SUSTAINABLE VALUE REPORT 2017

BMW GROUP

THE NEXT 100 YEARS

Rolls-Royce
Motor Cars Limited

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

ABOUT THIS REPORT

The BMW Group Sustainable Value Report (SVR) 2017 has been published to provide stakeholders with comprehensive information about the company's sustainability strategy and the progress made in integrating sustainability into its corporate processes. The Sustainable Value Report is published at the same time as the Annual Report on the date of the Annual Accounts Press Conference.

The requirements of the German CSR Directive Implementation Act (CSR RUG) obligate Bayerische Motoren Werke Aktiengesellschaft (BMW AG) to publish a non-financial report at company and Group level for financial year 2017 for the first time. This will be published jointly for BMW AG and the BMW Group as a combined separate non-financial Group report (abbreviated in the following as "combined separate non-financial report") within this Sustainable Value Report.

The legally required information* will be provided before the chapter sub-sections of the voluntary reporting in accordance with the Global Reporting Initiative (GRI) and identified accordingly. You can find the obligatory information on the blue pages in this report, specifically on the following pages:

— Business model:
Introduction, An overview of the BMW Group, page 8 as well as Annual Report 2017

— Integration of top management:
Chapter 1.1 Strategy and management, pages 12–13

— Environmental matters:
Chapter 2 Products and services, page 44, pages 46–47, pages 59–60, pages 70–72
Chapter 3 Production and value creation, page 84, pages 86–87, pages 99–100, pages 105–106

— Employee matters:
Chapter 4.1 Health and performance, pages 115–116, pages 118–119
Chapter 4.2 Long-term employee development, pages 115–116, pages 129–130
Chapter 4.3 Diversity, pages 115–116, pages 137–138

— Social matters:
Chapter 1.2 Stakeholder dialogue, page 24
Chapter 4.4 Corporate citizenship, pages 115–116, pages 143–145

— Respect for human rights:
Chapter 1.3 Compliance and human rights, pages 32–34
Chapter 3.3 Sustainable, resource-efficient supply chain, pages 105–106

— Combating corruption and bribery:
Chapter 1.3 Compliance and human rights, pages 32–34 as well as Annual Report 2017

— In addition we describe in
Chapter 1.4 our approach to product safety, page 38

For further information on our reporting concept, please refer to the Appendix (pages 207–208).
→ **see Our reporting concept**

* Diversity Concept in Board of Management and Supervisory Board is contained in the Statement on Corporate Governance → **see Annual Report 2017**.

CONTENTS

→ see page 45

→ see page 69

→ see page 85

→ see page 104

→ see page 142

Introduction

Preface 5
An overview of the BMW Group 8
Key sustainability indicators 9
Value chain 10

1

Fundamentals

1.1 Strategy and management 12
1.2 Stakeholder dialogue 24
1.3 Compliance and human rights 32
1.4 Product safety 38
1.5 Customer satisfaction 41

2

Products and services

2.1 Emissions of CO_2 and pollutants 46
2.2 Electromobility 59
2.3 Mobility patterns 70

3

Production and value creation

3.1 Consumption of resources 86
3.2 Renewable energy 99
3.3 Sustainable, resource-efficient supply chain 105

4

Employees and society

4.1 Health and performance 118
4.2 Long-term employee development 129
4.3 Diversity 137
4.4 Corporate citizenship 143

Further key indicators 150

Appendix

GRI Content Index 171
Our reporting concept 207
Independent Practitioners' Limited Assurance Report 211
Fuel consumption and CO_2 emissions ratings 213
Imprint 214

→ Introduction

Preface
An overview of the BMW Group
Key sustainability indicators
Value chain

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

INTRODUCTION

Introduction

→ Preface
An overview of the BMW Group
Key sustainability indicators
Value chain

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

Harald Krüger: "The BMW Group does not simply talk about new projects, it also makes sure it implements them."

