedings (for example, by the public prosecutor's office in Braunschweig, Germany) and/or administrative proceedings (for example, by the Bundesanstalt für Finanzdienstleistungsaufsicht BaFin – the German Federal Financial Supervisory Authority) have been opened. The public prosecutor's office in Braunschweig is investigating the core issue of the criminal investigations. Whether this will result in fines for the Company, and if so what their amount might be, is currently subject to estimation risks. According to Volkswagen's estimates so far, the likelihood for the majority of these proceedings to be successful is less than 50%. Contingent liabilities have therefore been disclosed in cases where they can be assessed and for which the likelihood for the imposition of fines was deemed not lower than 10%.

2. Product-related lawsuits worldwide (excluding the USA/Canada)

In principle, it is possible that customers in the affected markets will file civil lawsuits against Volkswagen AG and other Volkswagen Group companies. In addition, it is possible that importers and dealers could assert claims against Volkswagen AG and other Volkswagen Group companies, e.g. through recourse claims. As well as individual lawsuits, class action lawsuits are possible in various jurisdictions (albeit not in Germany).

In this context, various lawsuits are pending against Volkswagen AG and other Volkswagen Group companies at present.

Class action proceedings against Volkswagen AG and other Volkswagen Group companies are pending in various countries such as Argentina, Australia, Belgium, Brazil, Israel, Italy, United Kingdom, Mexico, Poland, Portugal and Taiwan. The class action proceedings are lawsuits aimed among other things at asserting damages. The amount of these damages cannot yet be quantified due to the early stage of the proceedings. Volkswagen does not estimate the litigants' prospect of success to be more than 50% in any of the aforementioned proceedings aimed at monetary relief. In South Korea various mass proceedings are pending (in some of

these individual lawsuits several hundred litigants have been aggregated). These lawsuits are filed to assert damages and to rescind the purchase contract including repayment of the purchase price. Due to special circumstances in the market and specific characteristics of the South Korean legal system, Volkswagen estimates the litigants' prospects of success in the South Korean mass proceedings mentioned above to be inherently higher than in other jurisdictions outside the USA and Canada. Contingent liabilities have been disclosed for pending class action proceedings that can be assessed and for which the chance of success was deemed not implausible. Provisions were recognized to a small extent.

Furthermore, individual lawsuits and similar proceedings are pending against Volkswagen AG and other Volkswagen Group companies in numerous countries. In Germany around 1.300 individual law suits, in Italy and Spain law suits in the low three digit range and in France, Ireland and Austria individual lawsuits in the two-digit range are pending, most of which are aimed at asserting damages or rescinding the purchase contract. According to Volkswagen's estimates so far, the litigants' prospect of success is below 50% in the vast majority of the individual lawsuits. Contingent liabilities have therefore been disclosed for those lawsuits that can be assessed and for which the chance of success was deemed not implausible.

It is too early to estimate how many customers will take advantage of the option to file lawsuits in the future, beyond the existing lawsuits, or what their prospects of success will be.

Meanwhile, except for 14 thousand vehicles, the KBA has ascertained for all approved clusters (groups of vehicles) that implementation of the technical solutions would not bring about any unfavorable changes in fuel consumption, engine power, torque and noise emissions. We are now working expeditiously to implement the technical solutions in the field. The implementation of the technical modifications already started in January 2016.

### 3. Lawsuits filed by investors worldwide (excluding the USA/Canada)

Investors from Germany and abroad have filed claims for damages against Volkswagen AG based on purported losses due to alleged misconduct in capital market communications in connection with the diesel issue.

The vast majority of these investor lawsuits are currently pending at the District Court (Landgericht) in Braunschweig. On August 5, 2016, the District Court in Braunschweig ordered that common questions of law and fact relevant to the lawsuits pending at the District Court in Braunschweig be referred to the Higher Regional Court (Oberlandesgericht) in Braunschweig for a binding declaratory decision pursuant to the German Act on Model Case Proceedings in Disputes

Regarding Capital Market Information (Kapitalanleger-Musterverfahrensgesetz). In this proceeding, common questions of law and fact relevant to these actions shall be adjudicated in a consolidated manner by the Higher Regional Court in Braunschweig. All lawsuits at the District Court in Braunschweig will be stayed pending up until resolution of the common issues, unless they can be dismissed for reasons independent of the common issues that are adjudicated in the model case proceedings. The resolution of the common issues in the model case proceedings will be binding on all pending cases in the stayed lawsuits.

At the District Court in Stuttgart, further lawsuits have been filed against Volkswagen AG and Porsche Automobil Holding SE as joint and several debtors. It is currently unclear whether model case proceedings will be initiated in respect of these lawsuits and whether they will take place at the Higher Regional Court in Stuttgart or referred to the Higher Regional Court in Braunschweig.

Further investor lawsuits have been filed at various courts in Germany as well as in Austria and the Netherlands.

Altogether, Volkswagen has so far been served with investor lawsuits, judicial applications for dunning procedures and conciliation proceedings with claims amounting to approximately €9 billion. Volkswagen remains of the opinion that it duly complied with its capital market obligations. Therefore, no provisions have been recognized for these investor lawsuits. Insofar as the chance of success was estimated at not lower than 10%, contingent liabilities have been disclosed.

### 4. Proceedings in the USA/Canada

Following the publication of the EPA's "Notices of Violation," Volkswagen AG and other Volkswagen Group companies have been the subject of intense scrutiny, ongoing investigations (civil and criminal) and civil litigation. Volkswagen AG and other Volkswagen Group companies have received subpoenas and inquiries from state attorneys general and other governmental authorities and are responding to such investigations and inquiries.

In addition, Volkswagen AG and other Volkswagen Group companies in the USA/Canada are facing litigation on a number of different fronts relating to the matters described in the EPA's "Notices of Violation".

A large number of putative class action lawsuits by affected customers and dealers have been filed in US federal courts and consolidated for pretrial coordination purposes in the federal multidistrict litigation proceeding in the State of California.

On January 4, 2016, the DOJ, Civil Division, on behalf of the EPA, initiated a civil complaint against Volkswagen AG, AUDI AG and certain other Volkswagen Group companies.

The action seeks statutory penalties under the US Clean Air Act, as well as certain injunctive relief, and has been consolidated for pretrial coordination purposes in the California multidistrict litigation.

On January 12, 2016, CARB announced that it intends to seek civil fines for alleged violations of the California Health & Safety Code and various CARB regulations.

In June 2016, Volkswagen AG, Volkswagen Group of America, Inc. and certain affiliates reached settlement agreements with the DOJ on behalf of the EPA, CARB and the California Attorney General; private plaintiffs represented by a Plaintiffs' Steering Committee (PSC) in the multidistrict litigation pending in California and the U.S. Federal Trade Commission (FTC). These settlement agreements will resolve certain civil claims made in relation to affected diesel vehicles with 2.0 l TDI engines from the Volkswagen Passenger Cars and Audi brands in the USA. Volkswagen AG and certain affiliates also entered into a first partial consent decree with the DOJ, EPA, CARB and the California Attorney General, which was lodged with the court on June 28, 2016. On October 18, 2016, a fairness hearing on whether final approval should be granted was held, and on October 25, 2016, the court granted final approval of the settlement agreements and the partial consent order. A number of class members have filed appeals to an US appellate court from the order approving the settlements.

The settlements provide affected customers with the option of a buyback or, for leased vehicles, early lease termination, or a free emissions modification of the vehicles, provided that EPA and CARB approve the modification. Volkswagen will also make additional cash payments to affected current owners or lessees as well as certain former owners or lessees.

Volkswagen also agreed to support environmental programs. The company will pay USD 2.7 billion over three years into an environmental trust, managed by a trustee appointed by the court, to offset excess nitrogen oxide (NO<sub>x</sub>) emissions. Volkswagen will also invest a total of USD 2.0 billion over ten years in zero emissions vehicle infrastructure as well as corresponding access and awareness initiatives.

Volkswagen AG and certain affiliates also entered into a separate partial consent decree with CARB and the California

Attorney General resolving certain claims under California unfair competition, false advertising, and consumer protection laws related to both the 2.0-liter and 3.0-liter TDI vehicles, which was lodged with the court on July 7, 2016. Under the terms of the agreement, Volkswagen agreed to pay California USD 86 million. The court entered judgment on the partial consent decree on September 1, 2016 and the USD 86 million payment was made on September 28, 2016.

On December 20, 2016, Volkswagen entered into a second partial consent decree, subject to court approval, with the DOJ, EPA, CARB and the California Attorney General that resolved claims for injunctive relief under the Clean Air Act and California environmental, consumer protection and false advertising laws related to the 3.0-liter TDI vehicles. Under the terms of this consent decree, Volkswagen agreed to implement a buyback and lease termination program for Generation 1 3.0-liter TDI vehicles and a free emissions recall and modification program for Generation 2 3.0-liter TDI vehicles (if the modification program for Generation 2 vehicles is not approved by the EPA and CARB, Volkswagen will be required to offer a buyback and lease termination program for those vehicles); and pay USD 225 million into the environmental mitigation trust that will be established pursuant to the first partial consent decree. The second partial consent decree was lodged with the court on December 20, 2016 and is currently in its notice and comment period.

In addition, on December 20, 2016, Volkswagen entered into an additional, concurrent second partial consent decree, subject to court approval, with CARB and the California Attorney General that resolved claims for injunctive relief under California environmental, consumer protection and false advertising laws related to the 3.0-liter TDI vehicles. Under the terms of this consent decree, Volkswagen agreed to provide additional injunctive relief to California, including the implementation of a "Green City" initiative and the introduction of three new Battery Electric Vehicle (BEV) models in California by 2020, as well as a USD 25 million payment to CARB to support the availability of BEVs in California.

On January 11, 2017, Volkswagen entered into a third partial consent decree, subject to court approval, with the DOJ and EPA that resolved claims for civil penalties and injunctive relief under the Clean Air Act related to the 2.0-liter and 3.0-

liter TDI vehicles. Volkswagen agreed to pay USD 1.45 billion (plus any accrued interest) to resolve the civil penalty and injunctive relief claims under the Clean Air Act, as well as the customs claims of the US Customs and Border Protection. Under the third partial consent decree, the injunctive relief includes monitoring, auditing and compliance obligations. This consent decree, which is subject to public comment, was lodged with the court on January 11, 2017. Also on January 11, 2017, Volkswagen entered into a settlement agreement with the DOJ to resolve any claims under the Financial Institutions Reform, Recovery and Enforcement Act of 1989 and agreed to pay USD 50 million (plus any accrued interest), specifically denying any liability and expressly disputing any claims.

The DOJ also opened a criminal investigation focusing on allegations that various federal law criminal offenses were committed. On January 11, 2017, Volkswagen AG agreed to plead guilty to three federal criminal felony counts, and to pay a USD 2.8 billion criminal penalty. Pursuant to the terms of this agreement, Volkswagen will be on probation for three years and will work with an independent monitor for three years. The independent monitor will assess and oversee the company's compliance with the terms of the resolution. This includes overseeing the implementation of measures to further strengthen compliance, reporting and monitoring systems, and an enhanced ethics program. Volkswagen will also continue to cooperate with the DOJ's ongoing investigation of individual employees or former employees who may be responsible for criminal violations.

Moreover, investigations by various US regulatory and government authorities, including in areas relating to securities, financing and tax, are ongoing.

On January 31, 2017, Volkswagen AG, Volkswagen Group of America, Inc. and certain affiliates entered into a settlement agreement with private plaintiffs represented by the PSC in the multidistrict litigation pending in California, and a consent order with the FTC. These agreements will resolve certain civil claims made in relation to affected diesel vehicles with 3.0 l TDI engines from the Volkswagen, Audi and Porsche brands in the USA. On February 14, 2017, the court preliminarily approved the settlement agreement with private

plaintiffs and scheduled a fairness hearing on whether final approval should be granted for May 11, 2017. The agreement with the FTC will also be subject to court approval.

Under the settlements, consumers' options and compensation will depend on whether their vehicles are classified as Generation 1 or Generation 2. Generation 1 (model years 2009-2012) consumers will have the option of a buyback, early lease termination, trade-in, or a free emissions modification, provided that EPA and CARB approve the modification. Additionally, Generation 1 owners and lessees, as well as certain former owners and lessees, will be eligible to receive cash payments.

Generation 2 (model years 2013-2016) consumers will receive a free emissions compliant repair to bring the vehicles into compliance with the emissions standards to which they were originally certified – provided that EPA and CARB grant approval – as well as cash payments. If Volkswagen ultimately cannot obtain EPA and CARB approval for emissions compliant repairs within the time limits set out in the settlement agreement, Generation 2 consumers will be offered the options for buyback, lease termination, trade-in or – if approved by EPA and CARB – an emissions modification that reduces the amount of emissions but does not bring the vehicles into compliance with original certification standards, in addition to cash payments. Volkswagen will also make cash payments to certain former Generation 2 owners or lessees.

In September 2016, Volkswagen announced that it had finalized an agreement to resolve the claims of Volkswagen branded franchise dealers in the United States relating to TDI vehicles and other matters asserted concerning the value of the franchise. The settlement agreement includes a cash payment of up to USD 1.208 billion, and additional benefits to resolve alleged past, current, and future claims of losses in franchise value. On January 18, 2017, a fairness hearing on whether final approval should be granted was held, and on January 23, 2017, the court granted final approval of the settlement agreement. Certain members of the class may appeal to an US appellate court the decision to finally approve the settlement; the deadline to do so has not yet expired.

Additionally, in the USA, some putative class actions, some individual customers' lawsuits and some state or municipal claims have been filed in state courts.

Volkswagen reached separate agreements with the attorneys general of 44 US states, the District of Columbia and Puerto Rico, to resolve their existing or potential consumer protection and unfair trade practices claims – in connection with both 2.0 l TDI and 3.0 l TDI vehicles in the USA – for a settlement amount of USD 603 million. Six states did not join these settlements and still have consumer claims outstanding: Arizona, New Jersey, New Mexico, Oklahoma, Vermont and West Virginia. The attorneys general of 18 US states (Alabama, Illinois, Maine, Maryland, Massachusetts, Minnesota, Missouri, Montana, New Hampshire, New Jersey, New Mexico, New York, Ohio, Pennsylvania, Tennessee, Texas, Vermont and Wyoming) and some municipalities have also filed suits in state and federal courts – and the state of Washington has asserted a penalty claim through administrative proceedings – against Volkswagen AG, Volkswagen Group of America, Inc. and certain affiliates, seeking civil penalties and injunctive relief for alleged violations of environmental laws. Alabama, Illinois, Maine, Maryland, Massachusetts, Minnesota, Missouri, Montana, New Hampshire, New York, Ohio, Pennsylvania, Tennessee, Texas, Washington and Wyoming participated in the state settlements described above with respect to consumer protection and unfair trade practices claims, but those settlements did not include claims for environmental penalties. In addition, although it has not yet filed an action, Delaware has entered into an agreement to toll the statute of limitations for its environmental claims through the end of February 2017. Two other states – Oregon and Wisconsin – signed agreements tolling the statute of limitations for their environmental claims through the end of 2016, but they have not requested an extension or filed actions. Another state (Connecticut) has expressed its intention to participate in environmental settlement discussions without filing suit.

In addition to lawsuits described above, for which provisions have been recognized, a putative class action has been filed on behalf of purchasers of Volkswagen AG American Depositary Receipts, alleging a drop in price purportedly resulting from the matters described in the EPA's "Notices of Violation." A putative class action has also been filed on behalf of purchasers of certain USD-denominated Volkswagen bonds, alleging that these bonds were trading at artificially inflated prices due to Volkswagen's alleged mis-

statements and that the value of these bonds declined after the EPA issued its "Notices of Violation."

These lawsuits have also been consolidated in the federal multidistrict litigation proceeding in the State of California described above. Volkswagen is of the opinion that it duly complied with its capital market obligations. Therefore, no provisions have been recognized. In addition, contingent liabilities have not been disclosed as they currently cannot be measured.

In Canada, civil consumer claims and regulatory investigations have been initiated for vehicles with 2.0 l and 3.0 l engines. On December 19, 2016, Volkswagen AG and other Canadian and US Volkswagen Group companies reached a class action settlement in Canada with consumers relating to 2.0 l diesel vehicles. Also on December 19, 2016, Volkswagen Group Canada agreed with the Commissioner of Competition in Canada to a civil resolution of its regulatory inquiry into consumer protection issues as to those vehicles. Civil consumer claims and the Commissioner's investigation with respect to 3.0 l diesel vehicles remain pending. Also, criminal enforcement related investigations by the federal environmental regulator and quasi-criminal enforcement related investigations by a provincial environmental regulator are ongoing in Canada related to 2.0l and 3.0l diesel vehicles. Provisions have been recognized for possible obligations stemming from pending lawsuits in Canada.

##### 5. Risk assessment regarding the diesel issue

To protect against the currently known legal risks, including suitable expenses for defense and legal advice related to the diesel issue, existing information and assessments at the time indicated the need to recognize expenses in the reporting year to the amount of €5.1 billion (previous year: €7.0 billion). Prior-year provisions for legal risks in an amount of €0.4 billion had to be reversed through profit or loss. In addition, in relation to the diesel issue – insofar as these can be adequately measured at this stage – especially the contingent liabilities in conjunction with lawsuits filed by investors to the amount of €3.1 billion (previous year: €1.0 billion) were disclosed in the notes. The provisions recognized, the contingent liabilities disclosed and the other latent legal risks are partially subject to substantial estimation risks given the complexity of the individual factors, the ongoing approval process with the authorities and the fact that the independent and comprehensive investigations have not yet been completed.

#### Additional important legal cases

ARFB Anlegerschutz UG (haftungsbeschränkt), Berlin, brought an action against Porsche Automobil Holding SE, Stuttgart, Germany, and Volkswagen AG for claims for damages allegedly assigned to it in the amount of approximately €2.26 billion. The plaintiff asserts that these claims are based on alleged breaches by the defendants of legislation to protect the capital markets in connection with Porsche's acquisition of Volkswagen shares in 2008. With its April 2016 ruling, the district court of Hanover submitted numerous goals for discovery to the higher regional court in Celle in an attempt to prompt a model case decision. In all other cases, the claims were thrown out for being inadmissible. In various cases since 2010, investors initiated conciliation proceedings for other alleged damages – including claims against Volkswagen AG – that amounted to approximately €4.6 billion in total and also related to transactions at that time. In each case, Volkswagen rejected the claims asserted and refused to participate in any conciliation proceedings.

In 2011, the European Commission opened antitrust proceedings against European truck manufacturers concerning inappropriate exchange of information during the period 1997–2011 and sent a statement of objections to MAN, Scania and the other truck manufacturers concerned in November 2014. With its settlement decision as of July 19, 2016 the European Commission has fined five European truck manufacturers excluding MAN and Scania. MAN was not fined as the company had informed the EU Commission about the cartel as a key witness. With regard to Scania, the antitrust proceedings will be continued. Scania has decided to fully exercise its rights of defense in the ongoing investigation. A provision of €0.4 billion was recognized in order to cover possible fines. Furthermore, antitrust lawsuits for damages from customers were received. As is the case in any antitrust proceedings, this may result in further lawsuits for damages.

The Annual General Meeting of MAN SE approved the conclusion of a control and profit and loss transfer agreement between MAN SE and Volkswagen Truck & Bus GmbH (formerly Truck & Bus GmbH), a subsidiary of Volkswagen AG, in June 2013. In July 2013, award proceedings were instituted to review the appropriateness of the cash settlement set out in the agreement in accordance with section 305 of the Aktiengesetz (AktG – German Stock Corporation Act) and the cash compensation in accordance with section 304 of the AktG. It is not uncommon for noncontrolling interest shareholders to institute such proceedings. In July 2015, the Munich Regional Court ruled in the first instance that the amount of the cash settlement payable to the noncontrolling interest shareholders of MAN should be increased from €80.89 to €90.29 per share; at the same time, the amount of the cash compensation was confirmed. The assessment of

liability for put options and compensation rights granted to noncontrolling interest shareholders was adjusted in 2015. Both applicants and Volkswagen Truck & Bus GmbH have appealed to the Higher Regional Court in Munich. Volkswagen continues to maintain that the results of the valuation are correct. The appropriateness of the valuation was confirmed by the audit firms engaged by the parties and by the court-appointed auditor of the agreement.

Since November 2016, Volkswagen has been responding to information requests from the EPA and CARB related to automatic transmissions in certain vehicles.

Additionally, thirteen putative class actions have been filed against Audi and certain affiliates alleging that defendants concealed the existence of “defeat devices” in Audi brand vehicles with automatic transmissions. A number of these putative class actions have been transferred to the federal multidistrict litigation proceeding in the State of California.

In line with IAS 37.92, no further statements have been made concerning estimates of financial impact or about uncertainty regarding the amount or maturity of provisions and contingent liabilities, particularly in relation to the diesel issue and the European Commission's investigation. This is so as to not compromise the results of the proceedings or the interests of the Company.

#### Strategies for hedging financial risks

In the course of our business activities, financial risks may arise from changes in interest rates, exchange rates, raw materials prices, or share and fund prices. Management of financial and liquidity risks is the responsibility of the central Group Treasury department, which minimizes these risks using nonderivative and derivative financial instruments. The Board of Management is informed of the current risk situation at regular intervals.

We hedge interest rate risk – where appropriate in combination with currency risk – and risks arising from fluctuations in the value of financial instruments by means of interest rate swaps, cross-currency swaps and other interest rate contracts with generally matching amounts and maturities. This also applies to financing arrangements within the Volkswagen Group.

Foreign currency risk is reduced in particular through natural hedging, i.e. by flexibly adapting our production capacity at our locations around the world, establishing new production facilities in the most important currency regions and also procuring a large percentage of components locally. We hedge the residual foreign currency risk using hedging instruments. These include currency forwards, currency options and cross-currency swaps. We use these transactions to limit the currency risk associated with forecasted cash

flows from operating activities, intragroup financing and liquidity positions in currencies other than the respective functional currency, for example as a result of restrictions on capital movements. The currency forwards and currency options can have a term of up to six years. We thus hedge our principal foreign currency risks, mostly against the euro and primarily in Argentine pesos, Australian dollars, Brazilian real, sterling, Chinese renminbi, Hong Kong dollars, Indian rupees, Japanese yen, Canadian dollars, Mexican pesos, Norwegian kroner, Polish zloty, Russian rubles, Swedish kronor, Swiss francs, Singapore dollars, South African rand, South Korean won, Taiwan dollars, Czech koruna, Hungarian forints and US dollars.

Increased volatility in future cash flows is to be expected from the current uncertainties regarding the effects of the diesel issue on the Volkswagen Group. This could impact the hedging result.

Raw materials purchasing entails risks relating to the availability of raw materials and price trends. We limit these risks mainly by entering into forward transactions and swaps. We have used appropriate contracts to hedge some of our requirements for commodities such as aluminum, lead, coal, copper, platinum, palladium and rhodium over a period of up to seven years. Similar transactions have been entered into for the purpose of supplementing and improving allocations of CO<sub>2</sub> emission certificates.

Pages 291 to 299 of the notes to the consolidated financial statements explain our hedging policy, the hedging rules and the default and liquidity risks, and quantify the hedging transactions mentioned. Additionally, we disclose information on market risk within the meaning of IFRS 7.

#### Risks arising from financial instruments

Channeling excess liquidity into investments and entering into derivatives contracts gives rise to counterparty risk. Partial or complete failure by a counterparty to perform its obligation to pay interest and repay principal, for example, would have a negative impact on the Volkswagen Group's earnings and liquidity. We counter this risk through our counterparty risk management, which we describe in more detail in the section entitled "Principles and Goals of Financial Management" starting on page 122. In addition to counterparty risk, the financial instruments held for hedging purposes hedge balance sheet risks, which we limit by applying hedge accounting.

By diversifying when selecting business partners, we ensure that the impact of a default is limited and the Volkswagen Group remains solvent at all times, even in the event of a default by individual counterparties.

Risks arising from trade receivables and from financial services are explained in more detail in the notes to the consolidated financial statements, starting on page 291.

#### Liquidity risk

We ensure that the Company remains solvent at all times by holding liquidity reserves, through confirmed credit lines and through our money market and capital market programs. We cover the capital requirements of the financial services business mainly by raising funds at matching maturities in the national and international financial markets as well as through customer deposits from the direct banking business.

Projects are financed by, among other things, loans provided by development banks such as the European Investment Bank (EIB), the International Finance Corporation (IFC) and the European Bank for Reconstruction and Development (EBRD), or by national development banks such as Kreditanstalt für Wiederaufbau (KfW) and Banco Nacional de Desenvolvimento Econômico e Social (BNDES). Lines of credit from banks supplement our broadly diversified refinancing structure.

Our ability to use refinancing instruments may possibly be restricted or precluded due to the diesel issue. A downgrade of the Company's rating could also adversely affect the terms associated with the Volkswagen Group's borrowings.

Information on the ratings of Volkswagen AG, Volkswagen Financial Services AG and Volkswagen Bank GmbH can be found on page 117 of this report.

#### Residual value risk in the financial services business

In the financial services business, we agree to buy back selected vehicles at a residual value that is fixed at inception of the contract. Residual values are set at a realistic amount so that we are able to leverage market opportunities. We evaluate the underlying lease contracts at regular intervals and recognize any necessary provisions if we identify any potential risks.

Management of the residual value risk is based on a defined feedback loop ensuring the full assessment, monitoring, management and communication of risks. This



process design ensures not only professional management of residual risks but also that we systematically improve and enhance our handling of residual value risks.

As part of our risk management, we use residual value forecasts to regularly assess the appropriateness of the provisions for risks and the potential for residual value risk – also with a view to the emissions issue. In the process, we compare the contractually agreed residual values with the fair values obtainable. These are determined utilizing data from external service providers and our own marketing data. We do not take account of the upside in residual market values when making provisions for risks.

More information on residual value risk and other risks in the financial services business, such as counterparty, market and liquidity risk, can be found in the 2016 Annual Report of Volkswagen Financial Services AG.

#### Reputational risks

The reputation of the Volkswagen Group and its brands is one of the most important assets and forms the basis for long-term business success. Our policy on issues such as integrity, ethics and sustainability is in the public focus. One of the basic principles of running our business is therefore to pay particular attention to compliance with legal requirements and ethical principles. However, we are aware that misconduct or criminal acts of individuals and the resulting reputational damage can never be fully prevented. In addition, media reactions can have a negative effect on the reputation of the Volkswagen Group and its brands. This impact could be amplified through insufficient communication.

Moreover, the above-described individual risks that may arise in the course of our operating activities may turn into a threat to the Volkswagen Group's reputation.

#### Other factors

Going beyond the risks already outlined, there are other factors that cannot be predicted and whose repercussions are therefore difficult to control. Should these transpire, they could have an adverse effect on the further development of the Volkswagen Group. In particular, these factors include natural disasters, epidemics and terrorist attacks.

#### Overall assessment of the risk and opportunity position

The Volkswagen Group's overall risk and opportunity position results from the specific risks and opportunities shown above. We have put in place a comprehensive risk management system to ensure that these risks are controlled. The most significant risks to the Group may result from a negative trend in unit sales of, and markets for, vehicles and genuine parts, from the failure to develop and produce products in line with demand and from quality problems. Risks relating to the diesel issue still remain for the Volkswagen Group which, when aggregated, are among the most significant risks. Taking into account all the information known to us at present, no risks exist which could pose a threat to the continued existence of significant Group companies or the Volkswagen Group.

This annual report contains forward-looking statements on the business development of the Volkswagen Group. These statements are based on assumptions relating to the development of the economic and legal environment in individual countries and economic regions, and in particular for the automotive industry, which we have made on the basis of the information available to us and which we consider to be realistic at the time of going to press. The estimates given entail a degree of risk, and actual developments may differ from those forecast. Any changes in significant parameters relating to our key sales

markets, or any significant shifts in exchange rates relevant to the Volkswagen Group, will have a corresponding effect on the development of our business. In addition, there may be departures from our expected business development if the assessments of the factors influencing sustainable value enhancement, as well as risks and opportunities, presented in this annual report develop in a way other than we are currently expecting, or if additional risks and opportunities or other factors emerge that affect the development of our business.

# Prospects for 2017

The Volkswagen Group's Board of Management expects the global economy to record slightly higher growth in 2017 than in the previous year. We believe risks will arise from protectionist tendencies, turbulence in the financial markets and structural deficits in individual countries. In addition, growth prospects will continue to be hurt by geopolitical tensions and conflicts. We expect the economic upturn to continue in the large majority of industrialized nations, with stable rates of expansion overall. Most emerging markets will probably see faster growth than in the previous year. We expect the strongest rates of expansion in Asia's emerging economies.

We expect trends in the passenger car markets in the individual regions to be mixed in 2017. Overall, growth in global demand for new vehicles will probably be slower than in the reporting period. We anticipate that sales volume in Western Europe and the German passenger car market will be slightly lower than in the previous year. In the Central and Eastern European markets, demand for passenger cars should exceed the weak prior-year figure. We expect that the market volume for passenger cars and light commercial vehicles (up to 6.35 tonnes) in North America in 2017 will be a little lower than the prior-year figure. On the South American market for passenger cars and light commercial vehicles, overall demand is expected to rise slightly compared with the previous year. The passenger car markets in the Asia-Pacific region look set to continue their growth trajectory at a slightly weaker pace.

We expect trends in the markets for light commercial vehicles in the individual regions to be mixed again in 2017. Overall, we envisage a slight increase in demand.

In the markets for mid-sized and heavy trucks that are relevant for the Volkswagen Group, new registrations in 2017 are set to rise slightly above the prior-year level, while a moderate year-on-year increase is expected in new registrations of buses in the relevant markets.

We believe that automotive financial services will continue to be very important for vehicle sales worldwide in 2017.

The Volkswagen Group is well positioned to deal with the mixed developments in automotive markets around the world. Our broad, selectively expanded product range featuring the latest generation of engines as well as a variety of alternative drives puts us in a good position globally compared with our competitors. The Group's further strengths include in particular its unique brand portfolio, its steadily growing presence in all major world markets and its wide selection of financial services. Our range of models covers almost all key segments, with offerings from small cars to super sports cars in the passenger car segment, and from pickups to heavy trucks and buses in the commercial vehicles segment, as well as motorcycles. The Volkswagen Group brands will further optimize their vehicle and drivetrain portfolio in 2017 to concentrate on the most attractive and fastest-growing market segments.

Our goal is to offer all customers the mobility and innovations they need, sustainably strengthening our competitive position in the process.

We expect that deliveries to customers of the Volkswagen Group in 2017 will moderately exceed the prior-year volume amid persistently challenging market conditions.

Challenges will arise particularly from the economic situation, intense competition in the market, exchange rate volatility and the diesel issue.

We expect the sales revenues of the Volkswagen Group and of the Passenger Car Business Area and Commercial Vehicles Business Area to grow by up to 4% year-on-year in 2017. In terms of the Group's operating profit, we anticipate an operating return on sales of between 6.0% and 7.0% in 2017. In the Passenger Cars Business Area, we expect an operating return on sales in the range of 6.5 – 7.5%. For the Commercial Vehicles Business Area, we anticipate an operating return on sales of between 3.0 and 5.0%. In the Power Engineering Business Area, we expect a substantial year-on-year decline in sales revenue but also a lower operating loss. For the Financial Services Division, we are forecasting sales revenue and the operating profit at the prior-year level.

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# Consolidated Financial Statements

## **CONSOLIDATED FINANCIAL STATEMENTS**

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# Income Statement

of the Volkswagen Group for the period January 1 to December 31, 2016

€ million	Note	2016	2015
<b>Sales revenue</b>	<b>1</b>	<b>217,267</b>	<b>213,292</b>
Cost of sales	2	-176,270	-179,382
<b>Gross profit</b>		<b>40,997</b>	<b>33,911</b>
Distribution expenses	3	-22,700	-23,515
Administrative expenses	4	-7,336	-7,197
Other operating income	5	13,049	12,905
Other operating expenses	6	-16,907	-20,171
<b>Operating result</b>		<b>7,103</b>	<b>-4,069</b>
Share of profits and losses of equity-accounted investments	7	3,497	4,387
Finance costs	8	-3,247	-2,393
Other financial result	9	-61	773
<b>Financial result</b>		<b>189</b>	<b>2,767</b>
<b>Earnings before tax</b>		<b>7,292</b>	<b>-1,301</b>
Income tax income/expense	10	-1,912	-59
Current		-3,273	-2,859
Deferred		1,361	2,800
<b>Earnings after tax</b>		<b>5,379</b>	<b>-1,361</b>
of which attributable to			
Noncontrolling interests		10	10
Volkswagen AG hybrid capital investors		225	212
Volkswagen AG shareholders		5,144	-1,582
<b>Basic earnings per ordinary share in €</b>	<b>11</b>	<b>10.24</b>	<b>-3.20</b>
<b>Diluted earnings per ordinary share in €</b>	<b>11</b>	<b>10.24</b>	<b>-3.20</b>
<b>Basic earnings per preferred share in €</b>	<b>11</b>	<b>10.30</b>	<b>-3.09</b>
<b>Diluted earnings per preferred share in €</b>	<b>11</b>	<b>10.30</b>	<b>-3.09</b>

# Statement of Comprehensive Income

Changes in comprehensive income for the period January 1 to December 31, 2015

€ million	Total	Equity attributable to Volkswagen AG shareholders	Equity attributable to Volkswagen AG hybrid capital investors	Equity attributable to noncontrolling interests
<b>Earnings after tax</b>	<b>-1,361</b>	<b>-1,582</b>	<b>212</b>	<b>10</b>
Pension plan remeasurements recognized in other comprehensive income				
Pension plan remeasurements recognized in other comprehensive income, before tax	2,568	2,567	-	1
Deferred taxes relating to pension plan remeasurements recognized in other comprehensive income	-838	-837	-	0
Pension plan remeasurements recognized in other comprehensive income, net of tax	1,730	1,729	-	1
Share of other comprehensive income of equity-accounted investments that will not be reclassified to profit or loss, net of tax	-7	-7	-	-
<b>Items that will not be reclassified to profit or loss</b>	<b>1,723</b>	<b>1,722</b>	<b>-</b>	<b>1</b>
Exchange differences on translating foreign operations				
Unrealized currency translation gains/losses	791	789	-	1
Transferred to profit or loss	0	0	-	-
Exchange differences on translating foreign operations, before tax	791	790	-	1
Deferred taxes relating to exchange differences on translating foreign operations	0	0	-	-
Exchange differences on translating foreign operations, net of tax	792	790	-	1
Cash flow hedges				
Fair value changes recognized in other comprehensive income	-7,082	-7,082	-	0
Transferred to profit or loss	3,957	3,957	-	0
Cash flow hedges, before tax	-3,125	-3,125	-	0
Deferred taxes relating to cash flow hedges	928	928	-	0
Cash flow hedges, net of tax	-2,197	-2,197	-	0
Available-for-sale financial assets				
Fair value changes recognized in other comprehensive income	468	468	-	-
Transferred to profit or loss	-1,796	-1,796	-	-
Available-for-sale financial assets, before tax	-1,328	-1,328	-	-
Deferred taxes relating to available-for-sale financial assets	49	49	-	-
Available-for-sale financial assets, net of tax	-1,278	-1,278	-	-
Share of other comprehensive income of equity-accounted investments that may be reclassified subsequently to profit or loss, net of tax	399	399	-	-
<b>Items that may be reclassified subsequently to profit or loss</b>	<b>-2,285</b>	<b>-2,286</b>	<b>-</b>	<b>1</b>
Other comprehensive income, before tax	-702	-704	-	3
Deferred taxes relating to other comprehensive income	140	140	-	0
<b>Other comprehensive income, net of tax</b>	<b>-562</b>	<b>-564</b>	<b>-</b>	<b>2</b>
<b>Total comprehensive income</b>	<b>-1,922</b>	<b>-2,146</b>	<b>212</b>	<b>12</b>

## Changes in comprehensive income for the period January 1 to December 31, 2016

€ million	Total	Equity attributable to Volkswagen AG shareholders	Equity attributable to Volkswagen AG hybrid capital investors	Equity attributable to noncontrolling interests
<b>Earnings after tax</b>	<b>5,379</b>	<b>5,144</b>	<b>225</b>	<b>10</b>
Pension plan remeasurements recognized in other comprehensive income				
Pension plan remeasurements recognized in other comprehensive income, before tax	-5,249	-5,248	-	-1
Deferred taxes relating to pension plan remeasurements recognized in other comprehensive income	1,591	1,591	-	1
Pension plan remeasurements recognized in other comprehensive income, net of tax	-3,658	-3,657	-	0
Share of other comprehensive income of equity-accounted investments that will not be reclassified to profit or loss, net of tax	-1	-1	-	-
<b>Items that will not be reclassified to profit or loss</b>	<b>-3,658</b>	<b>-3,658</b>	<b>-</b>	<b>0</b>
Exchange differences on translating foreign operations				
Unrealized currency translation gains/losses	-136	-135	-	-1
Transferred to profit or loss	3	3	-	-
Exchange differences on translating foreign operations, before tax	-133	-133	-	-1
Deferred taxes relating to exchange differences on translating foreign operations	3	3	-	-
Exchange differences on translating foreign operations, net of tax	-130	-129	-	-1
Cash flow hedges				
Fair value changes recognized in other comprehensive income	3,555	3,555	-	0
Transferred to profit or loss	1,322	1,322	-	0
Cash flow hedges, before tax	4,877	4,877	-	0
Deferred taxes relating to cash flow hedges	-1,422	-1,422	-	0
Cash flow hedges, net of tax	3,455	3,455	-	0
Available-for-sale financial assets				
Fair value changes recognized in other comprehensive income	155	155	-	-
Transferred to profit or loss	-135	-135	-	-
Available-for-sale financial assets, before tax	20	20	-	-
Deferred taxes relating to available-for-sale financial assets	-6	-6	-	-
Available-for-sale financial assets, net of tax	14	14	-	-
Share of other comprehensive income of equity-accounted investments that may be reclassified subsequently to profit or loss, net of tax	-130	-130	-	-
<b>Items that may be reclassified subsequently to profit or loss</b>	<b>3,209</b>	<b>3,210</b>	<b>-</b>	<b>-1</b>
Other comprehensive income, before tax	-616	-614	-	-2
Deferred taxes relating to other comprehensive income	167	166	-	1
<b>Other comprehensive income, net of tax</b>	<b>-449</b>	<b>-448</b>	<b>-</b>	<b>-1</b>
<b>Total comprehensive income</b>	<b>4,930</b>	<b>4,696</b>	<b>225</b>	<b>9</b>

# Balance Sheet

of the Volkswagen Group as of December 31, 2016

€ million	Note	Dec. 31, 2016	Dec. 31, 2015
<b>Assets</b>			
<b>Noncurrent assets</b>			
Intangible assets	12	62,599	61,147
Property, plant and equipment	13	54,033	50,171
Lease assets	14	38,439	33,173
Investment property	14	512	504
Equity-accounted investments	15	8,616	10,904
Other equity investments	15	996	974
Financial services receivables	16	68,402	63,185
Other financial assets	17	8,256	6,730
Other receivables	18	2,009	1,340
Tax receivables	19	392	395
Deferred tax assets	19	9,756	8,026
		<b>254,010</b>	<b>236,548</b>
<b>Current assets</b>			
Inventories	20	38,978	35,048
Trade receivables	21	12,187	11,132
Financial services receivables	16	49,673	46,888
Other financial assets	17	11,844	10,043
Other receivables	18	5,130	5,367
Tax receivables	19	1,126	1,029
Marketable securities	22	17,520	15,007
Cash, cash equivalents and time deposits	23	19,265	20,871
		<b>155,722</b>	<b>145,387</b>
<b>Total assets</b>		<b>409,732</b>	<b>381,935</b>



€ million	Note	Dec. 31, 2016	Dec. 31, 2015
<b>Equity and Liabilities</b>			
<b>Equity</b>	<b>24</b>		
Subscribed capital		1,283	1,283
Capital reserves		14,551	14,551
Retained earnings		70,446	69,039
Other reserves		-1,158	-4,374
Equity attributable to Volkswagen AG hybrid capital investors		7,567	7,560
Equity attributable to Volkswagen AG shareholders and hybrid capital investors		92,689	88,060
Noncontrolling interests		221	210
		<b>92,910</b>	<b>88,270</b>
<b>Noncurrent liabilities</b>			
Financial liabilities	25	66,358	73,292
Other financial liabilities	26	4,488	5,901
Other liabilities	27	5,664	4,905
Deferred tax liabilities	28	4,745	4,433
Provisions for pensions	29	33,012	27,535
Provisions for taxes	28	3,556	3,940
Other provisions	30	21,482	25,170
		<b>139,306</b>	<b>145,175</b>
<b>Current liabilities</b>			
Put options and compensation rights granted to noncontrolling interest shareholders	31	3,849	3,933
Financial liabilities	25	88,461	72,313
Trade payables	32	22,794	20,460
Tax payables	28	500	330
Other financial liabilities	26	9,438	10,350
Other liabilities	27	15,461	14,014
Provisions for taxes	28	1,301	1,301
Other provisions	30	35,711	25,788
		<b>177,515</b>	<b>148,489</b>
<b>Total equity and liabilities</b>		<b>409,732</b>	<b>381,935</b>

# Statement of Changes in Equity

of the Volkswagen Group for the period January 1 to December 31, 2016

€ million	OTHER RESERVES			
	Subscribed capital	Capital reserves	Retained earnings	Currency translation reserve
<b>Balance at Jan. 1, 2015</b>	<b>1,218</b>	<b>14,616</b>	<b>71,197</b>	<b>-1,777</b>
Earnings after tax	-	-	-1,582	-
Other comprehensive income, net of tax	-	-	1,729	790
<b>Total comprehensive income</b>	-	-	<b>148</b>	<b>790</b>
Capital increases*	65	-65	-	-
Dividends payment	-	-	-2,294	-
Capital transactions involving a change in ownership interest	-	-	-2	0
Other changes	-	0	-8	0
<b>Balance at Dec. 31, 2015</b>	<b>1,283</b>	<b>14,551</b>	<b>69,039</b>	<b>-987</b>
<b>Balance at Jan. 1, 2016</b>	<b>1,283</b>	<b>14,551</b>	<b>69,039</b>	<b>-987</b>
Earnings after tax	-	-	5,144	-
Other comprehensive income, net of tax	-	-	-3,657	-129
<b>Total comprehensive income</b>	-	-	<b>1,487</b>	<b>-129</b>
Capital increases	-	-	-	-
Dividends payment	-	-	-68	-
Capital transactions involving a change in ownership interest	-	-	-	-
Other changes	-	-	-13	-
<b>Balance at Dec. 31, 2016</b>	<b>1,283</b>	<b>14,551</b>	<b>70,446</b>	<b>-1,117</b>

\* Volkswagen AG recorded an inflow of cash funds amounting to €2,500 million, less a discount of €29 million and transaction costs of €14 million, from the hybrid capital issued in March 2015. Additionally, there were noncash effects from the deferral of taxes amounting to €11 million. The hybrid capital is required to be classified as equity instruments granted. In connection with the maturity and subsequent conversion of the mandatory convertible notes in fiscal year 2015, the notional value of the newly created shares (€65 million) was reclassified from the capital reserves to subscribed capital.

Explanatory notes on equity are presented in the note relating to equity.

	Cash flow hedge reserve	Available-for-sale financial assets	Equity- accounted investments	Equity attributable to Volkswagen AG hybrid capital investors	Equity attributable to Volkswagen AG shareholders and hybrid capital investors	Noncontrolling interests	Total equity
	-1,715	1,263	148	5,041	89,991	198	90,189
	-	-	-	212	-1,370	10	-1,361
	-2,197	-1,278	392	-	-564	2	-562
	-2,197	-1,278	392	212	-1,934	12	-1,922
	-	-	-	2,469	2,469	-	2,469
	-	-	-	-215	-2,509	-6	-2,516
	-	-	-	-	-2	-1	-3
	-	-	2	54	46	7	54
	-3,912	-16	542	7,560	88,060	210	88,270
	-3,912	-16	542	7,560	88,060	210	88,270
	-	-	-	225	5,369	10	5,379
	3,455	14	-131	-	-448	-1	-449
	3,455	14	-131	225	4,921	9	4,930
	-	-	-	-	-	-	-
	-	-	-	-291	-359	-6	-364
	-	-	-	-	-	-	-
	-	-	6	73	66	8	74
	-457	-2	417	7,567	92,689	221	92,910

# Cash flow statement

of the Volkswagen Group for the period January 1 to December 31, 2016

€ million	2016	2015
<b>Cash and cash equivalents at beginning of period</b>	<b>20,462</b>	<b>18,634</b>
Earnings before tax	7,292	-1,301
Income taxes paid	-3,315	-3,238
Depreciation and amortization of, and impairment losses on, intangible assets, property, plant and equipment, and investment property*	10,100	9,743
Amortization of and impairment losses on capitalized development costs*	3,586	3,262
Impairment losses on equity investments*	130	37
Depreciation of and impairment losses on lease assets*	7,107	6,651
Gain/loss on disposal of noncurrent assets and equity investments	-222	-1,581
Share of profit or loss of equity-accounted investments	377	297
Other noncash expense/income	716	2,102
Change in inventories	-3,637	-3,149
Change in receivables (excluding financial services)	-2,155	-1,807
Change in liabilities (excluding financial liabilities)	5,048	2,807
Change in provisions	5,966	18,329
Change in lease assets	-12,074	-10,808
Change in financial services receivables	-9,490	-7,663
<b>Cash flows from operating activities</b>	<b>9,430</b>	<b>13,679</b>
Investments in intangible assets (excluding development costs), property, plant and equipment, and investment property	-13,152	-13,213
Additions to capitalized development costs	-5,750	-5,021
Acquisition of subsidiaries	-119	-179
Acquisition of other equity investments	-309	-817
Disposal of subsidiaries	-7	0
Disposal of other equity investments	2,190	3,173
Proceeds from disposal of intangible assets, property, plant and equipment, and investment property	351	533
Change in investments in securities	-1,245	-3,916
Change in loans and time deposits	-2,638	-1,711
<b>Cash flows from investing activities</b>	<b>-20,679</b>	<b>-21,151</b>
Capital contributions	-	2,457
Dividends paid	-364	-2,516
Capital transactions with noncontrolling interest shareholders	-3	0
Other changes	-	13
Proceeds from issuance of bonds	14,262	22,533
Repayments of bonds	-23,601	-23,755
Changes in other financial liabilities	19,455	10,360
Lease payments	-36	-23
<b>Cash flows from financing activities</b>	<b>9,712</b>	<b>9,068</b>
Effect of exchange rate changes on cash and cash equivalents	-91	232
<b>Net change in cash and cash equivalents</b>	<b>-1,628</b>	<b>1,828</b>
<b>Cash and cash equivalents at end of period</b>	<b>18,833</b>	<b>20,462</b>
Cash and cash equivalents at end of period	18,833	20,462
Securities, loans and time deposits	28,036	24,613
<b>Gross liquidity</b>	<b>46,869</b>	<b>45,075</b>
Total third-party borrowings	-154,819	-145,604
<b>Net liquidity</b>	<b>-107,950</b>	<b>-100,530</b>

\* Net of impairment reversals.

Explanatory notes on the cash flow statement are presented in the note relating to the cash flow statement.

# Notes to the Consolidated Financial Statements

of the Volkswagen Group as of December 31, 2016

## Basis of presentation

Volkswagen AG is domiciled in Wolfsburg, Germany, and entered in the commercial register at the Braunschweig Local Court under No. HRB100484. The fiscal year corresponds to the calendar year.

In accordance with Regulation No. 1606/2002 of the European Parliament and of the Council, Volkswagen AG prepared its consolidated financial statements for 2016 in compliance with the International Financial Reporting Standards (IFRSs), as adopted by the European Union. We have complied with all the IFRSs adopted by the EU and required to be applied.

The accounting policies applied in the previous year were retained, with the exception of the changes due to the new or amended standards.

In addition, we have complied with all the provisions of German commercial law that we are also required to apply, as well as with the German Corporate Governance Code. For information on notices and disclosures of changes regarding the ownership of voting rights in Volkswagen AG in accordance with the Wertpapierhandelsgesetz (WpHG – German Securities Trading Act), please refer to the annual financial statements of Volkswagen AG.

The consolidated financial statements were prepared in euros. Unless otherwise stated, all amounts are given in millions of euros (€ million).

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

The income statement was prepared using the internationally accepted cost of sales method.

Preparation of the consolidated financial statements in accordance with the above-mentioned standards requires management to make estimates that affect the reported amounts of certain items in the consolidated balance sheet and in the consolidated income statement, as well as the related disclosure of contingent assets and liabilities. The consolidated financial statements present fairly the net assets, financial position and results of operations as well as the cash flows of the Volkswagen Group.

The Board of Management completed preparation of the consolidated financial statements on February 24, 2017. On that date, the period ended in which adjusting events after the reporting period are recognized.

## Effects of new and amended IFRSs

Volkswagen AG has applied all accounting pronouncements adopted by the EU and effective for periods beginning in fiscal year 2016.

A number of amendments to International Financial Reporting Standards resulting from the Annual Improvements Project 2012 and the Annual Improvements Project 2014 became effective on January 1, 2016. Among others, these amendments included changes to IFRS 3, IFRS 7, IFRS 8, IFRS 13 and IAS 24. The changes to IFRS 8 Operating Segments added a requirement to describe the criteria used to aggregate the operating segments. The segment disclosure requirements have therefore been clarified. Additional disclosure requirements have been included in IFRS 7 in relation to the derecognition of financial instruments. These changes mainly entail clarifications in relation to ABS transactions.

Changes to IAS 19 also had to be applied from January 1, 2016 onward. These changes relate to the accounting treatment of employee pension contributions. In the Volkswagen Group, employee contributions in which the amount is independent of the number of years of service (fixed percentage of salary) will be deducted from the service cost in the year the contributions are made.

The amendments to IAS 16 and IAS 38 clarified that, with effect from January 1, 2016, revenue-based methods for measuring depreciation and amortization are not generally permitted.

Furthermore, IAS 1 made clarifications and amendments for IFRS reporting with effect from January 1, 2016. The amendments also specified that disclosures are only required in the consolidated financial statements if the content is material.

The amendments do not materially affect the Volkswagen Group's net assets, financial position and results of operations.

## New and amended IFRSs not applied

In its 2016 consolidated financial statements, Volkswagen AG did not apply the following accounting pronouncements that have already been adopted by the IASB, but were not yet required to be applied for the fiscal year.

Standard/Interpretation	Published by the IASB	Application mandatory <sup>1</sup>	Adopted by the EU	Expected impact	
IFRS 2	Classification and Measurement of Share-based Payment Transactions	June 20, 2016	January 1, 2018	No	None
IFRS 4	Insurance Contracts: Application of IFRS 9 for insurers	September 12, 2016	January 1, 2018	No	None
IFRS 9	Financial instruments	July 24, 2014	January 1, 2018	Yes	Detailed descriptions after the tabular overview
IFRS 10 and IAS 28	Consolidated Financial Statements and Investments in Associates and Joint Ventures: Sales or Contributions of Assets between an Investor and its Associate/Joint Venture	September 11, 2014	Deferred <sup>2</sup>	–	None
IFRS 15	Revenue from Contracts with Customers	May 28, 2014	January 1, 2018 <sup>3</sup>	Yes	Detailed descriptions after the tabular overview
	Clarifications of IFRS 15 – Revenue from Contracts with Customers	April 12, 2016	January 1, 2018	No	Additional transitional expedients, otherwise no material impact
IFRS 16	Leases	January 13, 2016	January 1, 2019	No	Detailed descriptions after the tabular overview
IAS 7	Statement of Cash Flows: Disclosure Initiative	January 29, 2016	January 1, 2017	No	Preparation of a reconciliation statement for liabilities from financing activities
IAS 12	Income Taxes: Recognition of Deferred Tax Assets for Unrealized Losses	January 19, 2016	January 1, 2017	No	No material impact

IAS 40	Transfers of Investment Property	December 8, 2016	January 1, 2018	No	No material impact
	Annual Improvements to International Financial Reporting Standards 2016 <sup>4</sup>	December 8, 2016	January 1, 2018 <sup>5</sup>	No	No material impact
IFRIC 22	Foreign Currency Transactions and Advance Consideration	December 8, 2016	January 1, 2018	No	Translation of advance payments denominated in foreign currency into the functional currency at the spot rate on the day of payment

1 Effective date from Volkswagen AG's perspective.

2 The IASB decided on December 15, 2015 to defer the effective date indefinitely.

3 Deferred until January 1, 2018 (IASB decision of September 11, 2015).

4 Minor amendments to a number of IFRSs (IFRS 1, IFRS 12, IAS 28).

5 This relates to the effective date of the amendments to IFRS 1 and IAS 28; the effective date for the IFRS 12 is January 1, 2017.

#### IFRS 9 – FINANCIAL INSTRUMENTS

IFRS 9 “Financial Instruments” changes the accounting requirements for classifying and measuring financial assets, for impairment of financial assets, and for hedge accounting.

Financial assets are classified and measured on the basis of the entity's business model and the characteristics of the financial asset's cash flows. A financial asset is initially measured either “at amortized cost”, “at fair value through other comprehensive income”, or “at fair value through profit or loss”. The Volkswagen Group does not expect IFRS 9 to result in material changes in the updated classification of its financial assets. The classification of financial liabilities under IFRS 9 is largely unchanged compared with the current accounting requirements of IAS 39.

The basis for measuring impairment losses and recognizing loss allowances will switch from an incurred loss model to an expected credit loss model. We expect that this change in the requirements will tend to increase the amount of recognized loss allowances. This expectation is based, first, on the requirement to recognize a loss allowance on the basis of expected credit losses in the first 12 months in the case of financial assets not classified as non-performing and whose credit risk has not increased significantly since initial recognition. It is based, second, on the assessment that for financial assets for which there has been a significant increase in credit risk since initial recognition, loss allowances must be recognized on the basis of the entire remaining life of the contractual asset.

In the case of hedge accounting, IFRS 9 contains both extended designation options and the need to implement more complex measurement methods. In addition, IFRS 9 also eliminates the quantitative limits for effectiveness testing.

IFRS 9 will have a particularly significant impact on the entity's reclassification practice. Depending on market trends, there is an expectation that operating profit or loss will be affected by hedging transactions to a greater extent.

This will also result in far more extensive disclosures.

#### IFRS 15 – REVENUE FROM CONTRACTS WITH CUSTOMERS

IFRS 15 revises the accounting requirements governing revenue recognition. The Volkswagen Group expects that the changes resulting from IFRS 15 will lead to minor shifts in the recognition of revenue from warranty and licensing agreements for construction contracts. No significant changes over and above this are expected, in particular in the case of multiple-element arrangements. The Volkswagen Group plans to apply the modified retrospective transitional method under which the cumulative effect of initially applying IFRS 15 will be recognized as an adjustment to the opening balance of equity in 2018.

This will also result in far more extensive disclosures.

#### IFRS 16 – LEASES

IFRS 16 changes the accounting for leases. The main objective of IFRS 16 is to recognize all leases. It establishes that lessees are no longer required to classify their leases as either finance leases or operating leases. In the future, they will instead be required to recognize a right-of-use asset and a lease liability for all leases in the statement of financial position. Exceptions will only be made for short-term leases and leases of low-value assets. During the lease term, the right-of-use asset must be depreciated and the lease liability adjusted using an effective interest method and taking the lease payments into account. The new lessee accounting model will therefore tend to increase noncurrent assets and noncurrent liabilities. In the income statement this change is expected to improve the operating result and reduce the financial result. It will also lead to far more extensive disclosures. Lessor accounting essentially follows the current guidance of IAS 17. In the future, lessors will continue to classify their leases as finance leases or operating leases on the basis of the risks and rewards incidental to ownership of the leased asset.