Mr Krüger, how about giving us a tweet and describing to us in 280 characters: What does sustainability mean for your company?
For us, sustainability means future viability–for the BMW Group and for society. We know the challenges and are rising to meet them. We develop innovative mobility solutions that create additional value for customers, the company and society. #SustainableBMWGroup

How exactly did you implement that in 2017?
With specific measures and projects along the entire value chain: Last year, we reduced CO_2 emissions in our global new vehicle fleet by 141 grams per kilometre. In Europe, we now source our electricity free of CO_2.

We increased the share of electric vehicles in our product portfolio and sold over 100,000 electric vehicles in 2017. We are the market leader for electric vehicles in Europe.

And there are more examples in other areas: We opened a battery farm in Leipzig, Germany. We considerably increased the transparency of our cobalt supply chain. We continued to support a large number of social projects. I could go on with this list for quite a while. The BMW Group does not simply talk about new projects, it also makes sure it implements them.

Harald Krüger
Chairman of the Board of BMW AG outside BMW Welt in Munich.

Introduction

→ Preface
An overview of the BMW Group
Key sustainability indicators
Value chain

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

Nevertheless: 2017 was not an easy year for the car industry.
That's true. Not all companies in our industry have understood that words alone are not enough. You have to deliver. People have lost trust in cars. People have lost trust in the automotive industry. We have to take measures to counteract this. As an industry, we have to do even more, while at the same time steering the public discussion back into more objective waters.

You're talking about the diesel discussion in Germany.
This discussion was very prominent of course. A few years ago, there was a strong international focus on CO_2 emissions. Then, in 2017, NOx emissions were often at the forefront – especially in our home market here in Germany. There were a number of discussions about potentially banning diesel vehicles in cities.

We have to take these discussions seriously. We have spoken to many stakeholders in metropolitan centres around the world. People in the cities are increasing pressure on their municipal governments to provide new mobility concepts. And in turn, the municipalities are demanding the same from carmakers. That's understandable.

The key thing is for us to be able to offer solutions that improve quality of life in the cities – with our products, but also with new and innovative mobility services.

Is the criticism of diesel warranted from your point of view? Does diesel even have a future?
I can understand that a technology such as diesel would come under critical discussion in public. We are open to that. However, I think the discussion has often left objectivity behind and overshot the mark.

If we want to shape mobility patterns of the future in a more sustainable way, we should not prematurely exclude a mature technology like diesel. Especially in view of the fact that this technology offers what many people wish for. Diesel is highly efficient, as our vehicles show.

Many carmakers argue that they support sustainability. Critical stakeholders, on the other hand, doubt the motivations of the manufacturers. How do you answer these critics?
Why would we want to resist a more sustainable future? It wouldn't make sense. On the contrary, we are looking at the opportunities it can create for our company. This is in line with our corporate culture.

Awareness of sustainability is on the increase all over the world. More and more people are asking questions about the products they buy and the supply chain behind them. The framework conditions are changing. Sustainable management is not an altruistic idea, it's essential for our company to be successful.

Take, for example, the environmental measures we've already taken: our increasingly efficient use of resources has gained us €161 million since 2006 – that's a great motivator.

Introduction

→ Preface
An overview of the BMW Group
Key sustainability indicators
Value chain

1 Fundamentals

2 Products and services

3 Production and value creation

4 Employees and society

Further key indicators

Appendix

What are the key sustainability goals of the BMW Group?
We remain committed to the principles of the United Nations Global Compact, which we have consistently implemented at all our locations since 2001. We pursue an integrated sustainability strategy. We have set ten long-term goals along the entire value chain: from the areas of "Products and services", "Production and value creation" as well as "Employees and society".

What goals do you have for 2018 specifically?
First of all, we aim to continue to add substance to sustainability within the company: in terms of our products, on the production line, in our supply chain, and of course in our interaction with employees and society.

You will find numerous examples in this report: We will continue to increase the number of electric vehicles in our product range. We will increase the share of renewable energy used at our plants and are thus moving towards carbon-free production. And, among other things, we will be redesigning the raw materials chains for our batteries to make them more sustainable.

But let me also make clear: in many areas, we depend on corresponding advances in societal framework conditions. Electromobility is a good example of this: we already offer the products and solutions. Often, however, the necessary infrastructure is not yet available, which would ensure that they fully achieve their potential. We cannot act alone in this respect. Everyone has to play their part.