#### Key events

On September 18, 2015, the US Environmental Protection Agency (EPA) publicly announced in a “Notice of Violation” that irregularities in relation to nitrogen oxide (NO<sub>x</sub>) emissions had been discovered in emissions tests on certain vehicles with Volkswagen Group diesel engines. Volkswagen admitted to irregularities in this context. In its ad hoc release dated September 22, 2015, the Volkswagen Group announced that noticeable discrepancies between the figures achieved in testing and in actual road use had been identified in around eleven million vehicles worldwide with certain diesel engines.

On November 2, 2015, the EPA issued another “Notice of Violation” alleging that irregularities had also been discovered in the software installed in vehicles with type V6 3.0 l TDI diesel engines. Audi has confirmed that at least three auxiliary emission control devices (AECs) were not disclosed in the course of the US approval documentation of vehicles with six-cylinder V6 3.0 l TDI diesel engines.

Consequently, the Volkswagen Group has recognized expenses directly related to the diesel issue in 2015 in the total amount of €16.2 billion in operating result. This primarily entailed recognizing provisions for field activities (service measures and recalls) and for repurchases in the amount of €7.8 billion, as well as €7.0 billion for legal risks.

Additional expenses of €6.4 billion were recognized in fiscal year 2016 in connection with the diesel issue. These additions resulted from an increase in expenses attributable to legal risks amounting to €5.1 billion, higher warranty costs amounting to €0.4 billion, specific sales programs amounting to €0.5 billion, impairment losses on inventories amounting to €0.3 billion and impairment losses on intangible assets and property, plant and equipment amounting to €0.3 billion, which are offset by impairment reversals of noncurrent and current lease assets in the amount of €0.1 billion. The impairment losses recognized on noncurrent assets resulted primarily from the lower value in use of various products in the Passenger Cars segment due to expected declines in volumes. In addition, provisions of €0.3 billion were recognized for the investments totaling USD 2.0 billion over 10 years in zero emissions vehicle infrastructure as well as corresponding access and awareness initiatives for these technologies to which the Volkswagen Group had committed itself in the settlement agreements. Unutilized provisions for legal risks and sales-related measures amounting to a total of €0.5 billion had an offsetting effect. The Volkswagen Group has started entering into exchange rate hedges relating to the outstanding obligations denominated in foreign currencies. The translation at the reporting date of provisions denominated in foreign currencies resulted in expenses of €0.2 billion after hedging.

In addition, expenses were recognized for restructuring measures in the trucks and passenger car business in South America (€0.3 billion) and in the Power Engineering segment (€0.2 billion). Provisions of €0.4 billion were recognized for the antitrust proceedings that the European Commission opened in 2011 against European truck manufacturers including MAN and Scania. Additional provisions amounting to €0.3 billion were



recognized in the reporting period in connection with the replacement of potentially faulty airbags, manufactured and supplied by Takata, imposed by the competent authorities.

Further information on the litigation in connection with the diesel issue as well as the antitrust proceedings and the replacement of airbags manufactured and supplied by Takata can be found in the “Litigation” and “Contingent liabilities” sections.

Based on current information, fiscal year 2014 is not affected by the effects of the diesel issue. In the months after the International Council on Clean Transportation (ICCT) study was published in May 2014, the test set-ups on which the ICCT study was based were repeated in house at Volkswagen and the unusually high NO<sub>x</sub> emissions confirmed. The US environmental authority of California – the California Air Resources Board (CARB) – was informed of this result, and at the same time the offer was made to recalibrate the type EA 189 diesel engines as part of a service measure that was already planned in the USA. This measure was evaluated and adopted by the Ausschuss für Produktsicherheit (APS – product safety committee), which includes, among others, employees from the technical development, quality assurance, sales, production, logistics, procurement and legal departments, as part of the existing processes within the Volkswagen Group. The APS thus plays a central role in the internal control system at Volkswagen AG. There are currently no findings to confirm that an unlawful “defeat device software” under US law was reported by the APS as the cause of the discrepancies to the persons responsible for preparing the 2014 annual and consolidated financial statements. Instead, at the time that the annual and consolidated financial statements were being prepared, this group of people remained under the impression that the issue could be solved with comparatively little effort as part of a field measure. By the summer of 2015, however, it was reliably recognized that the cause of the discrepancies was a software modification, that would qualify as a “defeat device” as defined by US environmental law. This culminated in the disclosure of the US “defeat device” to EPA and CARB on September 3, 2015. According to the assessment at that time of the members of the Board of Management dealing with the matter, the scope of the costs expected as a result by the Volkswagen Group (recall costs, retrofitting costs and financial penalties) was basically not dissimilar to that of previous cases in which other vehicle manufacturers were involved, and therefore appeared to be controllable overall with a view to the business activities of the Volkswagen Group. This appraisal by Volkswagen AG was based on the assessment of a law firm brought in in the USA for approval issues, according to which similar cases in the past were resolved amicably with the US authorities. Publication of a “Notice of Violation” by the EPA on September 18, 2015, which came as a surprise to the Company, on the facts and possible financial consequences, then presented the situation in a completely different light.

Also, the publications released by the reporting date, as well as the continued investigations and interviews in connection with the diesel issue, did not provide the Group Board of Management with any new reliable findings or assessments regarding the underlying facts and the assessment of the associated risks (e.g. investor lawsuits).

## Basis of consolidation

In addition to Volkswagen AG, the consolidated financial statements comprise all significant German and non-German subsidiaries, including structured entities that are controlled directly or indirectly by Volkswagen AG. This is the case if Volkswagen AG obtains power over the potential subsidiaries directly or indirectly from voting rights or similar rights, is exposed, or has rights to, positive or negative variable returns from its involvement with the subsidiaries, and is able to influence those returns. In the case of the structured entities consolidated in the Volkswagen Group, Volkswagen is able to direct the material relevant activities remaining after the change in the structure even if it is not invested in the structured entity concerned and is thus able to influence the variable returns from its involvement. The structured entities are used primarily to enter into asset-backed securities transactions to refinance the financial services business and to invest surplus liquidity in special securities funds. Consolidation of subsidiaries begins at the first date on which control exists, and ends when such control no longer exists.

Subsidiaries whose business is dormant or of low volume and that are insignificant, both individually and in the aggregate, for the fair presentation of the net assets, financial position and results of operations as well as the cash flows of the Volkswagen Group are not consolidated. They were carried in the consolidated financial statements at cost net of any impairment losses and reversals of impairment losses required to be recognized.

Significant companies where Volkswagen AG is able, directly or indirectly, to significantly influence financial and operating policy decisions (associates), or that are directly or indirectly jointly controlled (joint ventures), are accounted for using the equity method. Joint ventures also include companies in which the Volkswagen Group holds the majority of voting rights, but whose articles of association or partnership agreements stipulate that important decisions may only be resolved unanimously. Insignificant associates and joint ventures are carried at cost net of any impairment losses and reversals of impairment losses required to be recognized.

The composition of the Volkswagen Group is shown in the following table:

	2016	2015
Volkswagen AG and consolidated subsidiaries		
Germany	149	155
Abroad	919	885
Subsidiaries carried at cost		
Germany	74	63
Abroad	251	287
Associates, joint ventures and other equity investments		
Germany	47	45
Abroad	70	69
	<b>1,510</b>	<b>1,504</b>

The list of all shareholdings that forms part of the annual financial statements of Volkswagen AG can be downloaded from the electronic companies register at [www.unternehmensregister.de](http://www.unternehmensregister.de) and from [www.volkswagenag.com/ir](http://www.volkswagenag.com/ir) by clicking on "Further mandatory Publications" under the heading "Mandatory Publications".

The following consolidated German subsidiaries with the legal form of a corporation or partnership meet the criteria set out in section 264(3) or section 264b of the Handelsgesetzbuch (HGB – German Commercial Code) due to their inclusion in the consolidated financial statements and have as far as possible exercised the option not to publish annual financial statements:

- > Audi Berlin GmbH, Berlin
- > Audi Frankfurt GmbH, Frankfurt am Main
- > Audi Hamburg GmbH, Hamburg
- > Audi Hannover GmbH, Hanover
- > Audi Leipzig GmbH, Leipzig
- > Audi Stuttgart GmbH, Stuttgart
- > Autostadt GmbH, Wolfsburg
- > AutoVision GmbH, Wolfsburg
- > Bugatti Engineering GmbH, Wolfsburg

- > Dr. Ing. h.c. F. Porsche AG, Stuttgart
- > Haberl Beteiligungs-GmbH, Munich
- > Karosseriewerk Porsche GmbH & Co. KG, Stuttgart
- > MAHAG GmbH, Munich
- > Porsche Connect GmbH, Stuttgart
- > Porsche Consulting GmbH, Bietigheim-Bissingen
- > Porsche Deutschland GmbH, Bietigheim-Bissingen
- > Porsche Dienstleistungs GmbH, Stuttgart
- > Porsche Engineering Group GmbH, Weissach
- > Porsche Engineering Services GmbH, Bietigheim-Bissingen
- > Porsche Financial Services GmbH & Co. KG, Bietigheim-Bissingen
- > Porsche Financial Services GmbH, Bietigheim-Bissingen
- > Porsche Holding Stuttgart GmbH, Stuttgart
- > Porsche Leipzig GmbH, Leipzig
- > Porsche Lizenz- und Handelsgesellschaft mbH & Co. KG, Ludwigsburg
- > Porsche Logistik GmbH, Stuttgart
- > Porsche Niederlassung Berlin GmbH, Berlin
- > Porsche Niederlassung Berlin-Potsdam GmbH, Kleinmachnow
- > Porsche Niederlassung Hamburg GmbH, Hamburg
- > Porsche Niederlassung Leipzig GmbH, Leipzig
- > Porsche Niederlassung Stuttgart GmbH, Stuttgart
- > Porsche Nordamerika Holding GmbH, Ludwigsburg
- > Porsche Siebte Vermögensverwaltung GmbH, Wolfsburg
- > Porsche Zentrum Hoppegarten GmbH, Stuttgart
- > Raffay Versicherungsdienst GmbH, Hamburg
- > SKODA AUTO Deutschland GmbH, Weiterstadt
- > VfL Wolfsburg-Fußball GmbH, Wolfsburg
- > VGRD GmbH, Wolfsburg
- > Volkswagen Automobile Berlin GmbH, Berlin
- > Volkswagen Automobile Chemnitz GmbH, Chemnitz
- > Volkswagen Automobile Frankfurt GmbH, Frankfurt am Main
- > Volkswagen Automobile Hamburg GmbH, Hamburg
- > Volkswagen Automobile Hannover GmbH, Hanover
- > VOLKSWAGEN Automobile Leipzig GmbH, Leipzig
- > Volkswagen Automobile Region Hannover GmbH, Hanover
- > Volkswagen Automobile Rhein-Neckar GmbH, Mannheim
- > Volkswagen Automobile Stuttgart GmbH, Stuttgart
- > Volkswagen Gebrauchtfahrzeughandels und Service GmbH, Langenhagen
- > Volkswagen Group Real Estate GmbH & Co. KG, Wolfsburg
- > Volkswagen Immobilien GmbH, Wolfsburg
- > Volkswagen Konzernlogistik GmbH & Co. OHG, Wolfsburg
- > Volkswagen New Mobility GmbH, Wolfsburg
- > Volkswagen Original Teile Logistik GmbH & Co. KG, Baunatal
- > Volkswagen Osnabrück GmbH, Osnabrück
- > Volkswagen R GmbH, Wolfsburg
- > Volkswagen Sachsen GmbH, Zwickau
- > Volkswagen Truck & Bus GmbH, Braunschweig
- > Volkswagen Vertriebsbetreuungsgesellschaft mbH, Chemnitz
- > Volkswagen Zubehör GmbH, Dreieich

## CONSOLIDATED SUBSIDIARIES

The changes in the consolidated Group are shown in the following table:

Number	Germany	Abroad
<b>Initially consolidated</b>		
of which: subsidiaries previously carried at cost	3	52
of which: newly acquired subsidiaries	0	1
of which: newly formed subsidiaries	0	6
<b>Deconsolidated</b>		
of which: mergers	4	13
of which: liquidations	5	7
of which: sales/other	0	5

The initial inclusion of these subsidiaries, either individually or collectively, did not have a significant effect on the presentation of the net assets, financial position and results of operations. The unconsolidated structured entities are immaterial from a Group perspective. In particular, they do not give rise to any significant risks to the Group.

## INVESTMENTS IN ASSOCIATES

From a Group perspective, the associates Sinotruk (Hong Kong) Ltd., Hongkong, China (Sinotruk), Bertrandt AG, Ehningen (Bertrandt) and There Holding B.V., Rijswijk, the Netherlands (There Holding) were material at the reporting date.

### Sinotruk

Sinotruk is one of the largest truck manufacturers in the Chinese market. There is an agreement in place between Group companies and Sinotruk regarding a long-term strategic partnership, under which the Group participates in the local market. In addition to the partnership with Sinotruk in the volume segment, exports of MAN vehicles to China are also helping to expand access to the small, but fast-growing premium truck market. Sinotruk's principal place of business is in Hongkong, China.

As of December 31, 2016, the quoted market price of the shares in Sinotruk amounted to €466 million (previous year: €251 million).

#### Bertrandt

Bertrandt is an engineering partner to companies in the automotive and aviation industry. Its portfolio of services ranges from developing individual components through complex modules to end-to-end solutions. Bertrandt's principal place of business is in Ehningen.

As of December 31, 2016, the quoted market price of the shares in Bertrandt amounted to €284 million (previous year: €327 million).

#### There Holding

The Audi Group, the BMW Group and Daimler AG each hold a 33.3% interest in There Holding B.V., Rijswijk, the Netherlands, which was formed in 2015. Effective December 4, 2015, There Holding B.V. acquired all shares in the HERE Group through a wholly owned subsidiary, There Acquisition B.V., Rijswijk, the Netherlands, for a purchase price of €2,593 million. HERE develops and sells high-resolution maps with real-time location information. The purchase price was financed largely by way of capital contributions at There Holding B.V. Audi's share of it amounts to €668 million. The remainder of the purchase price was financed through bank loans at There Acquisition B.V. There Acquisition B.V. was renamed HERE International B.V. on January 29, 2016.

There Holding B.V. is an associate that is accounted for using the equity method. The identification of hidden reserves and liabilities was completed in the first quarter of 2016. In view of the timing of this, and also for reasons of materiality, There Holding was not included as of December 31, 2015 on the basis of the Group's share of profit or loss.

In December 2016, There Holding B.V. signed contracts to sell a total of 25% of its shares in HERE International B.V. A 15% share was acquired by Intel Holdings B.V. The sale of 15% of these shares to Intel Holdings B.V. was completed in January 2017. The remaining 10% was sold to a Chinese consortium consisting of NavInfo Co. Ltd., Tencent Holdings Ltd. and GIC Private Ltd. It is expected that this transaction will be completed in the first half of 2017, after it has been approved by the competent authorities.

#### Navistar

Volkswagen Truck & Bus GmbH, a wholly owned subsidiary of Volkswagen AG, and US-based commercial vehicles manufacturer Navistar International Corporation, Lisle, USA, announced on September 6, 2016 that they had entered into a far-reaching alliance. This includes framework agreements for a strategic technology and supply cooperation, as well as a procurement joint venture. Additionally, Volkswagen Truck & Bus will acquire a 16.6% equity interest in Navistar by subscribing for a capital increase. The share price amounts to USD 15.76 and the total purchase price comes to USD 0.3 billion. The closing of the transaction and hence the implementation of the strategic alliance is subject to certain regulatory approvals and other customary closing conditions. The closing of the share acquisition by Volkswagen Truck & Bus is further subject to the finalization of the agreement governing the procurement joint venture and of the first contract under the technology and supply cooperation. The transaction is expected to close in the first quarter of 2017.

## SUMMARIZED FINANCIAL INFORMATION ON MATERIAL ASSOCIATES ON A 100% BASIS:

€ million	Sinotruk <sup>1</sup>	Bertrandt <sup>2</sup>	There Holding <sup>3</sup>
<b>2016</b>			
Equity interest (%)	25	29	33
Noncurrent assets	2,075	603	2,802
Current assets	4,034	492	592
Noncurrent liabilities	123	340	1,044
Current liabilities	3,029	168	518
Net assets	2,956	587	1,832
Sales revenue	4,116	992	1,240
Post-tax profit or loss from continuing operations	46	28	-167
Post-tax profit or loss from discontinued operations	-	-	-
Other comprehensive income	11	-1	-4
Total comprehensive income	57	27	-171
Dividends received	2	7	-
<b>2015</b>			
Equity interest (%)	25	29	33
Noncurrent assets	2,299	604	3,115
Current assets	4,472	341	365
Noncurrent liabilities	484	155	1,093
Current liabilities	3,204	205	384
Net assets	3,083	585	2,003
Sales revenue	4,079	935	-
Post-tax profit or loss from continuing operations	64	15	-
Post-tax profit or loss from discontinued operations	-	-	-
Other comprehensive income	-2	0	-
Total comprehensive income	62	15	-
Dividends received	5	7	-

1 Balance sheet amounts refer to the June 30 reporting date and income statement amounts refer to the period from July 1 to June 30.

2 Balance sheet amounts refer to the September 30 reporting date and income statement amounts refer to the period from October 1 to September 30.

3 Due to the first-time inclusion of the HERE Group in December 2015, the income statement disclosures for the current fiscal year relate to the period from December 5, 2015 to December 31, 2016. The information relating to the balance sheet in the previous year is based on the financial statement information available at the acquisition date of the HERE Group in December 2015.

**RECONCILIATION OF THE FINANCIAL INFORMATION TO THE CARRYING AMOUNT OF THE EQUITY-ACCOUNTED INVESTMENTS:**

€ million	Sinotruk	Bertrandt	There Holding <sup>1</sup>
<b>2016</b>			
Net assets at January 1	3,083	585	2,003
Profit or loss	46	28	-167
Other comprehensive income	11	-1	-4
Changes in reserves	30	-	-
Foreign exchange differences	-198	-	-
Dividends	-17	-25	-
Net assets at December 31	2,956	587	1,832
Proportionate equity	739	170	611
Consolidation/Goodwill/Others	-411	163	-
Carrying amount of equity-accounted investments	328	333	611
<b>2015</b>			
Net assets at January 1	2,490	592	2,003
Profit or loss	64	15	-
Other comprehensive income	-2	0	-
Changes in reserves	5	2	-
Foreign exchange differences	555	-	-
Dividends	-28	-24	-
Net assets at December 31	3,083	585	2,003
Proportionate equity	771	169	668
Consolidation/Goodwill/Others	-452	163	-
Carrying amount of equity-accounted investments	319	332	668

1 Due to the first-time inclusion of the HERE Group in December 2015, the the reconciliation of the net assets for the current fiscal year relates to the period from December 5, 2015 to December 31, 2016. In the case of the comparative amount presented for There Holding, the net carrying amount of the HERE Group at the acquisition date in the previous year is shown.

**SUMMARIZED FINANCIAL INFORMATION ON INDIVIDUALLY IMMATERIAL ASSOCIATES ON THE BASIS OF THE VOLKSWAGEN GROUP'S PROPORTIONATE INTEREST:**

€ million	2016	2015
Post-tax profit or loss from continuing operations	2	-1
Post-tax profit or loss from discontinued operations	-	-
Other comprehensive income	-1	1
Total comprehensive income	0	0
Carrying amount of equity-accounted investments	277	40

Unrecognized losses relating to investments in associates totaled €5 million (previous year: €3 million). There were no contingent liabilities relating to associates.

#### INTERESTS IN JOINT VENTURES

From a Group perspective, the joint ventures FAW-Volkswagen Automotive Company Ltd., Changchun, China, SAIC-Volkswagen Automotive Company Ltd., Shanghai, China (formerly: Shanghai-Volkswagen Automotive Company Ltd., Shanghai, China), SAIC-Volkswagen Sales Company Ltd., Shanghai, China (SAIC-Volkswagen Sales Company) and Global Mobility Holding B.V., Amsterdam, the Netherlands (Global Mobility Holding) were material at the reporting date and the prior-year reporting date due to their size.

##### FAW-Volkswagen Automotive Company

FAW-Volkswagen Automotive Company develops, produces and sells passenger cars. There is an agreement in place between Group companies and the joint venture partner China FAW Corporation Limited regarding a long-term strategic partnership. The principal place of business is in Changchun, China.

##### SAIC-Volkswagen Automotive Company

SAIC-Volkswagen Automotive Company develops and produces passenger cars. There is an agreement in place between Group companies and the joint venture partner Shanghai Automotive Industry Corporation regarding a long-term strategic partnership. The principal place of business is in Shanghai, China.

##### SAIC-Volkswagen Sales Company

SAIC-Volkswagen Sales Company sells passenger cars for SAIC-Volkswagen Automotive Company. There is an agreement in place between Group companies and the joint venture partner Shanghai Automotive Industry Corporation regarding a long-term strategic partnership. The principal place of business is in Shanghai, China.

##### Global Mobility Holding

Through its 50% interest in the joint venture Global Mobility Holding B.V., Amsterdam, the Netherlands (GMH), the Volkswagen Group held a 50% indirect stake in the joint venture's subsidiary, LeasePlan Corporation N.V., Amsterdam, the Netherlands (LeasePlan). GMH's business activity consisted of holding the interest in LeasePlan. LeasePlan is a Dutch financial services group whose core business is leasing and fleet management.

On July 23, 2015, GMH sold its 100% interest in LeasePlan to a consortium of international investors. The final approvals for the sale of LeasePlan to the consortium of investors were issued by the competent authorities in January 2016. Legal transfer of the LeasePlan shares was completed on March 21, 2016.

The total value of the transaction was approximately €3.7 billion plus interest in the amount of €31.5 million. In 2016, this had a positive effect of €2.2 billion on investing activities attributable to operating activities and net liquidity and, taking into account the disposal of equity-accounted investment in GMH, resulted in an income amount of €0.2 billion for the Volkswagen Group, which is reported in the financial result. On completion of the transaction, the existing credit line of €1.3 billion provided by the Volkswagen Group was canceled.



## SUMMARIZED FINANCIAL INFORMATION ON THE MATERIAL JOINT VENTURES ON A 100% BASIS:

€ million	FAW-Volkswagen Automotive Company	SAIC-Volkswagen Automotive Company <sup>1</sup>	Global Mobility Holding <sup>2</sup>	SAIC-Volkswagen Sales Company
<b>2016</b>				
Equity interest (%)	40.0	50.0		30.0
Noncurrent assets	9,341	7,254		517
Current assets	12,962	8,521		3,739
of which: cash, cash equivalents and time deposits	7,073	5,265		212
Noncurrent liabilities	1,774	1,437		22
of which: financial liabilities	–	–		–
Current liabilities	13,063	8,759		3,713
of which: financial liabilities	1	0		–
Net assets	7,466	5,579		520
Sales revenue	40,875	26,064	1,879	30,707
Depreciation and amortization	1,120	1,091	12	4
Interest income	82	40	168	–
Interest expenses	–	4	70	–
Pre-tax profit or loss from continuing operations	5,546	4,589	142	614
Income tax income/expense	1,576	1,127	38	154
Post-tax profit or loss from continuing operations	3,970	3,462	105	460
Post-tax profit or loss from discontinued operations	–	–	–	–
Other comprehensive income	37	21	–20	–
Total comprehensive income	4,007	3,483	85	460
Dividends received	1,634	1,661	–	127
<b>2015</b>				
Equity interest (%)	40.0	50.0	50.0	30.0
Noncurrent assets	7,997	6,345	12,404	486
Current assets	12,674	8,187	9,913	3,341
of which: cash, cash equivalents and time deposits	5,954	4,761	1,722	231
Noncurrent liabilities	1,424	1,471	9,855	10
of which: financial liabilities	–	–	8,757	–
Current liabilities	11,422	7,444	8,535	3,311
of which: financial liabilities	100	27	6,546	–
Net assets	7,825	5,618	3,927	506
Sales revenue	40,462	26,018	8,298	30,035
Depreciation and amortization	1,033	907	56	4
Interest income	64	79	780	14
Interest expenses	–	–	330	–
Pre-tax profit or loss from continuing operations	6,169	4,408	608	600
Income tax income/expense	1,464	850	165	151
Post-tax profit or loss from continuing operations	4,705	3,558	442	449
Post-tax profit or loss from discontinued operations	–	–	–	–
Other comprehensive income	–5	5	16	–
Total comprehensive income	4,700	3,563	458	449
Dividends received	2,170	2,048	114	143

1 SAIC-Volkswagen Sales Company sells passenger cars for SAIC-Volkswagen Automotive Company. Therefore, the sales revenue reported for SAIC-Volkswagen Automotive Company was mostly generated from its business with SAIC-Volkswagen Sales Company.

2 GMH transferred the LeasePlan shares to third parties on March 21, 2016 (see further disclosures in this section).

**RECONCILIATION OF THE FINANCIAL INFORMATION TO THE CARRYING AMOUNT OF THE EQUITY-ACCOUNTED INVESTMENTS:**

€ million	FAW-Volkswagen Automotive Company	SAIC-Volkswagen Automotive Company	Global Mobility Holding	SAIC-Volkswagen Sales Company
<b>2016</b>				
Net assets at January 1	7,825	5,618	3,927	506
Profit or loss	3,970	3,462	105	460
Other comprehensive income	37	21	-20	-
Changes in share capital	-	-	-	-
Changes in reserves	-	-	-	-
Foreign exchange differences	-281	-200	-20	-21
Dividends	-4,085	-3,321	-	-425
Net assets at December 31	7,466	5,579	3,991*	520
Proportionate equity	2,987	2,790	1,996	156
Consolidation/Goodwill/Others	-339	-415	-1,996	-
Carrying amount of equity-accounted investments	2,647	2,375	-	156
<b>2015</b>				
Net assets at January 1	7,956	5,603	3,697	497
Profit or loss	4,705	3,558	442	449
Other comprehensive income	-5	5	16	-
Changes in share capital	377	-	-	-
Changes in reserves	-377	-	-	-
Foreign exchange differences	594	548	-	38
Dividends	-5,425	-4,096	-228	-478
Net assets at December 31	7,825	5,618	3,927	506
Proportionate equity	3,130	2,809	1,964	152
Consolidation/Goodwill/Others	-212	-55	-13	-
Carrying amount of equity-accounted investments	2,918	2,754	1,950	152

**SUMMARIZED FINANCIAL INFORMATION ON INDIVIDUALLY IMMATERIAL JOINT VENTURES ON THE BASIS OF THE VOLKSWAGEN GROUP'S PROPORTIONATE INTEREST:**

€ million	2016	2015
Post-tax profit or loss from continuing operations	304	292
Post-tax profit or loss from discontinued operations	-	-
Other comprehensive income	3	10
Total comprehensive income	307	301
Carrying amount of equity-accounted investments	1,890	1,772

There were no unrecognized losses relating to interests in joint ventures. Contingent liabilities relating to joint ventures amounted to €183 million (previous year: €121 million). Cash funds of €173 million (previous year: €72 million) were deposited as collateral for asset-backed securities transactions and are therefore not available to the Volkswagen Group.

#### OTHER EQUITY INVESTMENTS

On August 29, 2015, an arbitration ruling was delivered to the parties in the proceedings between Suzuki Motor Corporation and Volkswagen AG. It found that Volkswagen had acted in accordance with the agreement. The arbitration court also confirmed that Suzuki was in breach of contract and, on the merits of this case, acknowledged that Volkswagen had a claim to damages. In addition, the arbitration court established that the parties had the right to give regular notice to terminate the cooperation agreement. It said that Suzuki had exercised this right, ending the partnership. According to the court, the agreements had to be interpreted in such a way that Volkswagen had to sell its equity investment in Suzuki on termination of the partnership. Volkswagen consequently sold its 19.9% equity investment in Suzuki to Suzuki on September 17, 2015 at the quoted market price of €3.1 billion. The sale of the shares generated income in the amount of €1.5 billion in the third quarter of the previous year.

In February 2016, Volkswagen and Suzuki agreed a settlement regarding the claims for damages brought by Volkswagen.

### Consolidation methods

The assets and liabilities of the German and foreign companies included in the consolidated financial statements are recognized in accordance with the uniform accounting policies used within the Volkswagen Group. In the case of companies accounted for using the equity method, the same accounting policies are applied to determine the proportionate equity, based on the most recent audited annual financial statements of each company.

In the case of subsidiaries consolidated for the first time, assets and liabilities are measured at their fair value at the date of acquisition. Their carrying amounts are adjusted in subsequent years. Goodwill arises when the purchase price of the investment exceeds the fair value of identifiable net assets. Goodwill is tested for impairment once a year to determine whether its carrying amount is recoverable. If the carrying amount of goodwill is higher than the recoverable amount, an impairment loss must be recognized. If this is not the case, there is no change in the carrying amount of goodwill compared with the previous year. If the purchase price of the investment is less than the identifiable net assets, the difference is recognized in the income statement in the year of acquisition. Goodwill is accounted for at the subsidiaries in the functional currency of those subsidiaries. Any difference that arises from the acquisition of additional shares of an already consolidated subsidiary is taken directly to equity. Unless otherwise stated, the proportionate equity directly attributable to noncontrolling interests is determined at the acquisition date as the share of the fair value of the assets (excluding goodwill) and liabilities attributable to them. Contingent consideration is measured at fair value at the acquisition date. Subsequent changes in the fair value of contingent consideration do not generally result in the adjustment of the acquisition-date measurement. Acquisition-related costs that are not equity transaction costs are not added to the purchase price, but instead recognized as expenses in the period in which they are incurred.

The consolidation process involves adjusting the items in the separate financial statements of the parent and its subsidiaries and presenting them as if they were those of a single economic entity. Intragroup assets, liabilities, equity, income, expenses and cash flows are eliminated in full. Intercompany profits or losses are eliminated in Group inventories and noncurrent assets. Deferred taxes are recognized for consolidation adjustments, and deferred tax assets and liabilities are offset where taxes are levied by the same tax authority and relate to the same tax period.

## Currency translation

Transactions in foreign currencies are translated in the single-entity financial statements of Volkswagen AG and its consolidated subsidiaries at the rates prevailing at the transaction date. Foreign currency monetary items are recorded in the balance sheet using the middle rate at the closing date. Foreign exchange gains and losses are recognized in the income statement. This does not apply to foreign exchange differences from loans receivable that represent part of a net investment in a foreign operation. The financial statements of foreign companies are translated into euros using the functional currency concept, under which asset and liability items are translated at the closing rate. With the exception of income and expenses recognized directly in equity, equity is translated at historical rates. The resulting foreign exchange differences are recognized in other comprehensive income until disposal of the subsidiary concerned, and are presented as a separate item in equity.

Income statement items are translated into euros at weighted average rates.

The rates applied are presented in the following table:

	€1 =	BALANCE SHEET MIDDLE RATE ON DECEMBER 31		INCOME STATEMENT AVERAGE RATE	
		2016	2015	2016	2015
Argentina	ARS	16.80096	14.13514	16.33207	10.26074
Australia	AUD	1.46150	1.48970	1.48880	1.47648
Brazil	BRL	3.43720	4.31170	3.86217	3.69160
Canada	CAD	1.42280	1.51160	1.46659	1.41760
Czech Republic	CZK	27.02400	27.02300	27.03433	27.28500
India	INR	71.65500	72.02150	74.37058	71.17522
Japan	JPY	123.50000	131.07000	120.31663	134.28651
Mexico	MXN	21.84800	18.91450	20.66535	17.59984
People's Republic of China	CNY	7.33320	7.06080	7.35067	6.97300
Poland	PLN	4.41530	4.26390	4.36416	4.18278
Republic of Korea	KRW	1,269.11000	1,280.78000	1,284.79543	1,255.74059
Russia	RUB	64.67550	80.67360	74.23443	68.00684
South Africa	ZAR	14.48480	16.95300	16.28336	14.15280
Sweden	SEK	9.56720	9.18950	9.46712	9.35448
United Kingdom	GBP	0.85850	0.73395	0.81897	0.72600
USA	USD	1.05600	1.08870	1.10675	1.10963

## Accounting policies

### MEASUREMENT PRINCIPLES

With certain exceptions such as financial instruments at fair value through profit or loss, available-for-sale financial assets and provisions for pensions and other post-employment benefits, items in the Volkswagen Group are accounted for under the historical cost convention. The methods used to measure the individual items are explained in more detail below.

### INTANGIBLE ASSETS

Purchased intangible assets are recognized at cost and amortized over their useful life using the straight-line method. This relates in particular to software, which is amortized over three years.

In accordance with IAS 38, research costs are recognized as expenses when incurred.

Development costs for future series products and other internally generated intangible assets are capitalized at cost, provided manufacture of the products is likely to bring the Volkswagen Group an economic benefit. If the criteria for recognition as assets are not met, the expenses are recognized in the income statement in the year in which they are incurred.

Capitalized development costs include all direct and indirect costs that are directly attributable to the development process. The costs are amortized using the straight-line method from the start of production over the expected life cycle of the models or powertrains developed – generally between two and ten years.

Amortization recognized during the year is allocated to the relevant functions in the income statement.

Brand names from business combinations usually have an indefinite useful life and are therefore not amortized. An indefinite useful life is usually the result of a brand's further use and maintenance.

Goodwill, intangible assets with indefinite useful lives and intangible assets that are not yet available for use are tested for impairment at least once a year. Assets in use and other intangible assets with finite useful lives are tested for impairment only if there are specific indications that they may be impaired. The Volkswagen Group generally applies the higher of value in use and fair value less costs to sell of the relevant cash-generating unit (brands or products) to determine the recoverable amount of goodwill and indefinite-lived intangible assets. Measurement of value in use is based on management's current planning. This planning is based on expectations regarding future global economic trends and on assumptions derived from those trends about the markets for passenger cars and commercial vehicles, market shares and the profitability of the products. The planning for the Financial Services segment is likewise prepared on the basis of these expectations, and also reflects the relevant market penetration rates and regulatory requirements. The planning for the Power Engineering segment reflects expectations about trends in the various individual markets. The planning includes reasonable assumptions about macroeconomic trends (exchange rate, interest rate and commodity price trends) and historical developments. The planning period generally covers five years. For information on the assumptions applied to the detailed planning period, please refer to the Report on Expected Developments, which is part of the Management Report. For subsequent years, plausible assumptions are made regarding future trends. The planning assumptions are adapted to reflect the current state of knowledge.

Estimation of cash flows is generally based on the expected growth trends for the markets concerned. The estimates for the cash flows following the end of the planning period are generally based on a growth rate of up to 1% p.a. (previous year: up to 1% p.a.) in the Passenger Cars segment, and on a growth rate of up to 1% p.a. (previous year: up to 1% p.a.) in the Power Engineering and Commercial Vehicles segments.

Value in use is determined for the purpose of impairment testing of goodwill, indefinite-lived intangible assets and finite-lived intangible assets – mainly capitalized development costs – using the following pretax weighted average cost of capital (WACC) rates, which are adjusted if necessary for country-specific discount factors:

WACC	2016	2015
Passenger Cars segment	5.4%	6.5%
Commercial Vehicles segment	6.5%	7.7%
Power Engineering segment	7.7%	9.2%

The WACC rates are calculated based on the risk-free rate of interest, a market risk premium and the cost of debt. Additionally, specific peer group information on beta factors and leverage are taken into account. The composition of the peer groups used to determine beta factors is continuously reviewed and adjusted if necessary.

#### PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment is carried at cost less depreciation and – where necessary – write-downs for impairment. Investment grants are generally deducted from cost. Cost is determined on the basis of the direct and indirect costs that are directly attributable. Special tools are reported under other equipment, operating and office equipment. Property, plant and equipment is depreciated using the straight-line method over its estimated useful life. The useful lives of items of property, plant and equipment are reviewed on a regular basis and adjusted if required.

Depreciation is based mainly on the following useful lives:

	Useful life
Buildings	20 to 50 years
Site improvements	10 to 20 years
Technical equipment and machinery	6 to 12 years
Other equipment, operating and office equipment, including special tools	3 to 15 years

Impairment losses on property, plant and equipment are recognized in accordance with IAS 36 where the recoverable amount of the asset concerned has fallen below the carrying amount. Recoverable amount is the higher of value in use and fair value less costs to sell. Value in use is determined using the principles described for intangible assets. The discount rates for product-specific tools and investments are the same as the discount rates for capitalized development costs given above for each segment. If the reasons for impairments recognized in previous years no longer apply, the impairment losses are reversed up to a maximum of the amount that would have been determined if no impairment loss had been recognized.

In accordance with the principle of substance over form, assets that have been formally transferred to third parties under a sale and leaseback transaction including a repurchase option also continue to be accounted for as separate assets.

Where leased items of property, plant and equipment are used, the criteria for classification as a finance lease as set out in IAS 17 are met if all material risks and rewards incidental to ownership have been transferred to the Group company concerned. In such cases, the assets concerned are recognized at fair value or at the present value of the minimum lease payments (if lower) and depreciated using the straight-line method over the asset's useful life, or over the term of the lease if this is shorter. The payment obligations arising from the future lease payments are discounted and recorded as a liability in the balance sheet.

Where Group companies are the lessees of assets under operating leases, i.e. if not all material risks and rewards are transferred, lease and rental payments are recorded directly as expenses in profit or loss.

#### LEASE ASSETS

Vehicles leased out under operating leases are recognized at cost and depreciated to their estimated residual value using the straight-line method over the term of the lease. Impairment losses identified as a result of an impairment test in accordance with IAS 36 are recognized and the future depreciation rate is adjusted. The forecast residual values are adjusted to include constantly updated internal and external information on residual values, depending on specific local factors and the experiences gained in the marketing of used cars. This requires management to make assumptions in particular about vehicle supply and demand in the future, as well as about vehicle price trends. Such assumptions are based either on qualified estimates or on data published by external experts. Qualified estimates are based on external data – if available – that reflects additional information that is available internally, such as historical experience and current sales data.

#### INVESTMENT PROPERTY

Real estate and buildings held in order to obtain rental income (investment property) are carried at amortized cost; the useful lives applied to depreciation generally correspond to those of the property, plant and equipment used by the Company itself. The fair value of investment property must be disclosed in the notes if it is carried at amortized cost. Fair value is generally estimated using an investment method based on internal calculations. This involves determining the income value for a specific building on the basis of gross income, taking into account additional factors such as land value, remaining useful life and a multiplier specific to property.

#### CAPITALIZATION OF BORROWING COSTS

Borrowing costs that are directly attributable to the acquisition of qualifying assets on or after January 1, 2009 are capitalized as part of the cost of these assets. A qualifying asset is an asset that necessarily takes at least a year to get ready for its intended use or sale.

#### EQUITY-ACCOUNTED INVESTMENTS

The cost of equity-accounted investments is adjusted to reflect the share of increases or reductions in equity at the associates and joint ventures after the acquisition that is attributable to the Volkswagen Group, as well as any effects from purchase price allocation. Additionally, the investment is tested for impairment if there are indications of impairment and written down to the lower recoverable amount if necessary. The recoverable amount is determined using the principles described for indefinite-lived intangible assets. If the reason for impairment ceases to apply at a later date, the impairment loss is reversed to the carrying amount that would have been determined had no impairment loss been recognized.

#### FINANCIAL INSTRUMENTS

Financial instruments are contracts that give rise to a financial asset of one company and a financial liability or an equity instrument of another. Regular way purchases or sales of financial instruments are accounted for at the settlement date – that is, at the date on which the asset is delivered.

IAS 39 classifies financial assets into the following categories:

- > financial assets at fair value through profit or loss;
- > held-to-maturity financial assets;
- > loans and receivables; and
- > available-for-sale financial assets.

Financial liabilities are classified into the following categories:

- > financial liabilities at fair value through profit or loss; and
- > financial liabilities measured at amortized cost.

We recognize financial instruments at amortized cost or at fair value.

The amortized cost of a financial asset or liability is the amount:

- > at which a financial asset or liability is measured at initial recognition;
- > minus any principal repayments;
- > minus any write-down for impairment or uncollectibility;
- > plus or minus the cumulative amortization of any difference between the original amount and the amount repayable at maturity (premium, discount), amortized using the effective interest method over the term of the financial asset or liability.

In the case of current receivables and liabilities, amortized cost generally corresponds to the principal or repayment amount.

Fair value generally corresponds to the market or quoted market price. If no active market exists, fair value is determined using other observable inputs as far as possible. If no observable inputs are available, fair value is determined using valuation techniques, such as by discounting the future cash flows at the market interest rate, or by using recognized option pricing models, and, as far as possible, verified by confirmations from the banks that handle the transactions.

The fair value option for financial assets and financial liabilities is not used in the Volkswagen Group.

Financial assets and financial liabilities are generally presented at their gross amounts and only offset if the Volkswagen Group currently has a legally enforceable right to set off the amounts and intends to settle on a net basis.

Subsidiaries, associates and joint ventures that are not consolidated for reasons of materiality do not fall within the scope of IAS 39 and IFRS 7. Other equity investments that are required by IAS 39.46(c) to be measured at cost, net of any impairment losses to be recognized, are presented as “measured at fair value”.

#### LOANS AND RECEIVABLES AND FINANCIAL LIABILITIES

Loans, receivables and liabilities, as well as held-to-maturity financial assets, are measured at amortized cost, unless hedged. Specifically, these relate to:

- > receivables from financing business;
- > trade receivables and payables;



- > other receivables and financial assets and liabilities;
- > financial liabilities; and
- > cash, cash equivalents and time deposits.

#### AVAILABLE-FOR-SALE FINANCIAL ASSETS

Available-for-sale financial assets are either allocated specifically to this category or are financial assets that cannot be assigned to any other category.

Available-for-sale financial assets (debt instruments) are carried at fair value. Changes in fair value are recognized directly in equity, net of deferred taxes. Prolonged changes in the fair value of debt instruments (impairment losses, foreign exchange gains and losses, interest calculated using the effective interest method) are recognized in profit or loss.

Other equity investments (shares representing an ownership interest of less than 20% as a rule) are also classified as available-for-sale financial assets. They are recognized at cost in the consolidated financial statements if there is no active market for those shares and fair values cannot be reliably ascertained without undue cost or effort. The lower present value of the estimated future cash flows is recognized if there are indications of impairment. There is currently no intention to sell these financial assets. Foreign exchange gains and losses attributable to equity instruments are recognized in other comprehensive income.

#### DERIVATIVES AND HEDGE ACCOUNTING

Volkswagen Group companies use derivatives to hedge balance sheet items and future cash flows (hedged items). Appropriate derivatives such as swaps, forward transactions and options are used as hedging instruments. The criteria for the application of hedge accounting are that the hedging relationship between the hedged item and the hedging instrument is clearly documented and that the hedge is highly effective.

The accounting treatment of changes in the fair value of hedging instruments depends on the nature of the hedging relationship. In the case of hedges against the risk of change in the carrying amount of balance sheet items (fair value hedges), both the hedging instrument and the hedged risk portion of the hedged item are measured at fair value. Several risk portions of hedged items are grouped into a portfolio if appropriate. In the case of a fair value portfolio hedge, the changes in fair value are accounted for in the same way as for a fair value hedge of an individual underlying. Gains or losses from the remeasurement of hedging instruments and hedged items are recognized in profit or loss. In the case of hedges of future cash flows (cash flow hedges), the hedging instruments are also measured at fair value. Gains or losses from remeasurement of the effective portion of the derivative are initially recognized in the reserve for cash flow hedges directly in equity, and are only recognized in the income statement when the hedged item is recognized in profit or loss; the ineffective portion of a cash flow hedge is recognized immediately in profit or loss.

Derivatives used by the Volkswagen Group for financial management purposes to hedge against interest rate, foreign currency, commodity, or price risks, but that do not meet the strict hedge accounting criteria of IAS 39, are classified as financial assets or liabilities at fair value through profit or loss (also referred to below as derivatives not included in hedging relationships). This also applies to options on shares. External hedging instruments of intragroup hedged items that are subsequently eliminated in the consolidated financial statements are also assigned to this category as a general rule. Assets and liabilities measured at fair value through profit or loss consist of derivatives or components of derivatives that are not included in hedge accounting. These relate primarily to the interest component of currency forwards used to hedge sales revenue, commodity futures and currency forwards relating to commodity futures. Gains and losses from the remeasurement and settlement of financial instruments at fair value through profit or loss are reported in the financial result.

#### RECEIVABLES FROM FINANCE LEASES

Where a Group company is the lessor – generally of vehicles – a receivable in the amount of the net investment in the lease is recognized in the case of finance leases, in other words where substantially all the risks and rewards are transferred to the lessee.

#### OTHER RECEIVABLES AND FINANCIAL ASSETS

Other receivables and financial assets (except for derivatives) are recognized at amortized cost.

#### IMPAIRMENT LOSSES ON FINANCIAL INSTRUMENTS

Default risk on loans and receivables in the financial services business is accounted for by recognizing specific valuation allowances and portfolio-based valuation allowances.

More specifically, in the case of significant individual receivables (e.g. dealer finance receivables and fleet customer business receivables) specific valuation allowances are recognized in accordance with Group-wide standards in the amount of the incurred loss. A potential impairment is assumed in the case of a number of situations such as delayed payment over a certain period, the institution of enforcement measures, the threat of insolvency or overindebtedness, application for or the opening of bankruptcy proceedings, or the failure of reorganization measures.

Portfolio-based valuation allowances are recognized by grouping together insignificant receivables and significant individual receivables for which there is no indication of impairment into homogeneous portfolios on the basis of comparable credit risk features and allocating them by risk class. As long as no definite information is available as to which receivables are in default, average historical default probabilities for the portfolio concerned are used to calculate the amount of the valuation allowances.

As a matter of principle, specific valuation allowances are recognized on receivables outside the Financial Services segment.

Valuation allowances on receivables are regularly recognized in separate allowance accounts.

An impairment loss is recognized on available-for-sale financial assets if there is objective evidence of permanent impairment. In the case of equity instruments, evidence of impairment is taken to exist, among other things, if the fair value decreases below cost significantly (by more than 20%) or the decrease is prolonged (by more than 10% of the average market prices over one year). If impairment is identified, the cumulative loss is recognized in the reserve and charged to profit and loss. In the case of equity instruments, reversals of impairment losses are taken directly to equity. Impairment losses are recognized on debt instruments if a decrease in the future cash flows of the financial asset is expected. An increase in the risk-free interest rate or an increase in credit risk premiums is not in itself evidence of impairment.

#### DEFERRED TAXES

Deferred tax assets are generally recognized for tax-deductible temporary differences between the tax base of assets and their carrying amounts in the consolidated balance sheet, as well as on tax loss carryforwards and tax credits provided it is probable that they can be used in future periods. Deferred tax liabilities are generally recognized for all taxable temporary differences between the tax base of liabilities and their carrying amounts in the consolidated balance sheet.

Deferred tax liabilities and assets are recognized in the amount of the expected tax liability or tax benefit, as appropriate, in subsequent fiscal years, based on the expected enacted tax rate at the time of realization. The tax consequences of dividend payments are generally not taken into account until the resolution on appropriation of earnings available for distribution has been adopted.

Deferred tax assets that are unlikely to be realized within a clearly predictable period are reduced by valuation allowances.

Deferred tax assets for tax loss carryforwards are usually measured on the basis of future taxable income over a planning period of five fiscal years.

Deferred tax assets and deferred tax liabilities are offset where taxes are levied by the same taxation authority and relate to the same tax period.

#### INVENTORIES

Raw materials, consumables and supplies, merchandise, work in progress and self-produced finished goods reported in inventories are carried at the lower of cost or net realizable value. Cost is determined on the basis of the direct and indirect costs that are directly attributable. Borrowing costs are not capitalized. The measurement of same or similar inventories is generally based on the weighted average cost method.

#### NONCURRENT ASSETS HELD FOR SALE AND DISCONTINUED OPERATIONS

Under IFRS 5, noncurrent assets or groups of assets and liabilities (disposal groups) are classified as held for sale if their carrying amounts will be recovered principally through a sale transaction rather than through continuing use. Such assets are carried at the lower of their carrying amount and fair value less costs to sell, and are presented separately in current assets and liabilities in the balance sheet.

Discontinued operations are components of an entity that have either been disposed of or are classified as held for sale. The assets and liabilities of operations that are held for sale represent disposal groups that must be measured and reported using the same principles as noncurrent assets held for sale. The income and expenses from discontinued operations are presented in the income statement as profit or loss from discontinued operations below the profit or loss from continuing operations. Corresponding disposal gains or losses are contained in the profit or loss from discontinued operations. The prior-year figures in the income statement are adjusted accordingly.

#### PENSION PROVISIONS

The actuarial valuation of pension provisions is based on the projected unit credit method stipulated by IAS 19 for defined benefit plans. The valuation is not only based on pension payments and vested entitlements known at the balance sheet date, but also reflects future salary and pension trends, as well as experience-based staff turnover rates. Remeasurements are recognized in retained earnings in other comprehensive income, net of deferred taxes.

#### PROVISIONS FOR TAXES

Tax provisions contain obligations resulting from current taxes. Deferred taxes are presented in separate items of the balance sheet and income statement. Provisions are recognized for potential tax risks on the basis of the best estimate of the liability.

#### OTHER PROVISIONS

In accordance with IAS 37, provisions are recognized where a present obligation exists to third parties as a result of a past event, where a future outflow of resources is probable and where a reliable estimate of that outflow can be made.

Provisions not resulting in an outflow of resources in the year immediately following are recognized at their settlement value discounted to the balance sheet date. Discounting is based on market interest rates. An average discount rate of 0.04% (previous year: 0.45%) was used in the eurozone. The settlement value also reflects cost increases expected at the balance sheet date.

Provisions are not offset against claims for reimbursement.

We recognize insurance contracts that form part of the insurance business in accordance with IFRS 4. Reinsurance acceptances are accounted for without any time delay in the year in which they arise. Provisions are generally recognized based on the cedants' contractual duties. Estimation techniques based on assumptions about future changes in claims are used to calculate the claims provision. Other technical provisions relate to the provision for cancellations.

The share of the provisions attributable to reinsurers is calculated in accordance with the contractual agreements with the retrocessionaries and reported under other assets.

#### CONTINGENT LIABILITIES

If the criteria for recognizing a provision are not met, but the outflow of financial resources is not improbable, such obligations are disclosed in the notes to the consolidated financial statements (see the "Contingent liabilities" section). Contingent liabilities are only recognized if the obligations are more certain, i.e. the outflow of financial resources has become probable and their amount can be reliably estimated.

#### LIABILITIES

Noncurrent liabilities are recorded at amortized cost in the balance sheet. Differences between historical cost and the repayment amount are amortized using the effective interest method.

Liabilities to members of partnerships from puttable shares are recognized in the income statement at the present value of the redemption amount at the balance sheet date.

Liabilities under finance leases are carried at the present value of the lease payments.

Current liabilities are recognized at their repayment or settlement value.

#### REVENUE AND EXPENSE RECOGNITION

Sales revenue, interest and commission income from financial services and other operating income are recognized only when the relevant service has been rendered or the goods have been delivered, that is, when the risk has passed to the customer, the amount of sales revenue can be reliably determined and settlement of the amount can be assumed. Revenue is reported net of sales allowances (discounts, rebates, or customer bonuses). Sales revenue from financing and lease agreements is recognized using the effective interest method. If non-interest-bearing or low-interest vehicle financing arrangements are agreed, sales revenue is reduced by the interest benefits granted. Customer financing and finance lease income is determined using the effective interest method and recognized under sales revenue. Sales revenue from extended warranties or maintenance agreements is recognized when deliveries take place or services are rendered. In the case of prepayments, deferred income is recognized proportionately by reference to the costs expected to be incurred, based on experience. Revenue is recognized on a straight-line basis if there is insufficient experience. If the expected costs exceed the accrued sales revenue, a loss is recognized from these agreements.

If a contract comprises several separately identifiable components (multiple-element arrangements), these components are recognized separately in accordance with the principles outlined above.

Income from assets for which a Group company has a buy-back obligation is recognized only when the assets have definitively left the Group. If a fixed repurchase price was agreed when the contract was entered into, the difference between the selling price and the present value of the repurchase price is recognized as income ratably over the term of the contract. Prior to that time, the assets are carried as inventories in the case of short contract terms and as lease assets in the case of long contract terms.

Cost of sales includes the costs incurred to generate the sales revenue and the cost of goods purchased for resale. This item also includes the costs of additions to warranty provisions. Research and development costs not eligible for capitalization in the period and amortization of development costs are likewise carried under cost of sales. Reflecting the presentation of interest and commission income in sales revenue, the interest and commission expenses attributable to the financial services business are presented in cost of sales.

Construction contracts are recognized using the percentage of completion (PoC) method, under which revenue and cost of sales are recognized by reference to the stage of completion at the end of the reporting period, based on the contract revenue agreed with the customer and the expected contract costs. As a rule, the stage of completion is determined as the proportion that contract costs incurred by the end of the reporting period bear to the estimated total contract costs (cost-to-cost method). In certain cases, in particular those involving innovative, complex contracts, the stage of completion is measured using contractually agreed milestones (milestone method). If the outcome of a construction contract cannot yet be estimated reliably, contract revenue is recognized only in the amount of the contract costs incurred to date (zero profit method). In the balance sheet, contract components whose revenue is recognized using the percentage of completion method are reported as trade receivables, net of prepayments received. Expected losses from construction contracts are recognized immediately in full as expenses by recognizing impairment losses on recognized contract assets, and additionally by recognizing provisions for amounts in excess of the impairment losses.

Dividend income is recognized on the date when the dividend is legally approved.

#### GOVERNMENT GRANTS

Government grants related to assets are deducted when arriving at the carrying amount of the asset and are recognized in profit or loss over the life of the depreciable asset as a reduced depreciation expense. If the Group becomes entitled to a grant subsequently, the amount of the grant attributable to prior periods is recognized in profit or loss.

Government grants related to income, i.e. that compensate the Group for expenses incurred, are recognized in profit or loss for the period in those items in which the expenses to be compensated by the grants are also recognized. Grants in the form of nonmonetary assets (e.g. the use of land free of charge or the transfer of resources free of charge) are disclosed as a memo item.

#### ESTIMATES AND ASSUMPTIONS BY MANAGEMENT

Preparation of the consolidated financial statements requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities, and income and expenses, as well as the related disclosure of contingent assets and liabilities of the reporting period. The estimates and assumptions relate largely to the following matters:

The impairment testing of nonfinancial assets (especially goodwill, brand names, capitalized development costs and special tools) and equity-accounted investments, or investments accounted at cost, and the measurement of options on shares in companies that are not traded in an active market require assumptions about the future cash flows during the planning period, and possibly beyond it, as well as about the discount rate to be applied. The estimates made in order to separate cash flows mainly relate to future market shares, the trend in the respective markets and the profitability of the Volkswagen Group's products. In addition, the recoverability of the Group's lease assets depends in particular on the residual value of the leased vehicles after expiration of the lease term, because this represents a significant portion of the expected cash flows. More detailed information on impairment tests and the measurement parameters used for those tests can be found in the explanations on the accounting policies for intangible assets.

If there are no observable market inputs, the fair values of assets acquired and liabilities assumed in a business combination are measured using recognized valuation techniques, such as the relief-from-royalty method or the residual method.

Impairment testing of financial assets requires estimates about the extent and probability of occurrence of future events. As far as possible, estimates are derived from past experience taking into account current market data as well as rating categories and scoring information. In the case of financial services receivables, both specific and portfolio-based valuation allowances are recognized. The more detailed balance sheet disclosures on IFRS 7 (Financial Instruments) contain an overview of these specific and portfolio-based valuation allowances.

Accounting for provisions is also based on estimates of the extent and probability of occurrence of future events, as well as estimates of the discount rate. As far as possible, these are also based on past experience or external opinions. The assumptions applied in the measurement of pension provisions are described in the "Provisions for pensions and other post-employment benefits" section. Remeasurements are recognized in other comprehensive income and do not affect profit or loss reported in the income statement. Any change in the estimates of the amount of other provisions is always recognized in profit or loss. The provisions are regularly adjusted to reflect new information obtained. The use of expected values means that additional amounts must frequently be recognized for provisions, or that unused provisions are reversed. Reversals of provisions are recognized as other operating income, whereas expenses relating to the recognition of provisions are allocated directly to the functions. Warranty claims from sales transactions are calculated on the basis of losses to date, estimated future losses and the policy on ex gratia arrangements. This requires assumptions to be made about the nature and extent of future guarantee and ex gratia claims. Assumptions were made in respect of the warranty provisions recognized in connection with the diesel issues. These depend on the series, model year and country concerned and relate in particular to the effort, material costs and hourly wage rates involved, or to vehicle values in the case of repurchases. They are based on qualified estimates, which

are based in turn on external data, and also reflect additional information available internally, such as values derived from past experience. An overview of other provisions can be found in the “Noncurrent and current other provisions” section. Further information on the legal proceedings and on the legal risks associated with the diesel issue can be found in the “Litigation” section. The put options and compensation rights of free float shareholders recognized within liabilities depend in particular on the outcome of the MAN award proceedings. The liability was based on estimates of the length of the award proceedings and the amount of the put options and compensation rights. The length was estimated based on the fact that proceedings take seven years on average. The amount of the put options and compensation rights of MAN’s free float shareholders is derived from the cash settlement in accordance with section 305 of the Aktiengesetz (AktG – German Stock Corporation Act). The cash settlement payable was adjusted in the previous year due to the ruling by the Munich Regional Court.

Government grants are recognized based on an assessment as to whether there is reasonable assurance that the Group companies will fulfill the attached conditions and the grants will be awarded. This assessment is based on the nature of the legal entitlement and past experience.

Estimates of the useful life of finite-lived assets are based on past experience and are reviewed regularly. Where estimates are modified the residual useful life is adjusted and an impairment loss is recognized, if necessary.

Measuring deferred tax assets requires assumptions regarding future taxable income and the timing of the realization of deferred tax assets.

The estimates and assumptions are based on underlying assumptions that reflect the current state of available knowledge. Specifically, the expected future development of business was based on the circumstances known at the date of preparation of these consolidated financial statements and a realistic assessment of the future development of the global and sector-specific environment. Our estimates and assumptions remain subject to a high degree of uncertainty because future business developments are subject to uncertainties that in part cannot be influenced by the Group. This applies in particular to short- and medium-term cash flow forecasts and to the discount rates used.

Developments in this environment that differ from the assumptions and that cannot be influenced by management could result in amounts that differ from the original estimates. If actual developments differ from the expected developments, the underlying assumptions and, if necessary, the carrying amounts of the assets and liabilities affected are adjusted.

The moderate global economic growth slowed to 2.5% in fiscal year 2016. Our planning assumes that the global economy will grow at a rather stronger pace in 2017 than it did in the previous year. As a result, from today’s perspective, we are not expecting material adjustments in the following fiscal year in the carrying amounts of the assets and liabilities reported in the consolidated balance sheet.

Estimates and assumptions by management were based in particular on assumptions relating to the development of the general economic environment, the automotive markets and the legal environment. These and further assumptions are explained in detail in the Report on Expected Developments, which is part of the Group Management Report.

## Segment reporting

Segments are identified on the basis of the Volkswagen Group's internal management and reporting. In line with the Group's multibrand strategy, each of its brands (operating segments) is managed by its own board of management. The Group targets and requirements laid down by the Board of Management of Volkswagen AG must be complied with. Segment reporting comprises four reportable segments: Passenger Cars, Commercial Vehicles, Power Engineering and Financial Services.

The activities of the Passenger Cars segment cover the development of vehicles and engines, the production and sale of passenger cars, and the corresponding genuine parts business. Given the high degree of technological and economic interlinking in the production network of the individual brands, the Passenger Cars reporting segment combines the Volkswagen Group's individual car brands to a single reportable segment. Furthermore, there is a collaboration within key areas such as procurement, research and development or treasury.

The Commercial Vehicles segment primarily comprises the development, production and sale of light commercial vehicles, trucks and buses, the corresponding genuine parts business and related services. Just as in the case of the car brands, there is a collaboration within the areas procurement, development and sale. The aim is to achieve other forms of interlinking.

The activities of the Power Engineering segment consist of the development and production of large-bore diesel engines, turbo compressors, industrial turbines and chemical reactor systems, as well as the production of gear units, propulsion components and testing systems.

The activities of the Financial Services segment comprise dealer and customer financing, leasing, banking and insurance activities, fleet management and mobility services. In this segment, combinations occur especially while taking into account the comparability of the type of services as well as the regulatory situation permits.

Purchase price allocation for companies acquired is allocated directly to the corresponding segments.

At Volkswagen, segment profit or loss is measured on the basis of the operating result.

In the segment reporting, the share of the profits or losses of joint ventures is contained in the share of profits and losses of equity-accounted investments in the corresponding segments.

The reconciliation contains activities and other operations that by definition do not constitute segments. It also includes the unallocated Group financing activities. Consolidation adjustments between the segments are also contained in the reconciliation.

Investments in intangible assets, property, plant and equipment, and investment property are reported net of investments under finance leases.

As a matter of principle, business relationships between the companies within the segments of the Volkswagen Group are transacted at arm's length prices.

## REPORTING SEGMENTS 2015

€ million	Passenger Cars	Commercial Vehicles	Power Engineering	Financial Services	Total segments	Reconciliation	Volkswagen Group
Sales revenue from external customers	158,533	24,382	3,769	26,416	213,100	192	213,292
Intersegment sales revenue	16,170	6,063	6	2,940	25,180	-25,180	-
Total sales revenue	174,703	30,445	3,775	29,357	238,279	-24,987	213,292
Depreciation and amortization	10,389	2,162	360	5,543	18,455	-136	18,319
Impairment losses	635	38	10	636	1,319	38	1,357
Reversal of impairment losses	16	1	-	3	20	1	21
Segment profit or loss (operating profit or loss)	-4,874	586	123	2,236	-1,929	-2,139	-4,069
Share of profits and losses of equity-accounted investments	4,129	10	6	21	4,166	221	4,387
Net interest income and other financial result	-1,273	-565	-10	75	-1,773	153	-1,620
Equity-accounted investments	8,032	397	-	525	8,954	1,950	10,904
Investments in intangible assets, property, plant and equipment, and investment property	15,085	2,426	198	476	18,185	50	18,234

## REPORTING SEGMENTS 2016

€ million	Passenger Cars	Commercial Vehicles	Power Engineering	Financial Services	Total segments	Reconciliation	Volkswagen Group
Sales revenue from external customers	160,461	25,385	3,590	27,884	217,320	-54	217,267
Intersegment sales revenue	17,354	6,695	3	3,367	27,418	-27,418	-
Total sales revenue	177,815	32,080	3,593	31,251	244,739	-27,472	217,267
Depreciation and amortization	10,846	2,293	368	6,224	19,731	-159	19,572
Impairment losses	886	126	3	491	1,506	-137	1,368
Reversal of impairment losses	152	0	-	92	245	-139	106
Segment profit or loss (operating profit or loss)	5,235	718	-217	2,435	8,171	-1,068	7,103
Share of profits and losses of equity-accounted investments	3,147	25	-	64	3,236	261	3,497
Net interest income and other financial result	-1,674	-379	-8	-91	-2,152	-1,157	-3,308
Equity-accounted investments	7,349	418	-	849	8,616	-	8,616
Investments in intangible assets, property, plant and equipment, and investment property	15,891	2,433	194	357	18,875	27	18,902



## RECONCILIATION

€ million	2016	2015
<b>Segment sales revenue</b>	<b>244,739</b>	<b>238,279</b>
Unallocated activities	749	984
Group financing	42	43
Consolidation	-28,263	-26,014
<b>Group sales revenue</b>	<b>217,267</b>	<b>213,292</b>
<b>Segment profit or loss (operating profit or loss)</b>	<b>8,171</b>	<b>-1,929</b>
Unallocated activities	86	161
Group financing	22	49
Consolidation	-1,176	-2,349
<b>Operating result</b>	<b>7,103</b>	<b>-4,069</b>
<b>Financial result</b>	<b>189</b>	<b>2,767</b>
<b>Consolidated result before tax</b>	<b>7,292</b>	<b>-1,301</b>

## BY REGION 2015

€ million	Germany	Europe/Other markets*	North America	South America	Asia- Pacific	Total
Sales revenue from external customers	42,248	90,287	35,384	10,148	35,225	213,292
Intangible assets, property, plant and equipment, lease assets and investment property	81,711	34,824	22,595	2,658	3,207	144,994

\* Excluding Germany.

## BY REGION 2016

€ million	Germany	Europe/Other markets*	North America	South America	Asia- Pacific	Total
Sales revenue from external customers	43,634	94,445	35,454	7,973	35,761	217,267
Intangible assets, property, plant and equipment, lease assets and investment property	84,525	40,717	23,958	3,320	3,064	155,583

\* Excluding Germany.

Allocation of sales revenue to the regions follows the destination principle.

## Income statement disclosures

### 1. Sales revenue

#### STRUCTURE OF GROUP SALES REVENUE

€ million	2016	2015
Vehicles*	137,293	138,903
Genuine parts	15,220	14,625
Used vehicles and third-party products*	13,324	12,193
Engines, powertrains and parts deliveries	9,770	8,763
Power Engineering	3,590	3,769
Motorcycles	589	564
Leasing business	22,306	20,085
Interest and similar income	6,695	6,755
Other sales revenue	8,481	7,635
	<b>217,267</b>	<b>213,292</b>

\* Prior-year figures adjusted.

For segment reporting purposes, the sales revenue of the Group is presented by segment and market.

Other sales revenue comprises revenue from workshop services and license revenue, among other things.

Sales revenue from construction contracts amounted to €1,069 million (previous year: €1,206 million) and mainly related to the Power Engineering segment.

To ensure that sales revenue from company vehicles is presented consistently, sales revenue from vehicles was reclassified to sales revenue from used vehicles and third-party products. Prior-year figures have been adjusted accordingly.

### 2. Cost of sales

Cost of sales includes interest expenses of €1,930 million (previous year: €1,868 million) attributable to the financial services business. This item also includes impairment losses on intangible assets (primarily development costs), property, plant and equipment (primarily other equipment, operating and office equipment), and lease assets in the amount of €1,369 million (previous year: €1,391 million). The impairment losses amounting to a total of €883 million recognized during the reporting period on intangible assets and items of property, plant and equipment result in particular from lower values in use of various products in the Passenger Cars segment, from market and exchange rate risks, and in particular from expected declines in volumes. The impairment losses on lease assets in the amount of €486 million (including €31 million reported in current lease assets), which are attributable predominantly to the Financial Services segment, are based on constantly updated internal and external information that is factored into the forecast residual values of the vehicles.

Government grants related to income amounted to €435 million in the fiscal year (previous year: €409 million) and were generally allocated to the functions.

### 3. Distribution expenses

Distribution expenses amounting to €22,700 million (previous year: €23,515 million) include nonstaff overheads and personnel costs, and depreciation and amortization applicable to the distribution function, as well as the costs of shipping, advertising and sales promotions. Please refer to the “Key events” section for information on the sales-related measures taken in connection with the diesel issue.

### 4. Administrative expenses

The administrative expenses of €7,336 million (previous year: €7,197 million) mainly include nonstaff overheads and personnel costs, as well as depreciation and amortization applicable to the administrative function.

### 5. Other operating income

€ million	2016	2015
Income from reversal of valuation allowances on receivables and other assets	847	737
Income from reversal of provisions and accruals	3,738	2,871
Income from foreign currency hedging derivatives	1,739	1,560
Income from foreign exchange gains	2,842	3,859
Income from sale of promotional material	440	427
Income from cost allocations	1,222	1,308
Income from investment property	14	10
Gains on asset disposals and the reversal of impairment losses	363	188
Miscellaneous other operating income	1,843	1,945
	<b>13,049</b>	<b>12,905</b>

The increase in income from the reversal of provisions and accrued liabilities mainly results from unutilized provisions for legal risks and sales-related measures in connection with the diesel issue. Foreign exchange gains mainly comprise gains from changes in exchange rates between the dates of recognition and payment of receivables and liabilities denominated in foreign currencies, as well as exchange rate gains resulting from measurement at the closing rate. Foreign exchange losses from these items are included in other operating expenses.

## 6. Other operating expenses

€ million	2016	2015
Valuation allowances on receivables and other assets	1,787	1,674
Losses from foreign currency hedging derivatives	2,964	5,083
Foreign exchange losses	3,077	3,260
Expenses from cost allocations	542	695
Expenses for termination agreements	424	502
Losses on disposal of noncurrent assets	144	106
Miscellaneous other operating expenses	7,970	8,853
	<b>16,907</b>	<b>20,171</b>

Miscellaneous other operating expenses include litigation expenses of €5.1 billion (previous year: €7.0 billion) in connection with the diesel issue as well as provisions of €0.4 billion for the antitrust proceedings that the European Commission opened against European truck manufacturers including MAN and Scania. The expenses for termination agreements result primarily from the restructuring expenses for the South American market and at MAN. In addition, the changes in the currency hedging derivatives are due to the exchange rate changes between the trade price and the price on realization; this applies in particular to the US dollar, the Chinese renminbi and sterling.

## 7. Share of profits and losses of equity-accounted investments

€ million	2016	2015
Share of profits of equity-accounted investments	3,563	4,417
of which: from joint ventures	(3,534)	(4,389)
of which: from associates	(29)	(28)
Share of losses of equity-accounted investments	66	30
of which: from joint ventures	-	(19)
of which: from associates	(66)	(11)
	<b>3,497</b>	<b>4,387</b>

## 8. Finance costs

€ million	2016	2015
Other interest and similar expenses	1,330	1,272
Interest cost included in lease payments	29	22
<b>Interest expenses</b>	<b>1,359</b>	<b>1,294</b>
<b>Realized expenses of loan receivables and payables in foreign currency</b>	<b>810</b>	<b>333</b>
Net interest on the net defined benefit liability	731	690
Interest cost on other liabilities	347	77
<b>Interest cost on liabilities</b>	<b>1,078</b>	<b>767</b>
<b>Finance costs</b>	<b>3,247</b>	<b>2,393</b>

The recognized foreign currency expenses presented in the “Other interest and similar expenses” item in previous years are presented separately in fiscal year 2016. The prior-year amounts have been reclassified accordingly.

## 9. Other financial result

€ million	2016	2015
Income from profit and loss transfer agreements	33	29
Cost of loss absorption	24	18
Other income from equity investments	110	1,594
Other expenses from equity investments	155	181
Income from marketable securities and loans*	-35	148
Realized income of loan receivables and payables in foreign currency	882	198
Other interest and similar income	642	780
Gains and losses from remeasurement and impairment of financial instruments	-303	-1,173
Gains and losses from fair value changes of derivatives not included in hedge accounting	-1,148	-637
Gains and losses from fair value changes of derivatives included in hedge accounting	-63	34
<b>Other financial result</b>	<b>-61</b>	<b>773</b>

\* Including disposal gains/losses.

The recognized foreign currency income presented in the “Other interest and similar income” item in previous years is presented separately in fiscal year 2016. The prior-year amounts have been reclassified accordingly.

The decrease in other income from equity investments is primarily due to the sale of the equity interest in Suzuki in the previous year. The change in gains and losses from remeasurement and impairment of financial instruments is largely the result of changes in the exchange rates for receivables and liabilities denominated in foreign currency and, in the previous year, negative remeasurement effects connected with put options and compensation rights granted to noncontrolling interest shareholders. Please see the section entitled “Put options and compensation rights granted to noncontrolling interest shareholders”.

## 10. Income tax income/expense

### COMPONENTS OF TAX INCOME AND EXPENSE

€ million	2016	2015
Current tax expense, Germany	885	812
Current tax expense, abroad	2,388	2,047
<b>Current income tax expense</b>	<b>3,273</b>	<b>2,859</b>
of which prior-period income (-)/expense (+)	(188)	(142)
Deferred tax income (-)/expense (+), Germany	-736	-2,075
Deferred tax income (-)/expense (+), abroad	-625	-725
<b>Deferred tax income (-)/expense (+)</b>	<b>-1,361</b>	<b>-2,800</b>
<b>Income tax income/expense</b>	<b>1,912</b>	<b>59</b>

The statutory corporation tax rate in Germany for the 2016 assessment period was 15%. Including trade tax and the solidarity surcharge, this resulted in an aggregate tax rate of 29.9% (previous year: 29.8%).

A tax rate of 29.9% (previous year: 29.8%) was used to measure deferred taxes in the German consolidated tax group.

The local income tax rates applied for companies outside Germany vary between 0% and 45%. In the case of split tax rates, the tax rate applicable to undistributed profits is applied.

The realization of tax benefits from tax loss carryforwards from previous years resulted in a reduction in current income taxes in 2016 of €146 million (previous year: €302 million).

Previously unused tax loss carryforwards amounted to €17,686 million (previous year: €18,407 million). Tax loss carryforwards amounting to €11,494 million (previous year: €12,663 million) can be used indefinitely, while €4,237 million (previous year: €4,120 million) must be used within the next ten years. There are additional tax loss carryforwards amounting to €1,956 million (previous year: €1,624 million) that can be used within a period of 15 or 20 years. Tax loss carryforwards of €6,380 million (previous year: €10,478 million) were estimated not to be usable overall. Of these, €276 million (previous year: €398 million) will expire within five years, €2,341 million (previous year: €3,169 million) within 6 to 20 years and €38 million (previous year: €131 million) after more than 20 years. Tax loss carryforwards of €3,725 million (previous year: €6,779 million) that are estimated not to be usable will not expire.

The benefit arising from previously unrecognized tax losses or tax credits of a prior period that is used to reduce current tax expense in the current fiscal year amounts to €135 million (previous year: €50 million). Deferred tax expense was reduced by €211 million (previous year: €110 million) because of a benefit arising from previously unrecognized tax losses and tax credits of a prior period. Deferred tax expense resulting from the write-down of a deferred tax asset amounts to €297 million (previous year: €68 million). Deferred tax income resulting from the reversal of a write-down of deferred tax assets amounts to €304 million (previous year: €212 million).

Tax credits granted by various countries amounted to €756 million (previous year: €800 million).

No deferred tax assets were recognized for deductible temporary differences of €1,533 million (previous year: €1,643 million) and for tax credits of €353 million (previous year: €439 million) that would expire in the next 20 years, or for tax credits of €65 million (previous year: €14 million) that will not expire.

In accordance with IAS 12.39, deferred tax liabilities of €326 million (previous year: €193 million) for temporary differences and undistributed profits of Volkswagen AG subsidiaries were not recognized because control exists.

Due to the change in the statutory provisions in Germany, a refund claim for corporation tax was recognized as a current tax asset for the first time in fiscal year 2006. The present value of the refund claim was €134 million (previous year: €259 million) at the balance sheet date.

Deferred tax expense resulting from changes in tax rates amounted to €120 million at Group level (previous year: €2 million income).

Deferred taxes in respect of temporary differences and tax loss carryforwards of €9,890 million (previous year: €8,466 million) were recognized without being offset by deferred tax liabilities in the same amount. The deferred tax assets of companies within the German tax group were recognized due to positive results in the past and are included in this analysis. The companies concerned are expecting positive tax income in the future, following losses in the reporting period or the previous year.

€5,486 million (previous year: €5,320 million) of the deferred taxes recognized in the balance sheet was credited to equity and relates to other comprehensive income. €3 million (previous year: €2 million) of this figure is attributable to noncontrolling interests. There were effects from capital transactions with noncontrolling interest shareholders in the prior-year period. Changes in deferred taxes classified by balance sheet item are presented in the statement of comprehensive income.

In the previous year, tax effects of €11 million resulting from equity transaction costs were recognized in equity.

#### DEFERRED TAXES CLASSIFIED BY BALANCE SHEET ITEM

The following recognized deferred tax assets and liabilities were attributable to recognition and measurement differences in the individual balance sheet items and to tax loss carryforwards:

€ million	DEFERRED TAX ASSETS		DEFERRED TAX LIABILITIES	
	Dec. 31, 2016	Dec. 31, 2015	Dec. 31, 2016	Dec. 31, 2015
Intangible assets	302	306	9,884	9,570
Property, plant and equipment, and lease assets	4,387	3,946	8,315	7,152
Noncurrent financial assets	26	24	24	23
Inventories	2,223	1,882	792	744
Receivables and other assets (including Financial Services Division)	2,107	1,577	7,273	7,188
Other current assets	2,768	3,029	92	148
Pension provisions	6,776	5,121	22	31
Liabilities and other provisions	10,746	11,532	2,750	2,241
Valuation allowances on deferred tax assets from temporary differences	-368	-330	-	-
Temporary differences, net of valuation allowances	28,967	27,087	29,152	27,097
Tax loss carryforwards, net of valuation allowances	3,365	2,455	-	-
Tax credits, net of valuation allowances	337	347	-	-
<b>Value before consolidation and offset</b>	<b>32,670</b>	<b>29,889</b>	<b>29,152</b>	<b>27,097</b>
of which noncurrent	(21,736)	(19,050)	(23,681)	(22,062)
Offset	25,198	24,110	25,198	24,110
Consolidation	2,284	2,248	791	1,446
<b>Amount recognized</b>	<b>9,756</b>	<b>8,026</b>	<b>4,745</b>	<b>4,433</b>

In accordance with IAS 12, deferred tax assets and liabilities are offset if, and only if, they relate to income taxes levied by the same taxation authority and relate to the same tax period.

The tax expense reported for 2016 of €1,912 million (previous year: €59 million) was €268 million lower (previous year: €447 million higher) than the expected tax expense of €2,180 million that would have resulted from application of a tax rate for the Group of 29.9% (previous year: 29.8%) to the earnings before tax of the Group.

## RECONCILIATION OF EXPECTED TO EFFECTIVE INCOME TAX

€ million	2016	2015
Earnings before tax	7,292	-1,301
<b>Expected income tax income (-) / expense (+)</b> <b>(tax rate 29.9%; previous year: 29.8%)</b>	<b>2,180</b>	<b>-388</b>
Reconciliation:		
Effect of different tax rates outside Germany	-446	-386
Proportion of taxation relating to:		
tax-exempt income	-1,226	-1,976
expenses not deductible for tax purposes	409	2,155
effects of loss carryforwards and tax credits	35	155
permanent differences	12	43
Tax credits	-137	-84
Prior-period tax expense	234	46
Effect of tax rate changes	139	-2
Nondeductible withholding tax	437	439
Other taxation changes	275	57
<b>Effective income tax expense</b>	<b>1,912</b>	<b>59</b>

## 11. Earnings per share

Basic earnings per share are calculated by dividing earnings attributable to Volkswagen AG shareholders by the weighted average number of ordinary and preferred shares outstanding during the reporting period. Since the basic and diluted number of shares is identical, basic earnings per share also correspond to diluted earnings per share. Article 27(2) No. 1 of the Articles of Association of Volkswagen AG sets out that, even in the event of a deficit, a preferred dividend of €0.11 per preferred share must be paid out in the subsequent fiscal years based on the cumulative arrangement if no dividend is paid for the year under review; consequently, this must be factored into the calculation of earnings per share for the current fiscal year. The dividend proposal that is based on Volkswagen AG's net income for the year under the German Commercial Code is not relevant for the calculation of earnings per share in accordance with IAS 33. The distribution of further dividends in accordance with Article 27(2) Nos. 2 and 3 of the Articles of Association of Volkswagen AG, whereby, in the case of a full distribution, the dividend paid for each preferred share is €0.06 higher than that paid for each ordinary share, is only included in the calculation of earnings per share if there is a profit after tax attributable to the shareholders of Volkswagen AG.

In 2012 and 2013, Volkswagen AG placed two mandatory convertible notes with identical features and an aggregate principal amount of €3.7 billion via a subsidiary, the Volkswagen Finance N.V. Amsterdam (issuer). These notes matured on November 9, 2015. The terms and conditions of the notes provided for early conversion options and the exercise of such options in the prior-year period resulted in the creation of 27,091 new preferred shares. Under the note terms and conditions, the mandatory convertible notes were required to be settled by issuing new preferred shares no later than at maturity. On the maturity date (November 9, 2015), the outstanding volume of the two notes was converted by the issuer as required under the terms and conditions, resulting in the creation of 25,536,876 new preferred shares.



Quantity	ORDINARY		PREFERRED	
	2016	2015	2016	2015
Weighted average number of shares outstanding – basic	295,089,818	295,089,818	206,205,445	206,205,445
Weighted average number of shares outstanding – diluted	295,089,818	295,089,818	206,205,445	206,205,445

€ million	2016	2015
Earnings after tax	5,379	-1,361
Noncontrolling interests	10	10
Earnings attributable to Volkswagen AG hybrid capital investors	225	212
Earnings attributable to Volkswagen AG shareholders	5,144	-1,582
Basic earnings attributable to ordinary shares	3,021	-945
Diluted earnings attributable to ordinary shares	3,021	-945
Basic earnings attributable to preferred shares	2,123	-637
Diluted earnings attributable to preferred shares	2,123	-637

€	2016	2015
Basic earnings per ordinary share	10.24	-3.20
Diluted earnings per ordinary share	10.24	-3.20
Basic earnings per preferred share	10.30	-3.09
Diluted earnings per preferred share	10.30	-3.09

## Additional Income Statement Disclosures in accordance with IAS 23 (Borrowing Costs)

Capitalized borrowing costs amounted to €83 million (previous year: €78 million) and related mainly to capitalized development costs. An average cost of debt of 1.5% (previous year: 1.8%) was used as a basis for capitalization in the Volkswagen Group.

## Additional Income Statement Disclosures in accordance with IFRS 7 (Financial Instruments)

### CLASSES OF FINANCIAL INSTRUMENTS

Financial instruments are divided into the following classes at the Volkswagen Group:

- > financial instruments measured at fair value,
- > financial instruments measured at amortized cost and
- > financial instruments not falling within the scope of IFRS 7.

Financial instruments not falling within the scope of IFRS 7 include in particular investments in associates and joint ventures accounted for using the equity method.

### NET GAINS OR LOSSES FROM FINANCIAL INSTRUMENTS BY IAS 39 MEASUREMENT CATEGORY

€ million	2016	2015
Financial instruments at fair value through profit or loss	-1,203	-700
Loans and receivables	4,109	5,317
Available-for-sale financial assets	-39	1,554
Financial liabilities measured at amortized cost	-3,480	-4,514
	<b>-613</b>	<b>1,657</b>

Net gains and losses from financial assets and liabilities at fair value through profit or loss are composed of the fair value measurement gains and losses on derivatives, including interest and gains and losses on currency translation.

Net gains and losses from available-for-sale financial assets primarily comprise income and expenses from marketable securities including disposal gains/losses, impairment losses on investments and currency translation effects.

Net gains and losses from loans and receivables and from financial liabilities carried at amortized cost comprise interest income and expenses in accordance with the effective interest method under IAS 39, including currency translation effects. Interest also includes interest income and expenses from the lending business of the financial services operations.

**TOTAL INTEREST INCOME AND EXPENSES ATTRIBUTABLE TO FINANCIAL INSTRUMENTS NOT  
MEASURED AT FAIR VALUE THROUGH PROFIT OR LOSS**

€ million	2016	2015
Interest income	5,401	5,540
Interest expenses	3,534	3,802
	<b>1,867</b>	<b>1,738</b>

**IMPAIRMENT LOSSES ON FINANCIAL ASSETS BY CLASS**

€ million	2016	2015
Measured at fair value	18	4
Measured at amortized cost	1,707	1,552
	<b>1,725</b>	<b>1,557</b>

Impairment losses relate to write-downs of financial assets, such as valuation allowances on receivables and marketable securities. Interest income on impaired financial assets amounted to €48 million in the fiscal year (previous year: €50 million).

In fiscal year 2016, €3 million (previous year: €3 million) was recognized as an expense and €67 million (previous year: €52 million) as income from fees and commissions for trust activities and from financial assets and liabilities not measured at fair value that are not accounted for using the effective interest method.

## Balance sheet disclosures

### 12. Intangible assets

#### CHANGES IN INTANGIBLE ASSETS IN THE PERIOD JANUARY 1 TO DECEMBER 31, 2015

€ million	Brand names	Goodwill	Capitalized development costs for products under development	Capitalized development costs for products currently in use	Other intangible assets	Total
<b>Cost</b>						
<b>Balance at Jan. 1, 2015</b>	<b>17,045</b>	<b>23,577</b>	<b>6,428</b>	<b>21,409</b>	<b>8,292</b>	<b>76,752</b>
Foreign exchange differences	16	64	-27	52	-189	-85
Changes in consolidated Group	-	5	-	-	43	48
Additions	-	-	4,043	978	506	5,526
Transfers	-	-	-3,652	3,652	16	17
Disposals	-	-	11	2,410	138	2,559
<b>Balance at Dec. 31, 2015</b>	<b>17,062</b>	<b>23,646</b>	<b>6,781</b>	<b>23,681</b>	<b>8,529</b>	<b>79,699</b>
<b>Amortization and impairment</b>						
<b>Balance at Jan. 1, 2015</b>	<b>79</b>	<b>0</b>	<b>14</b>	<b>12,085</b>	<b>4,639</b>	<b>16,818</b>
Foreign exchange differences	-7	0	0	39	-83	-50
Changes in consolidated Group	-	-	-	-	14	14
Additions to cumulative amortization	4	-	-	3,098	989	4,091
Additions to cumulative impairment losses	-	-	31	133	21	186
Transfers	-	-	-8	8	-2	-2
Disposals	-	-	-	2,396	105	2,501
Reversal of impairment losses	-	-	-	1	-	1
<b>Balance at Dec. 31, 2015</b>	<b>76</b>	<b>-</b>	<b>37</b>	<b>12,968</b>	<b>5,472</b>	<b>18,553</b>
<b>Carrying amount at Dec. 31, 2015</b>	<b>16,986</b>	<b>23,646</b>	<b>6,744</b>	<b>10,713</b>	<b>3,058</b>	<b>61,147</b>

## CHANGES IN INTANGIBLE ASSETS IN THE PERIOD JANUARY 1 TO DECEMBER 31, 2016

€ million	Brand names	Goodwill	Capitalized development costs for products under development	Capitalized development costs for products currently in use	Other intangible assets	Total
<b>Cost</b>						
<b>Balance at Jan. 1, 2016</b>	<b>17,062</b>	<b>23,646</b>	<b>6,781</b>	<b>23,681</b>	<b>8,529</b>	<b>79,699</b>
Foreign exchange differences	-37	-86	-12	-90	137	-89
Changes in consolidated Group	-	9	-	-	29	37
Additions	-	-	4,857	893	385	6,135
Transfers	-	-	-4,324	4,324	12	12
Disposals	-	10	17	1,442	456	1,925
<b>Balance at Dec. 31, 2016</b>	<b>17,024</b>	<b>23,559</b>	<b>7,285</b>	<b>27,366</b>	<b>8,637</b>	<b>83,870</b>
<b>Amortization and impairment</b>						
<b>Balance at Jan. 1, 2016</b>	<b>76</b>	<b>-</b>	<b>37</b>	<b>12,968</b>	<b>5,472</b>	<b>18,553</b>
Foreign exchange differences	5	0	0	-80	84	9
Changes in consolidated Group	-	-	-	-	7	7
Additions to cumulative amortization	3	-	-	3,278	906	4,187
Additions to cumulative impairment losses	-	10	16	293	55	375
Transfers	-	-	0	-	-3	-3
Disposals	-	10	14	1,419	412	1,855
Reversal of impairment losses	-	-	-	1	0	1
<b>Balance at Dec. 31, 2016</b>	<b>84</b>	<b>0</b>	<b>39</b>	<b>15,040</b>	<b>6,109</b>	<b>21,271</b>
<b>Carrying amount at Dec. 31, 2016</b>	<b>16,941</b>	<b>23,558</b>	<b>7,246</b>	<b>12,326</b>	<b>2,527</b>	<b>62,599</b>

Other intangible assets comprise in particular concessions, purchased customer lists and dealer relationships, industrial and similar rights, and licenses in such rights and assets.

The allocation of the brand names and goodwill to the operating segments is shown in the following table:

€ million	2016	2015
<b>Brand names by operating segment</b>		
Porsche	13,823	13,823
Scania Vehicles and Services	1,017	1,059
MAN Truck & Bus	1,127	1,127
MAN Diesel & Turbo	415	415
Ducati	404	404
Other	155	158
	<b>16,941</b>	<b>16,986</b>
<b>Goodwill by operating segment</b>		
Porsche	18,825	18,825
Scania Vehicles and Services	2,947	3,044
MAN Truck & Bus	608	607
MAN Diesel & Turbo	249	250
Ducati	290	290
ŠKODA	150	150
Porsche Holding Salzburg	197	197
Other	293	284
	<b>23,558</b>	<b>23,646</b>

The impairment test for recognized goodwill is based on value in use. Recoverability is not affected by a variation in the growth forecast with respect to the perpetual annuity or in the discount rate of +/-0.5 percentage points.

Research and development costs developed as follows:

€ million	2016	2015	%
Total research and development costs	13,672	13,612	0.4
of which: capitalized development costs	5,750	5,021	14.5
Capitalization ratio in %	42.1	36.9	-
Amortization of capitalized development costs	3,587	3,263	10.0
<b>Research and development costs recognized in profit or loss</b>	<b>11,509</b>	<b>11,853</b>	<b>-2.9</b>

### 13. Property, plant and equipment

#### CHANGES IN PROPERTY, PLANT AND EQUIPMENT IN THE PERIOD JANUARY 1 TO DECEMBER 31, 2015

€ million	Land, land rights and buildings, including buildings on third-party land	Technical equipment and machinery	Other equipment, operating and office equipment	Payments on account and assets under construction	Total
<b>Cost</b>					
<b>Balance at Jan. 1, 2015</b>	<b>28,489</b>	<b>37,873</b>	<b>53,922</b>	<b>6,607</b>	<b>126,890</b>
Foreign exchange differences	35	22	56	113	226
Changes in consolidated Group	129	37	44	0	210
Additions	992	1,777	4,283	5,748	12,800
Transfers	1,565	1,746	1,383	-4,713	-18
Disposals	173	1,620	1,446	38	3,277
<b>Balance at Dec. 31, 2015</b>	<b>31,036</b>	<b>39,836</b>	<b>58,243</b>	<b>7,717</b>	<b>136,832</b>
<b>Depreciation and impairment</b>					
<b>Balance at Jan. 1, 2015</b>	<b>11,906</b>	<b>26,779</b>	<b>42,000</b>	<b>36</b>	<b>80,721</b>
Foreign exchange differences	12	29	35	-6	69
Changes in consolidated Group	44	33	38	-	115
Additions to cumulative depreciation	948	2,691	4,539	-	8,178
Additions to cumulative impairment losses	6	107	382	58	553
Transfers	-1	71	-65	-1	3
Disposals	125	1,561	1,284	0	2,970
Reversal of impairment losses	0	1	1	7	10
<b>Balance at Dec. 31, 2015</b>	<b>12,789</b>	<b>28,148</b>	<b>45,645</b>	<b>79</b>	<b>86,661</b>
<b>Carrying amount at Dec. 31, 2015</b>	<b>18,247</b>	<b>11,688</b>	<b>12,597</b>	<b>7,638</b>	<b>50,171</b>
of which assets leased under finance leases					
Carrying amount at Dec. 31, 2015	345	12	36	-	393

Future finance lease payments due, and their present values, are shown in the following table:

€ million	2016	2017 – 2020	from 2021	Total
Finance lease payments	60	240	408	707
Interest component of finance lease payments	20	67	149	236
<b>Carrying amount of liabilities</b>	<b>40</b>	<b>173</b>	<b>258</b>	<b>471</b>

## CHANGES IN PROPERTY, PLANT AND EQUIPMENT IN THE PERIOD JANUARY 1 TO DECEMBER 31, 2016

€ million	Land, land rights and buildings, including buildings on third-party land	Technical equipment and machinery	Other equipment, operating and office equipment	Payments on account and assets under construction	Total
<b>Cost</b>					
<b>Balance at Jan. 1, 2016</b>	<b>31,036</b>	<b>39,836</b>	<b>58,243</b>	<b>7,717</b>	<b>136,832</b>
Foreign exchange differences	228	429	498	51	1,206
Changes in consolidated Group	42	26	30	1	98
Additions	742	1,843	5,150	5,025	12,760
Transfers	1,639	2,296	1,879	-5,758	55
Disposals	154	1,076	1,203	28	2,461
<b>Balance at Dec. 31, 2016</b>	<b>33,534</b>	<b>43,353</b>	<b>64,595</b>	<b>7,008</b>	<b>148,490</b>
<b>Depreciation and impairment</b>					
<b>Balance at Jan. 1, 2016</b>	<b>12,789</b>	<b>28,148</b>	<b>45,645</b>	<b>79</b>	<b>86,661</b>
Foreign exchange differences	90	305	397	5	796
Changes in consolidated Group	6	14	16	-	36
Additions to cumulative depreciation	1,000	2,918	4,707	-	8,625
Additions to cumulative impairment losses	67	143	291	8	508
Transfers	17	21	15	-46	7
Disposals	81	1,011	1,071	0	2,164
Reversal of impairment losses	-	7	0	7	13
<b>Balance at Dec. 31, 2016</b>	<b>13,887</b>	<b>30,531</b>	<b>49,999</b>	<b>39</b>	<b>94,456</b>
<b>Carrying amount at Dec. 31, 2016</b>	<b>19,647</b>	<b>12,822</b>	<b>14,596</b>	<b>6,969</b>	<b>54,033</b>
of which assets leased under finance leases					
Carrying amount at Dec. 31, 2016	318	9	45	-	372

Options to purchase buildings and plant leased under the terms of finance leases exist in most cases, and are also expected to be exercised.

Future finance lease payments due, and their present values, are shown in the following table:

€ million	2017	2018 – 2021	from 2022	Total
Finance lease payments	79	306	480	865
Interest component of finance lease payments	26	100	200	326
<b>Carrying amount of liabilities</b>	<b>53</b>	<b>206</b>	<b>279</b>	<b>539</b>

For assets leased under operating leases, payments recognized in the income statement amounted to €1,498 million (previous year: €1,463 million). With respect to internally used assets, €1,320 million (previous year: €1,306 million) of this figure is attributable to minimum lease payments and €60 million (previous year: €51 million) to contingent lease payments. The payments of €118 million (previous year: €106 million) under subleases primarily relate to minimum lease payments.



Government grants of €218 million (previous year: €120 million) were deducted from the cost of property, plant and equipment and noncash benefits received amounting to €12 million (previous year: €18 million) were not capitalized as the cost of assets.

Real property liens of €762 million (previous year: €657 million) are pledged as collateral for financial liabilities related to land and buildings.

#### 14. Lease assets and investment property

##### CHANGES IN LEASE ASSETS AND INVESTMENT PROPERTY IN THE PERIOD JANUARY 1 TO DECEMBER 31, 2015

€ million	Leasing assets	Investment property	Total
<b>Cost Balance at Jan. 1, 2015</b>	<b>36,780</b>	<b>736</b>	<b>37,516</b>
Foreign exchange differences	1,750	23	1,773
Changes in consolidated Group	10	1	11
Additions	18,265	15	18,280
Transfers	0	2	2
Disposals	11,687	16	11,702
<b>Balance at Dec. 31, 2015</b>	<b>45,118</b>	<b>761</b>	<b>45,879</b>
<b>Depreciation and impairment Balance at Jan. 1, 2015</b>	<b>9,195</b>	<b>251</b>	<b>9,446</b>
Foreign exchange differences	411	4	415
Changes in consolidated Group	3	1	4
Additions to cumulative depreciation	6,035	15	6,050
Additions to cumulative impairment losses	619	–	619
Transfers	0	–1	–1
Disposals	4,315	5	4,321
Reversal of impairment losses	3	8	10
<b>Balance at Dec. 31, 2015</b>	<b>11,945</b>	<b>257</b>	<b>12,202</b>
<b>Carrying amount at Dec. 31, 2015</b>	<b>33,173</b>	<b>504</b>	<b>33,677</b>

The following payments from noncancelable leases and rental agreements were expected to be received over the coming years:

€ million	2016	2017 – 2020	from 2021	Total
Lease payments	3,722	4,398	42	8,162

## CHANGES IN LEASE ASSETS AND INVESTMENT PROPERTY IN THE PERIOD JANUARY 1 TO DECEMBER 31, 2016

€ million	Leasing assets	Investment property	Total
<b>Cost Balance at Jan. 1, 2016</b>	<b>45,118</b>	<b>761</b>	<b>45,879</b>
Foreign exchange differences	321	12	333
Changes in consolidated Group	64	66	130
Additions	20,628	33	20,661
Transfers	3	-70	-67
Disposals	14,652	21	14,673
<b>Balance at Dec. 31, 2016</b>	<b>51,483</b>	<b>780</b>	<b>52,262</b>
<b>Depreciation and impairment Balance at Jan. 1, 2016</b>	<b>11,945</b>	<b>257</b>	<b>12,202</b>
Foreign exchange differences	74	2	76
Changes in consolidated Group	15	1	16
Additions to cumulative depreciation	6,743	17	6,760
Additions to cumulative impairment losses	455	0	455
Transfers	0	-4	-4
Disposals	6,097	4	6,101
Reversal of impairment losses	92	-	92
<b>Balance at Dec. 31, 2016</b>	<b>13,044</b>	<b>268</b>	<b>13,312</b>
<b>Carrying amount at Dec. 31, 2016</b>	<b>38,439</b>	<b>512</b>	<b>38,950</b>

Lease assets include assets leased out under the terms of operating leases and assets covered by long-term buy-back agreements.

Investment property includes apartments rented out and leased dealerships with a fair value of €1,150 million (previous year: €927 million). Fair value is estimated using an investment method based on internal calculations (Level 3 of the fair value hierarchy). Operating expenses of €46 million (previous year: €50 million) were incurred for the maintenance of investment property in use. Expenses of €1 million (previous year: €1 million) were incurred for unused investment property.

The following payments from noncancelable leases and rental agreements are expected to be received over the coming years:

€ million	2017	2018 – 2021	from 2022	Total
Lease payments	3,649	4,759	56	8,464

## 15. Equity-accounted investments and other equity investments

CHANGES IN EQUITY-ACCOUNTED INVESTMENTS AND OTHER EQUITY INVESTMENTS  
IN THE PERIOD JANUARY 1 TO DECEMBER 31, 2015

€ million	Equity- accounted investments	Other equity investments	Total
<b>Gross carrying amount at Jan. 1, 2015</b>	<b>9,955</b>	<b>4,014</b>	<b>13,968</b>
Foreign exchange differences	187	9	197
Changes in consolidated Group	–	–67	–67
Additions	740	253	993
Transfers	44	–44	–
Disposals	36	3,174	3,210
Changes recognized in profit or loss	4,386	–	4,386
Dividends	–4,683	–	–4,683
Other changes recognized in other comprehensive income	392	342	733
<b>Balance at Dec. 31, 2015</b>	<b>10,985</b>	<b>1,333</b>	<b>12,318</b>
<b>Impairment losses Balance at Jan. 1, 2015</b>	<b>80</b>	<b>331</b>	<b>411</b>
Foreign exchange differences	1	–2	–2
Changes in consolidated Group	–	–3	–3
Additions	–	38	38
Transfers	–	–	–
Disposals	–	4	4
Reversal of impairment losses	–	0	0
<b>Balance at Dec. 31, 2015</b>	<b>81</b>	<b>358</b>	<b>439</b>
<b>Carrying amount at Dec. 31, 2015</b>	<b>10,904</b>	<b>974</b>	<b>11,878</b>

**CHANGES IN EQUITY-ACCOUNTED INVESTMENTS AND OTHER EQUITY INVESTMENTS  
IN THE PERIOD JANUARY 1 TO DECEMBER 31, 2016**

€ million	Equity- accounted investments	Other equity investments	Total
<b>Gross carrying amount at Jan. 1, 2016</b>	<b>10,985</b>	<b>1,333</b>	<b>12,318</b>
Foreign exchange differences	-100	-1	-101
Changes in consolidated Group	-11	-103	-114
Additions	525	191	716
Transfers	-	-	-
Disposals	2,193	3	2,197
Changes recognized in profit or loss	3,250	-	3,250
Dividends	-3,598	-	-3,598
Other changes recognized in other comprehensive income	-131	-	-131
<b>Balance at Dec. 31, 2016</b>	<b>8,727</b>	<b>1,417</b>	<b>10,143</b>
<b>Impairment losses Balance at Jan. 1, 2016</b>	<b>81</b>	<b>358</b>	<b>439</b>
Foreign exchange differences	-1	1	0
Changes in consolidated Group	-	-57	-57
Additions	30	120	150
Transfers	-	-	-
Disposals	-	1	1
Reversal of impairment losses	-	0	0
<b>Balance at Dec. 31, 2016</b>	<b>110</b>	<b>420</b>	<b>531</b>
<b>Carrying amount at Dec. 31, 2016</b>	<b>8,616</b>	<b>996</b>	<b>9,613</b>

Equity-accounted investments include joint ventures in the amount of €7,068 million (previous year: €9,546 million) and associates in the amount of €1,548 million (previous year: €1,358 million).

The additions of equity-accounted investments are mainly attributable to the acquisition of the investment in Gett in the amount of €0.3 billion (previous year: There Holding) and to the measurement of the shares in GMH at the selling price in the amount of €0.2 billion. The disposals in the current year are connected with the divestment of LeasePlan by GMH. In the previous year, the disposals of other equity investments were mainly the result of the sale of the Suzuki shares. Further details can be found in the disclosures in the section entitled "Basis of consolidation".

Of the other changes recognized in other comprehensive income, €-132 million (previous year: €391 million) is attributable to joint ventures and €1 million (previous year: €1 million) to associates. They are mainly the result of foreign exchange differences in the amount of €-156 million (previous year: €393 million), pension plan remeasurements in the amount of €-1 million (previous year: €-8 million) and losses on the fair value measurement of cash flow hedges in the amount of €33 million (previous year: €6 million).

## 16. Noncurrent and current financial services receivables

€ million	CARRYING AMOUNT			FAIR VALUE	CARRYING AMOUNT			FAIR VALUE
	Current	Noncurrent	Dec. 31, 2016	Dec. 31, 2016	Current	Noncurrent	Dec. 31, 2015	Dec. 31, 2015
Receivables from financing business								
Customer financing	22,921	47,863	70,784	73,507	21,991	44,985	66,976	68,452
Dealer financing	15,531	2,108	17,639	17,626	14,738	1,832	16,570	16,539
Direct banking	254	2	256	256	212	2	214	214
	<b>38,707</b>	<b>49,973</b>	<b>88,680</b>	<b>91,389</b>	<b>36,941</b>	<b>46,819</b>	<b>83,760</b>	<b>85,205</b>
Receivables from operating leases	197	–	197	197	273	–	273	273
Receivables from finance leases	10,769	18,429	29,198	29,342	9,674	16,365	26,040	26,041
	<b>49,673</b>	<b>68,402</b>	<b>118,075</b>	<b>120,929</b>	<b>46,888</b>	<b>63,185</b>	<b>110,073</b>	<b>111,518</b>

The receivables from customer financing and finance leases contained in financial services receivables of €118.1 billion (previous year: €110.1 billion) decreased by €7 million (previous year: €18 million) as a result of a fair value adjustment from portfolio hedging.

The receivables from customer and dealer financing are secured by vehicles or real property liens. Of the receivables, €251 million (previous year: €– million) was furnished as collateral for financial liabilities and contingent liabilities.

The receivables from dealer financing include €51 million (previous year: €45 million) receivable from unconsolidated affiliated companies.

The receivables from finance leases – almost entirely in respect of vehicles – were or are expected to generate the following cash flows as of December 31, 2015 and December 31, 2016:

€ million	2016	2017 – 2020	from 2021	Total
Future payments from finance lease receivables	10,320	17,184	135	27,639
Unearned finance income from finance leases (discounting)	–646	–949	–4	–1,600
<b>Present value of minimum lease payments outstanding at the reporting date</b>	<b>9,674</b>	<b>16,234</b>	<b>131</b>	<b>26,040</b>

€ million	2017	2018 – 2021	from 2022	Total
Future payments from finance lease receivables	11,438	19,316	137	30,891
Unearned finance income from finance leases (discounting)	–670	–1,014	–11	–1,695
<b>Present value of minimum lease payments outstanding at the reporting date</b>	<b>10,768</b>	<b>18,302</b>	<b>126</b>	<b>29,196</b>

Accumulated valuation allowances for uncollectible minimum lease payments receivable amount to €94 million (previous year: €90 million).

## 17. Noncurrent and current other financial assets

€ million	CARRYING AMOUNT			CARRYING AMOUNT		
	Current	Noncurrent	Dec. 31, 2016	Current	Noncurrent	Dec. 31, 2015
Positive fair value of derivatives	2,317	3,274	5,591	2,081	2,246	4,326
Marketable securities	–	46	46	–	1,387	1,387
Receivables from loans, bonds, profit participation rights (excluding interest)	5,352	2,338	7,690	4,286	2,169	6,455
Miscellaneous financial assets	4,175	2,598	6,773	3,677	928	4,604
	<b>11,844</b>	<b>8,256</b>	<b>20,099</b>	<b>10,043</b>	<b>6,730</b>	<b>16,773</b>

Other financial assets include receivables from related parties of €6,928 million (previous year: €6,010 million). Other financial assets and noncurrent marketable securities amounting to €1,870 million (previous year: €1,897 million) were furnished as collateral for financial liabilities and contingent liabilities. There is no original right of disposal or pledge for the furnished collateral on the part of the collateral taker.

In addition, the miscellaneous financial assets include cash and cash equivalents that serve as collateral (mainly under asset-backed securities transactions).

The positive fair values of derivatives relate to the following items:

€ million	Dec. 31, 2016	Dec. 31, 2015
Transactions for hedging		
foreign currency risk from assets using fair value hedges	239	310
foreign currency risk from liabilities using fair value hedges	186	190
interest rate risk using fair value hedges	592	681
interest rate risk using cash flow hedges	65	19
foreign currency and price risk from future cash flows (cash flow hedges)	3,032	1,735
<b>Hedging transactions</b>	<b>4,114</b>	<b>2,936</b>
Assets related to derivatives not included in hedging relationships	1,477	1,391
	<b>5,591</b>	<b>4,326</b>

The positive fair value of transactions for hedging price risk from future cash flows (cash flow hedges) amounted to €36 million (previous year: €0 million).

Positive fair values of €1 million (previous year: €1 million) were recognized from transactions for hedging interest rate risk (fair value hedges) used in portfolio hedges.

Further details on derivative financial instruments as a whole are given in section entitled “Financial risk management and financial instruments”.

## 18. Noncurrent and current other receivables

€ million	CARRYING AMOUNT			CARRYING AMOUNT		
	Current	Noncurrent	Dec. 31, 2016	Current	Noncurrent	Dec. 31, 2015
Other recoverable income taxes	4,037	841	4,878	3,930	259	4,189
Miscellaneous receivables	1,093	1,169	2,261	1,438	1,081	2,518
	<b>5,130</b>	<b>2,009</b>	<b>7,139</b>	<b>5,367</b>	<b>1,340</b>	<b>6,707</b>

Miscellaneous receivables include assets to fund post-employment benefits in the amount of €46 million (previous year: €71 million). This item also includes the share of the technical provisions attributable to reinsurers amounting to €73 million (previous year: €78 million).

Current other receivables are predominantly non-interest-bearing.

## 19. Tax assets

€ million	CARRYING AMOUNT			CARRYING AMOUNT		
	Current	Noncurrent	Dec. 31, 2016	Current	Noncurrent	Dec. 31, 2015
Deferred tax assets	–	9,756	9,756	–	8,026	8,026
Tax receivables	1,126	392	1,518	1,029	395	1,424
	<b>1,126</b>	<b>10,148</b>	<b>11,274</b>	<b>1,029</b>	<b>8,421</b>	<b>9,451</b>

€6,294 million (previous year: €6,239 million) of the deferred tax assets are due within one year.

## 20. Inventories

€ million	Dec. 31, 2016	Dec. 31, 2015
Raw materials, consumables and supplies	4,396	4,021
Work in progress	4,408	3,927
Finished goods and purchased merchandise	25,719	23,083
Current lease assets	4,276	3,861
Prepayments	178	156
	<b>38,978</b>	<b>35,048</b>

At the same time as the relevant revenue was recognized, inventories in the amount of €166 billion (previous year: €162 billion) were included in cost of sales. Valuation allowances recognized as expenses in the reporting period amounted to €1,310 million (previous year: €932 million). Vehicles amounting to €263 million (previous year: €230 million) were assigned as collateral for partial retirement obligations.

## 21. Trade receivables

€ million	Dec. 31, 2016	Dec. 31, 2015
Trade receivables from		
third parties	9,110	8,570
unconsolidated subsidiaries	179	265
joint ventures	2,847	2,253
associates	47	40
other investees and investors	4	5
	<b>12,187</b>	<b>11,132</b>

The fair values of the trade receivables correspond to the carrying amounts.

The trade receivables include receivables from construction contracts accounted for using the percentage of completion (PoC) method. These are calculated as follows:

€ million	Dec. 31, 2016	Dec. 31, 2015
Contract costs and proportionate contract profit/loss of construction contracts	955	1,236
Progress billings	-91	-41
Exchange rate effects	2	-4
<b>PoC receivables, gross</b>	<b>865</b>	<b>1,191</b>
Prepayments received	-652	-969
<b>PoC receivables, net</b>	<b>213</b>	<b>222</b>

Other payments received on account of construction contracts in the amount of €225 million (previous year: €344 million), for which no construction costs have yet been incurred, are recognized under other liabilities.

## 22. Marketable securities

The marketable securities serve to safeguard liquidity. Marketable securities are quoted, mainly short-term fixed-income securities and shares allocated to the available-for-sale financial assets category.



## 23. Cash, cash equivalents and time deposits

€ million	Dec. 31, 2016	Dec. 31, 2015
Bank balances	19,093	20,656
Checks, cash-in-hand, bills and call deposits	171	216
	<b>19,265</b>	<b>20,871</b>

Bank balances are held at various banks in different currencies and include time deposits, for example.

## 24. Equity

The subscribed capital of Volkswagen AG is composed of no-par value bearer shares with a notional value of €2.56. As well as ordinary shares, there are preferred shares that entitle the bearer to a €0.06 higher dividend than ordinary shares, but do not carry voting rights.

The Annual General Meeting on April 19, 2012 resolved to create authorized capital of up to €110 million, expiring on April 18, 2017, for the issue of new ordinary bearer shares or preferred shares based. After deducting preferred shares that have already been issued, only €83 million of authorized capital remains. In 2014, Volkswagen AG recorded a cash inflow of €2,000 million from the capital increase, less transaction costs of €20 million.

The Annual General Meeting on April 22, 2010 resolved to create contingent capital in the amount of up to €102 million expiring on April 21, 2015 that could be used to issue up to €5 billion in bonds with warrants and/or convertible bonds.