All the more reason to continue to foster dialogue with our stakeholders in all our regions. Discussions can only take the right direction if there is a mutual understanding of the needs and room for manoeuvre.

I am confident that we will take a further large step towards sustainable mobility in 2018. This will benefit all of us.

Harald Krüger
Chairman of the Board of
Bayerische Motoren Werke Aktiengesellschaft

Combined separate non-financial report

AN OVERVIEW OF THE BMW GROUP

Profit before tax
in € million

10,655
↗ 2017

9,665
2016

Research and development expenditure in € million

6,108
↗ 2017

5,164
2016

BMW Group employees at year-end 2017 in numbers

129,932
↗ 2017

124,729
2016

Our business model

"The BMW Group is the most successful and sustainable premium provider of individual mobility."

Automobiles and motorcycles

Brands:
BMW, MINI, Rolls-Royce;
31 production and assembly facilities in 14 countries; around 6,000 dealerships in over 150 countries

Mobility services

ChargeNow DriveNow ParkNow

Financial services

in over 150 countries

→ see Annual Report 2017

Sales volume automobiles
in thousand units

2,463.5
↗ 2017

2,367.6
2016

CO_2 emissions of BMW Group Automobiles in g/km*

122
↘ 2017

124
2016

*Fleet consumption of newly registered vehicles in Europe (EU-28)

Investment in further education and training in € million

349
↘ 2017

352
2016

Search
Back

→ GRI 102-2, GRI 102-7

Introduction

Preface
An overview of the BMW Group
→ Key sustainability indicators
Value chain

1 Fundamentals

2 Products and services

3 Production and value creation

4 Employees and society

Further key indicators

Appendix

KEY SUSTAINABILITY INDICATORS

Five-year overview of key sustainability indicators

	2013	2014	2015	2016	2017	Change to previous year in %
BUSINESS ACTIVITIES						
Revenues (in € million)	76,059	80,401	92,175	94,163	**98,678**	4.8
Profit before tax (in € million)	7,893	8,707	9,224	9,665	**10,655**	10.2
Sales volume automobiles (in thousand units)	1,963.8	2,118.0	2,247.5	2,367.6	**2,463.5**	4.1
PRODUCTS AND SERVICES						
CO_2 emissions of BMW Group Automobiles (EU-28) (in g/km)	133	130	127	124	**122**	–1.6
Sales of electric and electrified vehicles (number)	311	17,805	32,474	62,255	**103,080**	65.6
DriveNow and ReachNow users (number)[1]	214,000	395,000	579,000	853,000	**1,108,000**	29.9
PRODUCTION AND VALUE CREATION						
Energy consumption per vehicle produced (in MWh/vehicle)	2.36	2.25	2.19	2.21	**2.17**	–1.8
Water consumption per vehicle produced (in m³/vehicle)	2.18	2.18	2.24	2.25	**2.22**	–1.3
Process waste water per vehicle produced (in m³/vehicle)	0.47	0.47	0.45	0.42	**0.4**	–4.8
CO_2 emissions per vehicle produced (in t/vehicle)	0.68	0.66	0.57	0.54	**0.41**	–24.1
Waste for disposal per vehicle produced (in kg/vehicle)	5.73	4.93	4.00	3.51	**3.86**	10.0
Volatile organic compounds (VOC) per vehicle produced (in kg/vehicle)	1.59	1.29	1.22	1.14	**1.03**	–9.6
Share of renewable energy purchased from third parties (in %)[2]	48	51	58	63	**81**	28.6
Share of production-relevant purchasing volume in the CDP Supply Chain Programme (in %)	—	45	53	69	**77**	11.6
EMPLOYEES AND SOCIETY						
BMW Group employees at end of year (number)	110,351	116,324	122,244	124,729	**129,932**	4.2
Attrition rate at BMW AG (as a percentage of workforce)	3.47	1.41	2.08	2.70	**2.64**	–2.2
Share of women in the entire workforce of the BMW Group (in %)	17.4	17.8	18.1	18.7	**19.3**	3.2
Share of women in management positions at BMW Group (in %)	13.8	14.2	14.5	15.3	**16.0**	4.6
Average days of further training per BMW Group employee (days per employee)	3.5	3.9	4.1	3.8	**3.4**	–10.5
Accident frequency at BMW Group (per one million hours worked)	4.8	5.1	4.4	4.0	**3.6**	–10.0
Expenditure on corporate citizenship (in € thousand)	28,944	34,524	39,109	87,837	**33,436**[3]	–61.9
Expenditure on donations by the BMW Group (in € thousand)	8,485	10,199	17,066	70,356	**16,205**[3]	–77.0