To date, Volkswagen has used this contingent capital as follows:

- › In November 2012, via a subsidiary, Volkswagen International Finance N.V. Amsterdam, the Netherlands (issuer), Volkswagen AG placed a €2.5 billion mandatory convertible note that entitled and obliged holders to subscribe for Volkswagen preferred shares. The preemptive rights of existing shareholders were disapplied. The convertible note bore a coupon of 5.50% and matured on November 9, 2015.
- › In June 2013, Volkswagen placed another €1.2 billion mandatory convertible note to supplement the mandatory convertible note issued in November 2012. The features of this mandatory convertible note corresponded to those of the mandatory convertible note issued in November 2012. It was issued at a price of 105.64% of the principal amount. Additionally, accrued interest (€1 million) was received and deferred. This mandatory convertible note also matured on November 9, 2015.

The convertible notes were settled by issuing new preferred shares no later than at maturity. The issuer was entitled to convert the mandatory convertible notes at any time at the minimum conversion price. The note terms and conditions also provided for early conversion options. This voluntary conversion right was exercised in the previous year. In 2015, a further 27,091 preferred shares were created through exercise of the voluntary conversion right. At the maturity date, November 9, 2015, the remaining amount of both notes was converted by the issuer as required. A further 25,536,876 new preferred shares were created and the underlying principal amount of each bond was €100,000 and the final conversion price €144.50. In this context, it was necessary to reclassify the principal amount of €65 million from the capital reserves to subscribed capital.

Following the voluntary and mandatory conversion of mandatory convertible notes in the previous year, the subscribed capital is composed of 295,089,818 no-par value ordinary shares and 206,205,445 no-par value preferred shares, and amounts to €1,283 million (December 31, 2015: €1,283 million).

The Annual General Meeting on May 5, 2015 resolved to create authorized capital of up to €179 million, expiring on May 4, 2020, to issue new preferred bearer shares.

In March 2015, Volkswagen AG placed unsecured subordinated hybrid notes with an aggregate principal amount of €2.5 billion via a subsidiary, Volkswagen International Finance N.V. Amsterdam, the Netherlands (VIF). The perpetual hybrid notes were issued in two tranches and can be called by VIF. The first call date for the first tranche (€1.1 billion and a coupon of 2.50%) is after seven years, and the first call date for the second tranche (€1.4 billion and a coupon of 3.50%) is after 15 years. Interest may be accumulated depending on whether a dividend is paid to Volkswagen AG shareholders. Under IAS 32, the hybrid notes must be classified in their entirety as equity. The capital raised was recognized in equity, less a discount and transaction costs and net of deferred taxes. The interest payments payable to the noteholders will be recognized directly in equity, net of income taxes.

#### CHANGE IN ORDINARY AND PREFERRED SHARES AND SUBSCRIBED CAPITAL

	SHARES		€	
	2016	2015	2016	2015
<b>Balance at January 1</b>	<b>501,295,263</b>	<b>475,731,296</b>	<b>1,283,315,873</b>	<b>1,217,872,118</b>
Capital increase	–	–	–	–
Conversion of mandatory convertible notes	–	25,563,967	–	65,443,756
<b>Balance at December 31</b>	<b>501,295,263</b>	<b>501,295,263</b>	<b>1,283,315,873</b>	<b>1,283,315,873</b>

The capital reserves comprise the share premium totaling €14,225 million (previous year: €14,225 million) from capital increases, the share premium of €219 million from the issuance of bonds with warrants and an amount of €107 million appropriated on the basis of the capital reduction implemented in 2006. As the mandatory convertible notes that had been issued were converted in fiscal year 2015, an amount of €65,443,756 was reclassified from the capital reserves to subscribed capital (see also the section entitled “Earnings per share”). No amounts were withdrawn from the capital reserves.

#### DIVIDEND PROPOSAL

In accordance with section 58(2) of the Aktiengesetz (AktG – German Stock Corporation Act), the dividend payment by Volkswagen AG is based on the net retained profits reported in the annual financial statements of Volkswagen AG prepared in accordance with the German Commercial Code. Based on these annual financial statements of Volkswagen AG, net retained profits of €1,402 million are eligible for distribution following the transfer of €1,399 million to the revenue reserves. The Board of Management and Supervisory Board will propose to the Annual General Meeting that a total dividend of €1,015 million, i.e. €2.00 per ordinary share and €2.06 per preferred share, be paid from the net retained profits. Shareholders are not entitled to a dividend payment until it has been resolved by the Annual General Meeting.

A dividend of €0.11 per ordinary share and €0.17 per preferred share was distributed in fiscal year 2016.

#### NONCONTROLLING INTERESTS

As of December 31, 2016, total noncontrolling interests amounted to €221 million (previous year: €210 million). The noncontrolling interests in equity are attributable primarily to shareholders of RENK AG and AUDI AG and are immaterial individually and in the aggregate.

## 25. Noncurrent and current financial liabilities

The details of noncurrent and current financial liabilities are presented in the following table:

€ million	CARRYING AMOUNT			CARRYING AMOUNT		
	Current	Noncurrent	Dec. 31, 2016	Current	Noncurrent	Dec. 31, 2015
Bonds	18,831	33,191	52,022	19,891	42,454	62,346
Commercial paper and notes	23,173	18,004	41,178	10,428	16,369	26,797
Liabilities to banks	14,180	10,816	24,996	16,018	11,101	27,119
Deposits business	31,019	2,759	33,779	25,357	1,141	26,498
Loans and miscellaneous liabilities	1,204	1,102	2,306	578	1,795	2,373
Bills of exchange	–	–	–	–	–	–
Finance lease liabilities	53	486	539	40	431	471
	<b>88,461</b>	<b>66,358</b>	<b>154,819</b>	<b>72,313</b>	<b>73,292</b>	<b>145,604</b>

## 26. Noncurrent and current other financial liabilities

€ million	CARRYING AMOUNT			CARRYING AMOUNT		
	Current	Noncurrent	Dec. 31, 2016	Current	Noncurrent	Dec. 31, 2015
Negative fair values of derivative financial instruments	3,428	2,630	6,058	4,799	3,905	8,703
Interest payable	581	48	630	668	70	739
Miscellaneous financial liabilities	5,428	1,810	7,239	4,883	1,926	6,809
	<b>9,438</b>	<b>4,488</b>	<b>13,926</b>	<b>10,350</b>	<b>5,901</b>	<b>16,251</b>

The negative fair values of derivatives relate to the following items:

€ million	Dec. 31, 2016	Dec. 31, 2015
Transactions for hedging		
foreign currency risk from assets using fair value hedges	74	71
foreign currency risk from liabilities using fair value hedges	286	106
interest rate risk using fair value hedges	147	71
interest rate risk using cash flow hedges	11	16
foreign currency and price risk from future cash flows (cash flow hedges)	4,135	6,970
<b>Hedging transactions</b>	<b>4,652</b>	<b>7,234</b>
Liabilities related to derivatives not included in hedging relationships	1,406	1,469
	<b>6,058</b>	<b>8,703</b>

The negative fair value of transactions for hedging price risk from future cash flows (cash flow hedges) amounted to €21 million (previous year: €166 million).

Negative fair values of €85 million (previous year: €44 million) were recognized from transactions for hedging interest rate risk (fair value hedges) used in portfolio hedges.

Further details on derivative financial instruments as a whole are given in the section entitled "Financial risk management and financial instruments".

## 27. Noncurrent and current other liabilities

€ million	CARRYING AMOUNT			CARRYING AMOUNT		
	Current	Noncurrent	Dec. 31, 2016	Current	Noncurrent	Dec. 31, 2015
Payments received on account of orders	4,042	572	4,614	3,994	150	4,144
Liabilities relating to						
other taxes	2,611	204	2,815	1,973	435	2,408
social security	536	35	571	486	29	515
wages and salaries	4,495	750	5,245	4,293	663	4,956
Miscellaneous liabilities	3,777	4,103	7,880	3,267	3,628	6,896
	<b>15,461</b>	<b>5,664</b>	<b>21,125</b>	<b>14,014</b>	<b>4,905</b>	<b>18,919</b>

## 28. Tax liabilities

€ million	CARRYING AMOUNT			CARRYING AMOUNT		
	Current	Noncurrent	Dec. 31, 2016	Current	Noncurrent	Dec. 31, 2015
Deferred tax liabilities	–	4,745	4,745	–	4,433	4,433
Provisions for taxes	1,301	3,556	4,857	1,301	3,940	5,241
Tax payables	500	–	500	330	–	330
	<b>1,801</b>	<b>8,301</b>	<b>10,102</b>	<b>1,630</b>	<b>8,373</b>	<b>10,004</b>

€328 million (€369 million) of the deferred tax liabilities are due within one year.

## 29. Provisions for pensions and other post-employment benefits

Provisions for pensions are recognized for commitments in the form of retirement, invalidity and dependents' benefits payable under pension plans. The benefits provided by the Group vary according to the legal, tax and economic circumstances of the country concerned, and usually depend on the length of service and remuneration of the employees.

Volkswagen Group companies provide occupational pensions under both defined contribution and defined benefit plans. In the case of defined contribution plans, the Company makes contributions to state or private pension schemes based on legal or contractual requirements, or on a voluntary basis. Once the contributions have been paid, there are no further obligations for the Volkswagen Group. Current contributions are recognized as pension expenses of the period concerned. In 2016, they amounted to a total of €2,084 million (previous year: €1,978 million) in the Volkswagen Group. Of this figure, contributions to the compulsory state pension system in Germany amounted to €1,552 million (previous year: €1,500 million).

In the case of defined benefit plans, a distinction is made between pensions funded by provisions and externally funded plans.

The pension provisions for defined benefits are measured by independent actuaries using the internationally accepted projected unit credit method in accordance with IAS 19, under which the future obligations are measured on the basis of the ratable benefit entitlements earned as of the balance sheet date. Measurement reflects actuarial assumptions as to discount rates, salary and pension trends, employee turnover rates, longevity and increases in healthcare costs, which were determined for each Group company depending on the economic environment. Remeasurements arise from differences between what has actually occurred and the prior-year assumptions as well as from changes in assumptions. They are recognized in other comprehensive income, net of deferred taxes, in the period in which they arise.

Multi-employer pension plans exist in the Volkswagen Group in the United Kingdom, Switzerland, Sweden, the Netherlands and Japan. These plans are defined benefit plans. A small proportion of them are accounted for as defined contribution plans, as the Volkswagen Group is not authorized to receive the information required in order to account for them as defined benefit plans. Under the terms of the multi-employer plans, the Volkswagen Group is not liable for the obligations of the other employers. In the event of its withdrawal from the plans or their winding-up, the proportionate share of the surplus of assets attributable to the Volkswagen Group will be credited or the proportionate share of the deficit attributable to the Volkswagen Group will have to be funded. In the case of the defined benefit plans accounted for as defined contribution plans, the Volkswagen Group's share of the obligations represents a small proportion of the total obligations. No probable significant risks arising from multi-employer defined benefit pension plans that are accounted for as defined

contribution plans have been identified. The expected contributions to those plans will amount to €25 million for fiscal year 2017.

Owing to their benefit character, the obligations of the US Group companies in respect of post-employment medical care in particular are also carried under provisions for pensions and other post-employment benefits. These post-employment benefit provisions take into account the expected long-term rise in the cost of health-care. In fiscal year 2016, €19 million (previous year: €19 million) was recognized as an expense for health care costs. The related carrying amount as of December 31, 2016 was €232 million (previous year: €222 million).

The following amounts were recognized in the balance sheet for defined benefit plans:

€ million	Dec. 31, 2016	Dec. 31, 2015
Present value of funded obligations	15,104	12,098
Fair value of plan assets	10,749	9,769
Funded status (net)	4,355	2,329
Present value of unfunded obligations	28,585	25,118
Amount not recognized as an asset because of the ceiling in IAS 19	26	17
<b>Net liability recognized in the balance sheet</b>	<b>32,967</b>	<b>27,464</b>
of which provisions for pensions	33,012	27,535
of which other assets	46	71

#### SIGNIFICANT PENSION ARRANGEMENTS IN THE VOLKSWAGEN GROUP

For the period after their active working life, the Volkswagen Group offers its employees benefits under attractive, modern occupational pension arrangements. Most of the arrangements in the Volkswagen Group are pension plans for employees in Germany classified as defined benefit plans under IAS 19. The majority of these obligations are funded solely by recognized provisions. These plans are now largely closed to new members. To reduce the risks associated with defined benefit plans, in particular longevity, salary increases and inflation, the Volkswagen Group has introduced new defined benefit plans in recent years whose benefits are funded by appropriate external plan assets. The above-mentioned risks have been largely reduced in these pension plans. The proportion of the total defined benefit obligation attributable to pension obligations funded by plan assets will continue to rise in the future. The significant pension plans are described in the following.

##### German pension plans funded solely by recognized provisions

The pension plans funded solely by recognized provisions comprise both contribution-based plans with guarantees and final salary plans. For contribution-based plans, an annual pension expense dependent on income and status is converted into a lifelong pension entitlement using annuity factors (guaranteed modular pension entitlements). The annuity factors include a guaranteed rate of interest. At retirement, the modular pension entitlements earned annually are added together. For final salary plans, the underlying salary is multiplied at retirement by a percentage that depends on the years of service up until the retirement date.

The present value of the guaranteed obligation rises as interest rates fall and is therefore exposed to interest rate risk.

The pension system provides for lifelong pension payments. The companies bear the longevity risk in this respect. This is accounted for by calculating the annuity factors and the present value of the guaranteed obligation using the latest generational mortality tables – the “Heubeck 2005 G” mortality tables – which already reflect future increases in life expectancy.

To reduce the inflation risk from adjusting the regular pension payments by the rate of inflation, a pension adjustment that is not indexed to inflation was introduced for pension plans where this is permitted by law.

#### German pension plans funded by external plan assets

The pension plans funded by external plan assets are contribution-based plans with guarantees. In this case, an annual pension expense dependent on income and status is either converted into a lifelong pension entitlement using annuity factors (guaranteed modular pension entitlement) or paid out in a single lump sum or in installments. In some cases, employees also have the opportunity to provide for their own retirement through deferred compensation. The annuity factors include a guaranteed rate of interest. At retirement, the modular pension entitlements earned annually are added together. The pension expense is contributed on an ongoing basis to a separate pool of assets that is administered independently of the Company in trust and invested in the capital markets. If the plan assets exceed the present value of the obligations calculated using the guaranteed rate of interest, surpluses are allocated (modular pension bonuses).

Since the assets administered in trust meet the IAS 19 criteria for classification as plan assets, they are deducted from the obligations.

The amount of the pension assets is exposed to general market risk. The investment strategy and its implementation are therefore continuously monitored by the trusts' governing bodies, on which the companies are also represented. For example, investment policies are stipulated in investment guidelines with the aim of limiting market risk and its impact on plan assets. In addition, asset-liability management studies are conducted if required so as to ensure that investments are in line with the obligations that need to be covered. The pension assets are currently invested primarily in fixed-income or equity funds. The main risks are therefore interest rate and equity price risk. To mitigate market risk, the pension system also provides for cash funds to be set aside in an equalization reserve before any surplus is allocated.

The present value of the obligation is the present value of the guaranteed obligation after deducting the plan assets. If the plan assets fall below the present value of the guaranteed obligation, a provision must be recognized in that amount. The present value of the guaranteed obligation rises as interest rates fall and is therefore exposed to interest rate risk.

In the case of lifelong pension payments, the Volkswagen Group bears the longevity risk. This is accounted for by calculating the annuity factors and the present value of the guaranteed obligation using the latest generational mortality tables – the “Heubeck 2005 G” mortality tables – which already reflect future increases in life expectancy. In addition, the independent actuaries carry out annual risk monitoring as part of the review of the assets administered by the trusts.

To reduce the inflation risk from adjusting the regular pension payments by the rate of inflation, a pension adjustment that is not indexed to inflation was introduced for pension plans where this is permitted by law.

Calculation of the pension provisions was based on the following actuarial assumptions:

%	GERMANY		ABROAD	
	2016	2015	2016	2015
Discount rate at December 31	1.79	2.70	3.82	4.36
Payroll trend	3.46	3.42	3.32	3.27
Pension trend	1.50	1.70	2.44	2.46
Employee turnover rate	1.13	1.01	3.63	3.80
Annual increase in healthcare costs	–	–	4.88	5.03

These assumptions are averages that were weighted using the present value of the defined benefit obligation.

With regard to life expectancy, consideration is given to the latest mortality tables in each country.

The discount rates are generally defined to reflect the yields on prime-rated corporate bonds with matching maturities and currencies. The iBoxx AA 10+ Corporates index was taken as the basis for the obligations of German Group companies. Similar indices were used for foreign pension obligations.

The payroll trends cover expected wage and salary trends, which also include increases attributable to career development.

The pension trends either reflect the contractually guaranteed pension adjustments or are based on the rules on pension adjustments in force in each country.

The employee turnover rates are based on past experience and future expectations.

The following table shows changes in the net defined benefit liability recognized in the balance sheet:

€ million	2016	2015
<b>Net liability recognized in the balance sheet at January 1</b>	<b>27,464</b>	<b>29,731</b>
Current service cost	1,066	1,104
Net interest expense	729	688
Actuarial gains (-)/losses (+) arising from changes in demographic assumptions	17	-23
Actuarial gains (-)/losses (+) arising from changes in financial assumptions	5,862	-2,904
Actuarial gains (-)/losses (+) arising from experience adjustments	-283	190
Income/expenses from plan assets not included in interest income	349	-164
Change in amount not recognized as an asset because of the ceiling in IAS 19	-4	-7
Employer contributions to plan assets	680	654
Employee contributions to plan assets	-7	-6
Pension payments from company assets	833	808
Past service cost (including plan curtailments)	-24	9
Gains (-) or losses (+) arising from plan settlements	4	2
Changes in consolidated Group	0	1
Other changes	-42	-15
Foreign exchange differences from foreign plans	25	-34
<b>Net liability recognized in the balance sheet at December 31</b>	<b>32,967</b>	<b>27,464</b>



The change in the amount not recognized as an asset because of the ceiling in IAS 19 contains an interest component, part of which was recognized in the financial result in profit or loss, and part of which was recognized outside profit or loss directly in equity.

The change in the present value of the defined benefit obligation is attributable to the following factors:

€ million	2016	2015
<b>Present value of obligations at January 1</b>	<b>37,215</b>	<b>38,939</b>
Current service cost	1,066	1,104
Interest cost	1,075	996
Actuarial gains(-)/losses (+) arising from changes in demographic assumptions	17	-23
Actuarial gains(-)/losses (+) arising from changes in financial assumptions	5,862	-2,904
Actuarial gains(-)/losses (+) arising from experience adjustments	-283	190
Employee contributions to plan assets	31	33
Pension payments from company assets	833	808
Pension payments from plan assets	308	292
Past service cost (including plan curtailments)	-24	9
Gains (-) or losses (+) arising from plan settlements	-64	-4
Changes in consolidated Group	0	2
Other changes	-4	-8
Foreign exchange differences from foreign plans	-62	-19
<b>Present value of obligations at December 31</b>	<b>43,689</b>	<b>37,215</b>

Changes in the relevant actuarial assumptions would have had the following effects on the defined benefit obligation:

Present value of defined benefit obligation if		DEC. 31, 2016		DEC. 31, 2015	
		€ million	Change in percent	€ million	Change in percent
Discount rate	is 0.5 percentage points higher	39,761	-8.99	34,103	-8.36
	is 0.5 percentage points lower	48,249	10.44	40,787	9.60
Pension trend	is 0.5 percentage points higher	45,985	5.25	39,081	5.01
	is 0.5 percentage points lower	41,601	-4.78	35,444	-4.76
Payroll trend	is 0.5 percentage points higher	44,297	1.39	37,693	1.28
	is 0.5 percentage points lower	43,145	-1.25	36,772	-1.19
Longevity	increases by one year	44,986	2.97	38,242	2.76

The sensitivity analysis shown above considers the change in one assumption at a time, leaving the other assumptions unchanged versus the original calculation, i.e. any correlation effects between the individual assumptions are ignored.

To examine the sensitivity of the defined benefit obligation to a change in assumed longevity, the estimates of mortality were reduced as part of a comparative calculation to the extent that doing so increases life expectancy by approximately one year.

The average duration of the defined benefit obligation weighted by the present value of the defined benefit obligation (Macaulay duration) is 20 years (previous year: 19 years).

The present value of the defined benefit obligation is attributable as follows to the members of the plan:

€ million	2016	2015
Active members with pension entitlements	25,622	21,148
Members with vested entitlements who have left the Company	2,222	1,754
Pensioners	15,846	14,314
	<b>43,689</b>	<b>37,215</b>

The maturity profile of payments attributable to the defined benefit obligation is presented in the following table, which classifies the present value of the obligation by the maturity of the underlying payments:

€ million	2016	2015
Payments due within the next fiscal year	1,126	1,098
Payments due between two and five years	4,801	4,420
Payments due in more than five years	37,762	31,697
	<b>43,689</b>	<b>37,215</b>

Changes in plan assets are shown in the following table:

€ million	2016	2015
<b>Fair value of plan assets at January 1</b>	<b>9,769</b>	<b>9,224</b>
Interest income on plan assets determined using the discount rate	346	308
Income/expenses from plan assets not included in interest income	349	-164
Employer contributions to plan assets	680	654
Employee contributions to plan assets	25	27
Pension payments from plan assets	308	292
Gains (+) or losses (-) arising from plan settlements	68	5
Changes in consolidated Group	-	1
Other changes	38	7
Foreign exchange differences from foreign plans	-82	10
<b>Fair value of plan assets at December 31</b>	<b>10,749</b>	<b>9,769</b>

The investment of the plan assets to cover future pension obligations resulted in income in the amount of €695 million (previous year: €144 million).

Employer contributions to plan assets are expected to amount to €594 million (€599 million) in the next fiscal year.

Plan assets are invested in the following asset classes:

€ million	DEC. 31, 2016			DEC. 31, 2015		
	Quoted prices in active markets	No quoted prices in active markets	Total	Quoted prices in active markets	No quoted prices in active markets	Total
Cash and cash equivalents	269	–	269	289	–	289
Equity instruments	360	–	360	313	–	313
Debt instruments	1,658	0	1,659	1,513	0	1,513
Direct investments in real estate	2	107	109	2	96	98
Derivatives	–15	–	–15	–19	–	–19
Equity funds	1,531	43	1,574	1,424	50	1,475
Bond funds	5,310	108	5,418	4,682	99	4,781
Real estate funds	192	–	192	257	–	257
Other funds	591	2	593	496	2	499
Other instruments	32	559	591	24	540	564

48.1% (previous year: 47.0%) of the plan assets are invested in German assets, 26.7% (previous year: 29.1%) in other European assets and 25.2% (previous year: 24.0%) in assets in other regions.

Plan assets include €19 million (previous year: €15 million) invested in Volkswagen Group assets and €9 million (previous year: €8 million) in Volkswagen Group debt instruments.

The following amounts were recognized in the income statement:

€ million	2016	2015
Current service cost	1,066	1,104
Net interest on the net defined benefit liability	731	690
Past service cost (including plan curtailments)	–24	9
Gains (–) or losses (+) arising from plan settlements	4	2
<b>Net income (–) and expenses (+) recognized in profit or loss</b>	<b>1,777</b>	<b>1,804</b>

The above amounts are generally included in the personnel costs of the functions in the income statement. Net interest on the net defined benefit liability is reported in finance costs.

## 30. Noncurrent and current other provisions

€ million	Obligations arising from sales	Employee expenses	Litigation and legal risks	Miscellaneous provisions	Total
<b>Balance at Jan. 1, 2015</b>	<b>20,539</b>	<b>4,091</b>	<b>1,306</b>	<b>7,049</b>	<b>32,986</b>
Foreign exchange differences	214	-19	-143	32	83
Changes in consolidated Group	0	0	0	1	2
Utilized	7,517	1,429	236	1,901	11,082
Additions/New provisions	19,270	1,668	7,697	2,747	31,382
Unwinding of discount/effect of change in discount rate	5	-22	4	4	-9
Reversals	1,185	142	219	858	2,404
<b>Balance at Dec. 31, 2015</b>	<b>31,326</b>	<b>4,148</b>	<b>8,409</b>	<b>7,075</b>	<b>50,958</b>
of which current	17,075	1,733	2,073	4,908	25,788
of which noncurrent	14,251	2,415	6,336	2,168	25,170
<b>Balance at Jan. 1, 2016</b>	<b>31,326</b>	<b>4,148</b>	<b>8,409</b>	<b>7,075</b>	<b>50,958</b>
Foreign exchange differences	174	35	93	100	402
Changes in consolidated Group	23	1	3	124	151
Utilized	9,265	1,344	1,583	2,103	14,295
Additions/New provisions	12,180	1,736	5,605	3,419	22,939
Unwinding of discount/effect of change in discount rate	123	196	-84	3	238
Reversals	1,533	227	726	713	3,199
<b>Balance at Dec. 31, 2016</b>	<b>33,027</b>	<b>4,546</b>	<b>11,717</b>	<b>7,904</b>	<b>57,193</b>
of which current	19,521	1,900	8,624	5,666	35,711
of which noncurrent	13,506	2,646	3,092	2,238	21,482

The obligations arising from sales contain provisions covering all risks relating to the sale of vehicles, components and genuine parts through to the disposal of end-of-life vehicles. They primarily comprise warranty obligations, calculated on the basis of losses to date and estimated future losses. They also include provisions for discounts, bonuses and similar allowances which are incurred after the balance sheet date, but for which there is a legal or constructive obligation attributable to sales revenue before the balance sheet date.

Provisions for employee expenses are recognized for long-service awards, time credits, partial retirement arrangements, severance payments and similar obligations, among other things.

The change in the provisions for litigation and legal risks is largely the result of provisions recognized to protect against the currently known legal risks related to the diesel issue, including suitable expenses for defense and legal advice, as well as provisions for the antitrust proceedings that the European Commission opened in 2011 against European truck manufacturers including MAN and Scania. These are subject to what are in part considerable estimation risks because the comprehensive and extensive investigations are still at an early stage, the factors involved are so complex, and the discussions with the authorities are still ongoing. In addition, the provisions for litigation and legal risks contain amounts relating to a large number of legal disputes and official proceedings in which Volkswagen Group companies become involved in Germany and internationally in the course of their operating activities. In particular, such legal disputes and other proceedings may occur in relation to suppliers, dealers, customers, employees, or investors. Please refer to the "Litigation" section for a discussion of the legal risks.

Miscellaneous provisions relate to a wide range of identifiable specific risks, price risks and uncertain obligations, which are measured in the amount of the expected settlement value. The increase results from provisions of €0.3 billion recognized for the investments totaling USD 2.0 billion over 10 years in zero emissions vehicle infrastructure as well as corresponding access and awareness initiatives for these technologies to which the Volkswagen Group had committed itself in the settlement agreements.

Miscellaneous provisions additionally include provisions amounting to €490 million (previous year: €459 million) relating to the insurance business.

### 31. Put options and compensation rights granted to noncontrolling interest shareholders

This balance sheet item consists primarily of the present value of the cash settlement in accordance with section 305 of the Aktiengesetz (AktG – German Stock Corporation Act) offered to MAN shareholders in connection with the control and profit and loss transfer agreement, including the basic interest rate in accordance with section 247 of the Bürgerliches Gesetzbuch (BGB – German Civil Code) assumed until the end of the award proceedings. The Annual General Meeting of MAN SE approved the conclusion of a control and profit and loss transfer agreement between MAN SE and Volkswagen Truck & Bus GmbH, a subsidiary of Volkswagen AG, in June 2013. The agreement sets out that the noncontrolling interest shareholders of MAN SE are entitled to either a cash settlement in accordance with section 305 of the AktG amounting to €80.89 per tendered ordinary or preferred share, or cash compensation in accordance with section 304 of the AktG in the amount of €3.07 per ordinary or preferred share (after corporate taxes, before the shareholder's individual tax liability) for each full fiscal year. In July 2013, award proceedings were instituted to review the appropriateness of the cash settlement set out in the agreement in accordance with section 305 of the AktG and the cash compensation in accordance with section 304 of the AktG. In July 2015, the Munich Regional Court ruled in the first instance that the amount of the cash settlement payable to the noncontrolling interest shareholders of MAN should be increased from €80.89 to €90.29; at the same time, the amount of the cash compensation was confirmed. The ruling is not yet legally effective, and both parties to the proceedings have since appealed. Volkswagen continues to maintain that the results of the valuation are correct. The appropriateness of the valuation was confirmed by the audit firms and by the court-appointed auditor of the agreement. As a precaution, the measurement was adjusted to the higher settlement payable, resulting in an expense of €437 million in 2015, which was recognized in the other financial result.

### 32. Trade payables

€ million	Dec. 31, 2016	Dec. 31, 2015
Trade payables to		
third parties	22,311	20,051
unconsolidated subsidiaries	182	165
joint ventures	157	82
associates	141	156
other investees and investors	3	7
	<b>22,794</b>	<b>20,460</b>

## Additional balance sheet disclosures in accordance with IFRS 7 (Financial Instruments)

### CARRYING AMOUNT OF FINANCIAL INSTRUMENTS BY IAS 39 MEASUREMENT CATEGORY

€ million	Dec. 31, 2016	Dec. 31, 2015
Financial assets at fair value through profit or loss	990	1,881
Loans and receivables	134,623	128,198
Available-for-sale financial assets	17,707	15,219
Financial liabilities at fair value through profit or loss	2,358	2,399
Financial liabilities measured at amortized cost	188,791	177,074

### RECONCILIATION OF BALANCE SHEET ITEMS TO CLASSES OF FINANCIAL INSTRUMENTS

The following table shows the reconciliation of the balance sheet items to the relevant classes of financial instruments, broken down by the carrying amount and fair value of the financial instruments.

The fair value of financial instruments measured at amortized cost, such as receivables and liabilities, is calculated by discounting using a market rate of interest for a similar risk and matching maturity. For reasons of materiality, the fair value of current balance sheet items is generally deemed to be their carrying amount.

Financial instruments measured at fair value also include shares in partnerships and corporations. There is no active market for these instruments. Since the future cash flows cannot be reliably determined, fair value cannot be determined using measurement models. The shares in these companies are carried at cost.

## RECONCILIATION OF BALANCE SHEET ITEMS TO CLASSES OF FINANCIAL INSTRUMENTS AS OF DECEMBER 31, 2015

€ million	MEASURED AT FAIR VALUE	MEASURED AT AMORTIZED COST		DERIVATIVE FINANCIAL INSTRUMENTS WITHIN HEDGE ACCOUNTING	NOT WITHIN SCOPE OF IFRS 7	BALANCE SHEET ITEM AT DEC. 31, 2015
	Carrying amount	Carrying amount	Fair value	Carrying amount	Carrying amount	
<b>Noncurrent assets</b>						
Equity-accounted investments	–	–	–	–	10,904	10,904
Other equity investments	211	–	–	–	763	974
Financial services receivables	–	63,185	64,630	–	–	63,185
Other financial assets	996	4,484	4,492	1,249	–	6,730
<b>Current assets</b>						
Trade receivables	–	11,132	11,132	–	–	11,132
Financial services receivables	–	46,888	46,888	–	–	46,888
Other financial assets	885	7,963	7,963	1,196	–	10,043
Marketable securities	15,007	–	–	–	–	15,007
Cash, cash equivalents and time deposits	–	20,871	20,871	–	–	20,871
<b>Noncurrent liabilities</b>						
Noncurrent financial liabilities	–	73,292	73,844	–	–	73,292
Other noncurrent financial liabilities	1,325	1,996	1,998	2,580	–	5,901
<b>Current liabilities</b>						
Put options and compensation rights granted to noncontrolling interest shareholders	–	3,933	3,783	–	–	3,933
Current financial liabilities	–	72,313	72,313	–	–	72,313
Trade payables	–	20,460	20,460	–	–	20,460
Other current financial liabilities	1,074	5,551	5,551	3,725	–	10,350



## RECONCILIATION OF BALANCE SHEET ITEMS TO CLASSES OF FINANCIAL INSTRUMENTS AS OF DECEMBER 31, 2016

€ million	MEASURED AT FAIR VALUE	MEASURED AT AMORTIZED COST		DERIVATIVE FINANCIAL INSTRUMENTS WITHIN HEDGE ACCOUNTING	NOT WITHIN SCOPE OF IFRS 7	BALANCE SHEET ITEM AT DEC. 31, 2016
	Carrying amount	Carrying amount	Fair value	Carrying amount	Carrying amount	
<b>Noncurrent assets</b>						
Equity-accounted investments	–	–	–	–	8,616	8,616
Other equity investments	187	–	–	–	809	996
Financial services receivables	–	68,402	70,766	–	–	68,402
Other financial assets	251	4,982	5,008	3,023	–	8,256
<b>Current assets</b>						
Trade receivables	–	12,187	12,187	–	–	12,187
Financial services receivables	–	49,673	49,673	–	–	49,673
Other financial assets	740	9,527	9,527	1,577	–	11,844
Marketable securities	17,520	–	–	–	–	17,520
Cash, cash equivalents and time deposits	–	19,265	19,265	–	–	19,265
<b>Noncurrent liabilities</b>						
Noncurrent financial liabilities	–	66,358	66,932	–	–	66,358
Other noncurrent financial liabilities	885	1,859	1,863	1,745	–	4,488
<b>Current liabilities</b>						
Put options and compensation rights granted to noncontrolling interest shareholders	–	3,849	3,861	–	–	3,849
Current financial liabilities	–	88,461	88,461	–	–	88,461
Trade payables	–	22,794	22,794	–	–	22,794
Other current financial liabilities	1,473	6,010	6,010	1,956	–	9,438

Uniform valuation techniques and inputs are used to measure fair value. The fair value of Level 2 and 3 financial instruments is measured in the individual divisions on the basis of Group-wide specifications. The measurement techniques used are explained in the section on “Accounting policies”. The fair value of put options and compensation rights granted to noncontrolling interest shareholders is calculated using a present value model based on the cash settlement determined by the Munich Regional Court in the award proceedings, including cash compensation, as well as the minimum statutory interest rate and a risk-adjusted discount rate for a matching maturity. For further information, please see section entitled “Put options and compensation rights granted to noncontrolling interest shareholders”. The fair value of Level 3 receivables was measured by reference to individual expectations of losses; these are based to a significant extent on the Company’s assump-

tions about counterparty credit quality. Financial services receivables are allocated to Level 3 because their fair value was measured using inputs that are not observable in an active market.

The following table contains an overview of the financial assets and liabilities measured at fair value by level:

**FINANCIAL ASSETS AND LIABILITIES MEASURED AT FAIR VALUE BY LEVEL\***

€ million	Dec. 31, 2015	Level 1	Level 2	Level 3
<b>Noncurrent assets</b>				
Other equity investments	211	117	–	94
Other financial assets	996	–	976	20
<b>Current assets</b>				
Other financial assets	885	–	879	6
Marketable securities	15,007	15,007	–	–
<b>Noncurrent liabilities</b>				
Other noncurrent financial liabilities	1,325	–	1,142	183
<b>Current liabilities</b>				
Other current financial liabilities	1,074	–	1,006	68

\* Prior-year figures adjusted.

€ million	Dec. 31, 2016	Level 1	Level 2	Level 3
<b>Noncurrent assets</b>				
Other equity investments	187	76	–	111
Other financial assets	251	–	216	34
<b>Current assets</b>				
Other financial assets	740	–	734	6
Marketable securities	17,520	17,520	–	–
<b>Noncurrent liabilities</b>				
Other noncurrent financial liabilities	885	–	722	163
<b>Current liabilities</b>				
Other current financial liabilities	1,473	–	1,406	67

## FAIR VALUE OF FINANCIAL ASSETS AND LIABILITIES MEASURED AT AMORTIZED COST BY LEVEL

€ million	Dec. 31, 2015	Level 1	Level 2	Level 3
Fair value of financial assets measured at amortized cost				
Financial services receivables	111,518	–	–	111,518
Trade receivables	11,132	–	10,975	157
Other financial assets	12,455	677	6,203	5,576
Cash, cash equivalents and time deposits	20,871	20,467	405	–
<b>Fair value of financial assets measured at amortized cost</b>	<b>155,977</b>	<b>21,144</b>	<b>17,583</b>	<b>117,251</b>
Fair value of financial liabilities measured at amortized cost				
Put options and compensation rights granted to noncontrolling interest shareholders	3,783	–	–	3,783
Trade payables	20,460	–	20,460	–
Financial liabilities	146,156	23,675	122,420	61
Other financial liabilities	7,550	269	7,185	95
<b>Fair value of financial liabilities measured at amortized cost</b>	<b>177,949</b>	<b>23,944</b>	<b>150,066</b>	<b>3,940</b>

€ million	Dec. 31, 2016	Level 1	Level 2	Level 3
Fair value of financial assets measured at amortized cost				
Financial services receivables	120,438	–	–	120,438
Trade receivables	12,187	–	11,977	210
Other financial assets	14,535	550	6,695	7,289
Cash, cash equivalents and time deposits	19,265	18,838	426	–
<b>Fair value of financial assets measured at amortized cost</b>	<b>166,915</b>	<b>19,389</b>	<b>19,099</b>	<b>128,427</b>
Fair value of financial liabilities measured at amortized cost				
Put options and compensation rights granted to noncontrolling interest shareholders	3,861	–	–	3,861
Trade payables	22,794	–	22,794	–
Financial liabilities	155,394	39,391	114,198	1,804
Other financial liabilities	7,873	537	7,159	177
<b>Fair value of financial liabilities measured at amortized cost</b>	<b>189,921</b>	<b>39,928</b>	<b>144,151</b>	<b>5,842</b>

## DERIVATIVE FINANCIAL INSTRUMENTS WITHIN HEDGE ACCOUNTING BY LEVEL

€ million	Dec. 31, 2015	Level 1	Level 2	Level 3
<b>Noncurrent assets</b>				
Other financial assets	1,249	–	1,249	–
<b>Current assets</b>				
Other financial assets	1,196	–	1,196	–
<b>Noncurrent liabilities</b>				
Other noncurrent financial liabilities	2,580	–	2,573	7
<b>Current liabilities</b>				
Other current financial liabilities	3,725	–	3,725	–

€ million	Dec. 31, 2016	Level 1	Level 2	Level 3
<b>Noncurrent assets</b>				
Other financial assets	3,023	–	3,019	4
<b>Current assets</b>				
Other financial assets	1,577	–	1,577	–
<b>Noncurrent liabilities</b>				
Other noncurrent financial liabilities	1,745	–	1,745	0
<b>Current liabilities</b>				
Other current financial liabilities	1,956	–	1,956	–

The allocation of fair values to the three levels in the fair value hierarchy is based on the availability of observable market prices. Level 1 is used to report the fair value of financial instruments for which a price is directly available in an active market. Examples include marketable securities and other equity investments measured at fair value. Fair values in Level 2, for example of derivatives, are measured on the basis of observable market inputs using market-based valuation techniques. In particular, the inputs used include exchange rates, yield curves and commodity prices that are observable in the relevant markets and obtained through pricing services. Level 3 fair values are calculated using valuation techniques that incorporate inputs that are not observable in active markets. In the Volkswagen Group, long-term commodity futures are allocated to Level 3 because the prices available on the market must be extrapolated for measurement purposes. This is done on the basis of observable inputs obtained for the different commodities through pricing services. Options on equity instruments and residual value protection models are also reported in Level 3. Equity instruments are measured primarily using the relevant business plans and entity-specific discount rates. The significant inputs used to measure fair value for the residual value protection models include forecasts and estimates of used vehicle residual values for the appropriate models.

## CHANGES IN BALANCE SHEET ITEMS MEASURED AT FAIR VALUE BASED ON LEVEL 3\*

€ million	Financial assets measured at fair value	Financial liabilities measured at fair value
<b>Balance at Jan. 1, 2015</b>	<b>178</b>	<b>249</b>
Foreign exchange differences	7	0
Total comprehensive income	0	157
recognized in profit or loss	-1	144
recognized in other comprehensive income	0	13
Additions (purchases)	-53	-
Sales and settlements	-12	-99
Transfers into Level 2	0	-56
<b>Balance at Dec. 31, 2015</b>	<b>119</b>	<b>251</b>
<b>Total gains or losses recognized in profit or loss</b>	<b>-1</b>	<b>-144</b>
Net other operating expense/income	-	-
of which attributable to assets/liabilities held at the reporting date	-	-
Financial result	-1	-144
of which attributable to assets/liabilities held at the reporting date	-1	-98

\* Prior-year figures adjusted.

€ million	Financial assets measured at fair value	Financial liabilities measured at fair value
<b>Balance at Jan. 1, 2016</b>	<b>119</b>	<b>251</b>
Foreign exchange differences	0	0
Total comprehensive income	24	97
recognized in profit or loss	17	100
recognized in other comprehensive income	7	-3
Additions (purchases)	23	-
Sales and settlements	-9	-89
Transfers into Level 2	-6	-30
<b>Balance at Dec. 31, 2016</b>	<b>152</b>	<b>230</b>
<b>Total gains or losses recognized in profit or loss</b>	<b>17</b>	<b>-100</b>
Net other operating expense/income	-	-
of which attributable to assets/liabilities held at the reporting date	-	-
Financial result	17	-100
of which attributable to assets/liabilities held at the reporting date	14	-74

The transfers between the levels of the fair value hierarchy are reported at the respective reporting dates. The transfers out of Level 3 into Level 2 comprise commodity futures for which observable quoted prices are now available for measurement purposes due to the decline in their remaining maturities; consequently, no extrapolation is required. There were no transfers between other levels of the fair value hierarchy.

Commodity prices are the key risk variable for the fair value of commodity futures. Sensitivity analyses are used to present the effect of changes in commodity prices on earnings after tax and equity.

If commodity prices for commodity futures classified as Level 3 had been 10% higher (lower) as of December 31, 2016, earnings after tax would have been €6 million (previous year: €6 million) higher (lower) and equity would have been €3 million (previous year: €2 million) higher (lower).

The key risk variable for measuring options on equity instruments held by the Company is the relevant enterprise value. Sensitivity analyses are used to present the effect of changes in risk variables on earnings after tax.

If the assumed enterprise values had been 10% higher, earnings after tax would have been €1 million (previous year: €1 million) higher. If the assumed enterprise values had been 10% lower, earnings after tax would have been €1 million (previous year: €1 million) lower.

Residual value risks result from hedging agreements with dealers under which earnings effects caused by market-related fluctuations in residual values that arise from buy-back obligations under leases are borne in part by the Volkswagen Group.

The key risk variable influencing the fair value of the options relating to residual value risks is used car prices. Sensitivity analyses are used to quantify the effects of changes in used car prices on earnings after tax.

If the prices for the used cars covered by the residual value protection model had been 10% higher as of December 31, 2016, earnings after tax would have been €249 million higher. If the prices for the used cars covered by the residual value protection model had been 10% lower as of December 31, 2016, earnings after tax would have been €249 million lower.

**OFFSETTING OF FINANCIAL ASSETS AND LIABILITIES**

The following tables contain information about the effects of offsetting in the balance sheet and the potential financial effects of offsetting in the case of instruments that are subject to a legally enforceable master netting arrangement or a similar agreement.

€ million	Gross amounts of recognized financial assets	Gross amounts of recognized financial liabilities set off in the balance sheet	Net amounts of financial assets presented in the balance sheet	AMOUNTS THAT ARE NOT SET OFF IN THE BALANCE SHEET		Net amount at Dec. 31, 2015
				Financial instruments	Collateral received	
Derivatives	4,326	–	4,326	–2,201	–123	2,002
Financial services receivables	110,396	–323	110,073	–	–16	110,057
Trade receivables	11,243	–111	11,132	0	–231	10,901
Marketable securities	15,007	–	15,007	–	–	15,007
Cash, cash equivalents and time deposits	20,871	–	20,871	–	–	20,871
Other financial assets	12,670	–11	12,658	–	–	12,658

€ million	Gross amounts of recognized financial assets	Gross amounts of recognized financial liabilities set off in the balance sheet	Net amounts of financial assets presented in the balance sheet	AMOUNTS THAT ARE NOT SET OFF IN THE BALANCE SHEET		Net amount at Dec. 31, 2016
				Financial instruments	Collateral received	
Derivatives	5,591	–	5,591	–3,425	–175	1,990
Financial services receivables	118,470	–395	118,075	–	–65	118,010
Trade receivables	12,188	–2	12,187	0	–7	12,179
Marketable securities	17,520	–	17,520	–	–	17,520
Cash, cash equivalents and time deposits	19,265	–	19,265	–	–	19,265
Other financial assets	14,709	–14	14,695	0	–	14,695

€ million	Gross amounts of recognized financial liabilities	Gross amounts of recognized financial assets set off in the balance sheet	Net amounts of financial liabilities presented in the balance sheet	AMOUNTS THAT ARE NOT SET OFF IN THE BALANCE SHEET		Net amount at Dec. 31, 2015
				Financial instruments	Collateral pledged	
Put options and compensation rights granted to noncontrolling interest shareholders	3,933	–	3,933	–	–	3,933
Derivatives	8,703	–	8,703	–2,178	–12	6,514
Financial liabilities	145,604	–	145,604	–	–3,587	142,018
Trade payables	20,571	–111	20,460	0	–	20,460
Other financial liabilities	7,882	–335	7,547	–	–	7,547

€ million	Gross amounts of recognized financial liabilities	Gross amounts of recognized financial assets set off in the balance sheet	Net amounts of financial liabilities presented in the balance sheet	AMOUNTS THAT ARE NOT SET OFF IN THE BALANCE SHEET		Net amount at Dec. 31, 2016
				Financial instruments	Collateral pledged	
Put options and compensation rights granted to noncontrolling interest shareholders	3,849	–	3,849	–	–	3,849
Derivatives	6,058	–	6,058	–3,427	–24	2,607
Financial liabilities	154,819	–	154,819	–	–3,041	151,778
Trade payables	22,796	–2	22,794	0	–	22,794
Other financial liabilities	8,278	–409	7,869	–	–	7,869

The “Financial instruments” column shows the amounts that are subject to a master netting arrangement but were not set off because they do not meet the criteria for offsetting in the balance sheet. The “Collateral received” and “Collateral pledged” columns show the amounts of cash collateral and collateral in the form of financial instruments received and pledged for the total assets and liabilities that do not meet the criteria for offsetting in the balance sheet.



## CHANGES IN CREDIT RISK VALUATION ALLOWANCES ON FINANCIAL ASSETS

€ million	Specific valuation allowances	Portfolio-based valuation allowances	2016	Specific valuation allowances	Portfolio-based valuation allowances	2015
<b>Balance at Jan. 1</b>	<b>2,142</b>	<b>1,970</b>	<b>4,112</b>	<b>2,269</b>	<b>1,665</b>	<b>3,933</b>
Exchange rate and other changes	90	-12	78	-115	-6	-121
Changes in consolidated Group	-25	0	-25	-19	-4	-23
Additions	663	727	1,390	702	628	1,330
Utilization	429	-	429	356	-	356
Reversals	404	453	857	362	290	652
Reclassification	56	-56	0	23	-23	0
<b>Balance at Dec. 31</b>	<b>2,092</b>	<b>2,175</b>	<b>4,268</b>	<b>2,142</b>	<b>1,970</b>	<b>4,112</b>

The valuation allowances mainly relate to the credit risks associated with receivables from the financial services business.

## ASSET-BACKED SECURITIES TRANSACTIONS

Asset-backed securities transactions with financial assets amounting to €24,191 million (previous year: €23,245 million) entered into to refinance the financial services business are included in bonds, commercial paper and notes, and liabilities from loans. The corresponding carrying amount of the receivables from the customer and dealer financing and the finance lease business amounted to €26,184 million (previous year: €26,415 million). Collateral of €43,847 million (previous year: €34,717 million) in total was furnished as part of asset-backed securities transactions. The expected payments were assigned to structured entities and the equitable liens in the financed vehicles were transferred. These asset-backed securities transactions did not result in the receivables from financial services business being derecognized, as the Group retains nonpayment and late payment risks. The difference between the assigned receivables and the related liabilities is the result of different terms and conditions and the share of the securitized paper and notes held by the Volkswagen Group itself, as well as the proportion of vehicles financed within the Group.

Most of the public and private asset-backed securities transactions of the Volkswagen Group can be repaid in advance (clean-up call) if less than 9% or 10%, as appropriate, of the original transaction volume is outstanding. The assigned receivables cannot be assigned again or pledged elsewhere as collateral. The claims of the holders of commercial paper and notes are limited to the assigned receivables and the receipts from those receivables are earmarked for the repayment of the corresponding liability.

As of December 31, 2016, the fair value of the assigned receivables still recognized in the balance sheet was €27,856 million (previous year: €25,161 million). The fair value of the related liabilities was €24,424 million (previous year: €23,000 million) at that reporting date.

The Volkswagen Financial Services AG Group is contractually obliged under certain conditions to transfer funds to the structured entities that are included in its consolidated financial statements. Since the receivables are transferred to the special purpose entity by way of undisclosed assignment, the situation may occur in which the receivable has already been reduced in a legally binding manner at the originator, for example if the obligor effectively offsets it against receivables owed to it by a company belonging to the Volkswagen Group. In this case, collateral must be furnished for the resulting compensation claims against the special purpose entity, for example if the rating of the Group company concerned declines to a contractually agreed reference value.

## Other disclosures

### 33. Cash flow statement

Cash flows are presented in the cash flow statement classified into cash flows from operating activities, investing activities and financing activities, irrespective of the balance sheet classification.

Cash flows from operating activities are derived indirectly from earnings before tax. Earnings before tax are adjusted to eliminate noncash expenditures (mainly depreciation, amortization and impairment losses) and income. Other noncash income and expense results mainly from measurement effects in connection with financial instruments and to fair value changes relating to hedging transactions (see section entitled "Other financial result"). This results in cash flows from operating activities after accounting for changes in working capital, which also include changes in lease assets and in financial services receivables.

Investing activities include additions to property, plant and equipment and equity investments, additions to capitalized development costs and investments in securities, loans and time deposits.

Financing activities include outflows of funds from dividend payments and redemption of bonds, inflows from the capital increases and issuance of bonds, and changes in other financial liabilities. Please refer to the "Equity" section for information on the inflows from the issuance of hybrid capital in March 2015 in the amount of €2,457 million contained in the capital contributions.

The changes in balance sheet items that are presented in the cash flow statement cannot be derived directly from the balance sheet, as the effects of currency translation and changes in the consolidated Group are noncash transactions and are therefore eliminated.

In 2016, cash flows from operating activities include interest received amounting to €6,364 million (previous year: €6,619 million) and interest paid amounting to €2,716 million (previous year: €2,440 million). Cash flows from operating activities also include dividend payments received from joint ventures and associates of €3,613 million (previous year: €4,704 million).

Dividends amounting to €68 million (previous year: €2,294 million) were paid to Volkswagen AG shareholders.

€ million	Dec. 31, 2016	Dec. 31, 2015
Cash, cash equivalents and time deposits as reported in the balance sheet	19,265	20,871
Time deposits	-431	-410
Cash and cash equivalents as reported in the cash flow statement	18,833	20,462

Time deposits are not classified as cash equivalents. Time deposits have a contractual maturity of more than three months. The maximum default risk corresponds to its carrying amount.

## 34. Financial risk management and financial instruments

### 1. HEDGING GUIDELINES AND FINANCIAL RISK MANAGEMENT PRINCIPLES

The principles and responsibilities for managing and controlling the risks that could arise from financial instruments are defined by the Board of Management and monitored by the Supervisory Board. General rules apply to the Group-wide risk policy; these are oriented on the statutory requirements and the “Minimum Requirements for Risk Management by Credit Institutions”.

Group Treasury is responsible for operational risk management and control of risks from the financial instruments it itself administers. The main functions of the MAN and PHS subgroups are included in Group Treasury’s operational risk management and control for risks relating to financial instruments, while the Scania subgroup is only included to a limited extent. Subgroups have their own risk management structures. The Executive Committee for Liquidity and Foreign Currency is regularly informed about current financial risks. In addition, the Group Board of Management and the Supervisory Board are regularly updated on the current risk situation.

For more information, please see the management report on page 199-200.

### 2. CREDIT AND DEFAULT RISK

The credit and default risk arising from financial assets involves the risk of default by counterparties, and therefore comprises at a maximum the amount of the claims under carrying amounts receivable from them and the irrevocable credit commitments. The maximum potential credit and default risk is reduced by collateral held and other credit enhancements in the amount of €77,465 million (previous year: €74,115 million). The collateral held relates solely to financial assets carried at amortized cost and mainly serves to secure financial services receivables and trade receivables. Collateral comprises vehicles and assets transferred as security, as well as guarantees and real property liens. Cash collateral is also used in hedging transactions. The risk arising from nonderivative financial instruments is also accounted for by recognizing bad debt losses. Significant cash and capital investments, as well as derivatives, are only entered into with national and international banks. Risk is additionally limited by a limit system based primarily on the equity base of the counterparties concerned and on credit assessments by international rating agencies. Financial guarantees issued also give rise to credit and default risk. The maximum potential credit and default risk is calculated from the amount Volkswagen would have to pay if claims were to be asserted under the guarantees. The corresponding amounts are presented in the Liquidity risk section.

There were no material concentrations of risk at individual counterparties or counterparty groups in the past fiscal year due to the global allocation of the Group’s business activities and the resulting diversification. There was hardly any change in the concentration of credit and default risk exposures to the German public banking sector as a whole that has arisen from Group-wide cash and capital investments as well as derivatives: the portion attributable to this sector was 13.0% at the end of 2016 compared with 9.7% at the end of 2015. Any existing concentration of risk is assessed and monitored both at the level of individual counterparties or counterparty groups and with regard to the countries in which these are based, in each case using the share of all credit and default risk exposures accounted for by the risk exposure concerned.

## CREDIT AND DEFAULT RISK RELATING TO FINANCIAL ASSETS BY GROSS CARRYING AMOUNT

€ million	Neither	Past due	Impaired	Dec. 31, 2016	Neither	Past due	Impaired	Dec. 31, 2015
	past due nor impaired	and not impaired			past due nor impaired	and not impaired		
Measured at amortized cost								
Financial services receivables	115,747	3,001	3,003	121,751	108,171	2,442	2,881	113,493
Trade receivables	9,421	2,596	607	12,624	8,508	2,503	554	11,565
Other receivables	14,391	110	162	14,663	12,368	59	279	12,705
	<b>139,559</b>	<b>5,706</b>	<b>3,772</b>	<b>149,037</b>	<b>129,047</b>	<b>5,003</b>	<b>3,713</b>	<b>137,764</b>

There are no past due financial instruments measured at fair value in the Volkswagen Group. In fiscal year 2016, marketable securities measured at fair value with a cost of €83 million (previous year: €15 million) were individually impaired. In addition, portfolio-based impairment losses are recognized in respect of the financial services receivables presented above that are not past due and not individually impaired, as well as of the financial services receivables presented above that are past due and not individually impaired.

## CREDIT RATING OF THE GROSS CARRYING AMOUNTS OF FINANCIAL ASSETS THAT ARE NEITHER PAST DUE NOR IMPAIRED

€ million	Risk class 1	Risk class 2	Dec. 31, 2016	Risk class 1	Risk class 2	Dec. 31, 2015
Measured at amortized cost						
Financial services receivables	99,153	16,595	115,747	91,651	16,520	108,171
Trade receivables	9,284	137	9,421	8,333	175	8,508
Other receivables	14,238	153	14,391	12,185	183	12,368
Measured at fair value	22,021	–	22,021	18,118	–	18,118
	<b>144,694</b>	<b>16,885</b>	<b>161,580</b>	<b>130,288</b>	<b>16,878</b>	<b>147,166</b>

The Volkswagen Group performs a credit assessment of borrowers in all loan and lease agreements, using scoring systems for the high-volume business and rating systems for corporate customers and receivables from dealer financing. Receivables rated as good are contained in risk class 1. Receivables from customers whose credit rating is not good but have not yet defaulted are contained in risk class 2.