[1] Rounded up/down to the nearest thousand.
[2] Calculated based on volumes of green energy purchased as well as the conservative calculation of country-specific energy shares from renewables purchased from third parties. (Modification in calculation method for Germany and Austria since 2012 and for the UK since 2016 due to use of transparency data in supplier invoices.) Figures from 2015 onwards not directly comparable to figures for 2012–2014. Figures from 2015 onwards include all BMW Group production locations as well as corporate functions, development and administration in Munich/DE.
[3] The decrease compared to 2016 is due to a one-off donation to the BMW Foundation in the centenary year 2016.

Introduction

Preface
An overview of the BMW Group
Key sustainability indicators
→ Value chain

1
Fundamentals

2
Products and services

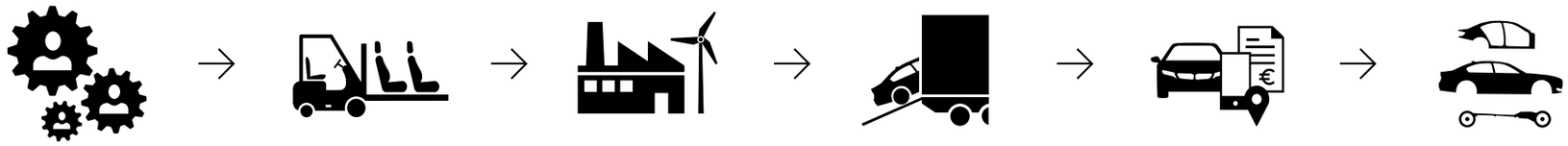
3
Production and value creation

4
Employees and society

Further key indicators

Appendix

VALUE CHAIN



RESEARCH AND DEVELOPMENT	SUPPLY CHAIN	PRODUCTION	LOGISTICS AND TRANSPORT	SALES AND UTILISATION	DISPOSAL AND RECYCLING
of products and services				of vehicles and services	
MAIN ACTIVITIES					
Development of innovative, fascinating cars, motorcycles and services — Concept — Series development — Production planning	Global cooperation with suppliers to create — Modules/systems — Components — Parts — Raw materials	Manufacturing of cars and motorcycles by a highly qualified and diverse workforce — Engine construction — Bodywork — Paintwork — Assembly — Quality control	Securing customer-oriented transport logistics in the network of — Suppliers — Plants — Dealerships worldwide through the seamless combination of various modes of transport	Range of premium products and services for individual mobility through — Coordination of a worldwide dealership/repair shop network — Implementation of a coordinated and target-group-oriented marketing mix — Provision of financial services	Recovery and dismantling of vehicles for — Reuse — Recycling and disposal of vehicle components and materials

→ GRI 102-2, GRI 102-9

The BMW Group's value chain is currently undergoing a fundamental transformation:

While in the past they were purely hardware products, automobiles are now becoming complex parts of an interconnected mobility world. In all areas of the value chain, mobility services such as DriveNow, ReachNow, ChargeNow or ParkNow therefore play an important role alongside the vehicles themselves.

Whereas just a few years ago the BMW Group was still clearly an industrial manufacturing company with traditional structures, it has now become a mobility provider.

The focus will continue to be placed on the development, production and sale of vehicles, with a wide range of innovative mobility services on top. The main drivers of business activities are the concepts "Automated", "Connected", "Electrified" and "Shared"–these constitute the vision for tomorrow's mobility. They will result in profound changes in the BMW Group's value chain in the next few years.

Introduction

1

→ Fundamentals

1.1 Strategy and management
1.2 Stakeholder dialogue
1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2

Products and services

3

Production
and value creation

4

Employees and society

Further key indicators

Appendix

FUNDAMENTALS

1

Introduction

1
Fundamentals

→ 1.1 Strategy and management
1.2 Stakeholder dialogue
1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

1.1 STRATEGY AND MANAGEMENT

The BMW Group manages its business in accordance with responsible corporate governance principles geared to sustainable value creation in all areas of the company. To ensure compliance with these principles, clear lines of accountability have been defined in the BMW Group's management system, which are reinforced through guidelines as well as control and incentive systems.

Involving the Board in sustainability management

The Board of Management governs the enterprise under its own responsibility, acting in the interests of the company and with the aim of achieving sustainable growth in value. It determines the strategic orientation of the enterprise and ensures its implementation. The Board of Management is also responsible for ensuring compliance with all provisions of the law and internal regulations as well as for adequate risk management and controlling. The Supervisory Board advises and supervises the Board of Management in conducting its duties (dual management system). → GRI 102-18, GRI 102-23

Sustainability is a component of our corporate strategy. For this reason, our Sustainability and Environmental Protection department has been directly incorporated into our Corporate Planning and Product Strategy department since 2007, under the mandate of the Chairman of the Board of Management. This unit is responsible for sustainability strategy and sustainability management worldwide. Its tasks include the following:

— To identify challenges and opportunities for sustainable operations

— To develop and monitor sustainability goals

— To further develop, specify and integrate our sustainability initiatives into individual divisions, taking the entire value chain into account

— To ensure the cooperation of all departments in the company involved in sustainability

— To provide a central corporate function for environmental protection (group representative) and manage the environmental protection network

— To manage global centres of competence on a range of environmental issues

Managing sustainability

The Sustainability Board makes decisions on the long-term alignment of the sustainability-related areas of action included in Strategy NUMBER ONE > NEXT. The entire Board of Management is represented on the Sustainability Board, along with the heads of Sustainability and Environmental Protection and of Corporate Communications. → GRI 102-18, GRI 102-26 The Sustainability Board convenes at least once a year to assess the company's progress on economic, environmental and social issues as well as the degree to which sustainability principles have been integrated into the various divisions. → GRI 102-31 The Strategy Circle comprises department heads from all divisions. In meetings that take place twice a year, it

Introduction

1
Fundamentals

→ 1.1 Strategy and management
1.2 Stakeholder dialogue
1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

explicitly addresses sustainability topics and prepares decisions made by the Sustainability Board. → GRI 102-19, GRI 102-20, GRI 102-27 The BMW Group management principles are also set down in the → **Corporate Governance Code.**

→ **see graphic 1.01**

Organisation of sustainability in the BMW Group
→ **G1.01**

Sustainability Board
Comprises the entire Board of Management
Chairman: Chairman of the Board of Management
Responsible for strategic alignment

↓ ↑

Strategy Circle
Comprises department heads from all divisions
Responsible for preliminary work to support decision-making
At least twice a year with the umbrella topic of sustainability

↓ ↑

Specialist divisions
Implement measures and processes needed
for the BMW Group to achieve its sustainability goals

Sustainability established as corporate objective

Sustainability has been integrated "top-down" at all corporate levels of the BMW Group since 2009 as a strategic objective based on specific targets and key performance indicators. Sustainability is therefore an explicit component of the company's management system. On the one hand, this means that every major issue and project must be measurable in terms of sustainability as a corporate objective. This way, we ensure that, in addition to economic factors, environmental and social aspects are also accounted for in the decision-making process.

It also means that sustainability as a corporate objective is broken down to the level of business areas and divisions. As a result, the personal targets set for managers include sustainability aspects and criteria which have an effect on their performance-based remuneration.
→ GRI 102-28

Rewarding sustainable business success

The Supervisory Board decides on the level of compensation received by members of the Board of Management, orienting its decisions on the sustainable development of the BMW Group. Bonuses are also based in part on personal performance, evaluated primarily according to qualitative criteria. These criteria include environmental innovation (e.g. reduction of carbon emissions), leadership accomplishments and the ability to lead change processes.