**MATURITY ANALYSIS OF THE GROSS CARRYING AMOUNTS OF FINANCIAL ASSETS  
THAT ARE PAST DUE AND NOT IMPAIRED**

€ million	PAST DUE BY			GROSS CARRYING AMOUNT
	up to 30 days	30 to 90 days	more than 90 days	Dec. 31, 2015
<b>Measured at amortized cost</b>				
Financial services receivables	1,777	637	28	2,442
Trade receivables	1,234	671	598	2,503
Other receivables	27	10	22	59
<b>Measured at fair value</b>	–	–	–	–
	<b>3,039</b>	<b>1,317</b>	<b>648</b>	<b>5,003</b>

€ million	PAST DUE BY			GROSS CARRYING AMOUNT
	up to 30 days	30 to 90 days	more than 90 days	Dec. 31, 2016
<b>Measured at amortized cost</b>				
Financial services receivables	2,205	788	8	3,001
Trade receivables	1,080	720	795	2,596
Other receivables	49	36	24	110
<b>Measured at fair value</b>	–	–	–	–
	<b>3,334</b>	<b>1,544</b>	<b>828</b>	<b>5,706</b>

Collateral that was accepted for financial assets in the current fiscal year was recognized in the balance sheet in the amount of €120 million (previous year: €90 million). This mainly relates to vehicles.

### 3. LIQUIDITY RISK

The solvency and liquidity of the Volkswagen Group are ensured at all times by rolling liquidity planning, a liquidity reserve in the form of cash, confirmed credit lines and the issuance of securities on the international money and capital markets. The volume of confirmed credit lines was maintained at a high level through the extension of a syndicated credit line in the amount of €20 billion.

Local cash funds in certain countries (e.g. China, Brazil, Argentina, India and South Africa) are only available to the Group for cross-border transactions subject to exchange controls. There are no significant restrictions over and above these.

The following overview shows the contractual undiscounted cash flows from financial instruments.

**MATURITY ANALYSIS OF UNDISCOUNTED CASH FLOWS FROM FINANCIAL INSTRUMENTS**

€ million	REMAINING CONTRACTUAL MATURITIES			2016	REMAINING CONTRACTUAL MATURITIES			2015
	under one year	within one to five years	over five years		under one year	within one to five years	over five years	
Put options and compensation rights granted to noncontrolling interest shareholders	3,382	–	–	3,382	3,406	–	–	3,406
Financial liabilities	90,044	60,603	10,955	161,602	74,217	66,347	13,377	153,941
Trade payables	22,788	6	–	22,794	20,456	4	–	20,460
Other financial liabilities	6,009	1,789	83	7,880	5,550	1,940	69	7,560
Derivatives	77,294	59,007	119	136,420	77,686	73,684	10	151,380
	<b>199,517</b>	<b>121,405</b>	<b>11,157</b>	<b>332,079</b>	<b>181,316</b>	<b>141,976</b>	<b>13,456</b>	<b>336,747</b>

When calculating cash outflows related to put options and compensation rights, it was assumed that shares would be tendered at the earliest possible repayment date.

Derivatives comprise both cash flows from derivative financial instruments with negative fair values and cash flows from derivatives with positive fair values for which gross settlement has been agreed. Derivatives entered into through offsetting transactions are also accounted for as cash outflows. The cash outflows from derivatives for which gross settlement has been agreed are matched in part by cash inflows. These cash inflows are not reported in the maturity analysis. If these cash inflows were also recognized, the cash outflows presented would be substantially lower. This applies in particular also if hedges have been closed with offsetting transactions.

The cash outflows from irrevocable credit commitments are presented in section entitled "Other financial obligations", classified by contractual maturities.

As of December 31, 2016, the maximum potential liability under financial guarantees amounted to €173 million (previous year: €1,638 million). Financial guarantees are assumed to be due immediately in all cases. The decrease is mainly attributable to the elimination of the pledge of claims under certificates of deposit with Bankhaus Metzler amounting to €1.3 billion to secure a loan granted to Fleet Investments B.V. by Bankhaus Metzler (see disclosures on the basis of consolidation/joint ventures).

**4. MARKET RISK**
**4.1 Hedging policy and financial derivatives**

During the course of its general business activities, the Volkswagen Group is exposed to foreign currency, interest rate, commodity price, equity price and fund price risk. Corporate policy is to limit or eliminate such risk by means of hedging. All necessary hedging transactions with the exception of the Scania, MAN and Porsche Holding GmbH (Salzburg) subgroups are executed or coordinated centrally by Group Treasury. There were no significant risk concentrations in the past fiscal year.

The following table shows the gains and losses on hedges:

€ million	2016	2015
Hedging instruments used in fair value hedges	670	779
Hedged items used in fair value hedges	-739	-700
Ineffective portion of cash flow hedges	6	-46

The ineffective portion of cash flow hedges represents the income and expenses from changes in the fair value of hedging instruments that exceed the changes in the fair value of the hedged items but that are documented to be within the permitted range of 80% to 125% overall when measuring effectiveness. Such income or expenses are recognized directly in the financial result.

In 2016, €1,222 million (previous year: €3,864 million), in both cases reducing earnings, was transferred from the cash flow hedge reserve to the other operating result, €10 million (previous year: €3 million), in both cases reducing earnings, was transferred to the financial result, and €90 million (previous year: €90 million) was transferred to cost of sales, reducing earnings.

The Volkswagen Group uses two different methods to present market risk from nonderivative and derivative financial instruments in accordance with IFRS 7. For quantitative risk measurement, interest rate and foreign currency risk in the Volkswagen Financial Services subgroup are measured using a value-at-risk (VaR) model on the basis of a historical simulation, while market risk in the other Group companies is determined using a sensitivity analysis. The value-at-risk calculation indicates the size of the maximum potential loss on the portfolio as a whole within a time horizon of 40 days, measured at a confidence level of 99%. To provide the basis for this calculation, all cash flows from nonderivative and derivative financial instruments are aggregated into an interest rate gap analysis. The historical market data used in calculating value at risk covers a period of 1,000 trading days. The sensitivity analysis calculates the effect on equity and profit or loss by modifying risk variables within the respective market risks.

#### 4.2 Market risk in the Volkswagen Group (excluding Volkswagen Financial Services)

##### 4.2.1 Foreign currency risk

Foreign currency risk in the Volkswagen Group (excluding Volkswagen Financial Services) is attributable to investments, financing measures and operating activities. Currency forwards, currency options, currency swaps and cross-currency swaps are used to limit foreign currency risk. These transactions relate to the exchange rate hedging of all material payments covering general business activities that are not made in the functional currency of the respective Group companies. The principle of matching currencies applies to the Group's financing activities.

Hedging transactions entered into in 2016 as part of foreign currency risk management were primarily in Argentine pesos, Australian dollars, Brazilian real, sterling, Chinese renminbi, Hong Kong dollars, Indian rupees, Japanese yen, Canadian dollars, Mexican pesos, Norwegian kroner, Polish zloty, Russian rubles, Swedish kronor, Swiss francs, Singapore dollars, South African rand, South Korean won, Taiwan dollars, Czech koruna, Hungarian forints and US dollars.

All nonfunctional currencies in which the Volkswagen Group enters into financial instruments are included as relevant risk variables in the sensitivity analysis in accordance with IFRS 7.

If the functional currencies concerned had appreciated or depreciated by 10% against the other currencies, the exchange rates shown below would have resulted in the following effects on the hedging reserve in equity and on earnings after tax. It is not appropriate to add together the individual figures, since the results of the various functional currencies concerned are based on different scenarios.

The following table shows the sensitivities of the main currencies in the portfolio as of December 31, 2016.

€ million	DEC. 31, 2016		DEC. 31, 2015	
	+10%	-10%	+10%	-10%
<b>Exchange rate</b>				
<b>EUR/USD</b>				
Hedging reserve	1,929	-2,294	1,969	-2,160
Profit/loss after tax	-338	649	135	5
<b>EUR/GBP</b>				
Hedging reserve	1,202	-1,189	1,849	-1,850
Profit/loss after tax	-58	51	-46	48
<b>EUR/CNY</b>				
Hedging reserve	665	-662	1,015	-1,071
Profit/loss after tax	6	25	69	-21
<b>EUR/CHF</b>				
Hedging reserve	380	-375	439	-442
Profit/loss after tax	-9	2	-4	6
<b>EUR/JPY</b>				
Hedging reserve	318	-318	248	-241
Profit/loss after tax	-7	7	1	-7
<b>EUR/CAD</b>				
Hedging reserve	145	-154	110	-101
Profit/loss after tax	-54	63	9	-16
<b>EUR/AUD</b>				
Hedging reserve	178	-182	92	-92
Profit/loss after tax	-23	26	-1	1
<b>EUR/PLN</b>				
Hedging reserve	-107	108	-47	47
Profit/loss after tax	-21	21	-4	4
<b>EUR/SEK</b>				
Hedging reserve	91	-89	112	-113
Profit/loss after tax	-24	23	-78	78
<b>GBP/USD</b>				
Hedging reserve	106	-106	62	-62
Profit/loss after tax	2	-2	-1	1
<b>CZK/GBP</b>				
Hedging reserve	106	-106	170	-170
Profit/loss after tax	0	0	1	-1
<b>BRL/USD</b>				
Hedging reserve	-20	20	-1	1
Profit/loss after tax	82	-82	77	-77
<b>EUR/KRW</b>				
Hedging reserve	77	-82	158	-161
Profit/loss after tax	-8	13	-27	31
<b>EUR/CZK</b>				
Hedging reserve	31	-31	41	-41
Profit/loss after tax	-43	43	3	-3



#### 4.2.2 Interest rate risk

Interest rate risk in the Volkswagen Group (excluding Volkswagen Financial Services) results from changes in market interest rates, primarily for medium- and long-term variable interest receivables and liabilities. Interest rate swaps and cross-currency swaps are entered into to hedge against this risk primarily under fair value or cash flow hedges, and depending on market conditions. Intragroup financing arrangements are mainly structured to match the maturities of their refinancing. Departures from the Group standard are subject to centrally defined limits and monitored on an ongoing basis.

Interest rate risk within the meaning of IFRS 7 is calculated for these companies using sensitivity analyses. The effects of the risk-variable market rates of interest on the financial result and on equity are presented, net of tax.

If market interest rates had been 100 bps higher as of December 31, 2016, equity would have been €60 million (previous year: €71 million) lower. If market interest rates had been 100 bps lower as of December 31, 2016, equity would have been €60 million (previous year: €69 million) higher.

If market interest rates had been 100 bps higher as of December 31, 2016, earnings after tax would have been €10 million (previous year: €81 million) higher. If market interest rates had been 100 bps lower as of December 31, 2016, earnings after tax would have been €24 million (previous year: €41 million) lower.

#### 4.2.3 Commodity price risk

Commodity price risk in the Volkswagen Group (excluding Volkswagen Financial Services) primarily results from price fluctuations and the availability of nonferrous metals and precious metals, as well as of coal, CO<sub>2</sub> certificates and rubber. Forward transactions and swaps are entered into to limit these risks.

Hedge accounting in accordance with IAS 39 was applied in some cases to the hedging of commodity risk associated with aluminum and coal.

Commodity price risk within the meaning of IFRS 7 is presented using sensitivity analyses. These show the effect on earnings after tax and equity of changes in risk variables in the form of commodity prices.

If the commodity prices of the hedged nonferrous metals, coal and rubber had been 10% higher (lower) as of December 31, 2016, earnings after tax would have been €82 million (previous year: €75 million) higher (lower).

If the commodity prices of the hedges included in hedge accounting had been 10% higher (lower) as of December 31, 2016, equity would have been €48 million (previous year: €41 million) higher (lower).

#### 4.2.4 Equity and bond price risk

The Spezialfonds (special funds) launched using surplus liquidity and the equity interests measured at fair value are subject in particular to equity price and bond price risk, which can arise from fluctuations in quoted market prices, stock exchange indices and market rates of interest. The changes in bond prices resulting from variations in the market rates of interest are quantified in sections 4.2.1 and 4.2.2, as are the measurement of foreign currency and other interest rate risks arising from the special funds and the equity interests measured at fair value. As a rule, we counter the risks arising from the special funds by ensuring a broad diversification of products, issuers and regional markets when investing funds, as stipulated by our Investment Guidelines. In addition, we use exchange rate hedges in the form of futures contracts when market conditions are appropriate.

As part of the presentation of market risk, IFRS 7 requires disclosures on how hypothetical changes in risk variables affect the price of financial instruments. Potential risk variables here are in particular quoted market prices or indices, as well as interest rate changes as bond price parameters.

If share prices had been 10% higher as of December 31, 2016, equity would have been €4 million (previous year: €53 million) higher. If share prices had been 10% lower as of December 31, 2016, equity would have been €28 million (previous year: €61 million) lower.

#### 4.3 Market risk at Volkswagen Financial Services

Exchange rate risk in the Volkswagen Financial Services subgroup is mainly attributable to assets that are not denominated in the functional currency and from refinancing within operating activities. Interest rate risk relates to refinancing without matching maturities and the varying interest rate elasticity of individual asset and liability items. The risks are limited by the use of currency and interest rate hedges.

Microhedges and portfolio hedges are used for interest rate hedging. Fixed-rate assets and liabilities included in the hedging strategy are recognized at fair value, as opposed to their original subsequent measurement at amortized cost. The resulting effects in the income statement are offset by the corresponding gains and losses on the interest rate hedging instruments (swaps). Currency hedges (currency forwards and cross-currency swaps) are used to mitigate foreign currency risk. All cash flows in foreign currency are hedged.

As of December 31, 2016, the value at risk was €95 million (previous year: €179 million) for interest rate risk and €199 million (previous year: €196 million) for foreign currency risk.

The entire value at risk for interest rate and foreign currency risk at the Volkswagen Financial Services subgroup was €197 million (previous year: €245 million).

#### 5. METHODS FOR MONITORING HEDGE EFFECTIVENESS

In the Volkswagen Group, hedge effectiveness is assessed prospectively using the critical terms match method and using statistical methods in the form of a regression analysis. Retrospective analysis of effectiveness uses effectiveness tests in the form of the dollar offset method or a regression analysis.

Under the dollar offset method, the changes in value of the hedged item expressed in monetary units are compared with the changes in value of the hedging instrument expressed in monetary units.

Where regression analysis is used, the change in value of the hedged item is presented as an independent variable, and that of the hedging instrument as a dependent variable. Hedge relationships are classified as effective if they have sufficient coefficients of determination and slope factors.

## NOTIONAL AMOUNT OF DERIVATIVES

€ million	REMAINING TERM			TOTAL NOTIONAL AMOUNT	TOTAL NOTIONAL AMOUNT
	under one year	within one to	over five years	Dec. 31, 2016	Dec. 31, 2015
		five years			
<b>Notional amount of hedging instruments used in cash flow hedges:</b>					
Interest rate swaps	3,019	13,851	184	17,054	8,864
Currency forwards	38,057	46,697	–	84,754	102,587
Currency options	8,350	17,731	–	26,081	22,989
Currency swaps	1,976	319	–	2,295	7,353
Cross-currency swaps	785	1,166	–	1,951	1,762
Commodity futures contracts	346	334	–	679	771
<b>Notional amount of other derivatives:</b>					
Interest rate swaps	25,354	41,149	18,109	84,612	85,316
Interest rate option contracts	–	–	–	–	–
Currency forwards	24,216	4,219	1	28,436	25,383
Other currency options	33	12	–	45	45
Currency swaps	10,751	1,456	–	12,207	9,874
Cross-currency swaps	3,612	5,228	–	8,839	8,417
Commodity futures contracts	699	536	–	1,235	1,517

Both derivatives closed with offsetting transactions and the offsetting transactions themselves are included in the respective notional amount. The offsetting transactions cancel out the effects of the original hedging transactions. If the offsetting transactions were not included, the respective notional amount would be significantly lower. In addition to the derivatives used for hedging foreign currency, interest rate and price risk, the Group held options and other derivatives on equity instruments at the reporting date with a notional amount of €45 million (previous year: €1.4 billion) whose remaining maturity is under one year.

Existing cash flow hedges in the notional amount of €811 million (previous year: €– million) were discontinued because of a reduction in the projections. €5 million (previous year: €– million) was transferred from the cash flow hedge reserve to the financial result, reducing earnings. In addition, hedges were to be terminated due to internal risk regulations.

Items hedged under cash flow hedges are expected to be realized in accordance with the maturity buckets of the hedges reported in the table.

The fair values of the derivatives are estimated using market data at the balance sheet date as well as by appropriate valuation techniques. The following term structures were used for the calculation:

in %	EUR	CHF	CNY	CZK	GBP	JPY	KRW	SEK	USD
Interest rate for six months	–0.2512	–0.5760	3.5311	0.1515	0.3745	0.0237	1.5085	–0.4449	0.9957
Interest rate for one year	–0.2139	–0.5631	3.7798	0.1518	0.4013	0.0232	1.5060	–0.4313	1.1687
Interest rate for five years	0.0740	–0.3210	4.4050	0.5050	0.8657	0.0588	1.6750	0.2580	1.9724
Interest rate for ten years	0.6520	0.1480	4.5550	0.9650	1.2325	0.2100	1.8350	1.0980	2.3460

### 35. Capital management

The Group's capital management ensures that its goals and strategies can be achieved in the interests of shareholders, employees and other stakeholders. In particular, management focuses on generating the minimum return on invested assets in the Automotive Division that is required by the capital markets, and on increasing the return on equity in the Financial Services Division. In the process, it aims overall to achieve the highest possible growth in the value of the Group and its divisions for the benefit of all the Company's stakeholder groups.

In order to maximize the use of resources in the Automotive Division and to measure the success of this, we have for a number of years been using a value-based management system, with value contribution as an absolute performance measure and return on investment (ROI) as a relative indicator.

Value contribution is defined as the difference between operating profit after tax and the opportunity cost of invested capital. The opportunity cost of capital is calculated by multiplying the market cost of capital by average invested capital. Invested capital is calculated by taking the operating assets reported in the balance sheet (property, plant and equipment, intangible assets, lease assets, inventories and receivables) and deducting non-interest-bearing liabilities (trade payables and payments on account received). Average invested capital is derived from the balance at the beginning and the end of the reporting period. In spite of the charges relating to the special items recognized in the operating result, the Automotive Division disclosed a positive value contribution of €1,775 million in the reporting period which due to the improvement in the operating result before special items and the decrease in the cost of capital was higher than the prior-year figure.

The return on investment (ROI) is defined as the return on invested capital for a particular period based on the operating result after tax. If the return on investment exceeds the market cost of capital, there is an increase in the value of the invested capital and a positive value contribution. In the Group, a minimum required rate of return on invested capital of 9% is defined, which applies to both the business units and the individual products and product lines. Our goal of generating a sustained return on investment of over 15% is anchored in Strategy 2025. The return on investment therefore serves as a consistent target in operational and strategic management and is used to measure target attainment for the Automotive Division, the individual business units, and projects and products. The return on investment achieved for the Automotive Division in the reporting period was 8.2%. Due to the special items recognized in the operating result, this was lower than our minimum required rate of return of 9%, but higher than our current cost of capital of 6.2%.

Due to the specific features of the Financial Services Division, its management focuses on return on equity, a special target linked to invested capital. This measure is calculated as the ratio of earnings before tax to average equity. Average equity is calculated from the balance at the beginning and the end of the reporting period. In addition, the goals of the Financial Services Division are to meet the banking supervisory authorities' regulatory capital requirements, to procure equity for the growth planned in the coming fiscal years and to support its external rating by ensuring capital adequacy. To ensure compliance with prudential requirements at all times, a planning procedure integrated into internal reporting has been put in place at Volkswagen Financial Services, allowing the required equity to be continuously determined on the basis of actual and expected business performance. In the reporting period, this again ensured that regulatory minimum capital requirements were always met both at Group level and at the level of subordinate companies' individual, specific capital requirements.

The return on investment and value contribution in the Automotive Division as well as the return on equity and the equity ratio in the Financial Services Division are shown in the following table:

€ million	2016	2015
<b>Automotive Division<sup>1</sup></b>		
Operating result after tax	7,419	-203
Invested capital (average)	91,020	84,289
<b>Return on investment (RoI) in %</b>	<b>8.2</b>	<b>-0.2</b>
Cost of capital in %	6.2	6.8
Opportunity cost of invested capital	5,643	5,732
<b>Value contribution<sup>2</sup></b>	<b>1,775</b>	<b>-5,935</b>
<b>Financial Services Division</b>		
Earnings before tax	2,408	2,333
Average equity	22,342	19,140
<b>Return on equity before tax in %</b>	<b>10.8</b>	<b>12.2</b>
<b>Equity ratio in %</b>	<b>12.5</b>	<b>11.9</b>

1 Including proportionate inclusion of the Chinese joint ventures and allocation of consolidation adjustments between the Automotive and Financial Services Divisions; excluding effects on earnings and assets from purchase price allocation.

2 The value contribution corresponds to the Economic Value Added (EVA®). EVA® is a registered trademark of Stern Stewart & Co.

## 36. Contingent liabilities

€ million	Dec. 31, 2016	Dec. 31, 2015
Liabilities under guarantees	419	334
Liabilities under warranty contracts	75	77
Assets pledged as security for third-party liabilities	20	20
Other contingent liabilities	6,305	3,069
	<b>6,819</b>	<b>3,500</b>

The trust assets and liabilities of the savings and trust entities belonging to the South American subsidiaries not included in the consolidated balance sheet amount to €944 million (previous year: €702 million).

In the case of liabilities from guarantees, the Group is required to make specific payments if the debtors fail to meet their obligations.

The other contingent liabilities primarily comprise potential liabilities arising from matters relating to taxes and customs duties, as well as litigation and proceedings relating to suppliers, dealers, customers, employees and investors. The increase is due in particular to additional contingent liabilities in conjunction with lawsuits. As a general principle, they do not include any class action lawsuits and criminal investigations/misdemeanor proceedings related to the diesel issue filed outside of the USA and Canada, as well as specific portions of investor lawsuits which meet the definition of a contingent liability but could not, as a rule, be disclosed because it is impossible to measure the amount involved. These proceedings are still at a very early stage, meaning that in a number of cases the plaintiffs have so far not specified the basis of their claims and/or there is insufficient certainty about the number of plaintiffs or the amounts being claimed.

As permitted by IAS 37.92, in order not to prejudice the outcomes of the proceedings and the interests of the Company, we have not made any further disclosures about estimates in connection with the financial effects of, and disclosures about, uncertainty regarding the timing or amount of contingent liabilities in connection with the diesel issue and investigations by the European Commission. Further information can be found under the section entitled "Litigation".

On May 5, 2016, the U.S. National Highway Traffic Safety Administration (NHTSA) announced, jointly with the Takata company, a further extension of the recall for various models from different manufacturers containing certain airbags produced by the Takata company. Recalls were also ordered by the local authorities in Canada, Japan and South Korea. The recalls also included models manufactured by the Volkswagen Group. Appropriate provisions have been recognized. Currently, the possibility of further extensions to the recalls that could also affect Volkswagen Group models cannot be ruled out. It is not possible at the moment to provide further disclosures in accordance with IAS 37.86 in relation to this matter because the technical investigations and consultations with the authorities are still being carried out.

### 37. Litigation

In the course of their operating activities, Volkswagen AG and the companies in which it is directly or indirectly invested become involved in a great number of legal disputes and official proceedings in Germany and internationally. In particular, such legal disputes and other proceedings may occur in relation to suppliers, dealers, customers, employees, or investors. For the companies involved, these may result in payment or other obligations. Above all in cases in particular where US customers assert claims for vehicle defects individually or by way of a class action, highly cost-intensive measures may have to be taken and substantial compensation or punitive damages paid. Corresponding risks also result from US patent infringement proceedings.

Risks may also emerge in connection with the adherence to regulatory requirements. This particularly applies in the case of regulatory vagueness that may be interpreted differently by Volkswagen and the agencies responsible for the respective regulations. In addition, legal risks can arise from the criminal activities of individual persons, which even the best compliance management system can never completely prevent.

Where transparent and economically viable, adequate insurance coverage is taken out for these risks. For the identifiable and measurable risks, provisions considered appropriate are recognized and information about contingent liabilities is disclosed. As some risks cannot be assessed or can only be assessed to a limited extent, the possibility of loss or damage not being covered by the insured amounts and provisions cannot be ruled out. This particularly applies to legal risk assessment regarding the diesel issue.

#### Diesel Issue

On September 18, 2015, the US Environmental Protection Agency (EPA) publicly announced in a "Notice of Violation" that irregularities in relation to nitrogen oxide (NO<sub>x</sub>) emissions had been discovered in emissions tests on certain vehicles with Volkswagen Group diesel engines. It has been alleged that we had used undisclosed engine management software installed in certain four-cylinder diesel engines used in certain 2009 to 2015 model year vehicles to circumvent NO<sub>x</sub> emissions testing regulations in the United States of America in order to comply with certification requirements. The US environmental authority of California – the California Air Resources Board (CARB) – announced its own enforcement investigation in this context.

Volkswagen admitted to irregularities in this context. In its ad hoc release dated September 22, 2015, the Volkswagen Group announced that noticeable discrepancies between the figures achieved in testing and in actual road use had been identified in around eleven million vehicles worldwide with certain diesel engines. The vast majority of these engines are Type EA 189 Euro 5 engines. On November 2, 2015, the EPA issued another "Notice of Violation" alleging that irregularities had also been discovered in the software installed in vehicles with type V6 TDI 3.0 l diesel engines. CARB also issued a letter announcing its own enforcement investigation in this context. Audi has confirmed that at least three auxiliary emission control devices were

inadequately disclosed in the course of the US approval documentation. Around 113 thousand vehicles from the 2009 to 2016 model years with certain six-cylinder diesel engines are affected in the USA and Canada, where regulations governing NO<sub>x</sub> emissions limits for vehicles are stricter than those in other parts of the world.

On January 4, 2016, the US Department of Justice (DOJ), on behalf of the EPA, filed a civil complaint against Volkswagen AG, AUDI AG and other companies of the Volkswagen Group. The claims asserted under civil law are founded on the alleged use of illegal (defeat device) software in violation of the American Clean Air Act. The complaint's allegations relate to both the four-cylinder and the six-cylinder diesel engines. On January 12, 2016, it was announced that CARB intends to seek civil fines for alleged violations of the California Health & Safety Code and various CARB regulations.

In addition to internal inquiries, Volkswagen AG commissioned an external investigation by US law firm Jones Day. This is an independent and comprehensive investigation addressing the diesel issue. The Supervisory Board of Volkswagen AG is ensuring that Jones Day can carry out its clarification work independently. Jones Day is updating the Company and the DOJ on the current results of its investigation on an ongoing basis and supports Volkswagen AG in its cooperation with the judicial authorities.

The Supervisory Board of Volkswagen AG has formed a special committee to coordinate all activities in this context for the Supervisory Board.

Based on decisions dated October 15, 2015, the Kraftfahrtbundesamt (KBA – German Federal Motor Transport Authority) ordered the Volkswagen Passenger Cars, Volkswagen Commercial Vehicles and SEAT brands to recall all of the diesel vehicles that had been issued with vehicle type approval by the KBA from among the 11 million affected. The recall concerns the member states of the European Union (EU28). On December 10, 2015 a similar decision was issued regarding Audi vehicles with the EA 189 engine. The timetable and action plan forming the basis for the recall order correspond to the proposals presented in advance by Volkswagen. Depending on the technical complexity of the remedial actions, this means that the Volkswagen Group has been recalling the affected vehicles, of which there are around 8.5 million in total in the EU28 countries, to the service workshops since January 2016. The remedial actions differ in scope depending on the engine variant. The technical solutions cover software and in some cases hardware modifications, depending on the series and model year. The details of the remedial actions for the Volkswagen Group vehicles falling within its jurisdiction have been agreed in close cooperation with the KBA, which had to approve all fixes in advance. Only the approval of the technical solutions for 14 thousand vehicles is still outstanding.

In fiscal year 2016, the SEAT brand received approvals in principle from its respective type approval authority, the Ministry of Industry in Spain.

The type approval authority for the ŠKODA brand is the Vehicle Certification Agency in the United Kingdom. The approval process for ŠKODA vehicles is still ongoing.

In some countries outside the EU – among others Switzerland, Australia, South Korea, Taiwan and Turkey – national type approval is based on prior recognition of the EC/ECE type approval. We are also in close contact with the authorities in these countries in order to finalize the approval process. In addition, there is an intensive exchange of information with the authorities in the USA and Canada, where Volkswagen's planned actions in relation to the four-cylinder and the six-cylinder diesel engines will also have to be approved. Due to considerably stricter NO<sub>x</sub> limits in the USA and Canada, it is a greater technical challenge to refit the vehicles so that all applicable emissions limits can be met.

Potential consequences for Volkswagen's results of operations, financial position and net assets could emerge primarily in the following legal areas:

1. Criminal and administrative proceedings worldwide (excluding the USA/Canada)

In addition to the described approval processes with the responsible registration authorities, in some countries criminal investigations/misdemeanor proceedings (for example, by the public prosecutor's office in Braunschweig, Germany) and/or administrative proceedings (for example, by the Bundesanstalt für Finanzdienstleistungsaufsicht BaFin – the German Federal Financial Supervisory Authority) have been opened. The public

prosecutor's office in Braunschweig is investigating the core issue of the criminal investigations. Whether this will result in fines for the Company, and if so what their amount might be, is currently subject to estimation risks. According to Volkswagen's estimates so far, the likelihood for the majority of these proceedings to be successful is less than 50%. Contingent liabilities have therefore been disclosed in cases where they can be assessed and for which the likelihood for the imposition of fines was deemed not lower than 10%.

## 2. Product-related lawsuits worldwide (excluding the USA/Canada)

In principle, it is possible that customers in the affected markets will file civil lawsuits against Volkswagen AG and other Volkswagen Group companies. In addition, it is possible that importers and dealers could assert claims against Volkswagen AG and other Volkswagen Group companies, e.g. through recourse claims. As well as individual lawsuits, class action lawsuits are possible in various jurisdictions (albeit not in Germany).

In this context, various lawsuits are pending against Volkswagen AG and other Volkswagen Group companies at present.

Class action proceedings against Volkswagen AG and other Volkswagen Group companies are pending in various countries such as Argentina, Australia, Belgium, Brazil, Israel, Italy, United Kingdom, Mexico, Poland, Portugal and Taiwan. The class action proceedings are lawsuits aimed among other things at asserting damages. The amount of these damages cannot yet be quantified due to the early stage of the proceedings. Volkswagen does not estimate the litigants' prospect of success to be more than 50% in any of the aforementioned proceedings aimed at monetary relief. In South Korea various mass proceedings are pending (in some of these individual lawsuits several hundred litigants have been aggregated). These lawsuits are filed to assert damages and to rescind the purchase contract including repayment of the purchase price. Due to special circumstances in the market and specific characteristics of the South Korean legal system, Volkswagen estimates the litigants' prospects of success in the South Korean mass proceedings mentioned above to be inherently higher than in other jurisdictions outside the USA and Canada. Contingent liabilities have been disclosed for pending class action proceedings that can be assessed and for which the chance of success was deemed not implausible. Provisions were recognized to a small extent.

Furthermore, individual lawsuits and similar proceedings are pending against Volkswagen AG and other Volkswagen Group companies in numerous countries. In Germany around 1.300 individual law suits, in Italy and Spain law suits in the low three digit range and in France, Ireland and Austria individual lawsuits in the two-digit range are pending, most of which are aimed at asserting damages or rescinding the purchase contract. According to Volkswagen's estimates so far, the litigants' prospect of success is below 50% in the vast majority of the individual lawsuits. Contingent liabilities have therefore been disclosed for those lawsuits that can be assessed and for which the chance of success was deemed not implausible.

It is too early to estimate how many customers will take advantage of the option to file lawsuits in the future, beyond the existing lawsuits, or what their prospects of success will be.

Meanwhile, except for 14 thousand vehicles, the KBA has ascertained for all approved clusters (groups of vehicles) that implementation of the technical solutions would not bring about any unfavorable changes in fuel consumption, engine power, torque and noise emissions. We are now working expeditiously to implement the technical solutions in the field. The implementation of the technical modifications already started in January 2016.

## 3. Lawsuits filed by investors worldwide (excluding the USA/Canada)

Investors from Germany and abroad have filed claims for damages against Volkswagen AG based on purported losses due to alleged misconduct in capital market communications in connection with the diesel issue.

The vast majority of these investor lawsuits are currently pending at the District Court (Landgericht) in Braunschweig. On August 5, 2016, the District Court in Braunschweig ordered that common questions of law and fact relevant to the lawsuits pending at the District Court in Braunschweig be referred to the Higher



Regional Court (Oberlandesgericht) in Braunschweig for a binding declaratory decision pursuant to the German Act on Model Case Proceedings in Disputes Regarding Capital Market Information (Kapitalanleger-Musterverfahrensgesetz). In this proceeding, common questions of law and fact relevant to these actions shall be adjudicated in a consolidated manner by the Higher Regional Court in Braunschweig. All lawsuits at the District Court in Braunschweig will be stayed pending up until resolution of the common issues, unless they can be dismissed for reasons independent of the common issues that are adjudicated in the model case proceedings. The resolution of the common issues in the model case proceedings will be binding on all pending cases in the stayed lawsuits.

At the District Court in Stuttgart, further lawsuits have been filed against Volkswagen AG and Porsche Automobil Holding SE as joint and several debtors. It is currently unclear whether model case proceedings will be initiated in respect of these lawsuits and whether they will take place at the Higher Regional Court in Stuttgart or referred to the Higher Regional Court in Braunschweig.

Further investor lawsuits have been filed at various courts in Germany as well as in Austria and the Netherlands.

Altogether, Volkswagen has so far been served with investor lawsuits, judicial applications for dunning procedures and conciliation proceedings with claims amounting to approximately € 9 billion. Volkswagen remains of the opinion that it duly complied with its capital market obligations. Therefore, no provisions have been recognized for these investor lawsuits. Insofar as the chance of success was estimated at not lower than 10%, contingent liabilities have been disclosed.

#### 4. Proceedings in the USA/Canada

Following the publication of the EPA's "Notices of Violation," Volkswagen AG and other Volkswagen Group companies have been the subject of intense scrutiny, ongoing investigations (civil and criminal) and civil litigation. Volkswagen AG and other Volkswagen Group companies have received subpoenas and inquiries from state attorneys general and other governmental authorities and are responding to such investigations and inquiries.

In addition, Volkswagen AG and other Volkswagen Group companies in the USA/Canada are facing litigation on a number of different fronts relating to the matters described in the EPA's "Notices of Violation".

A large number of putative class action lawsuits by affected customers and dealers have been filed in US federal courts and consolidated for pretrial coordination purposes in the federal multidistrict litigation proceeding in the State of California.

On January 4, 2016, the DOJ, Civil Division, on behalf of the EPA, initiated a civil complaint against Volkswagen AG, AUDI AG and certain other Volkswagen Group companies. The action seeks statutory penalties under the US Clean Air Act, as well as certain injunctive relief, and has been consolidated for pretrial coordination purposes in the California multidistrict litigation.

On January 12, 2016, CARB announced that it intends to seek civil fines for alleged violations of the California Health & Safety Code and various CARB regulations.

In June 2016, Volkswagen AG, Volkswagen Group of America, Inc. and certain affiliates reached settlement agreements with the DOJ on behalf of the EPA, CARB and the California Attorney General; private plaintiffs represented by a Plaintiffs' Steering Committee (PSC) in the multidistrict litigation pending in California and the U.S. Federal Trade Commission (FTC). These settlement agreements will resolve certain civil claims made in relation to affected diesel vehicles with 2.0 l TDI engines from the Volkswagen Passenger Cars and Audi brands in the USA. Volkswagen AG and certain affiliates also entered into a first partial consent decree with the DOJ, EPA, CARB and the California Attorney General, which was lodged with the court on June 28, 2016. On October 18, 2016, a fairness hearing on whether final approval should be granted was held, and on October 25, 2016, the court granted final approval of the settlement agreements and the partial consent order. A number of class members have filed appeals to an US appellate court from the order approving the settlements.

The settlements provide affected customers with the option of a buyback or, for leased vehicles, early lease termination, or a free emissions modification of the vehicles, provided that EPA and CARB approve the

modification. Volkswagen will also make additional cash payments to affected current owners or lessees as well as certain former owners or lessees.

Volkswagen also agreed to support environmental programs. The company will pay USD 2.7 billion over three years into an environmental trust, managed by a trustee appointed by the court, to offset excess nitrogen oxide (NO<sub>x</sub>) emissions. Volkswagen will also invest a total of USD 2.0 billion over ten years in zero emissions vehicle infrastructure as well as corresponding access and awareness initiatives.

Volkswagen AG and certain affiliates also entered into a separate partial consent decree with CARB and the California Attorney General resolving certain claims under California unfair competition, false advertising, and consumer protection laws related to both the 2.0-liter and 3.0-liter TDI vehicles, which was lodged with the court on July 7, 2016. Under the terms of the agreement, Volkswagen agreed to pay California USD 86 million. The court entered judgment on the partial consent decree on September 1, 2016 and the USD 86 million payment was made on September 28, 2016.

On December 20, 2016, Volkswagen entered into a second partial consent decree, subject to court approval, with the DOJ, EPA, CARB and the California Attorney General that resolved claims for injunctive relief under the Clean Air Act and California environmental, consumer protection and false advertising laws related to the 3.0-liter TDI vehicles. Under the terms of this consent decree, Volkswagen agreed to implement a buyback and lease termination program for Generation 1 3.0-liter TDI vehicles and a free emissions recall and modification program for Generation 2 3.0-liter TDI vehicles (if the modification program for Generation 2 vehicles is not approved by the EPA and CARB, Volkswagen will be required to offer a buyback and lease termination program for those vehicles); and pay USD 225 million into the environmental mitigation trust that will be established pursuant to the first partial consent decree. The second partial consent decree was lodged with the court on December 20, 2016 and is currently in its notice and comment period.

In addition, on December 20, 2016, Volkswagen entered into an additional, concurrent second partial consent decree, subject to court approval, with CARB and the California Attorney General that resolved claims for injunctive relief under California environmental, consumer protection and false advertising laws related to the 3.0-liter TDI vehicles. Under the terms of this consent decree, Volkswagen agreed to provide additional injunctive relief to California, including the implementation of a "Green City" initiative and the introduction of three new Battery Electric Vehicle (BEV) models in California by 2020, as well as a USD 25 million payment to CARB to support the availability of BEVs in California.

On January 11, 2017, Volkswagen entered into a third partial consent decree, subject to court approval, with the DOJ and EPA that resolved claims for civil penalties and injunctive relief under the Clean Air Act related to the 2.0-liter and 3.0-liter TDI vehicles. Volkswagen agreed to pay USD 1.45 billion (plus any accrued interest) to resolve the civil penalty and injunctive relief claims under the Clean Air Act, as well as the customs claims of the US Customs and Border Protection. Under the third partial consent decree, the injunctive relief includes monitoring, auditing and compliance obligations. This consent decree, which is subject to public comment, was lodged with the court on January 11, 2017. Also on January 11, 2017, Volkswagen entered into a settlement agreement with the DOJ to resolve any claims under the Financial Institutions Reform, Recovery and Enforcement Act of 1989 and agreed to pay USD 50 million (plus any accrued interest), specifically denying any liability and expressly disputing any claims.

The DOJ also opened a criminal investigation focusing on allegations that various federal law criminal offenses were committed. On January 11, 2017, Volkswagen AG agreed to plead guilty to three federal criminal felony counts, and to pay a USD 2.8 billion criminal penalty. Pursuant to the terms of this agreement, Volkswagen will be on probation for three years and will work with an independent monitor for three years. The inde-

pendent monitor will assess and oversee the company's compliance with the terms of the resolution. This includes overseeing the implementation of measures to further strengthen compliance, reporting and monitoring systems, and an enhanced ethics program. Volkswagen will also continue to cooperate with the DOJ's ongoing investigation of individual employees or former employees who may be responsible for criminal violations.

Moreover, investigations by various US regulatory and government authorities, including in areas relating to securities, financing and tax, are ongoing.

On January 31, 2017, Volkswagen AG, Volkswagen Group of America, Inc. and certain affiliates entered into a settlement agreement with private plaintiffs represented by the PSC in the multidistrict litigation pending in California, and a consent order with the FTC. These agreements will resolve certain civil claims made in relation to affected diesel vehicles with 3.0 l TDI engines from the Volkswagen, Audi and Porsche brands in the USA. On February 14, 2017, the court preliminarily approved the settlement agreement with private plaintiffs and scheduled a fairness hearing on whether final approval should be granted for May 11, 2017. The agreement with the FTC will also be subject to court approval.

Under the settlements, consumers' options and compensation will depend on whether their vehicles are classified as Generation 1 or Generation 2. Generation 1 (model years 2009-2012) consumers will have the option of a buyback, early lease termination, trade-in, or a free emissions modification, provided that EPA and CARB approve the modification. Additionally, Generation 1 owners and lessees, as well as certain former owners and lessees, will be eligible to receive cash payments.

Generation 2 (model years 2013-2016) consumers will receive a free emissions compliant repair to bring the vehicles into compliance with the emissions standards to which they were originally certified – provided that EPA and CARB grant approval – as well as cash payments. If Volkswagen ultimately cannot obtain EPA and CARB approval for emissions compliant repairs within the time limits set out in the settlement agreement, Generation 2 consumers will be offered the options for buyback, lease termination, trade-in or – if approved by EPA and CARB – an emissions modification that reduces the amount of emissions but does not bring the vehicles into compliance with original certification standards, in addition to cash payments. Volkswagen will also make cash payments to certain former Generation 2 owners or lessees.

In September 2016, Volkswagen announced that it had finalized an agreement to resolve the claims of Volkswagen branded franchise dealers in the United States relating to TDI vehicles and other matters asserted concerning the value of the franchise. The settlement agreement includes a cash payment of up to USD 1.208 billion, and additional benefits to resolve alleged past, current, and future claims of losses in franchise value. On January 18, 2017, a fairness hearing on whether final approval should be granted was held, and on January 23, 2017, the court granted final approval of the settlement agreement. Certain members of the class may appeal to an US appellate court the decision to finally approve the settlement; the deadline to do so has not yet expired.

Additionally, in the USA, some putative class actions, some individual customers' lawsuits and some state or municipal claims have been filed in state courts.

Volkswagen reached separate agreements with the attorneys general of 44 US states, the District of Columbia and Puerto Rico, to resolve their existing or potential consumer protection and unfair trade practices claims – in connection with both 2.0 l TDI and 3.0 l TDI vehicles in the USA – for a settlement amount of USD 603 million. Six states did not join these settlements and still have consumer claims outstanding: Arizona, New Jersey, New Mexico, Oklahoma, Vermont and West Virginia. The attorneys general of 18 US states (Alabama, Illinois, Maine, Maryland, Massachusetts, Minnesota, Missouri, Montana, New Hampshire, New Jersey, New Mexico, New York, Ohio, Pennsylvania, Tennessee, Texas, Vermont and Wyoming) and some municipalities have also filed suits in state and federal courts – and the state of Washington has asserted a penalty claim through

administrative proceedings – against Volkswagen AG, Volkswagen Group of America, Inc. and certain affiliates, seeking civil penalties and injunctive relief for alleged violations of environmental laws. Alabama, Illinois, Maine, Maryland, Massachusetts, Minnesota, Missouri, Montana, New Hampshire, New York, Ohio, Pennsylvania, Tennessee, Texas, Washington and Wyoming participated in the state settlements described above with respect to consumer protection and unfair trade practices claims, but those settlements did not include claims for environmental penalties. In addition, although it has not yet filed an action, Delaware has entered into an agreement to toll the statute of limitations for its environmental claims through the end of February 2017. Two other states – Oregon and Wisconsin – signed agreements tolling the statute of limitations for their environmental claims through the end of 2016, but they have not requested an extension or filed actions. Another state (Connecticut) has expressed its intention to participate in environmental settlement discussions without filing suit.

In addition to lawsuits described above, for which provisions have been recognized, a putative class action has been filed on behalf of purchasers of Volkswagen AG American Depositary Receipts, alleging a drop in price purportedly resulting from the matters described in the EPA's "Notices of Violation." A putative class action has also been filed on behalf of purchasers of certain USD-denominated Volkswagen bonds, alleging that these bonds were trading at artificially inflated prices due to Volkswagen's alleged misstatements and that the value of these bonds declined after the EPA issued its "Notices of Violation."

These lawsuits have also been consolidated in the federal multidistrict litigation proceeding in the State of California described above. Volkswagen is of the opinion that it duly complied with its capital market obligations. Therefore, no provisions have been recognized. In addition, contingent liabilities have not been disclosed as they currently cannot be measured.

In Canada, civil consumer claims and regulatory investigations have been initiated for vehicles with 2.0 l and 3.0 l engines. On December 19, 2016, Volkswagen AG and other Canadian and US Volkswagen Group companies reached a class action settlement in Canada with consumers relating to 2.0 l diesel vehicles. Also on December 19, 2016, Volkswagen Group Canada agreed with the Commissioner of Competition in Canada to a civil resolution of its regulatory inquiry into consumer protection issues as to those vehicles. Civil consumer claims and the Commissioner's investigation with respect to 3.0 l diesel vehicles remain pending. Also, criminal enforcement related investigations by the federal environmental regulator and quasi-criminal enforcement related investigations by a provincial environmental regulator are ongoing in Canada related to 2.0 l and 3.0 l diesel vehicles. Provisions have been recognized for possible obligations stemming from pending lawsuits in Canada.

##### 5. Risk assessment regarding the diesel issue

To protect against the currently known legal risks, including suitable expenses for defense and legal advice related to the diesel issue, existing information and assessments at the time indicated the need to recognize expenses in the reporting year to the amount of €5.1 billion (previous year: €7.0 billion). Prior-year provisions for legal risks in an amount of €0.4 billion had to be reversed through profit or loss. In addition, in relation to the diesel issue – insofar as these can be adequately measured at this stage – especially the contingent liabilities in conjunction with lawsuits filed by investors to the amount of €3.1 billion (previous year: €1.0 billion) were disclosed in the notes. The provisions recognized, the contingent liabilities disclosed and the other latent legal risks are partially subject to substantial estimation risks given the complexity of the individual factors, the ongoing approval process with the authorities and the fact that the independent and comprehensive investigations have not yet been completed.

#### Additional important legal cases

ARFB Anlegerschutz UG (haftungsbeschränkt), Berlin, brought an action against Porsche Automobil Holding SE, Stuttgart, Germany, and Volkswagen AG for claims for damages allegedly assigned to it in the amount of approximately €2.26 billion. The plaintiff asserts that these claims are based on alleged breaches by the defendants of legislation to protect the capital markets in connection with Porsche's acquisition of Volkswagen shares in 2008. With its April 2016 ruling, the district court of Hanover submitted numerous goals for discovery to the higher regional court in Celle in an attempt to prompt a model case decision. In all other cases, the claims were thrown out for being inadmissible. In various cases since 2010, investors initiated conciliation proceedings for other alleged damages – including claims against Volkswagen AG – that amounted to approximately €4.6 billion in total and also related to transactions at that time. In each case, Volkswagen rejected the claims asserted and refused to participate in any conciliation proceedings.

In 2011, the European Commission opened antitrust proceedings against European truck manufacturers concerning inappropriate exchange of information during the period 1997–2011 and sent a statement of objections to MAN, Scania and the other truck manufacturers concerned in November 2014. With its settlement decision as of July 19, 2016 the European Commission has fined five European truck manufacturers excluding MAN and Scania. MAN was not fined as the company had informed the EU Commission about the cartel as a key witness. With regard to Scania, the antitrust proceedings will be continued. Scania has decided to fully exercise its rights of defense in the ongoing investigation. A provision of €0.4 billion was recognized in order to cover possible fines. Furthermore, antitrust lawsuits for damages from customers were received. As is the case in any antitrust proceedings, this may result in further lawsuits for damages.

The Annual General Meeting of MAN SE approved the conclusion of a control and profit and loss transfer agreement between MAN SE and Volkswagen Truck & Bus GmbH (formerly Truck & Bus GmbH), a subsidiary of Volkswagen AG, in June 2013. In July 2013, award proceedings were instituted to review the appropriateness of the cash settlement set out in the agreement in accordance with section 305 of the Aktiengesetz (AktG – German Stock Corporation Act) and the cash compensation in accordance with section 304 of the AktG. It is not uncommon for noncontrolling interest shareholders to institute such proceedings. In July 2015, the Munich Regional Court ruled in the first instance that the amount of the cash settlement payable to the noncontrolling interest shareholders of MAN should be increased from €80.89 to €90.29 per share; at the same time, the amount of the cash compensation was confirmed. The assessment of liability for put options and compensation rights granted to noncontrolling interest shareholders was adjusted in 2015. Both applicants and Volkswagen Truck & Bus GmbH have appealed to the Higher Regional Court in Munich. Volkswagen continues to maintain that the results of the valuation are correct. The appropriateness of the valuation was confirmed by the audit firms engaged by the parties and by the court-appointed auditor of the agreement.

Since November 2016, Volkswagen has been responding to information requests from the EPA and CARB related to automatic transmissions in certain vehicles.

Additionally, thirteen putative class actions have been filed against Audi and certain affiliates alleging that defendants concealed the existence of “defeat devices” in Audi brand vehicles with automatic transmissions. A number of these putative class actions have been transferred to the federal multidistrict litigation proceeding in the State of California.

In line with IAS 37.92, no further statements have been made concerning estimates of financial impact or about uncertainty regarding the amount or maturity of provisions and contingent liabilities, particularly in relation to the diesel issue and the European Commission's investigation. This is so as to not compromise the results of the proceedings or the interests of the Company.

## 38. Other financial obligations

€ million	PAYABLE	PAYABLE	PAYABLE	TOTAL
	2016	2017 – 2020	from 2021	Dec. 31, 2015
Purchase commitments in respect of				
property, plant and equipment	7,214	1,169	–	8,383
intangible assets	1,163	143	–	1,306
investment property	8	–	–	8
Obligations from				
loan commitments to unconsolidated subsidiaries	558	2	–	560
irrevocable credit and lease commitments to customers	4,602	0	94	4,696
long-term leasing and rental contracts	997	2,466	2,444	5,908
Miscellaneous other financial obligations	3,290	1,059	200	4,549

€ million	PAYABLE	PAYABLE	PAYABLE	TOTAL
	2017	2018 – 2021	from 2022	Dec. 31, 2016
Purchase commitments in respect of				
property, plant and equipment	7,170	1,585	–	8,756
intangible assets	1,243	386	–	1,629
investment property	13	–	–	13
Obligations from				
loan commitments to unconsolidated subsidiaries	126	2	–	128
irrevocable credit and lease commitments to customers	4,551	0	44	4,595
long-term leasing and rental contracts	995	2,489	2,261	5,745
Miscellaneous other financial obligations	2,569	1,416	1,072	5,056

Other financial obligations from long-term leasing and rental contracts are partly offset by expected income from subleases of €1,664 million (previous year: €989 million).

The change in miscellaneous other financial obligations is primarily attributable to the elimination of an irrevocable credit commitment in the amount of €1.3 billion to LeasePlan as well as to the investments in zero emissions vehicle infrastructure to which the Volkswagen Group had committed itself in the settlement agreements in connection with the diesel issue and in corresponding access and awareness initiatives for these technologies. Other financial obligations include an amount of €1.6 billion for this purpose. In the previous year, the matter was not included in the table due to the investments having not yet been defined in terms of content and time.

### 39. Total audit fees of the Group auditors

Under the provisions of the Handelsgesetzbuch (HGB – German Commercial Code), Volkswagen AG is obliged to disclose the total audit fee of the Group auditors in Germany.

€ million	2016	2015
Financial statement audit services	16	15
Other assurance services	7	6
Tax advisory services	0	0
Other services	4	6
	<b>27</b>	<b>27</b>

### 40. Total expense for the period

€ million	2016	2015
<b>Cost of materials</b>		
Cost of raw materials, consumables and supplies, purchased merchandise and services	140,307	143,700
<b>Personnel expenses</b>		
Wages and salaries	29,971	29,301
Social security, post-employment and other employee benefit costs	7,046	6,967
	<b>37,017</b>	<b>36,268</b>

### 41. Average number of employees during the year

	2016	2015
Performance-related wage-earners	236,204	230,720
Salaried staff	292,240	286,125
	<b>528,444</b>	<b>516,845</b>
of which in the passive phase of partial retirement	<b>(5,915)</b>	<b>(6,483)</b>
Vocational trainees	17,962	17,321
	<b>546,406</b>	<b>534,166</b>
Employees of Chinese joint ventures	72,940	70,221
	<b>619,346</b>	<b>604,387</b>

## 42. Events after the balance sheet date

There were no significant events after the end of fiscal year 2016.

## 43. Related party disclosures in accordance with IAS 24

Related parties as defined by IAS 24 are natural persons and entities that Volkswagen AG has the ability to control or on which it can exercise significant influence, or natural persons and entities that have the ability to control or exercise significant influence on Volkswagen AG, or that are influenced by another related party of Volkswagen AG.

Porsche SE reached an agreement with Suzuki Motor Corporation at the end of September 2015 to acquire 1.5% of Volkswagen AG's ordinary shares via an off-market transaction. At 52.2%, Porsche SE held the majority of the voting rights in Volkswagen AG as of the reporting date. The creation of rights of appointment for the State of Lower Saxony was resolved at the Extraordinary General Meeting of Volkswagen AG on December 3, 2009. As a result, Porsche SE cannot appoint the majority of the members of Volkswagen AG's Supervisory Board for as long as the State of Lower Saxony holds at least 15% of Volkswagen AG's ordinary shares. However, Porsche SE has the power to participate in the operating policy decisions of the Volkswagen Group and is therefore classified as a related party as defined by IAS 24.

The contribution of Porsche SE's holding company operating business to Volkswagen AG on August 1, 2012 has the following effects on the agreements between Porsche SE, Volkswagen AG and companies of the Porsche Holding Stuttgart Group that existed prior to the contribution and were entered into on the basis of the Comprehensive Agreement and its related implementation agreements:

- › Volkswagen AG continues to indemnify Porsche SE against certain financial guarantees issued by Porsche SE to creditors of the companies belonging to the Porsche Holding Stuttgart Group up to the amount of its share in the capital of Porsche Holding Stuttgart, which amounts to 100% since the contribution as of August 1, 2012. Porsche Holding Finance plc, Dublin, Ireland, was contributed to the Volkswagen Group in the course of the transfer of Porsche SE's holding company operating business. The indemnification includes financial guarantees issued by Porsche SE to creditors of Porsche Holding Finance plc in relation to interest payments on and the repayment of bonds in the aggregate amount of €250 million. As part of the contribution of Porsche SE's holding company operating business to Volkswagen AG, Volkswagen AG undertook to assume standard market liability compensation effective August 1, 2012 for guarantees issued to external creditors, whereby it is indemnified internally.
- › Volkswagen AG continues to indemnify Porsche SE internally against claims by the Einlagensicherungsfonds (German deposit protection fund) after Porsche SE submitted an indemnification agreement required by the Bundesverband Deutscher Banken (Association of German Banks) to the Einlagensicherungsfonds in August 2009. Volkswagen AG has also undertaken to indemnify the Einlagensicherungsfonds against any losses caused by measures taken by the latter in favor of a bank in which Volkswagen AG holds a majority interest.
- › Under certain conditions, Porsche SE continues to indemnify Porsche Holding Stuttgart, Porsche AG and their legal predecessors against tax liabilities that exceed the obligations recognized in the financial statements of those companies relating to periods up to and including July 31, 2009. In return, Volkswagen AG has undertaken to pay to Porsche SE any tax benefits or tax refunds of Porsche Holding Stuttgart, Porsche AG and their legal predecessors and subsidiaries for tax assessment periods up to July 31, 2009. Based on the results of the external tax audit for the assessment periods 2006 to 2008 that has now been completed, a compensation obligation running into the low triple-digit millions of euros would arise for Volkswagen AG. New information emerging in the future from the external tax audit that commenced at the end of 2015 for the 2009 assessment period could result in an increase or decrease in the potential compensation obligation.