Further criteria for the composition of the performance-based amount are: enhancing the company's attractiveness as an employer, progress in the implementation of the diversity concept, which is presented to the Supervisory Board in a report, as well as activities that advance corporate citizenship in the BMW Group → **Compensation Report in the 2017 Annual Report.** → GRI 102-27, GRI 102-28, GRI 102-35

Introduction

1
Fundamentals

→ 1.1 Strategy and management
1.2 Stakeholder dialogue
1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

STRATEGY AND MANAGEMENT IN DETAIL

OUR VISION

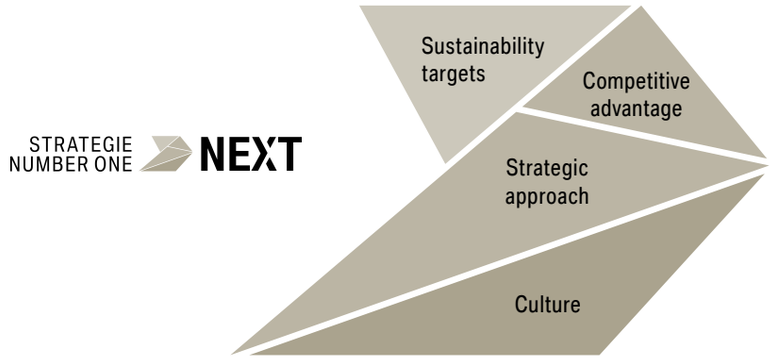
The BMW Group is the world's most successful and sustainable premium provider of individual mobility.

In order to make sure we are fit for the future, we continuously integrate sustainability into our business model. We see global challenges such as climate change and urbanisation as an opportunity to develop innovative products and services. In this way, sustainability makes a long-term contribution to the business success of the BMW Group. Our innovations are not developed solely to enhance the benefits of our customers–we also want them to have a positive impact on society and the environment.

Taking social and environmental responsibility for all we do is an integral part of how we perceive ourselves as a company. We are convinced that the lasting economic success of any enterprise in today's world comes down to acting responsibly and ensuring social acceptance. We achieve a clear competitive advantage with efficient and resource-friendly production processes and state-of-the-art solutions for sustainable individual mobility for our customers. For this reason, sustainability is a key component of our corporate Strategy NUMBER ONE > NEXT, as shown in the following schematic diagram. This consistent integration of sustainability in our corporate strategy is evidenced by the activities along the value chain described in this report–ranging from the sustainability challenges in the procurement process to the design of our products through to the establishment of new business areas, with sustainability integrated into the relevant business model.

→ see graphic 1.02

Strategy NUMBER ONE > NEXT *
→ G1.02



Sustainability targets:
We are Number ONE. We inspire people on the move.
We shape tomorrow's premium individual mobility.

Competitive advantage:
We combine enthusiasm, responsibility and success.

Strategic approach:
We are bringing the BMW Group into a new era. We are pushing ahead with innovative technologies, digitalisation and sustainability to create unique customer experiences.

Culture:
Responsibility, appreciation, transparency, trust, openness.

* The forward-looking arrow of Strategy **NUMBER ONE > NEXT** symbolises dynamism and is made up of four aspects: sustainability targets, competitive advantage, strategic approach and culture.

Introduction

1
Fundamentals
→ 1.1 Strategy and management
1.2 Stakeholder dialogue
1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

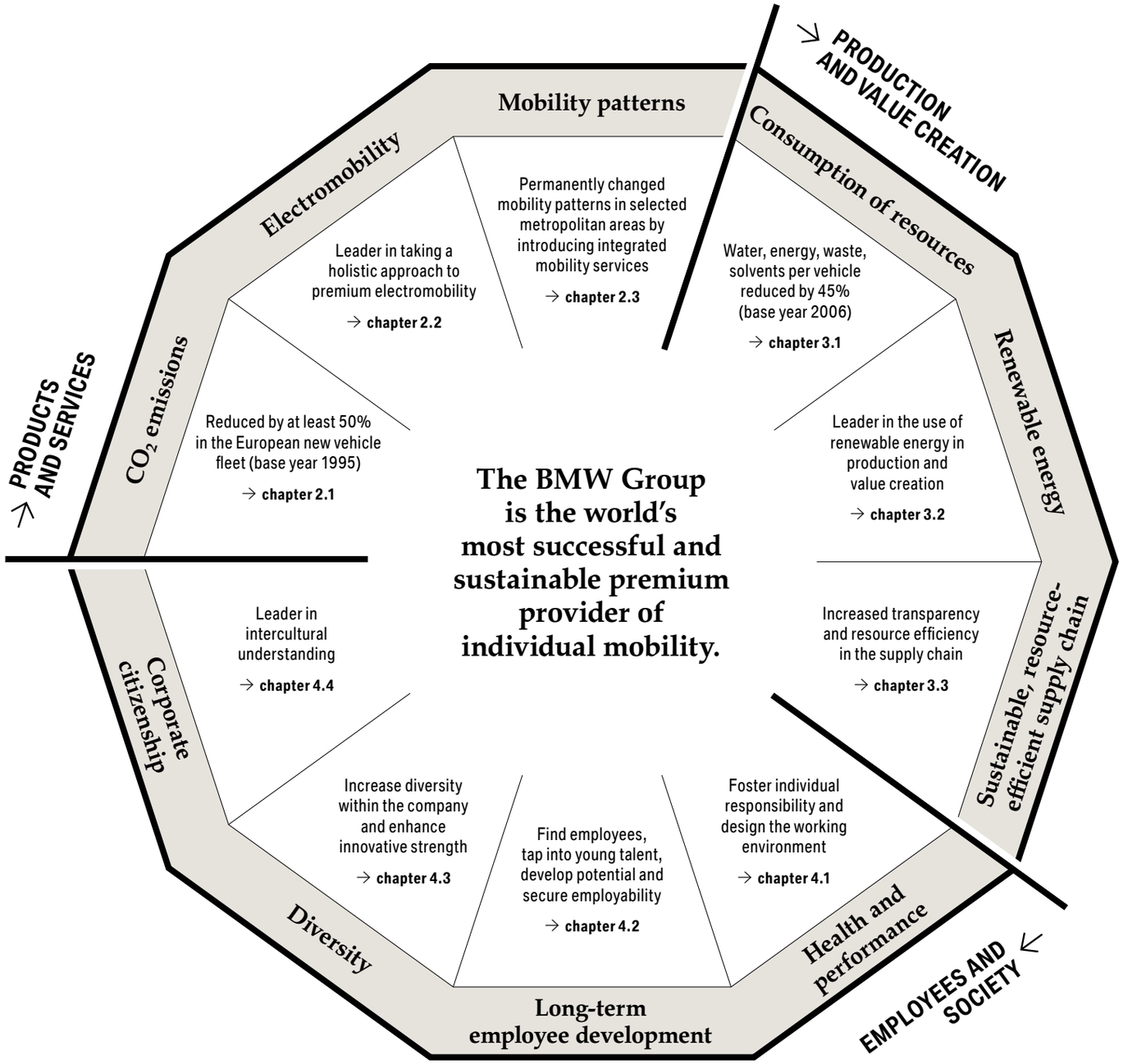
Pursuing long-term sustainability goals

In 2012, the BMW Group set itself ten strategic sustainability goals running through to 2020, which we consistently pursue.

We focus on three areas of action:
- Products and services
- Production and value creation
- Employees and society

Ten sustainability goals of the BMW Group

→ G1.03



Introduction

1
Fundamentals

→ 1.1 Strategy and management
1.2 Stakeholder dialogue
1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

Our vision of being the most successful and sustainable premium provider of individual mobility sets out the framework for our goals and measures. The BMW Group integrates sustainability along the entire value chain and into all basic processes–thus creating added value for the company, the environment and society. → GRI 102-11

Aside from our ten long-term goals, we continuously address the existing sustainability issues that are topics of much discussion among the general public. Some examples of this would be our positions on the diesel debate, critical issues of the supply chain, global regulation of CO_2 and contaminants and on positive framework conditions for electromobility.