Under the terms of the Comprehensive Agreement, Porsche SE and Volkswagen AG had granted each other put and call options with regard to the remaining 50.1% interest in Porsche Holding Stuttgart held by Porsche SE until the contribution of its holding company operating business to Volkswagen AG. Both Volkswagen AG (if it had exercised its call option) and Porsche SE (if it had exercised its put option) had undertaken to bear the tax burden resulting from the exercise of the options and any subsequent activities in relation to the equity investment in Porsche Holding Stuttgart (e.g. from recapture taxation on the spin-off in 2007 and/or 2009). If tax benefits had accrued to Volkswagen AG, Porsche Holding Stuttgart, Porsche AG, or their respective subsidiaries as a result of recapture taxation on the spin-off in 2007 and/or 2009, the purchase price to be paid by Volkswagen AG for the transfer of the outstanding 50.1% equity investment in Porsche Holding Stuttgart if the put option had been exercised by Porsche SE would have been increased by the present value of the tax benefit. This arrangement was taken over under the terms of the contribution agreement to the effect that Porsche SE has a claim against Volkswagen AG for payment in the amount of the present value of the realizable tax benefits from any recapture taxation of the spin-off in 2007 as a result of the contribution. It was also agreed under the terms of the contribution that Porsche SE will indemnify Volkswagen AG, Porsche Holding Stuttgart and their subsidiaries against taxes if measures taken by or not taken by Porsche SE result in recapture taxation for 2012 at these companies in the course of or following implementation of the contribution. In this case, too, Porsche SE is entitled to assert a claim for payment against Volkswagen AG in the amount of the present value of the realizable tax benefits that arise at the level of Volkswagen AG or one of its subsidiaries as a result of such a transaction.

Further agreements were entered into and declarations were issued in connection with the contribution of Porsche SE's holding company operating business to Volkswagen AG, in particular:

- › Porsche SE issued various guarantees to Volkswagen AG in the course of the contribution relating to Porsche Holding Stuttgart, Porsche AG and its other transferred investees. Among other things, these relate to the proper issuance of and full payment for shares and capital contributions, and/or to the ownership of the shares of Porsche Holding Stuttgart and Porsche AG.
- › Under the terms of the contribution of its holding company operating business, Porsche SE also issued guarantees to Volkswagen AG for other assets transferred and liabilities assumed. In doing so, Porsche SE guarantees that these have not been assigned and are, in principle, free from third-party rights up to the date of completion of the contribution.
- › As a general principle, Porsche SE's liabilities for these guarantees are restricted to the consideration paid by Volkswagen AG.
- › Porsche SE indemnifies its contributed subsidiaries, Porsche Holding Stuttgart, Porsche AG and their subsidiaries against liabilities to Porsche SE that relate to the period up to and including December 31, 2011 and that exceed the obligations recognized in the financial statements of those companies for that period.
- › Porsche SE indemnifies Porsche Holding Stuttgart and Porsche AG against obligations arising from certain legal disputes; this includes the costs of an appropriate legal defense.
- › Moreover, Porsche SE indemnifies Volkswagen AG, Porsche Holding Stuttgart, Porsche AG and their subsidiaries against half of the taxes (other than taxes on income) arising at those companies in conjunction with the contribution that would not have been incurred in the event of the exercise of the call option on the shares of Porsche Holding Stuttgart that continued to be held by Porsche SE until the contribution. Volkswagen AG therefore indemnifies Porsche SE against half of such taxes that it incurs. In addition, Porsche Holding Stuttgart is indemnified against half of the land transfer tax and other costs triggered by the merger.
- › Additionally, Porsche SE and Porsche AG agreed to allocate any subsequent VAT receivables or liabilities from transactions in the period up to December 31, 2009 to the company entitled to the receivable or incurring the liability.
- › A range of information, conduct and cooperation obligations were agreed by Porsche SE and the Volkswagen Group.

According to a notification dated January 2, 2017, the State of Lower Saxony and Hannoversche Beteiligungsgesellschaft mbH, Hanover, held 20.00% of the voting rights of Volkswagen AG on December 31, 2016. As mentioned above, the General Meeting of Volkswagen AG on December 3, 2009 also resolved that the State of Lower Saxony may appoint two members of the Supervisory Board (right of appointment).

Members of the Board of Management and Supervisory Board of Volkswagen AG are members of supervisory and management boards or shareholders of other companies with which Volkswagen AG has relations in the normal course of business. All transactions with related parties are conducted on an arm's length basis.

The following tables present the amounts of supplies and services transacted, as well as outstanding receivables and liabilities, between consolidated companies of the Volkswagen Group and related parties.

#### RELATED PARTIES

€ million	SUPPLIES AND SERVICES RENDERED		SUPPLIES AND SERVICES RECEIVED	
	2016	2015	2016	2015
	Porsche SE	12	12	2
Supervisory Board members	3	7	5	4
Board of Management members	0	1	0	0
Unconsolidated subsidiaries	890	944	973	886
Joint ventures and their majority interests	13,728	11,785	1,377	1,429
Associates and their majority interests	190	126	912	826
Pension plans	4	3	0	0
Other related parties	0	0	0	0
State of Lower Saxony, its majority interests and joint ventures	6	5	6	2

€ million	RECEIVABLES (INCLUDING COLLATERAL) FROM		LIABILITIES (INCLUDING OBLIGATIONS) TO	
	Dec. 31, 2016	Dec. 31, 2015	Dec. 31, 2016	Dec. 31, 2015
	Porsche SE	323	334	1
Supervisory Board members	0	0	297	165
Board of Management members	0	0	39	81
Unconsolidated subsidiaries	1,036	1,015	1,188	1,418
Joint ventures and their majority interests	8,808	7,495	1,784	2,343
Associates and their majority interests	53	40	495	518
Pension plans	1	1	8	8
Other related parties	–	–	64	25
State of Lower Saxony, its majority interests and joint ventures	2	0	1	0

The tables above do not contain the dividend payments of €3,613 million (previous year: €4,704 million) received from joint ventures and associates and dividends of €17 million (previous year: €719 million) paid to Porsche SE.

€52 million (previous year: €148 million) of the related party receivables were impaired in the reporting period.

In addition, the Volkswagen Group has furnished guarantees to external banks on behalf of related parties in the amount of €112 million (previous year: €262 million).

The changes in supplies and services received from and rendered to joint ventures and their majority interests are primarily attributable to deliveries to the Chinese joint ventures.

The supplies and services received from Porsche SE relate mainly to standard market liability compensation for guarantees assumed. The supplies and services rendered to Porsche SE relate mainly to interest income on loans granted.

The receivables from Porsche SE mainly comprise loan receivables.

The decrease in obligations to joint ventures and their majority interests mainly results from the elimination of an irrevocable credit commitment in the amount of €1.3 billion to LeasePlan.

As in the previous year, obligations to members of the Supervisory Board amounting to €297 million (previous year: €165 million) relate primarily to interest-bearing bank balances of Supervisory Board members that were invested at standard market terms and conditions at Volkswagen Group companies.

Obligations to the Board of Management comprise outstanding balances for bonuses payable to Board of Management members and the fair values of the phantom shares held by Board of Management members in the amount of €26 million (previous year: €36 million). This item also includes amounts of €– million (previous year: €39 million) granted on the termination of employment relationships with Board of Management members.

In addition to the amounts shown above, the following expenses were recognized for the members of the Board of Management and Supervisory Board of the Volkswagen Group in the course of their activities as members of these bodies:

€	2016	2015
Short-term benefits	45,456,678	65,404,667
Benefits based on phantom shares	-670,296	-
Post-employment benefits	9,347,409	3,375,923
Termination benefits	-	41,132,431
	<b>54,133,791</b>	<b>109,913,021</b>

At its meeting on April 22, 2016, Volkswagen AG's Supervisory Board accepted the offer made by the members of the Board of Management to withhold 30% of the variable remuneration for fiscal year 2015 for the Board of Management members active on the date of the resolution and to make its disposal subject to future share price performance by means of phantom shares. The amount withheld led to the creation of 50,703 phantom preferred shares. In 2015, the resolution was not required to be reflected in the calculation of short-term employee benefits under IFRSs because it was only passed after the fiscal year had ended. In accordance with IFRS 2, starting in 2016 the obligations relating to these phantom shares are accounted for as a cash-settled plan and measured at fair value using a recognized valuation technique. The link between the original bonus (€5.7 million) and future share price performance resulted in a gain of €1.5 million as of April 22, 2016 that reduced the employee benefits based on phantom shares in 2016. Expenses of €0.8 million were recognized because of the share price performance in the period up to December 31, 2016. In accordance with IFRSs, these were disclosed under employee benefits based on phantom shares. The fair value of the obligation to members of the Board of Management as of December 31, 2016 amounts to €5.0 million. If all members of the Board of Management had left as of December 31, 2016, the obligation (intrinsic value) would have amounted to a total of €5.1 million.

Mr. Pötsch's waiver of a portion of his variable remuneration for fiscal year 2015 generated income of €2.3 million that has no impact on the short-term employee benefits for the reporting period. In its meeting on February 24, 2017, the Supervisory Board accepted Mr. Blessing's offer to irrevocably relinquish the top-up amount of €512.5 thousand for fiscal year 2016 to reach the minimum remuneration. Since the waiver was declared after the end of fiscal year 2016, it has no effect on the short-term benefits according to IFRS.

For further details, please refer to our disclosures in the remuneration report, which is part of the management report.

The employee representatives on the Supervisory Board are also entitled to a regular salary as set out in their employment contracts. This is based on the provisions of the Betriebsverfassungsgesetz (BetrVG – German Works Constitution Act) and represents an appropriate remuneration for their functions and activities in the Company. The same also applies to the representative of the senior executives on the Supervisory Board. The members of the Supervisory Board have declared to the Management Board that they waive their claims for all remuneration payments for fiscal year 2016. Such waiver shall apply to the extent that those claims exceed the amount that would be due if the stipulations to be resolved by the General Meeting on May 10, 2017 regarding the remuneration for the Supervisory Board for the current and future fiscal years were applied for fiscal year 2016. Since the waiver was declared after the end of fiscal year 2016, it has no effect on the values shown in the notes.

The post-employment benefits relate to additions to pension provisions for current members of the Board of Management.

The termination benefit commitments in the previous year relate to Mr. Östling, Mr. Winterkorn, Mr. Klingler and Mr. Pötsch.

Disclosures on the pension provisions for members of the Board of Management and more detailed explanations of the remuneration of the Board of Management and the Supervisory Board can be found in the section entitled "Remuneration of the Board of Management and the Supervisory Board" and in the remuneration report, which is part of the management report.

#### 44. German Corporate Governance Code

On November 18, 2016, the Board of Management and Supervisory Board of Volkswagen AG issued their declaration of conformity with the German Corporate Governance Code as required by section 161 of the Aktiengesetz (AktG – German Stock Corporation Act) and made it permanently available to the shareholders of Volkswagen AG on the Company's website at [www.volkswagenag.com/ir](http://www.volkswagenag.com/ir).

On November 24, 2016, the Board of Management and Supervisory Board of AUDI AG likewise issued their declaration of conformity with the German Corporate Governance Code and made it permanently available to the shareholders at [www.audi.com/cgk-declaration](http://www.audi.com/cgk-declaration).

In December 2016, the Executive Board and Supervisory Board of MAN SE issued their declaration of conformity with the German Corporate Governance Code as required by section 161 of the AktG and made it permanently available to the shareholders at [www.corporate.man.eu/en](http://www.corporate.man.eu/en).

The Executive and Supervisory Boards of RENK AG issued a declaration of conformity on December 9, 2016 and made it permanently available to the shareholders at [www.renk.biz/corporated-governance.html](http://www.renk.biz/corporated-governance.html).

#### 45. Remuneration of the Board of Management and the Supervisory Board

€	2016	2015
Board of Management remuneration		
Non-performance-related remuneration	18,093,835	28,288,098
Performance-related remuneration	21,453,778	34,956,362
	<b>39,547,612</b>	<b>63,244,460</b>
Supervisory Board remuneration		
Fixed remuneration components	709,346	660,976
Variable remuneration components	4,687,220	35,977
	<b>5,396,565</b>	<b>696,953</b>

##### NON-PERFORMANCE-RELATED REMUNERATION

The non-performance-related remuneration of the Board of Management comprises fixed remuneration and fringe benefits. In addition to the basic level of remuneration, the fixed remuneration also includes differing levels of remuneration for appointments assumed at Group companies. In addition, Ms. Hohmann-Dennhardt received €6.3 million (previous year: Mr. Diess received €5.0 million and Mr. Renschler €11.5 million) to compensate for lost entitlements resulting from a change in employer. The fringe benefits result from the grant of noncash benefits and include in particular the use of operating assets such as company cars and the payment of insurance premiums. Taxes due on these noncash benefits were mainly borne by Volkswagen AG.

##### PERFORMANCE-RELATED REMUNERATION

The performance-related remuneration comprises a business performance bonus, which relates to business performance in the reporting period and in the preceding year, and, since 2010, a Long-Term Incentive (LTI) plan, which is based on the reporting period and the previous three fiscal years. Members of the Board of Management can also be awarded bonuses that reflect their individual performance.

At its meeting on April 22, 2016, Volkswagen AG's Supervisory Board accepted the offer made by the members of the Board of Management to withhold 30% of the variable remuneration for fiscal year 2015 for the Board of Management members active on the date of the resolution and to make its disposal subject to future share price performance by means of phantom shares. The performance-related remuneration measured in accordance with German GAAP includes the amounts withheld from the active Board of Management members whose disposal is subject to the Company's future share price performance. These are reported at their fair value in 2015 of €4.2 million. Expenses of €0.8 million were recognized because of the share price performance in the period up to December 31, 2016. In accordance with German GAAP, these did not constitute remuneration. Furthermore, Mr. Pötsch's waiver of a portion of his variable remuneration for fiscal year 2015

generated income of €2.3 million that has no impact on the remuneration disclosed for the reporting period. In its meeting on February 24, 2017, the Supervisory Board accepted Mr. Blessing's offer to irrevocably relinquish the topup amount of €512.5 thousand for fiscal year 2016 to reach the minimum remuneration. The waiver lowered the performance-related remuneration according to German GAAP of the current fiscal year.

#### PENSION ENTITLEMENTS

On December 31, 2016, the pension provisions for members of the Board of Management in accordance with IFRSs amounted to €113.5 million (previous year: €86.6 million). Current pensions are index-linked in accordance with the index-linking of the highest collectively agreed salary insofar as the application of section 16 of the Gesetz zur Verbesserung der betrieblichen Altersversorgung (BetrAVG – German Company Pension Act) does not lead to a larger increase.

Members of the Board of Management were paid interest-free advances in the amount of €– million (previous year: €0.2 million), which will be set off against performance-related remuneration in the following year.

Former members of the Board of Management and their surviving dependents received €11.1 million (previous year: €51.3 million). The figures for the previous year include amounts agreed to be paid to Mr. Östling, Mr. Winterkorn, Mr. Klingler and Mr. Pötsch in connection with their departure from the Board of Management.

Pension provisions in accordance with IFRSs for former members of the Board of Management amounted to €270.0 million (previous year: €242.7 million).

The individual remuneration of the members of the Board of Management and the Supervisory Board is explained in the remuneration report in the management report on page 67. A comprehensive assessment of the individual bonus components of the LTI can also be found there.

# Responsibility Statement

To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the Group management report includes a fair review of the development and performance of the business and the position of the Group, together with a description of the material opportunities and risks associated with the expected development of the Group.

Wolfsburg, February 24, 2017

Volkswagen Aktiengesellschaft  
The Board of Management



Matthias Müller



Karlheinz Blessing



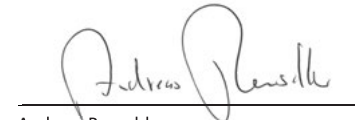
Herbert Diess



Francisco Javier Garcia Sanz



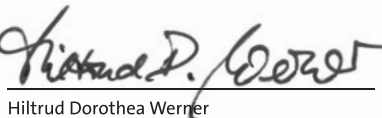
Jochem Heizmann



Andreas Renschler



Rupert Stadler



Hiltrud Dorothea Werner



Frank Witter

# Auditor's Report

On completion of our audit, we issued the following unqualified auditor's report dated February 24, 2017. This report was originally prepared in German. In case of ambiguities the German version takes precedence:

## Auditor's Report

We have audited the consolidated financial statements prepared by the VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, comprising income statement and statement of comprehensive income, the balance sheet, the statement of changes in equity, cash flow statement and the notes to the consolidated financial statements, together with the group management report, which is combined with the management report of the VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, for the business year from January 1 to December 31, 2016. The preparation of the consolidated financial statements and the combined management report in accordance with the IFRSs, as adopted by the EU, and the additional requirements of German commercial law pursuant to § (Article) 315a Abs. (paragraph) 1 HGB ("Handelsgesetzbuch": German Commercial Code) are the responsibility of the parent Company's Board of Management. Our responsibility is to express an opinion on the consolidated financial statements and the combined management report based on our audit.

We conducted our audit of the consolidated financial statements in accordance with § 317 HGB and German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany) (IDW). Those standards require that we plan and perform the audit such that misstatements materially affecting the presentation of the net assets, financial position and results of operations in the consolidated financial statements in accordance with the applicable financial reporting framework and in the combined management report are detected with reasonable assurance. Knowledge of the business activities and the economic and legal environment of the Group and expectations as to possible misstatements are taken into account in the determination of audit procedures. The effectiveness of the accounting-related internal control system and the evidence supporting the disclosures in the consolidated financial statements and the combined management report are examined primarily on a test basis within the framework of the audit. The audit includes assessing the annual financial statements of those entities included in consolidation, the determination of the entities to be included in consolidation, the accounting and consolidation principles used and significant estimates made by the Company's Board of Management, as well as evaluating the overall presentation of the consolidated financial statements and the combined management report. We believe that our audit provides a reasonable basis for our opinion.

Our audit has not led to any reservations.



In our opinion based on the findings of our audit the consolidated financial statements comply with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to § 315a Abs. 1 HGB and give a true and fair view of the net assets, financial position and results of operations of the Group in accordance with these provisions. The combined management report is consistent with the consolidated financial statements, complies with legal requirements, as a whole provides a suitable view of the Group's position and suitably presents the opportunities and risks of future development.

Without qualifying our opinion, we draw attention to the information provided and statements made in section "Key events" of the notes to the consolidated financial statements and in section "Diesel Issue" of the combined management report with regard to the diesel issue, the underlying causes, the involvement of members of the board of management as well as the impact on these financial statements.

Based on the results of the various measures taken to investigate the issue presented so far, which underlie these financial statements, there is no validation that members of the board of management were aware of the deliberate manipulation of engine management software before summer 2015. Nevertheless, should as a result of the ongoing investigation new solid knowledge be obtained showing that members of the board of management were informed earlier, this could eventually have an impact on the annual and consolidated financial statements and on the combined management report for fiscal year 2016 and prior years.

The provisions for warranties and legal risks recorded so far are based on the presented state of knowledge. Due to the inevitable uncertainties associated with the current and expected litigation it cannot be excluded that a future assessment of the risks may be different.

Hanover, February 24, 2017

PricewaterhouseCoopers  
Aktiengesellschaft  
Wirtschaftsprüfungsgesellschaft

Norbert Winkeljohann  
Wirtschaftsprüfer  
(German Public Auditor)

Frank Hübner  
Wirtschaftsprüfer  
(German Public Auditor)

# Glossary

## Selected terms at a glance

### Association of Southeast Asian Nations (ASEAN)

An international organization of Southeast Asian nations with political, economic and cultural aims that has been in existence since August 8, 1967.

### Big Data

Big data is a term used to describe new ways of analyzing and evaluating data volumes that are too vast and too complex to be processed using manual or conventional methods.

### Compliance

Adherence to statutory provisions, internal company policies and ethical principles.

### Compressed Natural Gas (CNG)

Burning this compressed natural gas releases approximately 25% less CO<sub>2</sub> than petrol because of its low carbon and high energy content.

### Corporate Governance

International term for responsible corporate management and supervision driven by long-term value added.

### Direct Shift Gearbox (DSG)

Gearbox that consists of two gearboxes with a dual clutch and so combines the agility, driving pleasure and low consumption levels of a manual gearbox with the comfort of an automatic.

### Driving Cycles

Levels of fuel consumption and exhaust gas emissions for vehicles registered in Europe are currently measured on a dynamometer or engine test bed with the help of the "New European Driving Cycle (NEDC)". Starting in fall 2017, the existing test procedure for emissions and fuel consumption used in the EU will gradually be replaced by the Worldwide Harmonized Light-Duty Vehicles Test Procedure (WLTP). This will be applied to new vehicle types from fall 2017 and to all new vehicles from fall 2018. The aim of this new test cycle is to state CO<sub>2</sub> emissions and fuel consumption in a more practice-oriented manner. A further important European regulation is the Real Driving Emissions (RDE) for passenger cars and light commercial vehicles. The packages of legislation are currently being elaborated; uniform limits for nitrogen oxide and particulate emissions will then apply across the EU from September 2017.

### Hedge accounting

Presentation of hedges in the balance sheet with the aim of compensating offsetting gains and losses from hedged items and hedging instruments within the same period economically and in the financial statements.

### Hedging instruments

Hedging transactions used in risk management, for example to hedge interest rate and exchange rate risks.

### Hybrid drive

Drive combining two different types of engine and energy storage system (usually an internal combustion engine and an electric motor).

### Hybrid notes

Hybrid notes issued by Volkswagen are classified in their entirety as equity. The issuer has call options at defined dates during their perpetual maturities. They pay a fixed coupon until the first possible call date, followed by a variable rate depending on their terms and conditions.

### Industry 4.0

Describes the fourth industrial revolution and the systematic development of real-time and intelligent networks between people, objects and systems, exploiting all of the opportunities of information technology along the entire value added chain. Intelligent machines, inventory systems and operating equipment that independently exchange information, trigger actions and control each other will be integrated into production and logistics at a technical level. This offers tremendous versatility, efficient resource utilization, ergonomics and the integration of customers and business partners in operational processes throughout the entire value chain.

### Internet of things

Internet of things denotes the digital networking of everyday objects. The focus hereby is on the increasing amount of objects for daily use, which are constantly communicating to and with each other.

**Liquefied Natural Gas (LNG)**

LNG is needed so that natural gas engines can be used in long-distance trucks and buses, since this is the only way of achieving the required energy density.

**Modular Transverse Toolkit (MQB)**

As an extension of the modular strategy, this platform can be deployed in vehicles whose architecture permits a transverse arrangement of the engine components. The modular perspective enables high synergies to be achieved between the vehicles in the Volkswagen Passenger Cars, Volkswagen Commercial Vehicles, Audi, SEAT and ŠKODA brands.

**Penetration rate for financial services**

The ratio of the leasing and financing business to deliveries.

**Plug-in-hybrid**

Next-generation hybrid vehicles. Plug-in hybrid electric vehicles (PHEVs) have a larger battery with a correspondingly higher capacity that can be charged via the combustion engine, the brake system, or an electrical outlet. This increases the range of the vehicle.

**Rating**

Systematic evaluation of companies in terms of their credit quality. Ratings are expressed by means of rating classes, which are defined differently by the individual rating agencies.

**Turntable concept**

Concept of flexible manufacturing enabling the production of different models in variable daily volumes within a single plant, as well as offering the facility to vary daily production volumes of one model between two or more plants.

**Vocational groups**

For example, electronics, logistics, marketing, or finance. A new teaching and learning culture is gradually being established by promoting training in the vocational groups. The specialists are actively involved in the teaching process by passing on their skills and knowledge to their colleagues.

**Zero-Emissions Vehicle (ZEV)**

Vehicles that operate without exhibiting any harmful emissions from combustion gases. Examples of zero-emissions vehicles include purely battery-powered electric vehicles (BEV) or fuel cell vehicles.

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# Scheduled Dates 2017

## **MOTOR SHOWS**

March 9–19  
International Motor Show, Geneva

April 14–23  
New York International Auto Show

April 21–28  
Auto Shanghai

April 24–28  
Hannover Messe

September 16–24  
International Motor Show (IAA), Frankfurt am Main

October 28–November 5  
Tokyo Motor Show

December 1–10  
Los Angeles Auto Show

## **FINANCIAL CALENDAR**

March 14  
Volkswagen AG Annual Media Conference  
and Investor Conference, Wolfsburg

May 3  
Interim Report January – March

May 10  
Volkswagen AG Annual General Meeting  
(Hanover Exhibition Grounds)

July 27  
Half-Yearly Financial Report

October 27  
Interim Report January – September



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Volkswagen AG  
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This annual report is published in English and German.  
Both versions of the report are available on the  
Internet at [www.volkswagenag.com/ir](http://www.volkswagenag.com/ir).  
The German version is legally binding.

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## **CONCEPT, DESIGN AND REALIZATION**

3st kommunikation, Mainz

## **ENGLISH TRANSLATION**

Leinhäuser Language Services GmbH, Unterhaching

## **FINANCIAL REPORT**

Produced in-house with firesys

## **PRINTER**

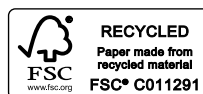
Kunst- und Werbedruck, Bad Oeynhausen

## **PAPER**

Everprint Premium, Geese

## **PHOTOGRAPHY**

Hartmut Nägele (p. 7, 9–10, 13)  
Roland Niepaul (p. 10)



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# momentum

The Volkswagen Group magazine

NEW BEGINNING  
A journey into  
the mobile future

# VOLKSWAGEN

AKTIENGESELLSCHAFT



Volkswagen



Audi



SEAT



ŠKODA



BENTLEY



BUGATTI



LAMBORGHINI



PORSCHE



Commercial  
Vehicles



SCANIA



MAN



DUCATI

# VOLKSWAGEN FINANCIAL SERVICES

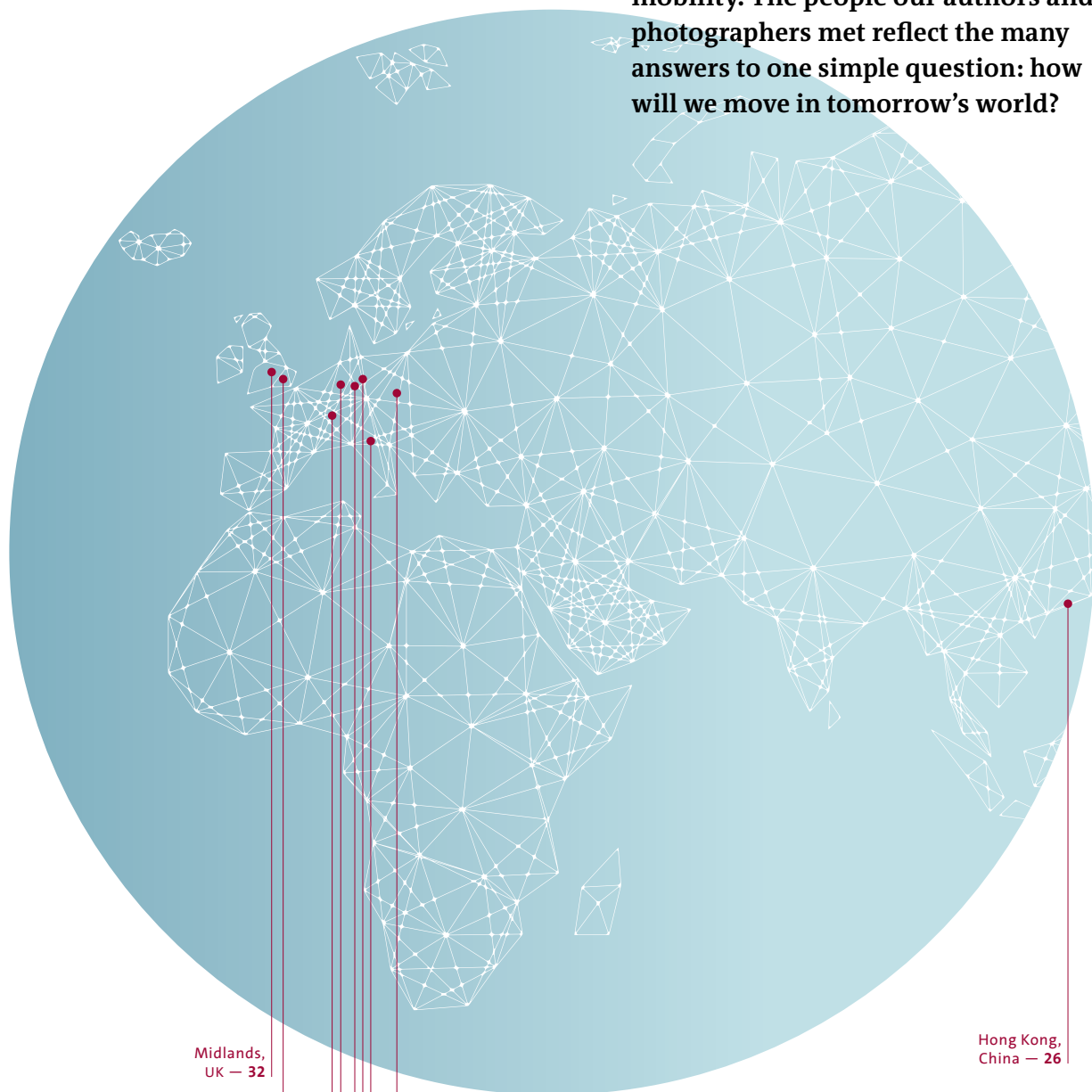
AKTIENGESELLSCHAFT

**The Volkswagen Group is transforming itself from one of the largest car manufacturers into a globally leading provider of sustainable mobility.**

**This metamorphosis is already visible in many areas today: new powertrains, strong partnerships for new forms of mobility, and new digital products and services.**

**This issue of momentum brings you stories about people who have set out to drive this change. The journey into the mobile future has begun.**

This issue of **momentum** takes you to places where the Volkswagen Group is working on the future of mobility. The people our authors and photographers met reflect the many answers to one simple question: how will we move in tomorrow's world?



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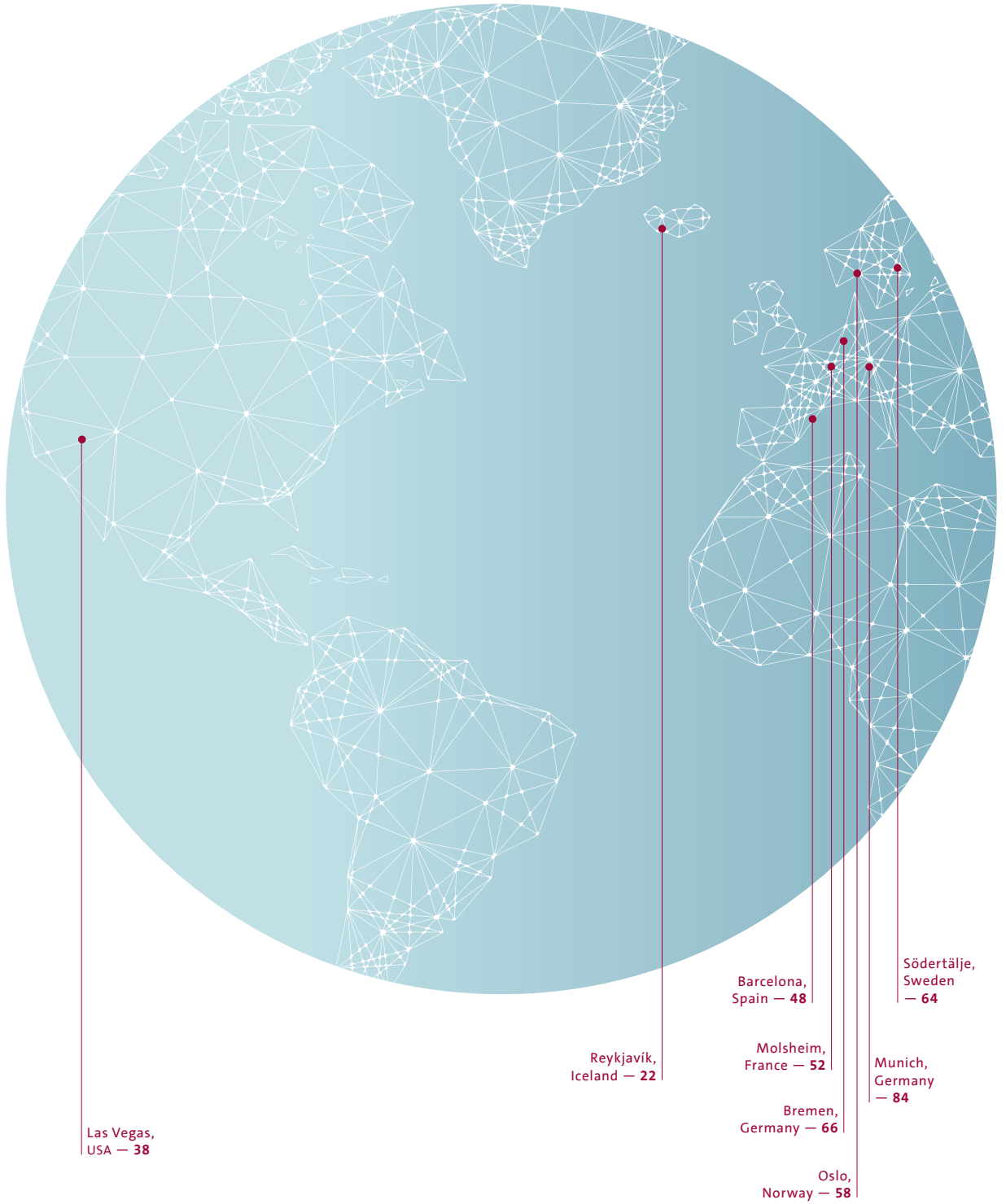
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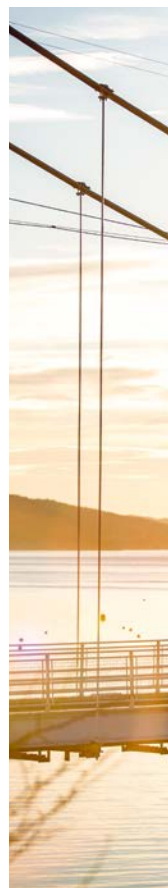




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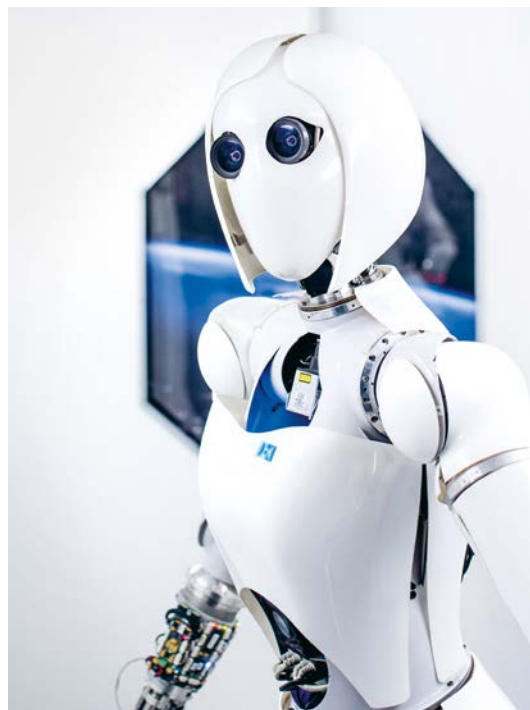
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# A QUESTION OF **VALUES**

**What do people really want from everyday mobility?  
How important are electric vehicles, automated driving and  
car-sharing to them? **momentum** put these questions  
to families in Berlin.**

Text Laurin Paschek

Photography Urban Zintel, Volker Kreidler



**“We associate mobility with spontaneity and lifestyle. That’s why car-sharing schemes today have to improve.”**

\_\_\_\_\_ Lars Hodeige (40), right

When Lars Hodeige, who runs his own creative agency, and ghostwriter Paul Nielsen need to get around in Berlin, they almost always use car-sharing. Having a car of their own isn't important to them. But they would very much like to see greater choice in this segment: “There just aren't enough model options in car-sharing”, Paul Nielsen says. “That limits our flexibility, for instance when we're traveling with friends or when we have to transport something.” They would also like to use the vehicles on longer journeys: “Making a snap decision to spend the weekend on the Baltic coast doesn't work with car-sharing at the moment.”



Lars Hodeige (right) and Paul Nielsen (29): car-sharing schemes should offer a greater choice of models.

**“For me, everyday utility is the top priority. But the car is also a place where I can find peace and quiet.”**

\_\_\_\_\_ Selma Aras (38), far right

Children play the main role in the life of Selma Aras, who is married to a computer scientist. Having her own car is a time-saving boon in the hectic everyday life of the mother of three and part-time preschool teacher. “I often drive short distances, to kindergarten, school or work”, she says. “But for me, the car doesn’t just take us from A to B, it’s also a place where I can find peace and quiet, like a second home.” So for her, cars should be designed to turn travel time into quality time – for instance, with no-hassle infotainment systems.



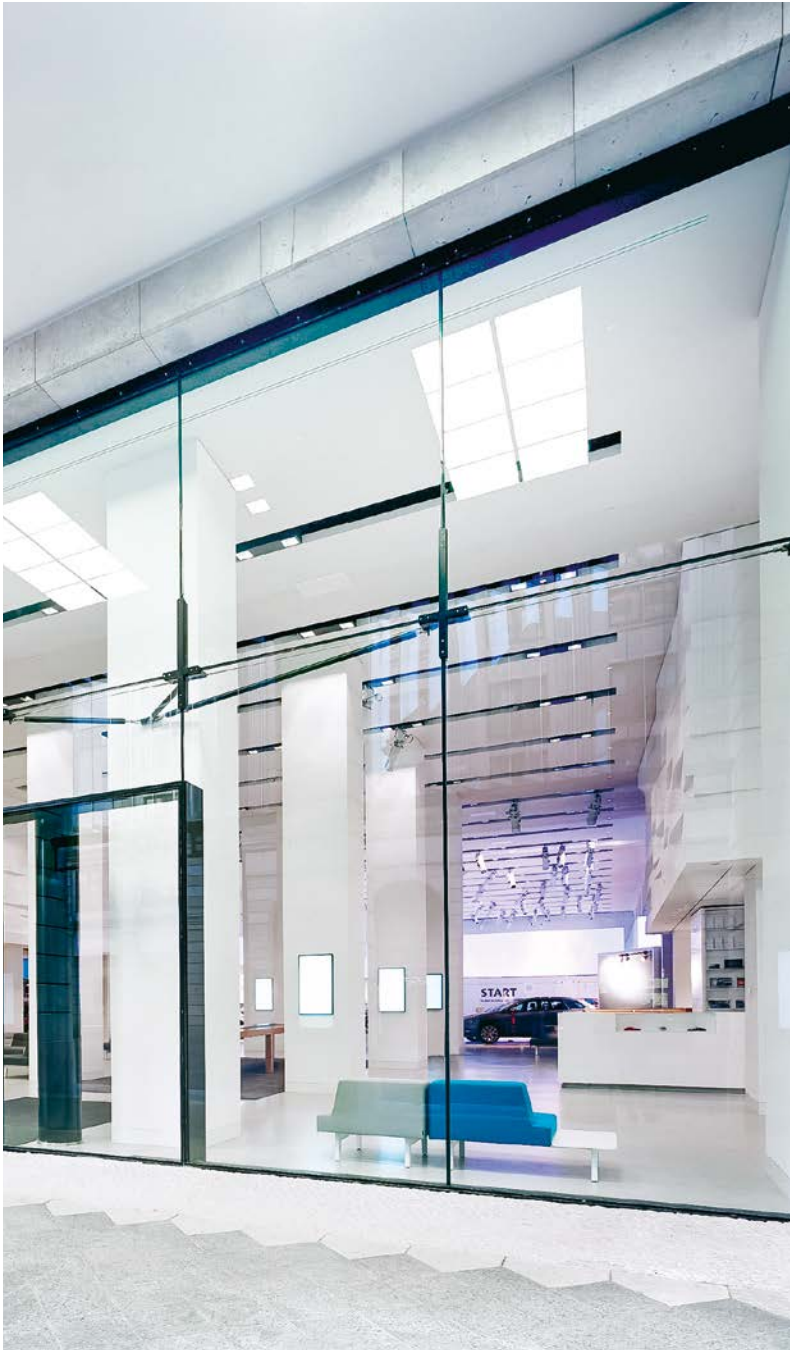


From right: Selma with her daughters Ela (7) and Defne (16), husband Servet Celik (41), her mother Ayda (55) and toddler Levin (3): having an own car saves lots of time in everyday life.





From right: Elias with his uncle Marlo Szüts (31), cousin Aris Lioe (6 months) and aunt Denise Lioe (37): off to soccer training in a spacious family station wagon.



Elias Lioe would like to take his driving test in an eco-friendly electric car that travels quietly through the streets of Berlin – possibly even in self-driving mode. “But it must still have a steering wheel so that I can take control if things get tricky”, Elias says. Today, he’s on his way to soccer training in a spacious family station wagon with his Aunt Denise, Uncle Marlo and young cousin Aris. “We haven’t always had a car and in the past we used public transport most of the time”, his aunt says. “But with a baby, having your own car does make life much easier.”

**“I care about the environment.  
Electric cars are much quieter  
and cleaner.”**

\_\_\_\_\_ Elias Lioe (11), far right



**DIGITAL**





**What will it be like to ride through the city in a self-driving electric car? What sets different brands apart in the digital age? These questions are being explored by the Volkswagen Group's Head of Design, Michael Mauer, and the Group's Chief Digital Officer, Johann Jungwirth. We talked to them at the Volkswagen Group Future Center in Potsdam.**

Text Johannes Winterhagen  
Photography Urban Zintel

# DESIGN

### **Will we still travel in the digital era?**

**Michael Mauer** The way we approach mobility will change, just like the way we communicate has changed as a result of the Internet and smartphones. What's more, trends always trigger counter-trends. The more we move in a virtual reality, the more we value our personal experiences. In future, we might preview our travel destination with the help of a virtual reality headset, but that doesn't mean anyone would be willing to miss the 'live' experience, the personal encounter. Physical mobility will still have high priority.

**Johann Jungwirth** Self-driving cars can actually make individual mobility possible for many people. Take the elderly, who are no longer able or willing to drive. Mobility on demand, affordable for everyone, will lead to entirely new vehicle concepts. I'm convinced this is how Volkswagen can help improve the lives of many people.

### **How can you make reliable predictions about the way mobility will develop in future?**

**MM** Classic customer surveys will not get us very far, especially given that the world is changing so fast. People live in the here and now and compare the new with the familiar. That is why we take a different approach in the Future Centers. We look far ahead, we time-warp ourselves to the world of 2030, or even 2040, and develop a vision. Starting from this vision we then work our way back to the present. We come up with some very unusual approaches, such as a car where children sit in the front seats because that is where they have the best view. Many people find that difficult to imagine today because of the safety risks – but surely it's only logical in an era where accidents will have become a thing of the past?

**JJ** We look very carefully at how life is changing for city dwellers, because that's where the future has already arrived, it's just unevenly distributed from a geographic standpoint. If you look in the right places, such as Silicon Valley, Shanghai or Berlin, you can already see key changes, such as a strong willingness to treat mobility as a service. Another phenomenon is the big regional differences we are seeing in city clusters as regards the mobility of tomorrow. Our

thoughts, actions and decisions always center on people and the user experience.

### **For many people, the car is something very emotional. Will that still be true in the digital future?**

**MM** I definitely think so. But the difference will be what triggers those emotions. In an electric car, for instance, the way the engine sounds isn't as important. If you're riding through dense city traffic in a highly-automated car, you are less concerned about the driving dynamics – and more interested in the way the interior is designed.

**JJ** The critical factor will be the perfect symbiosis between the physical and the digital world. There mustn't be any interruption in our digital lives when we transition from one location to another – from the home to the office or the car. On the contrary, we must intensify the digital experience, for instance by using the windows – even the side windows – as augmented reality displays to add virtual information to the view of the world outside.

**MM** We often talk about the optimal user experience. That will depend on the priorities set by the individual brands. Imagine a sports car fitted with a virtual trainer. That would help many customers experience the full potential of their car for the first time – naturally only on the race circuit. In a Bentley, on the other hand, you could imagine a holographic chauffeur.

### **How do you find the optimal user experience?**

**JJ** We rely on agile development methods where ideas are turned into software very quickly – within one to three weeks. The teams always include a user experience designer and what we call a user tester, who tests the operating logic of each new software release with users as soon as it is ready, for example. The final product is perhaps totally different to what we had envisaged to begin with – but it is optimally aligned with what people want.

**MM** We involve customers in the design and development process at a very early stage. We recently designed a concept for a self-driving urban car by asking people on the streets in Berlin for their ideas – how they would like the seats to be arranged, for instance. That was very enlightening.



# Digitization and design

How automation, digitization and electrification bring new freedom to vehicle design:



## BODY

Until now, external design has largely been determined by the fact that the vehicle body must be able to absorb the energy generated by a collision. If highly-automated road traffic means there are no more accidents, the variety of body shapes will increase.



## INTERIOR

The interior of fully-autonomous electric vehicles can be entirely designed around people. Seats can be positioned at will.



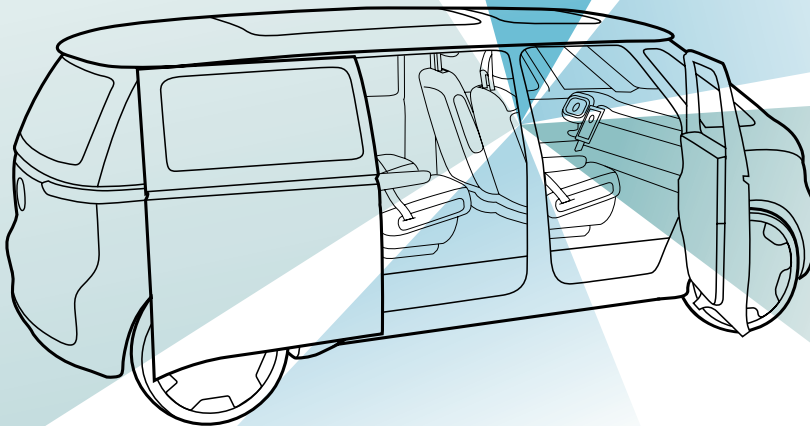
## INTERACTION

Knobs and buttons are things of the past: every vehicle has a virtual assistant that understands human speech and can anticipate wishes thanks to artificial intelligence methods.



## DISPLAYS

Large displays with augmented reality functions create a premium character – they replace the windows.



## DRIVETRAIN

If a vehicle is based on Volkswagen's Modular Electric Drive Kit (MEB), all the drive and chassis components, including the traction battery, are integrated in the floor.



## DIGITAL ECO SYSTEM

With their user ID, every Volkswagen Group customer can take all their settings along with them from one vehicle to the next – rather like swapping a SIM card from one smartphone to another.

**JJ** And we invited the same people to join us in the Future Center Europe to design and optimize the user experience for this self-driving urban vehicle; that's how we came up with new solutions. Another thing we did was to get blind people in London involved in the design process so that we could optimize the concept car to suit their needs as well. Our vision is mobility for everyone, at the touch of a button.

**Does a car powered solely by electricity look different from today's vehicles with internal combustion engines?**

**MM** It's the designer's job to visualize this new freedom. I think the Volkswagen brand's designer team did an excellent job in achieving that with the I.D. and I.D. Buzz concepts. They demonstrate how electrification opens up entirely new possibilities for designing the interior.

**“We must intensify the digital experience.”**

Johann Jungwirth



Until now, technology imposed restrictions on design and we had to make people as comfortable as possible in the remaining space. That situation is being reversed now: we can design the interior based on people and their needs, and can quite literally design it around them.

**JJ** There will be greater diversity, just like the rooms in a building can be decorated in totally different ways: there will be very puristic, function-oriented interiors as well as very stylish ones. Thanks to our brand diversity, self-driving cars with no steering wheel, pedals or cockpit give us the chance to become even more versatile.

**Surely the way the brand character is perceived will be strongly influenced by the content of the displays?**

**JJ** We are building up our own digital platform and our own digital eco system so that customers remain within the Volkswagen Group world. The user ID means customers can take their profile along with them from one vehicle to another, even to rental cars or mobility-on-demand vehicles.

**MM** However, user interfaces as well as functions will differ from brand to brand, similar to the way we create a brand-specific driving experience today even though we have the Group's modular engineering and electronics tool kits.

**JJ** We will define the interaction between people and vehicles as well as designing the user interfaces even if content comes from third parties. This will all be based on a standardized digital platform for all passenger car brands that can meet all customer needs. In parallel, Volkswagen Truck & Bus is setting up 'RIO', a digital B2B platform for the transportation industry.

**How will the interaction between driver and vehicle work in the future?**

**JJ** We have just begun a partnership with the chip manufacturer Nvidia to develop a cockpit based on artificial intelligence. That will give the driver an on-board assistant to minimize the number of operating steps. Ideally, there would be no need for any manual interaction whatsoever, because the system predicts the next steps in a given situation at a given location and determines the information

## “Electrification opens up entirely new possibilities for designing the interior based on people and their needs.”

Michael Mauer

required as a function of the context, the situation and the location.

### **What is the difference between a digital product from the Volkswagen Group and other digital offerings?**

**JJ** For us, this is about values, and above all about digital fairness. By that we mean data protection, data security and transparency in handling customer data. We want to leave it to users to decide for themselves what data they are willing to share. Today, people already entrust us with their most precious asset: their own lives. And they will place their trust in us in a digital world, too. For us it is extremely important to handle their data with respect and fairness.

**MM** Some of the values from the traditional world of cars are definitely transferable. Quality, for example, because software that functions perfectly is just as important as perfect engineering.

**JJ** Or performance: we are aiming for top-level processor speed across all brands and the same applies to over-the-air update capability and durability.

### **You both work for the Volkswagen Group. What tasks are centralized and what tasks do the brands themselves perform?**

**MM** The brands work very independently. My role is to act as an initiator. To do that, there has to be a certain distance between my work and series production projects. The brands also have progressive ideas, but they have to keep on asking themselves whether these ideas are feasible. We have the freedom to question everything. But we don't do that in isolation, we are in constant dialog with the brand chief designers.

**JJ** It makes sense to harness the synergies within the Group. Neither the Group nor the brands want to do everything themselves. We collaborate closely with strategic partners because the impetus for digital life often comes from outside, from the consumer electronics world, for instance. The Volkswagen Group is a very interesting partner for the IT industry that drives such developments; after all, our brands put some ten million vehicles on the streets each year and we have around 100 million active customers and users. Bringing the full strength of all brands to negotiations with potential partners is an advantage.



# RIGHT HERE?

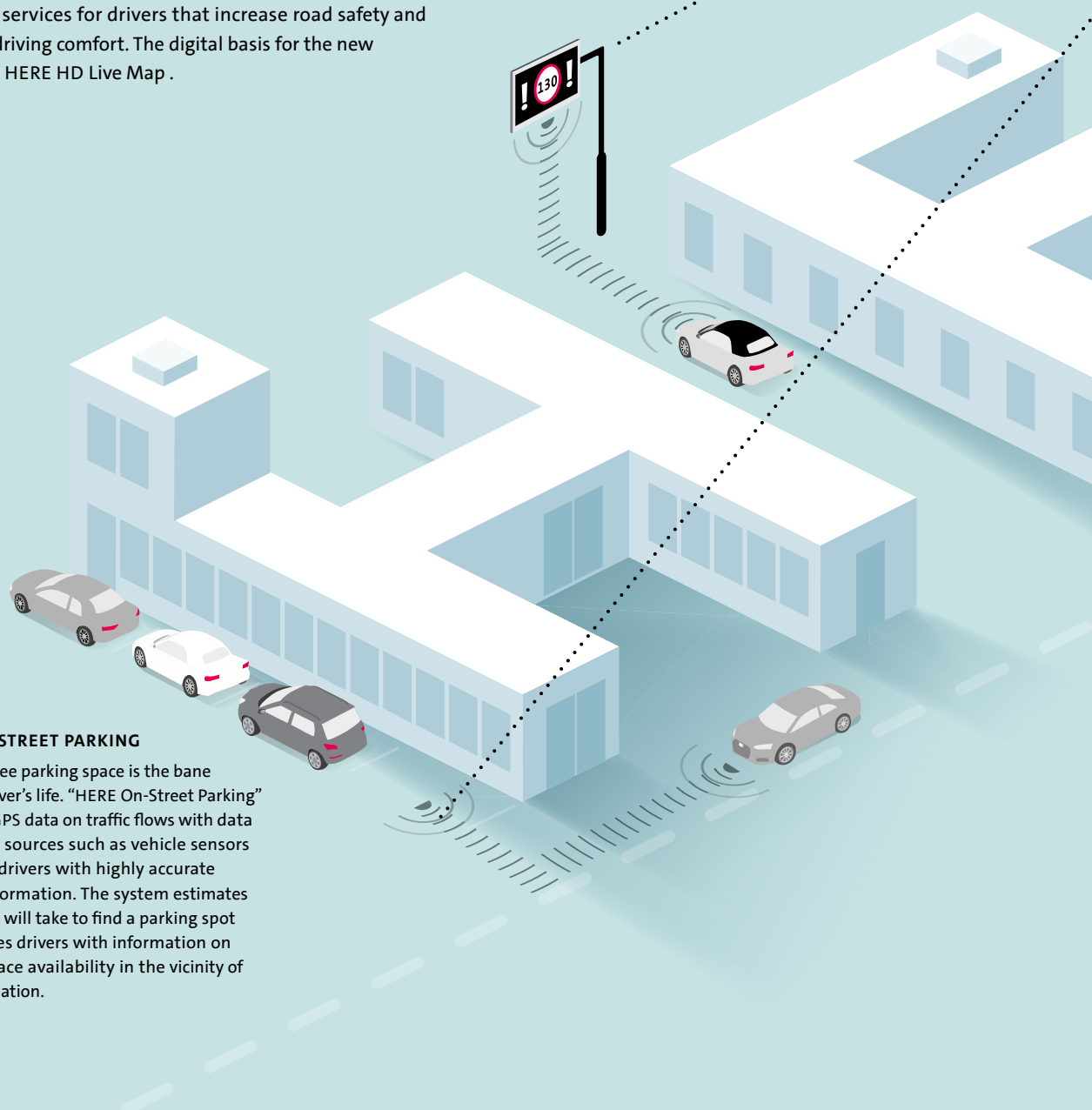
All navigation systems and telematics services are based on high-precision, up-to-date mapping data. This is why Audi AG holds a stake in HERE, a developer and provider of cloud-based mapping services. The wealth of data owned by the company backed by several car manufacturers and technology partners ranges from digital street maps for approximately 200 countries to building plans of shopping malls and airports. HERE's open location platform will in future enable the intelligent use of swarm data from vehicle fleets: the sensors installed in cars collect data on road conditions or possible hazard as well as vehicle speed and braking maneuvers. HERE uses this raw data to develop real-time services for drivers that increase road safety and enhance driving comfort. The digital basis for the new services is HERE HD Live Map.

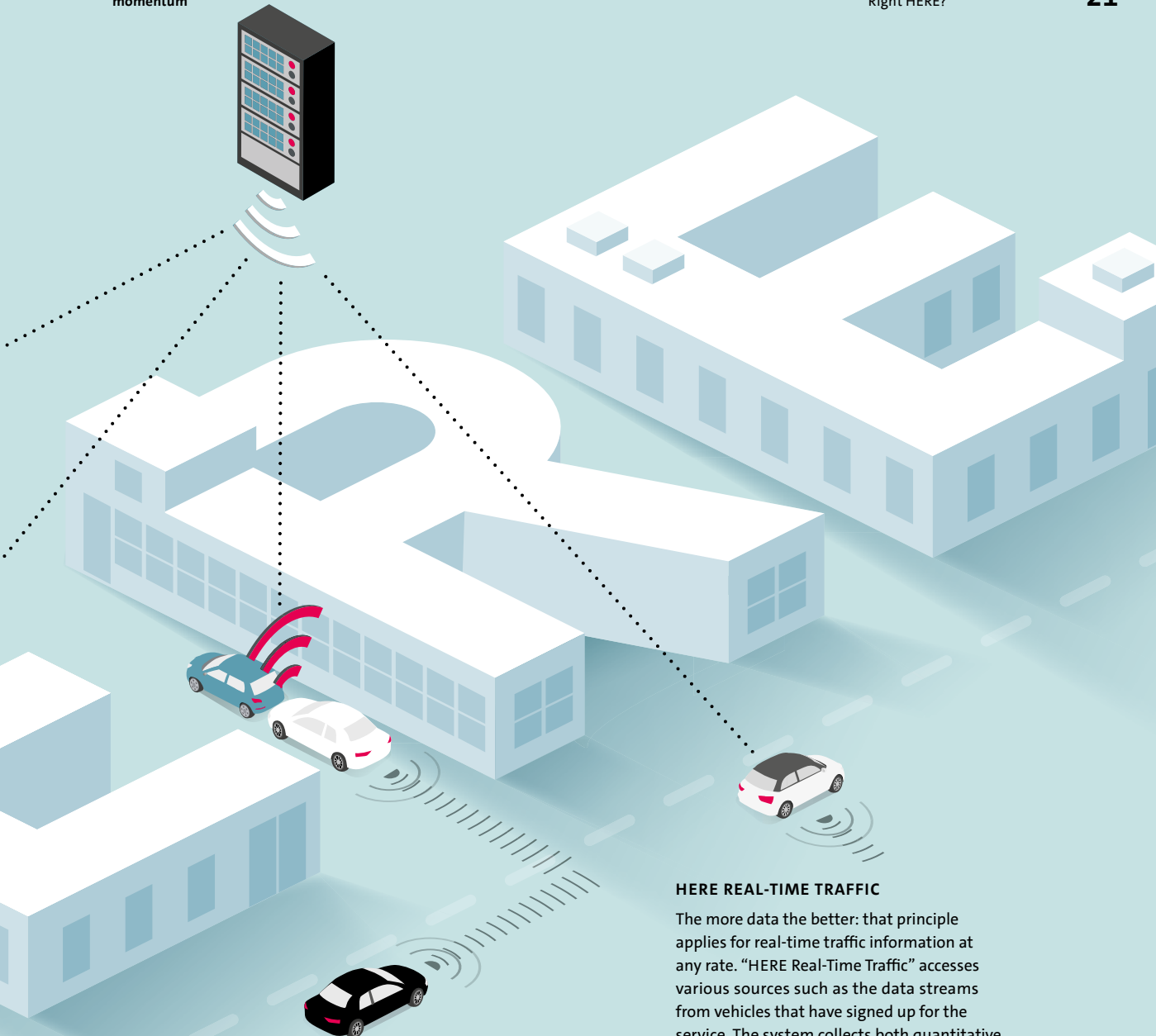
## HERE ROAD SIGNS

Digital displays like the ones often found on gantries help improve traffic flows and enhance safety. However, drivers sometimes find it difficult to keep up with the signage information – for example when the speed restrictions change in quick succession. "HERE Road Signs" sends road signage information directly to vehicles. This is also important for advanced driver assistance system applications such as Adaptive Cruise Control.

## HERE ON-STREET PARKING

Finding a free parking space is the bane of every driver's life. "HERE On-Street Parking" combines GPS data on traffic flows with data from other sources such as vehicle sensors to provide drivers with highly accurate parking information. The system estimates how long it will take to find a parking spot and provides drivers with information on parking space availability in the vicinity of their destination.



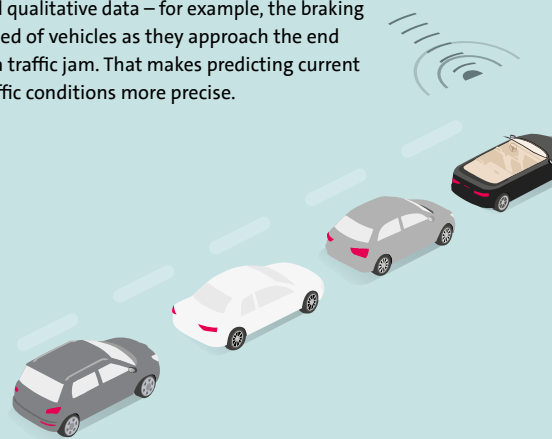


**HERE HAZARD WARNINGS**

If an accident has happened around the next corner, “HERE Hazard Warnings” alerts drivers long before they actually become aware of the danger ahead. The service uses sensor data from the vehicles involved in the accident. The real-time notifications can also warn of extreme weather conditions such as black ice or fog: if the sensor on a vehicle traveling ahead registers an icy road, the service sends out the information to all following cars.

**HERE REAL-TIME TRAFFIC**

The more data the better: that principle applies for real-time traffic information at any rate. “HERE Real-Time Traffic” accesses various sources such as the data streams from vehicles that have signed up for the service. The system collects both quantitative and qualitative data – for example, the braking speed of vehicles as they approach the end of a traffic jam. That makes predicting current traffic conditions more precise.





# ON TOUR WITH THE CRAFTER

Volkswagen Commercial Vehicles has set out to conquer new markets with the new Crafter. This is why the specific requirements of people from very diverse trades played a key role in development work. Whatever their craft, these experts had one wish in common: quality. That is why craftspeople across Europe were given the opportunity to check out the Crafter. One of them was Anna María Karlsdóttir, an artisan and designer living in Iceland.

*Text* Laurin Paschek

*Photography* Matthias Haslauer











The Crafter makes its way swiftly down the rough gravel track. Every now and then, the tires kick up one of the innumerable small pieces of lava scattered all over the ground. A thin layer of snow covers the volcanic landscape that surrounds us. We are right on top of the Mid-Atlantic Ridge which splits Iceland from north to south. Geologically speaking, we have America on one side of the track and Europe on the other. Iceland owes its volcanoes – and thus its existence – to the fact that two tectonic plates are drifting apart here.

We are heading for the community of craftspeople called “Íshús Hafnarfjarðar” in the fishing village of Hafnarfjörður to the south of Iceland’s capital city Reykjavík. In summer 2014, Anna María Karlsdóttir and her husband Ólafur Gunnar Sverrisson, a professional wooden boat builder, rented an old fish factory in the harbor, refurbished the building, divided it into several zones and set up workplaces for initially twelve designers and craftspeople.

“Our idea was to give freelance designers their own space for working on their craft – as well as providing them with access to the communal areas, along with our ceramic and porcelain kilns and our tools, plus the small fleet of vehicles.”

The success of the Icelandic start-up was overwhelming. Anna and Óli have since expanded and now have 32 workplaces for a total of 45 artisans, including wood carvers, potters, graphic and fashion designers. Most of their tenants are women, although there is also a cutler from Greece. “We primarily use old materials for our work”, Anna says. An old buoy is transformed into a lamp, a piece of driftwood becomes a work of art and an everyday wooden pallet is converted into an elegant table. Most of the raw materials are found on the island: old furniture, wooden boards, stones, scrap metal. The items created in Íshús Hafnarfjarðar are then sold, some of them to tourists in Reykjavík.





**“Our idea was to give freelance designers their own space for working on their craft – and the chance to share a small fleet of vehicles.”**

———— ANNA MARÍA KARLSDÓTTIR, ARTISAN AND DESIGNER

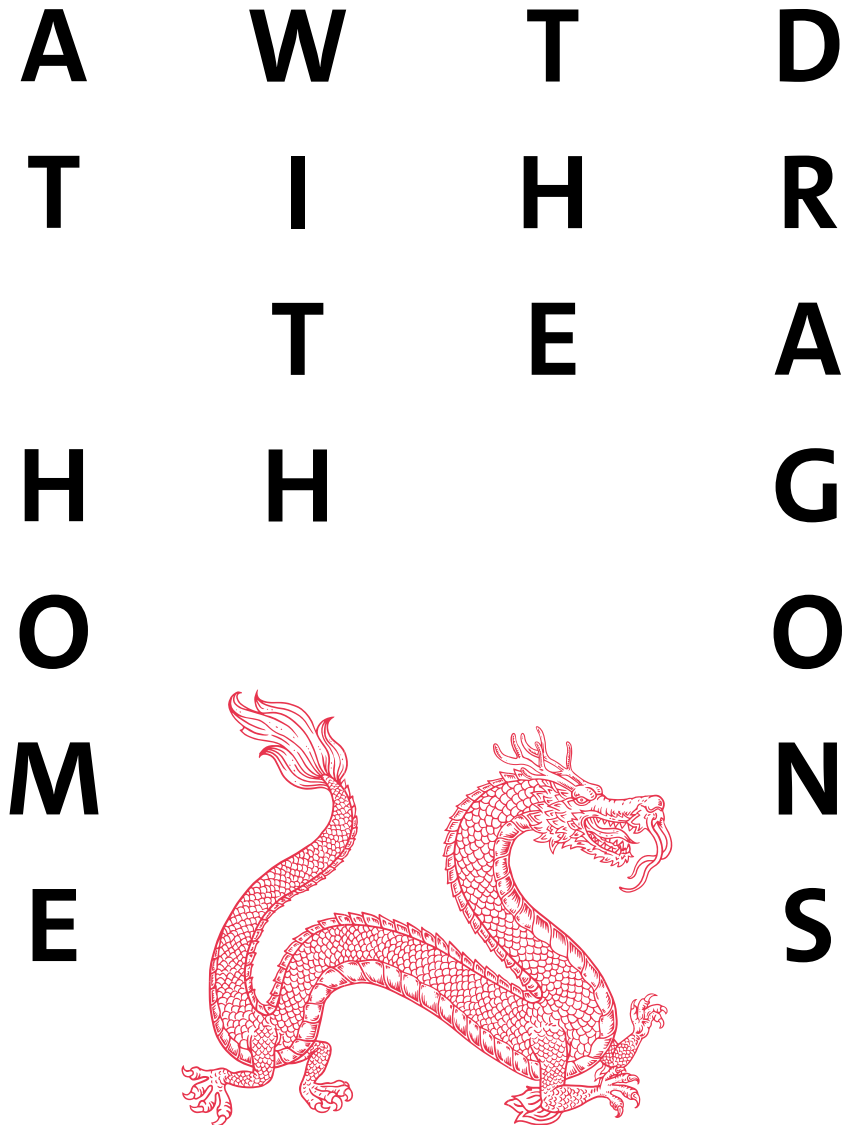
“My husband and I spend a lot of time driving round the island in the transporter collecting raw materials”, Anna says as she inspects the Crafter’s loading space. “Our top priority is having plenty of space. I don’t think that’s a problem with this van”, she adds with a grin. All-wheel drive is also important because otherwise it would not be possible to negotiate the roads on the island, many of them only rough tracks, during the cold season which lasts from September to May. “Another thing I really like about the Crafter is that you can order it with several rows of seats”, says the anthropology graduate. “That means we could use it to take our four kids to the swimming pool, or visit friends with the whole family.”

The Crafter as an all-rounder for collecting materials, delivering finished works of art, as well as a family van: versatility is what’s needed in Anna’s colorful community of craftspeople on the ridge that separates America from Europe.



#### **CRAFTER2CRAFTSMEN**

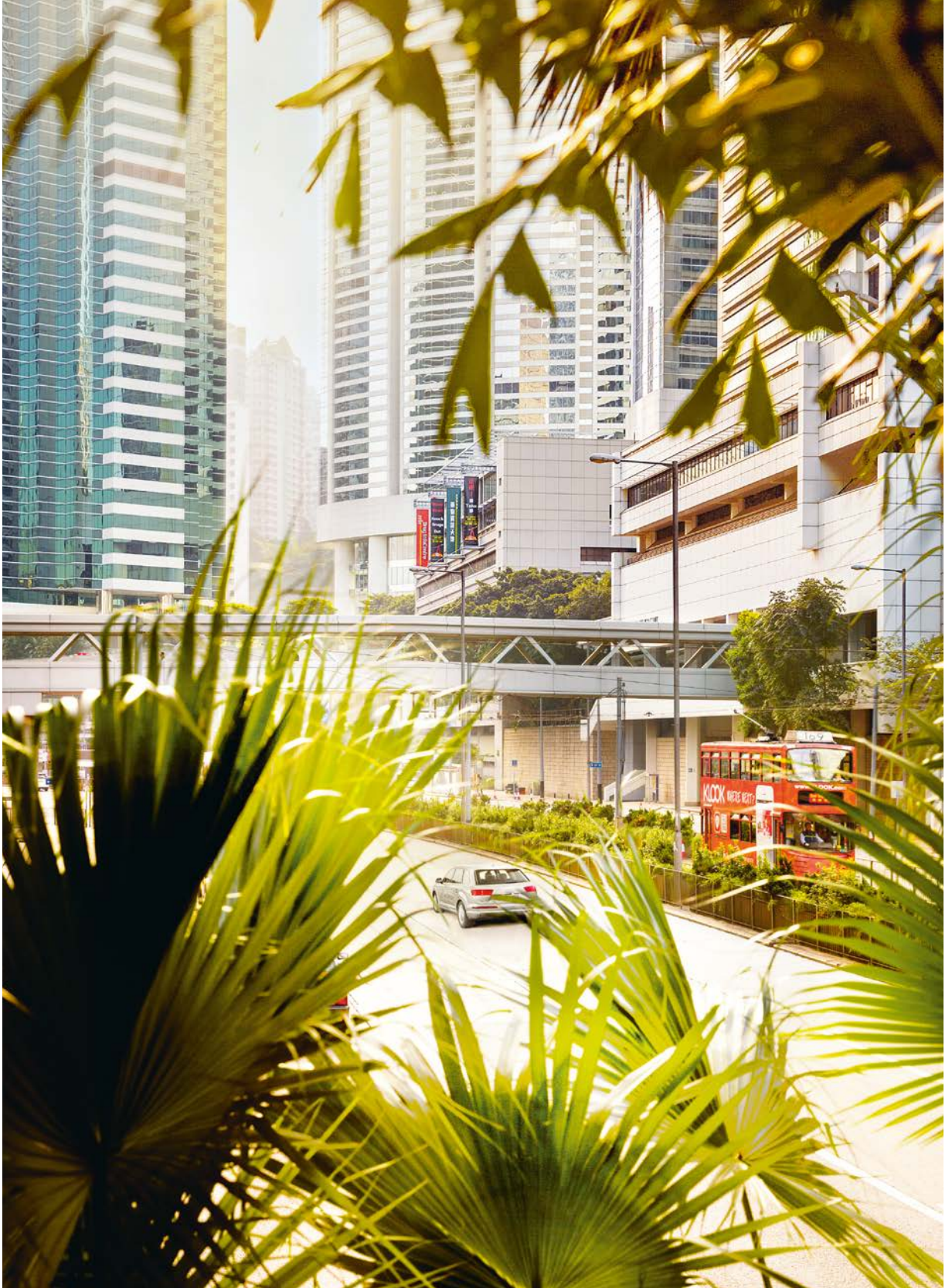
30 countries, 42,000 kilometers, four months: prior to the market launch, Volkswagen Commercial Vehicles sent the new Crafter on a final quality check – from the North Cape to Morocco, from Iceland to the Black Sea – in search of out-of-the-ordinary craftspeople. The test users included a bagpipe maker, a windmill restorer, a royal florist and a blacksmith who makes axes. They all put the new Crafter through its paces and gave their impressions on just how practical, innovative and cost-efficient the new van is – and how it would suit their business.



**Hong Kong is one of the most densely populated megacities in the world, and parking spaces there are in short supply. That is why Audi has launched a mobility service in the Dragons Range residential complex. “Audi at home” offers individual mobility without the need for a private parking space.**

Text Christiane Kühl  
Photography Andreas Mader







**“What impressed me most was that I could book my car with the app.”**

Ken Wong, Dragons Range resident

The road from the apartment towers of Dragons Range winds its way along narrow serpentine, down the hillside planted with evergreens and into the valley. The next subway station is a long way away, the next shopping mall even more distant. A few high-rise apartment blocks in one of the neighboring satellite towns are just visible through the haze. The residents of Dragons Range appreciate the peace and quiet. But they also want to get around flexibly and independently, which makes the new residential complex the ideal choice as the first location for “Audi at home” in Asia. Via the “Audi at home” app, residents can choose from an Audi A3 Sportback e-tron<sup>1</sup>, an Audi TT Roadster<sup>2</sup> or an Audi Q7<sup>3</sup>, which they can book for a few hours, a day or a whole week.

It takes around 45 minutes to travel from Dragons Range to downtown Hong Kong. “There is a shuttle service to the subway station, but it isn’t very flexible”, says Alex Yeung, who regularly uses “Audi at home”. The 39-year-old



investment banker frequently uses the A3 e-tron to collect her parents and take them home again. Or she takes her husband to the station when he is traveling on business. The couple faces a problem that is typical for Hong Kong. “We own an Audi Q7, but we don’t have anywhere to park the car here”, Yeung says. “That’s why we left it with my parents-in-law.”

For years now, there has been a shortage of parking facilities for the millions who live and work in the densely populated city of Hong Kong. For 670,000 registered vehicles, there are only around 590,000 public and private parking spaces. Residential developers are only allowed to build parking facilities for a proportion of the new apartments in their projects. That is one of the ways the government is seeking to limit the number of cars in Hong Kong. In Dragons Range, for example, 970 apartments have been sold – but there are only 500 parking spaces.

“Hong Kong urgently needs new mobility concepts”, says René Koneberg, Managing Director of Audi Hong Kong. “At the same time, the city is a trendsetter for the whole of China. That makes it an ideal place to test new services.” 150 residents of Dragons Range have already registered with “Audi at home”. The vehicles are booked via app. A QR code is sent to the customer’s smartphone 15 minutes before departure. The customer can then collect the key from the property’s concierge. Ken Wong, another Dragons Range resident, recently tested the service for the first time, picking up the Q7 from the Audi fleet to collect a friend and his family plus luggage from the station. They then drove downtown for a shopping trip. “It was all really easy”, the 55-year-old says. “What impressed me most was that I could book my car with the app.”

The “Audi at home” rental charge includes fuel, battery power and insurance. And the service also has the occasional surprise in store: every now and then, Audi temporarily adds a “mystery car” to the fleet. At Dragons Range, the new Audi Q2<sup>4</sup> was the latest surprise, but users have also been treated to an Audi RS6<sup>5</sup>. Sports cars are very popular in Hong Kong, and so are electric vehicles. “We’ve included the Audi A3 e-tron plug-in hybrid in the portfolio because people here are becoming more eco-conscious and welcome such models”, Koneberg says. Hong Kong is not very large in terms of area, so the battery’s range is easily sufficient to travel from one end of the city to the other. And the gasoline engine takes over on a longer journey. That is why the A3 e-tron is popular with “Audi at home” service users in Hong Kong.

# 15

**minutes before departure, a QR code is sent to the customer’s smartphone. Then they can collect the key from the property’s concierge.**



Audi has been working on new mobility concepts for megacities for quite some time. At Audi Business Innovation GmbH, the company develops ideas for the urban mobility of the future. “We have a look at urban areas and then think about the kind of intelligent mobility concept that would be a good fit”, Bettina Bernhardt, Managing Director of Audi Business Innovation GmbH, explains. Such concepts include “Audi on demand”: in Munich and San Francisco, customers can make a spontaneous vehicle booking online and collect their vehicle just a few minutes later. Other established concepts in Germany are “Audi shared fleet”, an innovative car-sharing system for companies, and “Audi select”, a rental service where customers can use up to three different models in one year.



## “Hong Kong is like a trendsetter for the whole of China. That makes the city an ideal place to test new services.”

René Koneberg, Managing Director Audi Hong Kong

Hong Kong is already the second location for “Audi at home”, following on from San Francisco. “The target group for our new mobility service is people who live in large apartment complexes and are therefore accustomed to sharing services”, Bernhardt says. “We wanted to find out whether they are also willing to share cars.” The service was first trialed in San Francisco and was very well received by the buzzing start-up scene there. “People who work on digital services adapt more quickly to using such services themselves”, Bernhardt points out. “And digitization opens the door to connected cars and bookings via app.” A lot of the experience gained in the USA can be transferred to Hong Kong. “For instance, we noticed there are clearly defined profiles within the user group.” Some users always book the same car, others test the entire range. Some make high-frequency bookings for short trips, others only book infrequently, but when they do, they book a car for a whole week. Bernhardt analyzes these behavior patterns to tailor the service to meet these needs.

Dragons Range resident Yan Kuan has already tried out several “Audi at home” models – including the RS6 “mystery car”. “That was amazing”, the 26-year-old says with a broad grin. Kuan moved from Hangzhou in eastern China to Hong Kong to study for his master’s degree, and he

also works part-time at a trading company. He and his girlfriend rented an apartment in Dragons Range because he finds downtown Hong Kong too crowded and too hectic. They both use the new Audi service. “It’s more convenient and more flexible than taking the bus or subway”, Kuan explains. “You can usually get a car pretty quickly. Once I even needed one at two in the morning, but that wasn’t a problem, either.”

Looking to the future, there are plans to introduce this Audi service at other residential complexes in Hong Kong. “We see a big demand”, Bernhardt says. The Dragons Range project is just the beginning.

- 1 Audi A3 Sportback e-tron fuel consumption in l/100 km combined from 1.8 to 1.6; energy consumption in kWh/100 km combined from 12.0 to 11.4; CO<sub>2</sub> emissions in g/km combined from 40 to 36. Efficiency class A+.
- 2 Audi TT Roadster fuel consumption in l/100 km combined from 8.5 to 4.7; CO<sub>2</sub> emissions in g/km combined from 194 to 118. Efficiency class from E to A.
- 3 Audi Q7 fuel consumption in l/100 km combined from 7.6 to 1.8; energy consumption in kWh/100 km combined from 19.0 to 18.1; CO<sub>2</sub> emissions in g/km combined from 199 to 48. Efficiency class from C to A+.
- 4 Audi Q2 fuel consumption in l/100 km combined from 5.8 to 4.1; CO<sub>2</sub> emissions in g/km combined from 134 to 109. Efficiency class A.
- 5 Audi RS6 fuel consumption in l/100 km combined 9.6; CO<sub>2</sub> emissions in g/km combined 223. Efficiency class E.



A population of over seven million, 670,000 registered vehicles, but only 590,000 parking spaces: Hong Kong needs new mobility solutions.



# TIMELESS

**A Bentley Mulsanne Speed<sup>1</sup>, exquisite watches and the art of finding the perfect combination of tradition, modernity and luxury: on a drive with entrepreneur George Bamford through the Midlands of England.**

Text Peter Gaide

Photography Matthias Haslauer



**George Bamford in the Midlands: what better way to travel in style through this region known as the heart of England?**









Customers of the Bamford Watch Department can take a closer look at their personalized luxury watch in the Bentley Mulsanne Speed.



A winding country lane in the Cotswolds in Central England, a captivating, undulating landscape not far from Oxford. A sonorous purr marks the passage of a deep black Bentley Mulsanne Speed as it glides past head-high hedges and walls. Gnarled trees and stone farmhouses salute from the wayside. A pub appears at the side of the road, next to it a red phone box – this is picture book England. What better way to travel in style through this region known as the heart of England. George Bamford smiles softly, but cannot be drawn into responding. Maybe the way he drives is answer enough. Cool, calm and collected, he is in complete control despite – or maybe even because of – the Bentley’s huge reserves of power.

George Bamford is a car enthusiast and entrepreneur. The 36-year-old founded the “Bamford Watch Department” headquartered in London 13 years ago. The business customizes luxury watches to meet the wishes of their wealthy owners. Bamford’s father, Lord Anthony Bamford, is the chairman of a leading construction equipment manufacturer founded by Bamford’s grandfather.

Bamford brings the Bentley to a halt in the courtyard of an expansive country house. The beige gravel crunches quietly under the tires. This is where Bamford spends weekends with his wife and three children. His collection of exclusive cars is housed in several garages, tended daily by a member of his staff, and shrouded in delicate covers resplendent with the “B” emblem.

Bentley and Bamford: that has become a tradition. “Our family owns a few Bentleys”, Bamford says as the kettle boils for tea. It would be no exaggeration to talk of an almost timeless love affair which began with his grandfather. “Bentley is a brand with a unique blend of style, perfection and engineering prowess”, he adds. Bamford’s black Mulsanne Speed is a one-off model, designed in close collaboration with Mulliner, Bentley’s in-house bespoke personalization division.





“For me, my Bentley Mulsanne Speed is the embodiment of what true luxury products must deliver in the 21<sup>st</sup> century to keep their clientele satisfied and turn them into loyal customers.” Bamford believes the critical factor is to create a unique, almost symbiotic relationship between the product and the owner through personalization. And that is exactly what Bamford Watch Department does. Some 50 designers, technicians, watchmakers and marketing experts in and around London craft and market luxury watches. These sophisticated timepieces are one of a kind: a watch face was designed for a horse owner in a shade of brown to match the pants worn by her jockey when he won a prestigious race. Another customer commissioned an intricate mechanism that conjured up a tiny heart on the watch face to celebrate her wedding anniversary each year. The exquisite chronometers are available from 48 branches all over the world.

The Bentley Mulsanne Speed has a special place in Bamford’s world. “The car is a particularly noble ‘work-horse’ in our company.” It collects customers from the airport and chauffeurs them through London. The comfort, the black-in-black interior and other color highlights help to build a relationship with the Bamford Watch Department brand. During the journey, customers can take a closer look at the watches displayed in a futuristic carbon box located in the back of the car.

Having a motorcar that he can use for business because his discerning guests feel completely at ease in its luxury – so much so that some even might lose track of time. That is definitely beneficial for Bamford’s business. The design of the Mulsanne Speed may be timeless – but a chronometer is still extremely useful for everything else.

<sup>1</sup> Bentley Mulsanne Speed fuel consumption in l/100 km combined 15.0; CO<sub>2</sub> emissions in g/km combined 342. Efficiency class G.







**LUXURY PRODUCTS MUST CREATE A UNIQUE,  
ALMOST SYMBIOTIC RELATIONSHIP WITH  
THEIR OWNER.**

# LET'S TALK NERDY

**Every year, 200,000 nerds – the top technology specialists from the automotive and IT worlds – meet up in Las Vegas for the Consumer Electronics Show (CES). The star at the Volkswagen booth this year was a car that recognizes the digital identity of its users: the Volkswagen I.D. Three visitors to the 2017 tradeshow share their impressions.**

Text Johannes Winterhagen

Photography Roderick Aichinger

Once registration for a Volkswagen user ID has been completed owners have access to all of the brand's mobility worlds. That means they can take their personal settings and accounts from third-party services along with them, regardless of the vehicle they are using. So a rental car feels much more familiar with their own personalized seat and climate control settings or their favorite music ready and waiting. All users need for identification is their smartphone. Volkswagen demonstrated the advantages of the user ID at CES 2017: all visitors could download a user ID to their smartphone and then try out their personal configuration live at the Volkswagen booth.







**Manuela Midl (32), electrical engineer from San Francisco**

“Originally I come from Austria, but I’m currently spending three years working for my employer, an Austrian engineering firm, in Silicon Valley. I’m developing a cloud solution for industrial automation. I was very keen to try out the virtual reality cockpit, even though that meant queuing for quite a while. It’s fascinating to see how quickly new technologies are becoming part of our lives. I think Volkswagen’s idea of networking people and cars via a user ID is pretty convincing. I don’t want to waste time sorting out settings. It’s much better to have a car that already knows what I want before I actually get in.”



**Guoliang Shen (37), marketing specialist from Shanghai**

“This is my first time at CES. It’s awesome to see so much high-tech in one place, from domestic robots to self-driving cars. Lots of stuff here fits in really well with the digital lifestyle we Chinese love. We want to be mobile, but we also want to stay connected. And we want things to be as comfortable as possible. For instance, we find using cash annoying. So the fact that you can use Volkswagen’s user ID to reserve and pay for a parking space is just perfect. You know, finding a space to leave your car is often the most difficult thing about driving in my home town.”





**Abby Bollenbacher (28), actress from Los Angeles**

"I grew up on a remote farm in Ohio, now I'm working on my acting career in Hollywood and I also anchor events. I think cars are great fun – and I admit I like driving fast. What does it for me is the feeling of power when you accelerate. That's where electric vehicles like the I.D. have a big advantage. Unfortunately, driving in Los Angeles often means spending a lot of time sitting in traffic jams. So I'm really looking forward to autonomous driving. Then I can use the time I spend in the car much more effectively, for instance, to coordinate my schedule. We're so lucky to be living in an age when this kind of technology can make a breakthrough."



Ole Harms is convinced that urban mobility solutions can only succeed in close cooperation with municipalities.

# AMBITIOUS GOALS

**Mobility services that enchant users – that is the mission of Ole Harms, CEO of MOIA, the newest company in the Volkswagen Group. On a ride through London he explains what will set MOIA apart from other mobility solutions. And he talks about the role that vehicles specially designed will play in making this difference.**

Text Johannes Winterhagen  
Photography Urban Zintel

Ole Harms checks his smartphone. “Our taxi’s almost here”, he says with a broad smile. Seconds later, a typical black London cab draws up. The logo emblazoned on its door reads “Gett”; Volkswagen made a 300-million-dollar investment in the ride-hailing service in 2016. Gett is currently active in more than 100 cities, including megacities like Moscow or New York, and of course in London. Every third cab in the British capital already uses the service to pick up fares.



“For us, the Gett deal was just the first step to gaining a foothold in the fast-growing market for mobility services”, Harms explains as we climb in. “We want to be one of the world-leading players in this segment in ten years’ time.” The Volkswagen Group founded MOIA with this aim in mind. The word is derived from the Sanskrit term for “magic”. “We love that analogy. We want our services to make urban life much better for our customers”, says Harms. This has been the Volkswagen



**Building vehicles tailor-made for new mobility services:  
the Volkswagen Group's brand diversity offers the perfect  
foundation for that.**

**66.4 %**  
**of the world's population**  
**will live in cities in 2050.**



manager's ambition since 2014. Back then, on a business trip to Jakarta, he was met at the airport by a chauffeur and spent hours stuck in a traffic jam on a journey of just a few kilometers. He came to the conclusion that "we need new mobility solutions for the world's megacities."

How do you make life better? And how do you accomplish that in a market which already has many players? Pooling is one of the concepts at the top of MOIA's agenda at the moment. With ride pooling, an app bundles several mobility requests and matches them with available rides. Initially, MOIA is planning a service where drivers collect passengers at various points along a route in specially designed ride-pooling taxis and take them to their destinations. At a later stage, self-driving electric vehicles are expected to take over this task. For Harms, one key to success lies in the fact that the Volkswagen Group brands have the ability to build cars tailor-made to meet the demands of these new mobility services. He knows the hallmarks of these vehicles: they are electric, they will soon also be self-driving, the interior is specifically designed for the needs of the urban target group, and the vehicles are spacious and fully connected. The aim is to fill the gap between public transport and existing taxi services. Buses and trains are confined to fixed routes and schedules and cannot fulfill all mobility needs. On the other hand, many people find taxis too expensive.

"Rides must be available at a comparable price to public transport", Harms says. "That will allow us to reach new target groups."

MOIA could also offer further mobility services, but Harms rules out a global one-size-fits-all solution. "Urban mobility solutions can only be created in close cooperation with municipalities. Each city has its own ideas and needs." Negotiations with potential partner cities are already underway, and Hamburg will be the first metropolis to test the new solutions with the Volkswagen Group. MOIA will complement, not replace, existing mobility services offered by other brands in the Volkswagen Group. "There are many possible approaches for collaboration within the Group", Harms explains, citing the dealer network as one example. The time will come when the vehicles built specially for MOIA will need to be serviced – or simply parked and charged overnight.

Harms' smartphone blinks constantly as new messages arrive. "We attracted a great deal of international interest when we launched MOIA and we're now getting a lot of enquiries about possible cooperation projects", Harms says. He decided on London as the venue for the launch, even though MOIA is headquartered in Berlin. With its population of over eight and a half million, London has always been a pioneer when it comes to new mobility





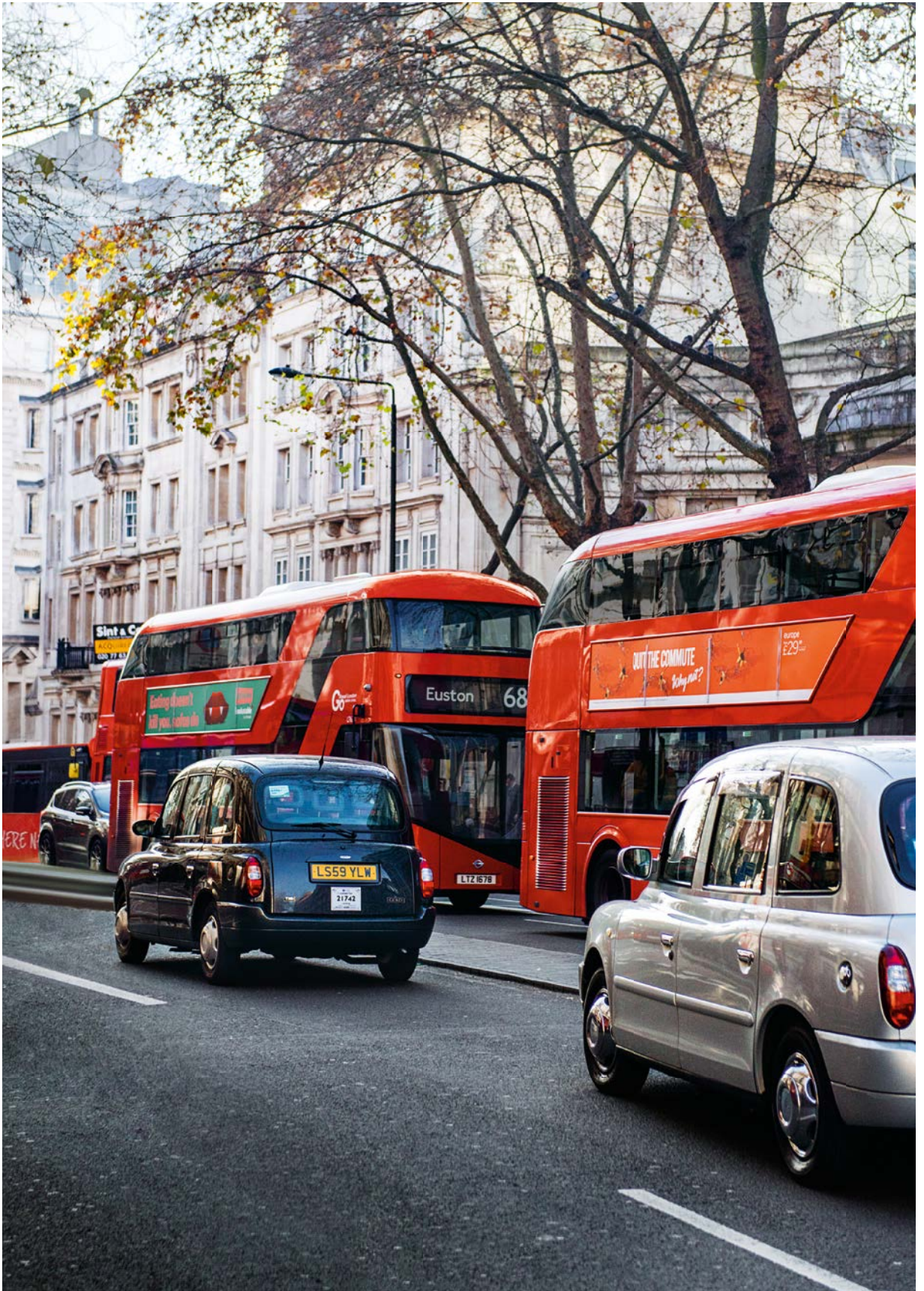
**Destination Copper Box: the app automatically takes care of payment. “Often it’s the little things that make life simpler.”**

solutions. In the 19th century, when the population expanded from one million to five million, the city aldermen built the world’s first underground railway: the Tube began operating back in 1863. And in 2003, London was the first megacity to introduce a toll on motor vehicles traveling in high-volume innercity areas. This model has since been copied in many cities worldwide. He may be brimming with enthusiasm, but Ole Harms is definitely not a dreamer. The former strategic consultant knows that new mobility services will only succeed in the long term if they are profitable. “At the moment we’re focusing on getting the business going, but we will have to build up the volume in the coming ten years.” MOIA will initially be rolling out its services in the home market of Europe, but Harms is nevertheless already looking to China, where the booming and extremely fast-paced environment for new business models and mobility services is a very attractive proposition. MOIA needs local partners in China. “We’re already in talks there”, Harms confirms. He is not only counting on the strength of the Volkswagen Group to shoulder the capital-intensive start-up phase. “Looking ahead, we are open to investors from outside the Group as well.”

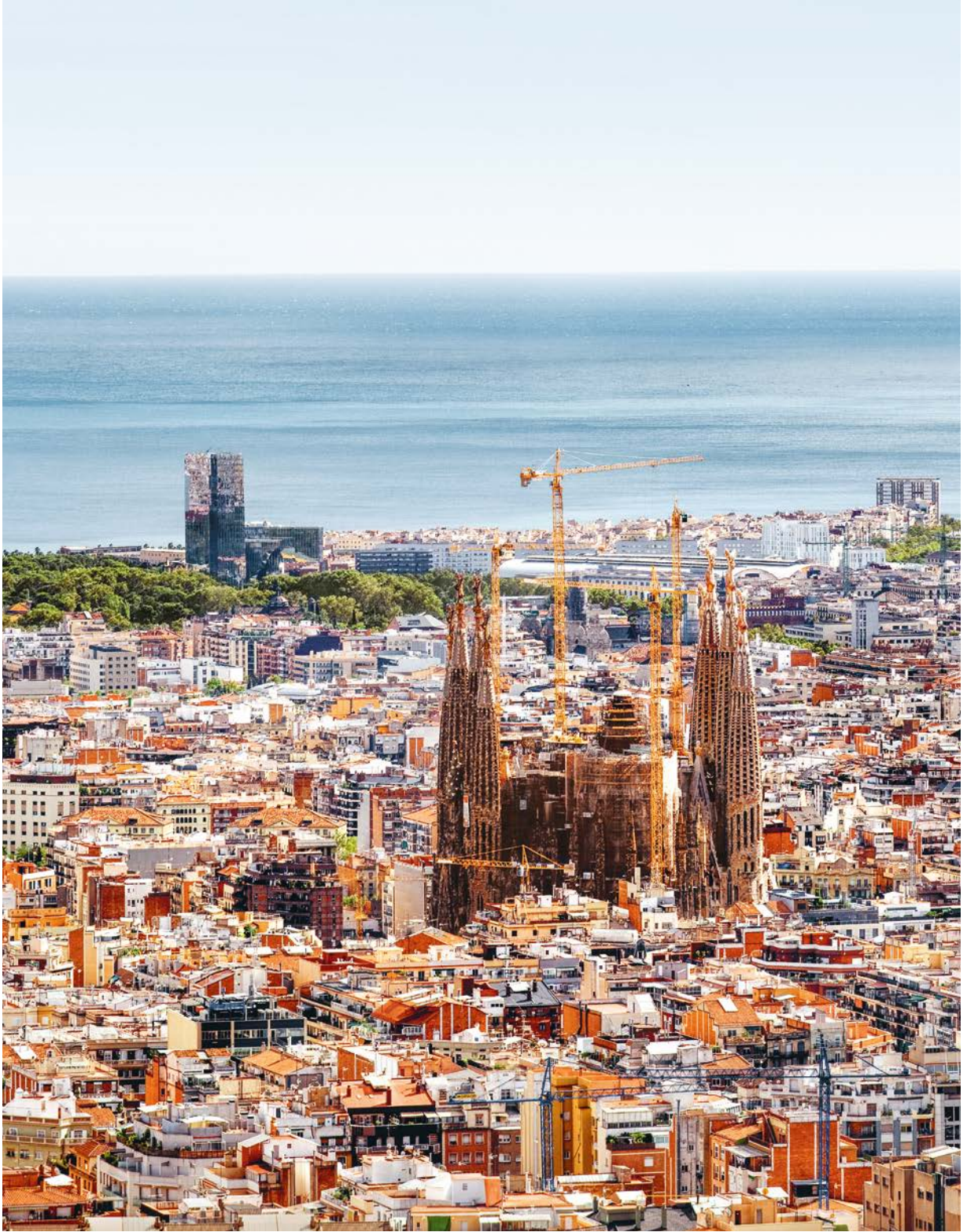
Our destination is the “Copper Box Arena” in London’s up-and-coming borough of Stratford, once a center of the railway industry. No cash is needed to pay for the ride because the Gett app automatically takes care of that. “Often it’s the little things that make life simpler”, Harms points out.

London is not only a pioneer when it comes to urban mobility, it is also a key center for the international start-up scene. Its members meet up regularly at the “TechCrunch” held in the Copper Box Arena used for the 2012 Olympic Games to share ideas and collect fresh capital. In his cardigan, jeans and sneakers, Harms blends with the participants. The exhibition is reminiscent of a university event: the booths are tiny, new technologies are presented on simple tables, and a striking number of these new concepts have something to do with artificial intelligence. It’s the ideas that count, not the presentation format. That is exactly why a new chapter in the history of Volkswagen began here in December 2016 with the launch of MOIA.











# MOBILE CITY

**In Barcelona, the pioneering smart city, SEAT is working on the future of connected mobility in partnership with universities such as the Universitat Politècnica de Catalunya (UPC) and with Volkswagen Group Research. The network's first projects focus on new car-sharing concepts and the intelligent use of scarce parking space.**

Text Laurin Paschek

Illustration Anje Jäger

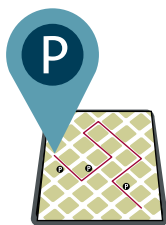
The flight path takes us over the deep-blue ocean and follows the coastline, past the port, the sandy beaches and the city blocks arranged like a chess board. On the approach to Barcelona airport, the capital city of Catalonia looks dressed in its best. But its coastal location also presents a challenge for the metropolitan area: Europe's second most densely populated city of over a million inhabitants has hardly any space to grow. Nevertheless, its population has swollen by more than 100,000 to over 1.6 million since the turn of the millennium. Over the same period, the number of tourists has doubled to roughly nine million per year.

More and more people also means ever-denser traffic. That is why the city's administration has launched the "Barcelona iCity platform" which, among other things,



**"The CARNET research network is developing technologies that respond to the challenges of metropolitan areas – and improve mobility for city dwellers at the same time."**

Fabian Simmer, Digital Officer, SEAT



Say goodbye to searching for a parking space: sensors under the road surface and in cars driving by collect data on **vacant parking spaces**, and the navigation system then takes the driver there.



Everyone benefits: **car-sharing** and **ride-sharing** use cars more efficiently – and bring financial benefits for the owner.

collates traffic flow data, and thus lays the foundation for research into future-oriented traffic solutions. “Barcelona offers us the ideal environment to develop digital mobility concepts”, says SEAT Digital Officer Fabian Simmer. He leads research on the digital transformation and the mobility of the future in Barcelona. SEAT has teamed up for this work with Volkswagen Group Research and several universities, such as the UPC, to form the “Cooperative Automotive Research Network”, or “CARNET” for short.

The primary goal of the network partners is to create digital solutions that improve the quality of urban life and the mobility of city dwellers. The first project of this kind is an app that enables registered users to share their vehicles with others. For what is known as “peer-to-peer sharing”, SEAT has collaborated with CARNET to

develop a version of the Ateca<sup>1</sup> model series with smart technology, and fitted a display on the exterior of the B pillar. Whenever a potential car-sharing user walks past the car, an app on their smartphone lets them know the car-sharing rates and allows them to send an enquiry about vehicle availability. If the owner gives the go-ahead, the user is issued with a digital key. The display on the side of the car takes the user through the hiring process step-by-step. Car owners can also offer ride sharing via the app: they can let other members of the app community know when they will be traveling along a certain route and invite them to share the ride. A pilot project for SEAT employees will be launched this year.

Direct communication between the vehicle and the smartphone is crucial in this context. “For this kind of digital



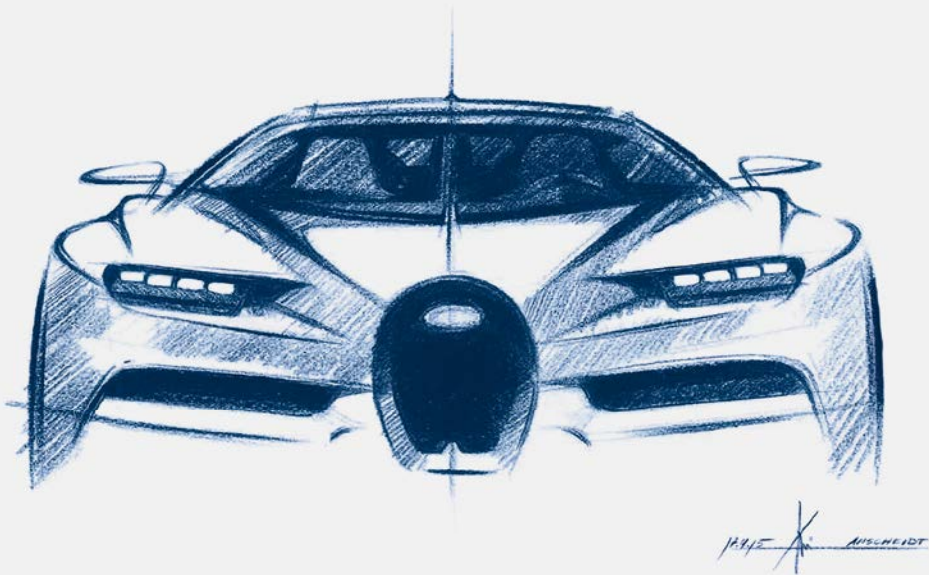
**Planned city:** hemmed in by its city walls, Barcelona was full to overflowing when in 1850 urban planner Ildefons Cerdà expanded it with a characteristic grid-like design.

technology to be accepted, we must offer users and drivers the easiest solutions imaginable”, Simmer explains. However, developing shared transportation concepts for city dwellers that optimize the use of vehicles also means providing sufficient parking space as near as possible to residential areas. That is why CARNET is working on the “Smart City Parking” project in the “Les Corts” district in the western part of Barcelona’s old city. Sensors installed under the road surface collect data on free parking spaces. At the same time, SEAT cars are equipped with technology to locate vacant parking spaces as they drive by. The data are transmitted in real time to Barcelona’s iCity platform and the vacant parking spaces are displayed and updated on a map shown on the screen in the car. The navigation system then guides the driver directly to the vacant space.

“Our projects are designed to demonstrate what’s technologically possible”, says Simmer. The CARNET alliance is currently working on more than 20 research projects. “Things will get really exciting when cars start delivering data to a smart city platform like the one we are planning with our iCity platform for Barcelona.” That will create entirely new collaboration models for cities and car manufacturers.

<sup>1</sup> SEAT Ateca fuel consumption in l/100 km combined from 6.1 to 4.3; CO<sub>2</sub> emissions in g/km combined from 141 to 113. Efficiency class from C to A.

# SYMBIOSIS



**A mighty 16-cylinder, eight-liter power plant in a mid-engine configuration with a power output of 1,500 hp and maximum torque of 1,600 newton meters: designing a super sports car combining such an exceptional power plant with classical aesthetics calls for a focused approach. For the designers of the Bugatti Chiron<sup>1</sup>, the principle was “form follows performance”.**

Text Laurin Paschek  
Photography Hartmut Nägele





**“Form follows performance’ is our response to the extreme technical challenges and is imperative for the design of the new Bugatti Chiron”,** says Achim Anscheidt, Director of Design at Bugatti.

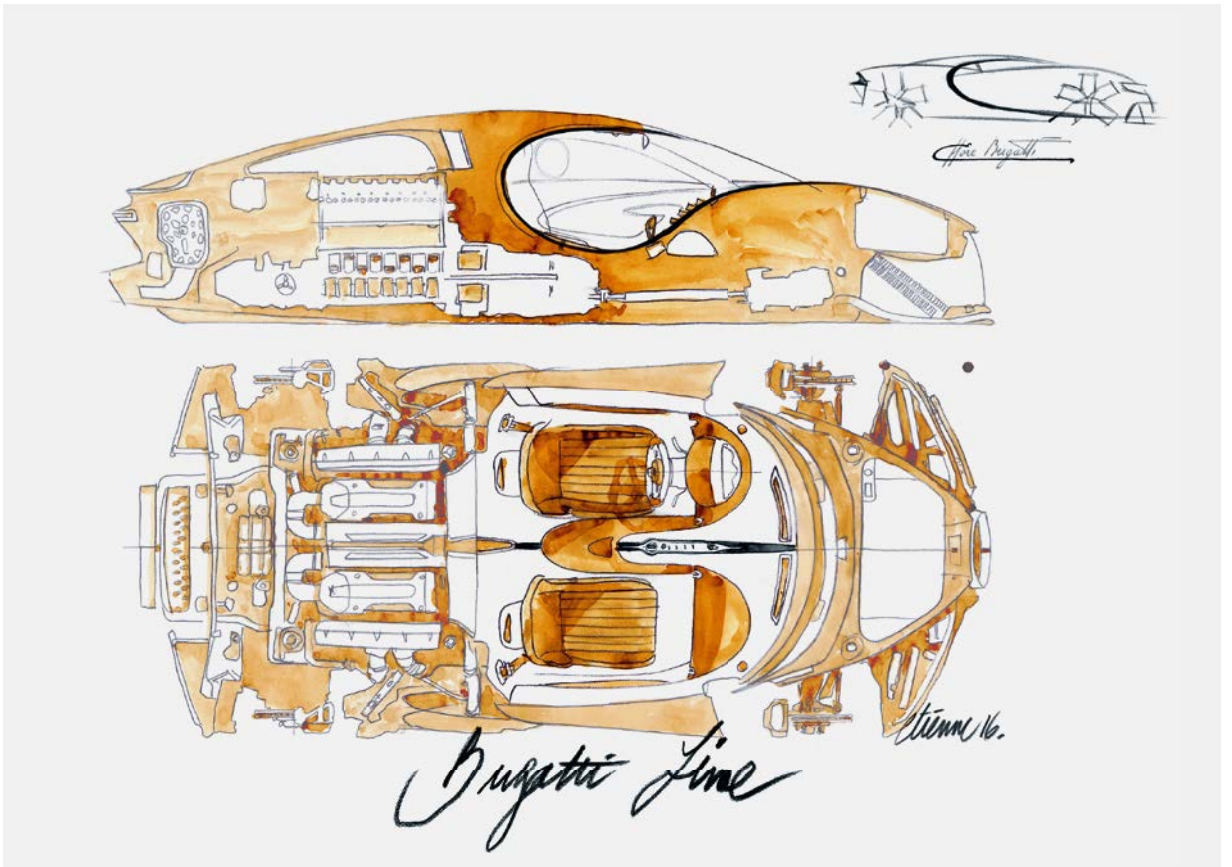
The key requirements for fulfilling this mission, transforming the sheer power of the engine into an effortless driving experience while redefining the unmistakable design in the legendary Bugatti tradition: these were the main requirements in the design brief based on the principle of “form follows performance”. The best example is the Bugatti C-line with a broad, sweeping curve described along the side of the car. The line features wide air intakes, capturing the air that flows along the bodywork behind the A-pillar at the level of the windows. This provides the Chiron’s 16-cylinder engine with the cooling performance it needs, representing an improvement of 25 percent over its predecessor, the Veyron 16.4 Super Sport<sup>2</sup>.

**“Performance is not just about figures – it also means that the driver intuitively finds all the controls at the right time.”**

———— ETIENNE SALOMÉ, HEAD OF INTERIOR DESIGN, BUGATTI

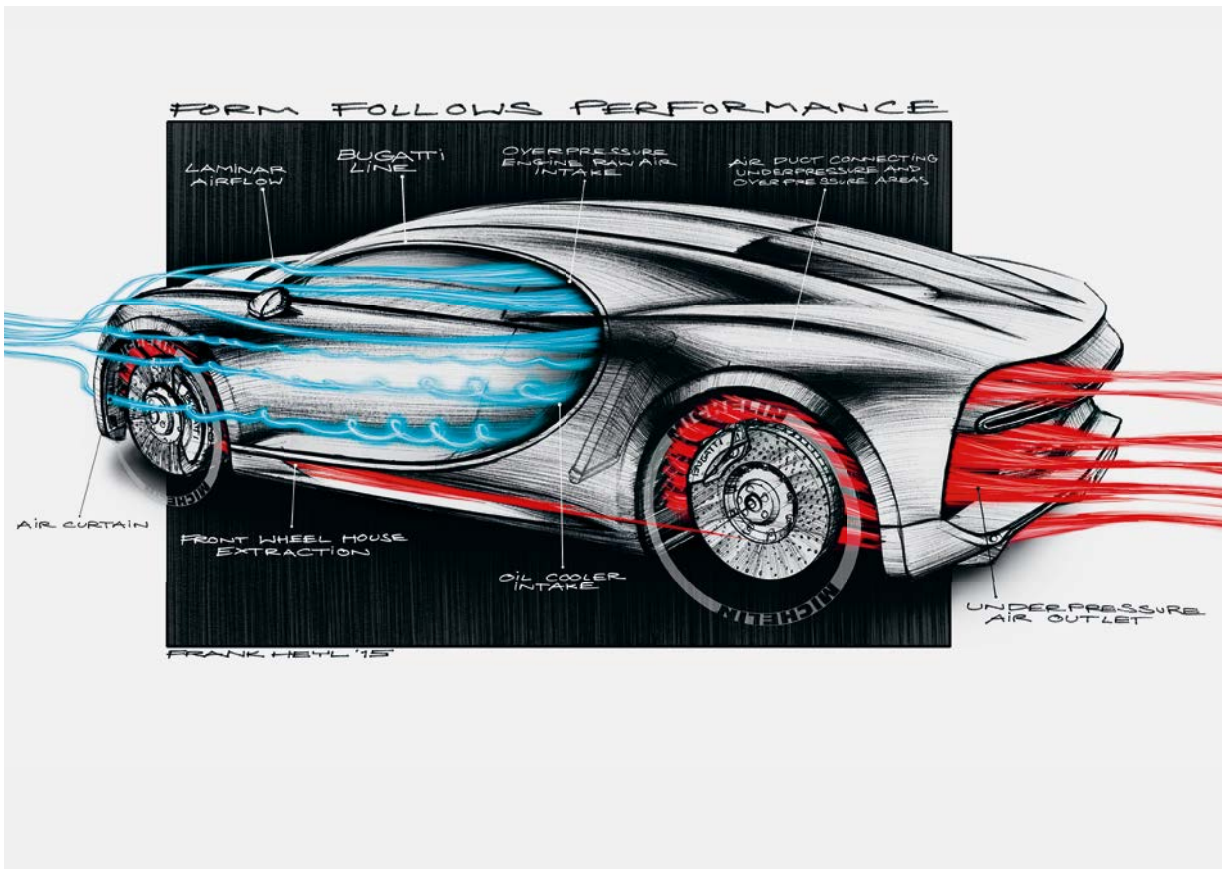


The Chiron's interior reflects the dynamics of its exterior, including the Bugatti line. The C-bar sweeps through the center of the symmetrically configured passenger compartment in a way that is reminiscent of the exterior. Here, “form follows performance” means that all the controls consistently focus on the driver. From the driver's seat in the cockpit, all systems can be operated intuitively, for example using the multi-function buttons on the newly designed steering wheel. The central eyecatcher is an analog speedometer with a scale reaching to the magic figure of 500 km/h – even though the Chiron is limited to 420 km/h in road use.



*Gugatti Line*





The sheer size of the 16-cylinder engine calls for a certain vehicle configuration to ensure balanced weight distribution.

Its extremely high top speed poses ultimate challenges for the aerodynamic design of the Chiron. Starting from these two premises, the design of the vehicle evolved in a series of steps with designers and engineers repeatedly weighing up technical and aesthetic requirements in order to arrive at solutions. You could say that the Chiron looks just as it does precisely because it has this 16-cylinder engine. The design has been shaped by a unique symbiosis of engineering and aesthetics.

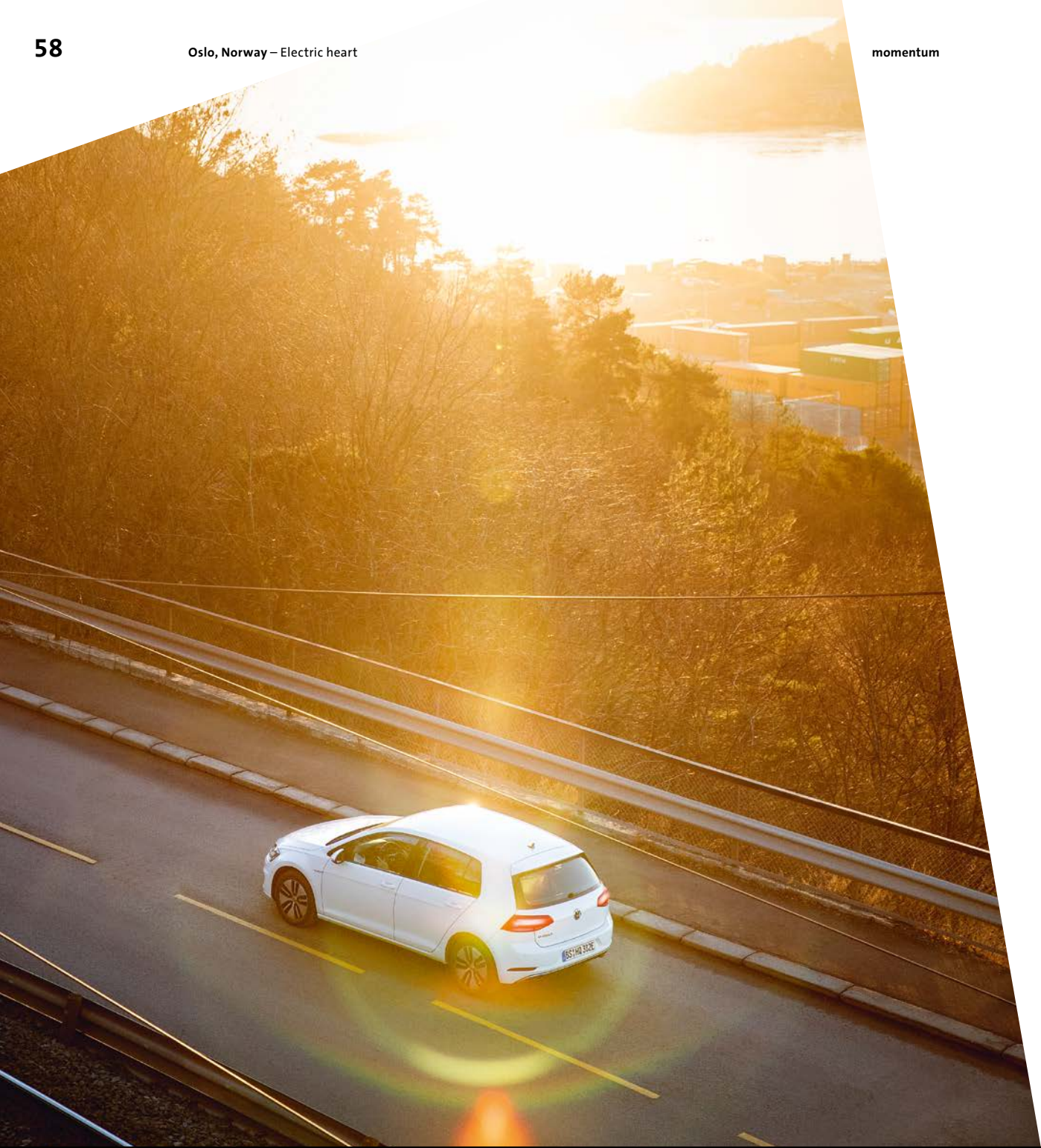
1 Bugatti Chiron fuel consumption in l/100 km combined 22.5;  
CO<sub>2</sub> emissions in g/km combined 516. Efficiency class G.

2 Bugatti Veyron 16.4 Super Sport fuel consumption in l/100 km combined 23.1;  
CO<sub>2</sub> emissions in g/km combined 539. Efficiency class G.



**“To make a vehicle like the Chiron possible,  
designers and engineers need to work hand in hand  
in every respect.”**

FRANK HEYL, HEAD OF EXTERIOR DESIGN PRODUCTION DEVELOPMENT, BUGATTI



# ELECTRIC HEART

**Norway is the country with the highest number of electric cars per capita in the world. The capital city of Oslo is the ideal starting point for a trip with the new e-Golf<sup>1</sup>, which has over 50 percent more range than its predecessor.**

Text Johannes Winterhagen  
Photography Matthias Haslauer

The temperature outside is zero degrees. It is still rather dark; in early December, the sun does not rise in Oslo until just before 9 o'clock. Nevertheless, Dr. Florian Hofemeier is wide awake and in good spirits early in the morning. The young engineer, who is responsible for the energy management systems of Volkswagen electric vehicles, takes his place behind the wheel of a new e-Golf. The car welcomes driver and passenger into its warm and cozy interior. "I've already heated up the cabin", Hofemeier explains. He programmed the electric auxiliary heater the night before using an app. "By the way, this is one of the most important features of our e-Golf for my wife", Hofemeier says. But it is not only for her sake that he makes sure the car is comfortable. It is his job to see that Volkswagen electric cars use precious battery power extremely frugally. Heat management plays a key role. Normally, the range of an electric vehicle is significantly reduced in winter because power is also needed for

Charging time

**60 mins**

The battery can be charged to 80 percent capacity within an hour at a CCS charging station.





heating the interior. The e-Golf, on the other hand, uses an efficient heat pump – a miniature version of the technology that already heats many homes. The sophisticated unit even harnesses the waste heat generated by the electric drive system when the vehicle is in motion. “Depending on the outdoor temperature, we can produce up to three kilowatt-hours of heat from one kilowatt-hour of electricity”, Hofemeier is proud to report.

300 kilometers is the nominal range of the new e-Golf, based on the official New European Driving Cycle (NEDC). This is an improvement of more than 100 kilometers, or 50 percent, over its predecessor introduced in 2014. “However, what is much more important is the fact that in terms of annual average, customers can now travel 200 kilometers under real-world conditions despite using the heater or air conditioning system”, Hofemeier explains, moving the shifter of the automatic transmission from P to B. This option means that when the driver takes his foot off the gas, the electric engine brakes sharply, recharging the battery with the energy that is recovered.

However, the first-generation e-Golf was already equipped with regenerative braking and a heat pump. So how has the range been boosted by more than 50 percent? The most important factor is that although the number of cells has remained unchanged, battery capacity has been increased from 24.2 to 35.8 kilowatt-hours. “We’ve managed to pack much more active material into the same space”, Hofemeier explains. “Battery technology is currently making great inroads and we are consistently taking advantage of these improvements.” However, more active material also means a heavier vehicle and therefore, potentially, higher energy consumption. Thanks to other changes in the vehicle, Hofemeier’s team was able to more than compensate for this drawback. For example, the transmission of the new e-Golf features a



Max. torque

**290 Nm**

The torque has been boosted to offset the slightly heavier battery for a dynamic driving experience.

Battery capacity

**35.8 kWh**

Much more active material has been packed into the same space.

new, more efficient bearing design and a higher final drive ratio. Normally, this would reduce the starting torque, which gives the e-Golf its powerful acceleration from low speeds. However, as the torque developed by the electric motor has also been boosted – again without changing the motor’s external dimensions – a balance has been retained between driving pleasure and energy consumption. “This is a very important factor for me”, says Hofemeier. “I want to play my part in making sure that individual mobility and climate protection are compatible.”

That is why the engineer is pleased to see so many cars on the roads of Oslo with an “E” license plate indicating that they have an electric drive. The market share of electric cars in Norway is about 15 percent, higher than in any other country. It is even higher for Volkswagen vehicles. The e-Golf accounts for one-third of all new Golf models registered in the country, and the Golf GTE<sup>2</sup> with plug-in hybrid drive system for another third. One of the main reasons is that e-mobility has been subsidized by the state in Norway for 15 years. Anyone buying an electric vehicle not only saves value-added tax, which is 25 percent in Norway, but also the car purchase tax, which is based on a vehicle’s power output and emissions. And on top of that, electric vehicles can use toll roads and ferries free of charge. The use of ferries is a convincing argument, especially in the west of the country with its coastline dissected by fjords. In the rush hour in Oslo, electric cars can even use the bus lane if they have at least two occupants.

For more than 100,000 of five million inhabitants of Norway, driving an electric car has become part of everyday life. Take Magne Bjella, for example, manager for new media at Oslo Opera house and an enthusiastic driver of a first-generation e-Golf. He meets us in the foyer of the opera house; shaped like an iceberg, it dominates the harbor district skyline – a symbol of a country where a tangible sense of optimism has prevailed for several years. Bjella admits: “I actually wanted to buy a conventional Golf. The car really suits me.” But then the dealer persuaded him to take a test drive in an e-Golf. As Bjella puts it: “It drove just like a Golf should, but better.” Hofemeier listens, smiles, then says: “That’s exactly what an electric car must offer – everyday mobility and driving pleasure.” We continue towards the nearby coast with its picturesque towns and small islands, where many inhabitants of the capital city have weekend homes. As long as there is a road or ferry to the islands, they are within the range of the e-Golf.

1 Volkswagen e-Golf energy consumption in kWh/100 km combined 12.7; CO<sub>2</sub> emissions in g/km combined 0. Efficiency class A+.

2 Volkswagen Golf GTE fuel consumption in l/100 km combined from 1.8 to 1.6; energy consumption in kWh/100 km combined from 12.0 to 11.4; CO<sub>2</sub> emissions in g/km combined from 40 to 36. Efficiency class A+.

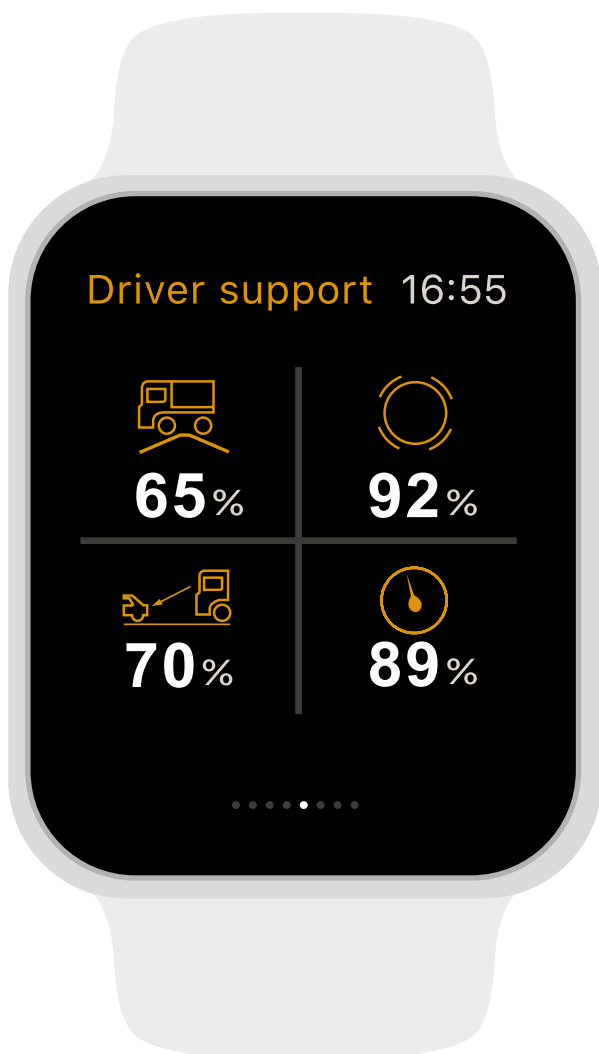




Energy manager Florian Hofemeier (left) tests a second-generation e-Golf, opera manager Magne Bjella (right) owns a first-generation e-Golf.

# WATCHING OUT FOR DRIVERS

A Scania S 500 is on its way from Copenhagen to Södertälje in Sweden: the Scania Apple Watch on the driver's wrist displays important information during the journey. The mini-computer calculates key performance ratios along the way to make the trip even safer and driving performance even more efficient.



## Record after record

Drivers can beat their own record with the help of the four key parameters that are part of the Scania Driver Support system. Does the driver take his foot off the accelerator in good time at the crest of a hill, and apply the brakes correctly? Does the driver anticipate situations well, and shift gears at the right time? The better the performance, the higher the score displayed on the watch. One quick glance at the watch tells the driver exactly where there is still room for improvement.

4. Södertälje



2. Coffee break: Ljungby  
227km — 2hrs55mins

### 15-minute break

#### Rain on its way

The driver activates the watch to make sure his break lasts the legally prescribed 15 minutes. During the coffee break, the watch says that rain is expected in the next 20 minutes. Wet roads ahead! The driver heeds the warning and exercises special caution as the truck sets off again.



4. Destination: Södertälje  
624km — 8hrs55mins

### Unloading the cargo

#### The final score

Before the cargo is unloaded at the end of the journey, the Apple Watch-Scania Edition displays the average fuel consumption, giving the driver a good indication of whether today's driving performance was fuel efficient. The latest parameters from the Scania Driver Support system give the driver immediate feedback on whether there has been an improvement in any of the driving metrics.

3. Jönköping



3. Lunch break: Jönköping  
336km — 4hrs30mins

### Food and fitness

#### Active recovery

The driver makes optimal use of the lunch break by taking a short walk after the meal. Just 15 minutes should be fine. The watch not only monitors the time; sensors constantly measure the driver's pulse to optimize his walking speed as well. Refreshed and rested, he continues on his journey.

2. Ljungby



1. Start: Copenhagen  
0km — 0hours

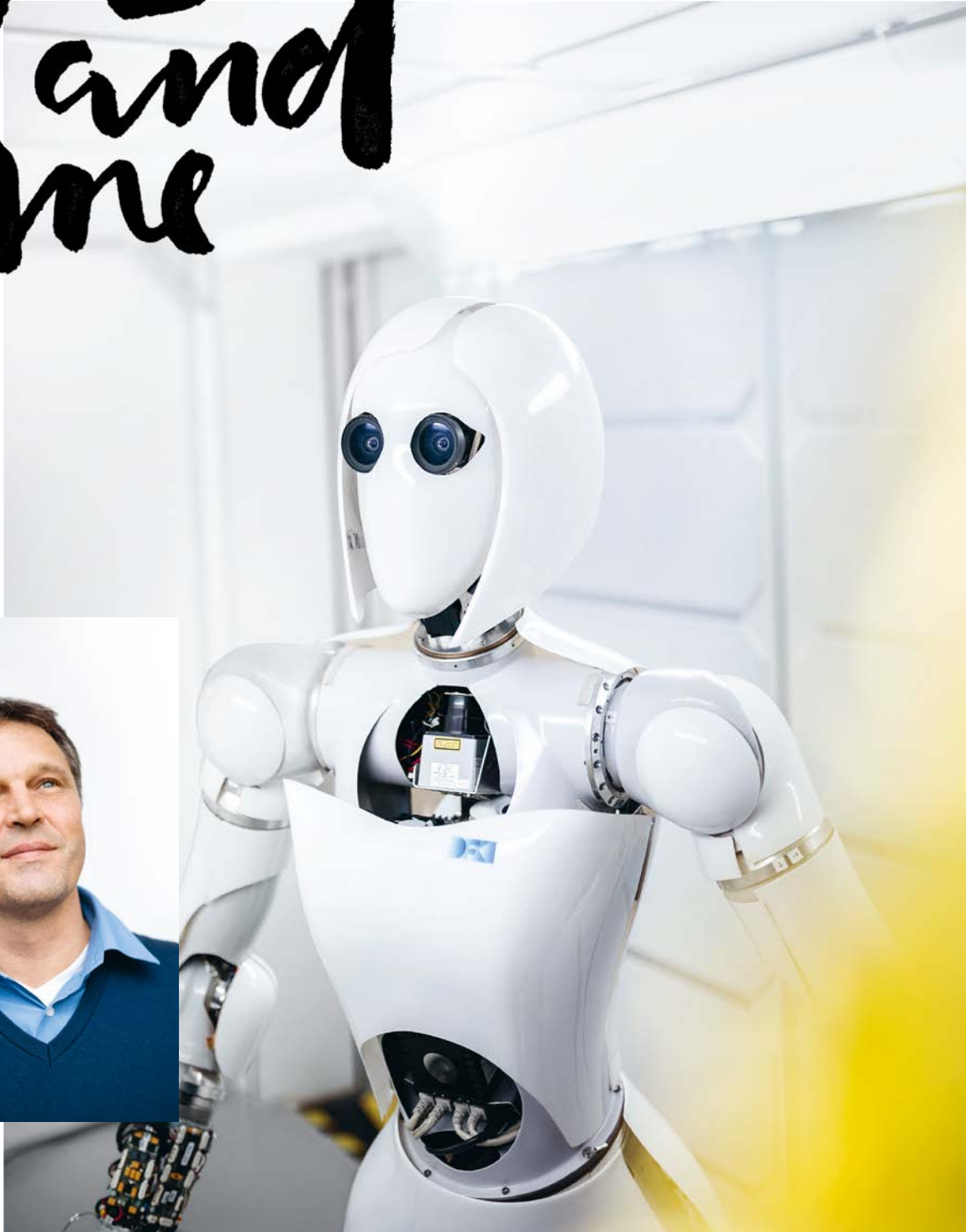
### Ready to roll

#### Everything under control

The 40-tonne truck sends the current fuel and AdBlue levels to the Apple Watch-Scania Edition via the fleet management system. If the levels are OK, the truck is ready to roll. The driver can also use the app to check up on sleep metrics during his rest periods: seven hours and 48 minutes of sleep last night. A good night's rest in Copenhagen.

1. Copenhagen

# AILA and me



**When it comes to putting driverless cars on the road, research into intelligent autonomous systems such as female robot AILA plays an important role. That is why Volkswagen has acquired a stake in the German Research Center for Artificial Intelligence (DFKI). Prof. Dr. Frank Kirchner from the DFKI's Robotics Innovation Center is working on teaching machines how to learn.**

Text Johannes Winterhagen  
Photography Evelyn Dragan

**When will machines have reached the stage where their abilities rival human intelligence?**

The English computer scientist Alan Turing, probably the most gifted mathematician of the 20<sup>th</sup> century, devised a test, which no machine has so far passed: a machine is only considered intelligent if a human interrogator interacting with the machine and another human through language alone, without visual contact, cannot tell the difference between the two. We still have a very long way to go before machines have reached that stage, given that the human brain is still far superior because it has made massive advances as it has evolved. At a rough estimate, the brain has 100 billion neurons that can network with one another. In fact, the number of possible connections in a single human brain is probably larger than the number of celestial bodies in the entire universe. And on top of that, humans are much more than just computing power and storage capacity – they also have the ability to learn and to perform very complex movements.

**Research into artificial intelligence began in the 1950s. How would you describe the present status of this work?**

What we are witnessing at the moment is the “second summer” of artificial intelligence. The “first summer” began in the 1980s with what are known as expert systems. The idea behind these systems is to feed machines with vast amounts of knowledge in order to generate new knowledge. That works well, but it would be wrong to assume this process creates intelligence. Two things have come together in recent years to lend new impetus to our work: first, we now have computing methods that solve complex problems by observing nature because they use soft

computing techniques based on fuzzy logic: it is perfectly possible for the result of a calculation to be “between one and two” instead of “1.65”. And second, we have powerful computers that enable these computing techniques to be used decentrally.

**How important is the robot lady AILA for you?**

If robots are to operate in an environment created for people, such as a factory or a space station, it makes sense to give them a human-like appearance. That is why we developed AILA five years ago. AILA’s arms, for example, can lift objects that weigh more than the lady herself; for robots, the reverse is usually the case. To do that, we explored new approaches; for instance, we integrated many of the sensors directly into the robot structure in the same way as sensory cells are part of the human body. That is how we are gradually increasing the complexity of robots. Above all, we have to learn how to build systems based on existing technical and mathematical capabilities that can behave autonomously over a long period of time.


**That includes the ability for robots to find their way around in completely unknown terrain?**

Yes. And that is why we must teach machines how to learn. Imagine a “robotic car”, for example, a driverless car that operates in inner cities: it would be totally impossible to program the car to handle every single situation that could potentially occur. That would take an incredibly long time. Not only that: all physical systems show signs of wear-and-tear over time, so that has to be factored in as well. The general solution, then, must be a robotic car that has predictive capabilities similar to those of an experienced driver, in other words, it must be able to anticipate what could potentially happen next. In complex situations, the robotic car has to take an endless number of possibilities into account. To do that and still take decisions quickly, it must be able to deal with residual uncertainties.

**Will the day come when we will see fully autonomous cars on our roads?**

Yes, most definitely. Driverless cars will become a familiar sight on our roads. But that will only happen if we develop an intelligent infrastructure alongside the vehicle technology – for example, traffic lights that monitor a crossroads and transmit information to all vehicles in the vicinity. As fascinating as the human brain may be, networked machines have one crucial advantage: they can process enormous amounts of information in milliseconds and exchange data in real time.





*"Autonomous systems must first learn how to learn."*

\_\_\_\_\_ Prof. Dr. Frank Kirchner

Computer scientist Prof. Dr. Frank Kirchner, born in 1963, heads the DFKI's Robotics Innovation Center in Bremen. Kirchner discovered his passion for programming when, as a young guitarist, he found himself without a band after moving home. He solved the problem by connecting his synthesizer to a Commodore 64 computer.



# MY ENGINE

**At the new Porsche engine plant in Stuttgart-Zuffenhausen, more than 100 innovations ensure that people and machines work together in perfect harmony. Volkan Atas, a skilled engine assembly worker who has been with Porsche for 15 years, takes us on a tour of the new eight-cylinder engine assembly line.**

Text Johannes Winterhagen

Photography Evelyn Dragan





### It all starts with ergonomics

The starting point in the life of an engine is an intelligent workpiece carrier that conveys the engine along the assembly line over the next six hours. The carrier not only allows height adjustment but can also turn the engine through a full 360°, which means that Volkan Atas can always work in an ergonomically optimized position.

ABOUT

# 200

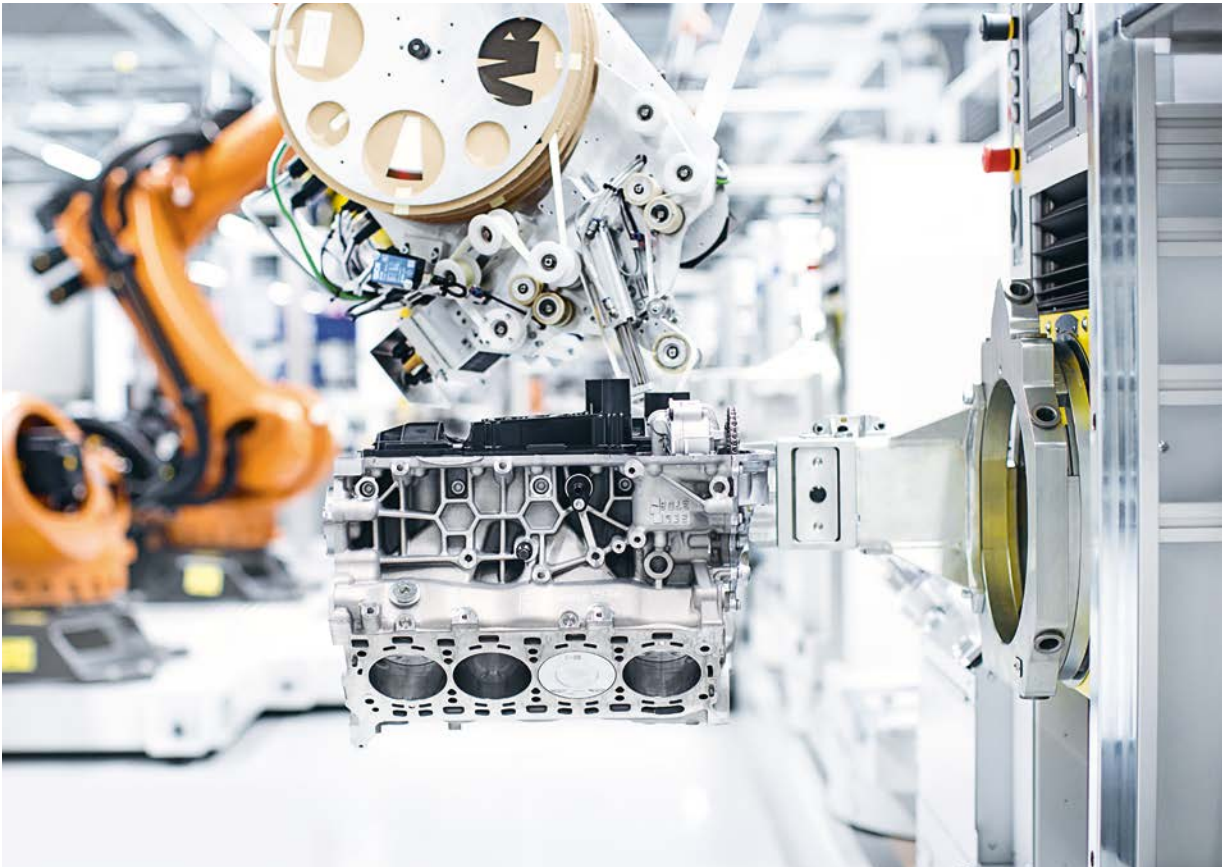
**EIGHT-CYLINDER ENGINES CAN BE PRODUCED DAILY AT THE NEW ENGINE PLANT WHEN IT IS OPERATING TO FULL CAPACITY.**



### Human beings and machines

The assembly of the piston unit is one of the most sensitive steps – it has a decisive impact on the functioning and durability of the crankshaft drive. This is why Porsche decided to assemble the connecting rod, big end bearing, piston and wrist pin using a fully automated process in a dirt-protected area. However, inserting this unit into the cylinder block still calls for the experienced hands of a skilled worker. One after the other, Atas assembles a total of eight pistons. A small trolley with the required parts is temporarily attached to the workpiece carrier during this stage, keeping Atas' hands free.





### Clean seals

High precision in repetitive tasks is one of the key strengths of industrial robots. This feature is put to good use in sealing the oil sump, for example. An effective seal guarantees that oil stays in the engine, allowing it to perform optimally. During this step, it is essential to ensure that the seal surfaces are free from grease and dirt. This is why a robot initially cleans the surfaces with a cleaning strip – a microfiber cloth moistened with primer which picks up particles. A second robot then applies the liquid sealant. The other sections of the new engine plant are also extremely clean. The entire assembly unit is located on its own floor, which is separate from the logistics areas.

ALMOST

80

MILLION EUROS WERE INVESTED  
BY PORSCHE IN THE FIRST STAGE  
OF THE NEW ENGINE PLANT.



### Smarter bolting

The cylinder heads – two for each engine – are preassembled in a separate area outside the assembly line. When they are installed in the engine, the bolts must be tightened following a precisely defined torque curve. The tools used at Porsche's engine plant have exact information on the torque curve and document compliance with the specified limits, even if they are transferred to another work station. As a general principle, bucking bars are always used when applying high torque to minimize the physical stress on assembly line workers. In addition, the overhead guide system on which the tools are installed is designed to allow rotation in two directions, another feature that facilitates precise, ergonomic working.



### A digital twin

Every engine has an embossed number and all major parts are marked with a data matrix code, which Volkan Atas scans as he is assembling an engine. A component is only released for assembly if it is precisely the right part for the engine variant being assembled. As the data of all components is stored on the system, this process creates a digital twin of the physical engine. The system also stores all test data. The evaluation of this data allows for continuous process and quality optimization.

### ABOUT

# 6

**HOURS IS THE LENGTH OF TIME IT TAKES TO ASSEMBLE A COMPLETE EIGHT-CYLINDER ENGINE.**

**“When I look at a finished engine, I always feel proud. And I’m really happy that we will be building engines for other Group brands here soon, too.”**

———— VOLKAN ATAS, SKILLED WORKER, PORSCHE



### **Hot and cold**

Following each manual or automated work station, checks are made to ensure that every part has been installed properly. The workpiece carrier only continues its journey when Atas has pressed a green button. All the same, a cold test covering all electrical and mechanical functions is carried out on each engine when it reaches the end of the assembly line. Some engines selected on a random basis are also subjected to a hot test: for this purpose, the engine is transferred to a separate test bed where it is operated using fuel.

# ANY TIME, ANY PLACE

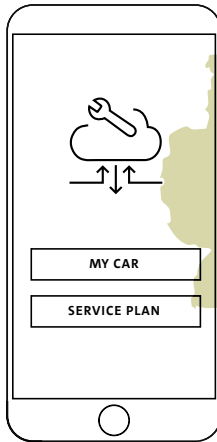
Volkswagen Financial Services has set up a “Digital Unit” comprising a team of international experts based in the start-up mecca of Berlin. The team is working on new digital services. Looking ahead, Volkswagen Group customers will be able to order and manage finance, insurance and maintenance for their vehicles by computer or smartphone in one integrated process via a central service platform. Here are three examples.



## CENTRAL PAYMENT SERVICES

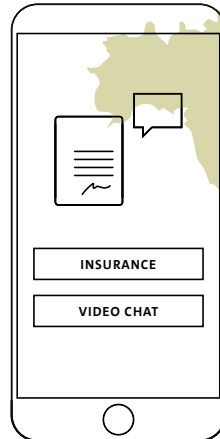
Single sign-on – multiple applications. That is the idea behind a new multi-brand platform developed by the Digital Unit.





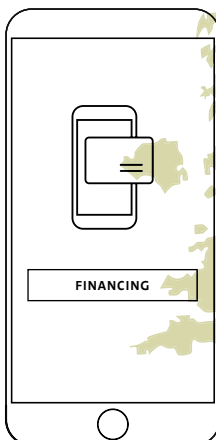
## GOOD PLANNING

If you love your car, you need to look after your service manual. Or your car's online profile. The Volkswagen brand launched an entirely new, flat-rate service in August 2016: for a fixed monthly sum, car owners can opt to sign up for servicing and maintenance according to the service schedule. All it takes are a few details and a couple of clicks. There are plans to expand this service to other Group brands, too.



## FACILISSIMO

Typically, car liability insurance in Italy is only valid for twelve months from the date of registration. Italian customers used to have to renew their insurance by letter or phone. Now, though, there is a new online platform for customers of all Group brands; they can use this digital service to take out new insurance contracts as well as renewing existing ones. The platform also features a video chat function for customers who prefer personalized advice.



## CAR SHOPPING

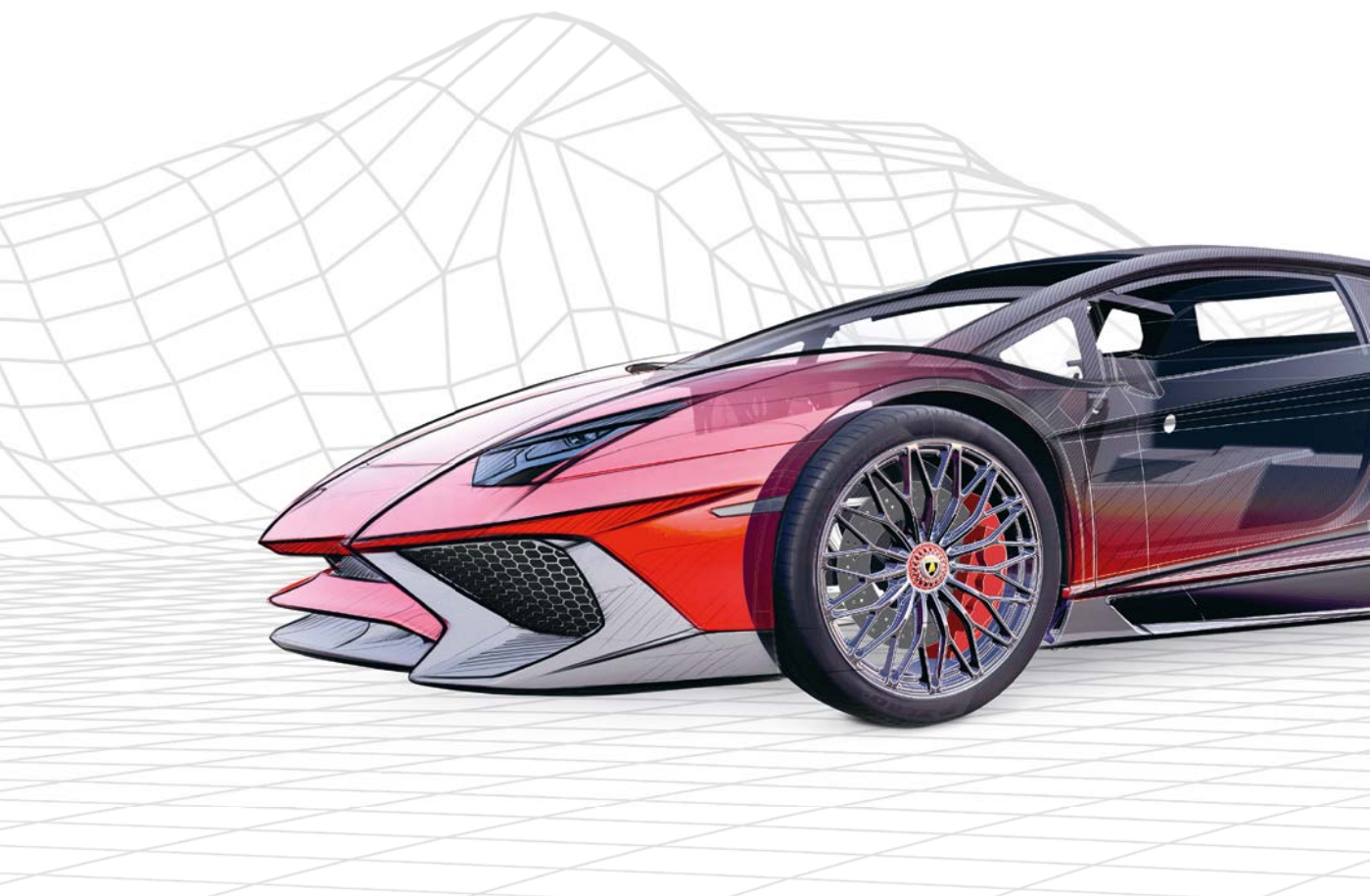
The trendy "intu Lakeside Shopping Center" on the fringe of Greater London attracts 26 million customers every year. SEAT decided on this location for its very first retail store offering buyers selected SEAT models at fixed monthly instalments. Customers who choose one of these models can make all the financing arrangements either via the specially-designed instore tablets or from their computer back home. They only need to return to the store to sign the finance agreement. What began as a pilot project at SEAT has already proven its worth, and is to be made available to Audi customers in the UK soon, too, under a scheme which will apply to finance agreements concluded with any Audi dealer.

# VIRTUAL REALITIES

Vehicle design in the Volkswagen Group begins with virtual reality: developers use computers to calculate and simulate material properties, compare design alternatives and define driving characteristics. These results are then tested on real components and prototypes at later stages in the development process.

Text Laurin Paschek

Photography Hartmut Nägele



## LAMBORGHINI AVENTADOR SUPERVELOCE COUPÉ

**Carbon is not only extremely light, it also provides excellent protection for occupants – if this innovative material is used correctly. Specialists at Lamborghini are constantly refining their digital tools with that in mind.**

Perfect driving performance on the one hand, uncompromising safety on the other – developing a super sports car like the Lamborghini Aventador Superveloce Coupé<sup>1</sup> is a balancing act. The bodywork must be light, but at the same time extremely strong and stable. It should be able to absorb as much energy as possible in the event of a crash. Carbon is the material best suited to meet these requirements. The complete chassis

structure of the Aventador Superveloce Coupé is made of carbon fiber.

Carbon fiber can be used flexibly in a range of thicknesses and forms. However, the specific properties depend on the type of composite. That makes carbon simulation very difficult. Engineers at Lamborghini have developed a multi-stage method for verifying the calculations and simulations in a series of tests on real components; this method also constantly optimizes the calculation process. That is how they gradually built up a carbon fiber chassis made of a single unit – a monocoque – which weighs as little as possible while at the same time providing the necessary stability.



# 2.03 kg per hp

is the power-to-weight ratio of the Aventador Superveloce Coupé. The 12-cylinder engine delivers 750 hp, the vehicle only weighs 1,525 kg.





A 3D panorama lets developers view the geometries of virtually-designed components. Radoslav Horák, coordinator from Technical Development, uses the so-called 3D cave to optimize the cockpit.

# 18 cm

Seven people can travel in the Kodiaq, ŠKODA's new SUV. To achieve that, the middle row of seats can be slid forwards or backwards by 18 centimeters.

## ŠKODA KODIAQ

Compact on the outside, plenty of room wherever you sit inside – that is what is expected of a modern SUV. The developers of the new ŠKODA Kodiaq<sup>2</sup> mastered that challenge by seating virtual test persons in a simulated interior.

The new Kodiaq marks ŠKODA's entry into the large SUV segment. The development brief for the cabin was to provide the very best in terms of ease of use and seating comfort for all occupants, short or tall. The Kodiaq's third row of seats offers something special as regards comfort: it has no difficulty accommodating tall passengers, while still giving smaller occupants easy access to all key controls in the cabin.

Using three-dimensional design software, ŠKODA engineers calculated various model variants for the cabin and simulated access to the controls as well as to the third row of seats with the help of virtual occupants. Projections in a so-called 3D cave were used to optimize the position of the infotainment display, for example, and to test for any distracting reflections during virtual rides. The simulation results were then verified on real prototypes later in the development process.



## DUCATI SUPERSPORT

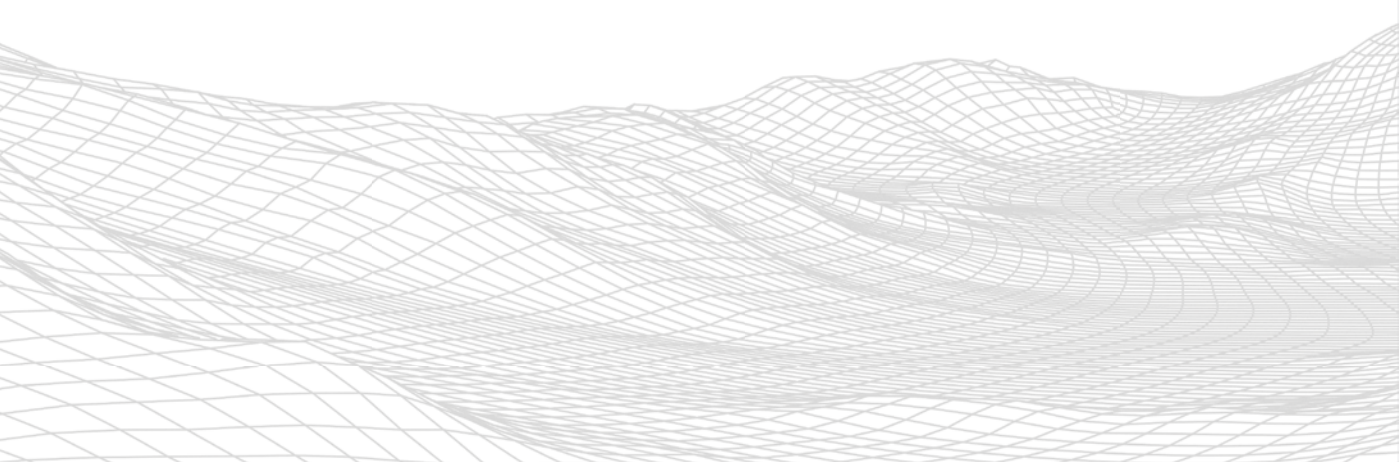
**“Fare una bella figura” is an Italian expression that can be translated as “look good” or “achieve a great performance”. Ducati’s mission is to deliver on both.**

Creating motorcycles with an inimitable design and sporting character – the new SuperSport carries on this Ducati tradition. But this bike goes even further as a light, compact road-going sports bike with perfectly-balanced comfort. The most important task for the SuperSport’s designers was combining all the components to achieve this goal. What’s more, the designers also had to bear in mind that most motorcycle components are not hidden under a bodyshell, but are clearly visible.

So the developers used innovative virtual methods to calculate all chassis components and mounted parts. Their aim was to simulate the performance of individual variants and to find the optimal solutions: for example, making the muffler as compact as possible or pairing frame functional requirements with aesthetics, while also incorporating the comfort features from the design brief. Weight reduction is a key factor to ensure the best handling and performance. That is how the new SuperSport achieves superior dynamics in many different situations.

1 Lamborghini Aventador Superveloce Coupé fuel consumption in l/100 km combined 16.0; CO<sub>2</sub> emissions in g/km combined 370. Efficiency class G.

2 ŠKODA Kodiaq fuel consumption in l/100 km combined from 9.1 to 4.7; CO<sub>2</sub> emissions in g/km combined from 170 to 139. Efficiency class from C to A.



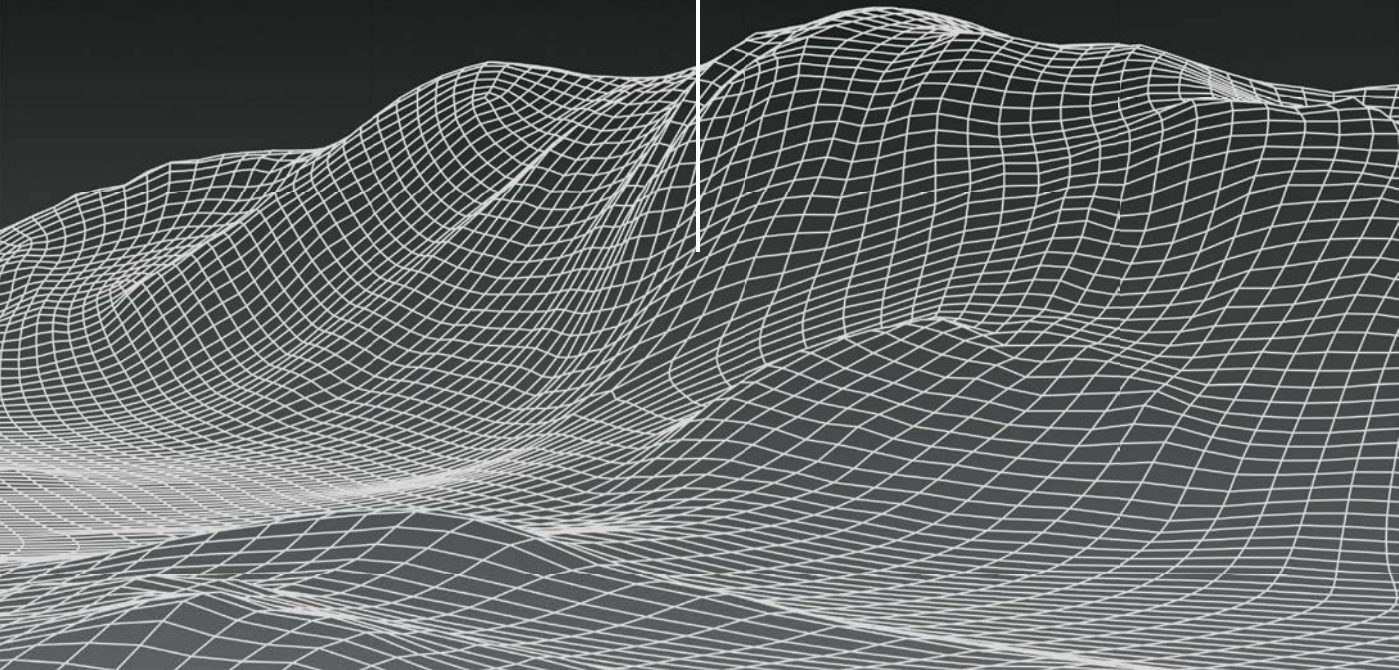
# 80 kg

is the average weight of  
a motorcycle rider.  
The SuperSport weighs in

at about

# 200 kg

which is only 2.5 times more  
than the rider's average weight.







# SUPPLY CHAIN



A fully connected digital supply chain – that is the aim of RIO, the new, open digital platform for the entire transportation industry launched by Volkswagen Truck & Bus, the Group’s commercial vehicles arm. The cloud-based logistics solution stems from an MAN initiative and delivers solutions for mixed fleet operators as well as forwarders or workshops from the Munich location. By combining information from tractors, trailers, bodies, drivers and orders, and pooling this information with traffic, weather or navigation data, for example, RIO provides its users with concrete recommendations that significantly enhance transportation and logistics processes, such as enabling predictive maintenance for trucks, improving cargo space utilization and calculating the optimal route for navigating drivers to drop-off locations.

RIO is based on the principle that anyone willing to share data can participate in the connected supply chain – and, of course, enjoy the benefits themselves. Thanks to intelligent algorithms, RIO combines different sources of data, carries out big data analyses and transmits the findings, for instance to shippers, workshops, drivers and orderers.

As of 2017, all new MAN trucks will be equipped with RIO as standard; in addition, all Scania customers can connect with RIO. Using a refit box, any truck – no matter what brand – can be integrated into the network via a fleet management system gateway.

SHIPPER

DISPATCHER

DRIVER

RECIPIENT

## RIO GEO

Getting the full picture: to assist fleet operators with their logistics planning, “RIO Geo” provides up-to-date road maps showing the exact position of their vehicles. The trucks send information on their location to the system at one-minute intervals. Fleet managers can also define geographic areas within specific boundaries – known as geofences – for specific trucks. The system also provides assistance in calculating charges for road toll systems in Europe and offers fleet planning support in the form of smart asset tracking.

## RIO CONNECT

Putting drivers first: “RIO Connect” offers maximum support every day. Drivers first use the chat function to coordinate with the dispatchers and then receive tour and order details directly from the service. Before they set off, drivers use the app to check that everything, such as lights, tires and brakes, is in good working order. One click activates the navigation, and the app guides the driver directly to the customer’s drop-off location. While they are on the road, RIO Connect reminds drivers of the compulsory rests and displays the maximum permissible remaining driving time.

# HOW DO WE TURN CHANGE INTO SUCCESS?

**Matthias Müller, CEO of Volkswagen Aktiengesellschaft,  
about transition and change in the company.**

“I was at a friend’s farewell party not so long ago. He was about to go abroad for a few years and wanted to spend some time with good friends before he left. That evening brought home to me just how much we need a sense of belonging when we are about to embark on something new. Change always brings uncertainty and risk. But people are creatures of habit and like to surround themselves with the familiar. That creates stability and security in a world that is changing at a breathtaking pace.

As a company that has notched up one delivery record after the next, for a long time we lacked the impetus to wholeheartedly embrace new horizons. Success seemed to prove us right. We continued to grow, kept on working to make our vehicles ever safer, more efficient and comfortable. In the end, though, it was the diesel crisis that compelled us to stop talking about change and actually get down to implementing it. Volkswagen must change. Not because everything so far has been wrong, but because the needs of our customers and thus our industry itself will change more fundamentally in the next ten years than in the last hundred. The advancement of traditional competences will not be sufficient to master this epochal transition.

That said – how do we make a success of such a profound transformation from a car maker to a global mobility provider? That takes different structures, a sound strategy, the necessary financial buffer for investing in the future. On its own, though, that is not enough: above all, we have to refresh the way we think and operate. We need to take decisions faster and become more agile. We need

an even greater entrepreneurial spirit at Volkswagen. We must open up to partnerships and participations. And we need to take our courage in both hands and go ahead and try things out instead of just looking at the risks.

That sounds easy, but it is in fact a difficult undertaking. A transformation process on this scale needs time and patience. This magazine is proof that we are not just talking the talk – we are really getting down to business when it comes to addressing the issues of the future. However, we must also bear in mind that change is a painful process. We must overcome fears, break down resistance, win over customers and employees to the new Volkswagen.

We can draw strength from what has always been the very heart of our company: the passion we bring to developing, building and marketing cars for our customers. I firmly believe that if we succeed in building the bridge between the “old” and the “new” mobility world, we will be able to understand change for what it is: an enormous achievement that ultimately brings benefits for everyone.

My friend recently sent me an email. He described how difficult the first few weeks in his new homeland had been. That it would still take some time for him to adjust to his new environment. But he also wrote he was glad he had taken this decision in favor of change. I fully understand what he means.”

**“Volkswagen must change.  
Not because everything so far has  
been wrong, but because the  
needs of our customers and thus our  
industry itself will change more  
fundamentally in the next ten years  
than they have in the last hundred.”**

———— MATTHIAS MÜLLER



# Key Figures

FISCAL YEAR 2016

## VOLKSWAGEN GROUP

Volume data <sup>1</sup>	2016	2015	%
Vehicle sales (units)	10,391,113	10,009,605	+3.8
Production (units)	10,405,092	10,017,191	+3.9
Employees at Dec. 31	626,715	610,076	+2.7
<b>Financial data (IFRSs), € million</b>	<b>2016</b>	<b>2015</b>	<b>%</b>
Sales revenue	217,267	213,292	+1.9
Operating result before special items	14,623	12,824	+14.0
as a percentage of sales revenue	6.7	6.0	
Special items	-7,520	-16,893	-55.5
Operating result	7,103	-4,069	X
as a percentage of sales revenue	3.3	-1.9	
Earnings before tax	7,292	-1,301	X
Earnings after tax	5,379	-1,361	X
Earnings attributable to Volkswagen AG shareholders	5,144	-1,582	X
Cash flows from operating activities	9,430	13,679	-31.1
Cash flows from investing activities attributable to operating activities	16,797	15,523	+8.2
<b>Automotive Division<sup>2</sup></b>			
EBITDA <sup>3</sup>	18,999	7,212	X
Cash flows from operating activities	20,271	23,796	-14.8
Cash flows from investing activities attributable to operating activities <sup>4</sup>	15,941	14,909	+6.9
of which: capex	12,795	12,738	+0.4
as a percentage of sales revenue	6.9	6.9	
capitalized development costs	5,750	5,021	+14.5
as a percentage of sales revenue	3.1	2.7	
Net cash flow	4,330	8,887	-51.3
Net liquidity at Dec. 31	27,180	24,522	+10.8
<b>Return ratios in %</b>	<b>2016</b>	<b>2015</b>	
Return on sales before tax	3.4	-0.6	
Return on investment (ROI) in the Automotive Division	8.2	-0.2	
Return on equity before tax (Financial Services Division) <sup>5</sup>	10.8	12.2	

1 Volume data including the unconsolidated Chinese joint ventures.

2 Including allocation of consolidation adjustments between the Automotive and Financial Services divisions.

3 Operating result plus net depreciation/amortization and impairment losses/reversals of impairment losses on property, plant and equipment,

capitalized development costs, lease assets, goodwill and financial assets as reported in the cash flow statement.

4 Excluding acquisition and disposal of equity investments: €18,224 (€17,270) million.

5 Earnings before tax as a percentage of average equity.

## VOLKSWAGEN AG

Volume data	2016	2015	%
Vehicle sales (units)	2,632,144	2,676,629	-1.7
Production (units)	1,241,217	1,255,771	-1.2
Employees at Dec. 31	113,928	114,066	-0.1
<b>Financial data (HGB), € million</b>	<b>2016</b>	<b>2015</b>	<b>%</b>
Sales	75,310	73,510	+2.4
Net income/net loss for the year	2,799	-5,515	X
Dividends (€)			
per ordinary share	2.00	0.11	
per preferred share	2.06	0.17	

This version of the annual report is a translation of the German original. The German takes precedence. All figures shown in the report are rounded, so minor discrepancies may arise from addition of these amounts. The figures from the previous fiscal year are shown in parentheses directly after the figures for the current reporting period.



# Moving Globally

FISCAL YEAR 2016

VOLKSWAGEN GROUP DELIVERIES – IN THOUSAND UNITS

## NORTH AMERICA

2014 — 893  
2015 — 932  
2016 — 939

+0.8%

## EUROPE/OTHER MARKETS

2014 — 4,392  
2015 — 4,505  
2016 — 4,618

+2.5%



## SOUTH AMERICA

2014 — 795  
2015 — 559  
2016 — 422

-24.5%

## ASIA-PACIFIC

2014 — 4,058  
2015 — 3,935  
2016 — 4,319

+9.7%

## CONTACT INFORMATION

Published By Volkswagen AG / Group Communications / Letterbox 1970 / 38436 Wolfsburg / Germany / Phone +49 (0) 5361 9-0 / Fax +49 (0) 5361 9-28282 / [www.volkswagenag.com](http://www.volkswagenag.com) Concept, Design and Realization 3st kommunikation, Mainz **Editorial, Text** delta eta – Laurin Paschek & Johannes Winterhagen, Frankfurt / Main **English translation** Dr. E. G. Maddocks, Essen, and Elizabeth Renken, Sprockhövel **Printer** Kunst- und Werbedruck, Bad Oeynhausen / Printed in Germany **Paper** Everprint Premium, Geese **Photography, Illustrations, Picture Credits** Roderick Aichinger (p. 38–41) / Evelyn Dragan (p. 66–75) / Matthias Haslauer (p. 22–25, 32–37, 58–63) / Anje Jäger (p. 49) / Volker Kreidler (p. 13), Andreas Mader (p. 27–31) / Hartmut Nägele (p. 53–54, 57, 80, 87) / Urban Zintel (p. 8–19, 42–47) / Volkswagen AG (p. 48, 50, 52, 55–56, 64–65, 78–79, 83–85) / 3st (p. 17, 20–21, 76–77) / Getty Images (p. 1, 51)

Magazine for the 2016 fiscal year of Volkswagen Aktiengesellschaft  
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