→ see chapter 3.3
→ see chapter 2.1
→ see chapter 2.2

This report expands on our sustainability strategy. The report is structured along the long-term sustainability goals of the BMW Group. The weighting of topics is based on our materiality analysis.

→ see graphic 1.04

Sustainability goals of the BMW Group contribute to Sustainable Development Goals (SDGs)

→ see chapter 2.3

In autumn 2015, the General Assembly of the United Nations announced the → **Sustainable Development Goals (SDGs).** The SDGs are at the core of the 2030 Agenda, a global action plan with the aim of shaping economic progress in an environmentally compatible manner and in accordance with social equity. We too are committed to this new social contract and to supporting the goals formulated within it as part of our sustainability strategy and with a focus on our value chain.

We are convinced that companies, governments and other organisations can make a positive contribution towards the attainment of the SDGs.

On the basis of our materiality matrix, we analysed in 2016 which SDGs were a priority for the BMW Group. Currently we have identified the following SDGs as areas in which we can have the greatest potential impact: → GRI 203-2

— SDG 11 – Sustainable Cities and Communities: with our integrated mobility services and innovative approaches, we want to change mobility patterns in selected metropolitan areas in a sustainable way. These include our car-sharing services DriveNow and ReachNow, which increasingly offer electric vehicles, as well as the electric scooter specially designed for commuter traffic in cities. With the Urban Mobility competence centre created in 2015, the BMW Group supports the paradigm shift from cities suitable for cars to cities suitable for people. The centre acts as a platform through which the BMW Group works with cities and other partners to develop new concepts for future urban mobility with a view to making cities even more attractive to live in.

→ see text box page 81

What's more, the BMW Group also invests in start-ups with promising mobility concepts through its investment fund BMW i Ventures with registered offices in Silicon Valley. With competitions and internal start-up programmes, we promote the development of further innovation in the context of SDG 11 in a targeted manner. An intrapreneurship competition was held for this purpose in summer 2017. All departments were called upon to submit ideas for products and services on the topic of "Sustainable Cities and Communities".

— SDG 12 – Responsible Consumption and Production: we continuously reduce CO_2 emissions and resource usage per vehicle produced. In our locations worldwide, we are increasingly focusing on renewable energy and are also working with our supplier network towards improving resource efficiency. The joint venture "Digital Energy Solutions", founded in 2015, also offers digital-based services to small and medium-sized companies, with a view to better harnessing the potential of renewable energy. The recycling of vehicle parts is also promoted with the joint venture Encory, founded in September 2016.

→ see chapter 3

— SDG 13 – Climate Action: if a consistent measurement method is applied, we are continuously reducing the CO_2 emissions of our vehicle fleet. Due to a transition to a new statutory test procedure, the levels will temporarily increase. However, in spite of the transition to WLTP, we expect emissions to further decrease in the long run. Electromobility is an essential component of our CO_2 strategy. We are consistently increasing the proportion of electrified drive systems in our model range and therefore not only make a contribution towards the reduction of greenhouse gas emissions, but also towards improved air quality in urban areas.

→ see chapter 2.2 and chapter 2.3
→ see chapter 2.1 and chapter 2.2

Introduction

1

Fundamentals

→ 1.1 Strategy and management
1.2 Stakeholder dialogue
1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2

Products and services

3

Production
and value creation

4

Employees and society

Further key indicators

Appendix

Identifying key issues

The development of our sustainability strategy is based on the identification of key issues. → GRI 102-46 The results of our materiality analysis are shown in the materiality matrix. On this basis, we regularly review our strategic alignment as well as our sustainability targets and measures.

→ see graphic 1.04

In order to identify in good time which topics may bring opportunities and risks to our business, today or in the future, and to focus our activities accordingly, we observe external trends on an ongoing basis using an "environmental radar". This includes keeping track of both the public discourse and the political agenda, for example the World Climate Conference and the Sustainable Development Goals. In addition, we regularly carry out a materiality analysis in order to identify relevant issues. To do this, we analyse the importance of current sustainability topics, both from the perspective of different stakeholder groups as well as from a business perspective. The trends picked up by the environmental radar form the basis for identifying topics and validating the results of the materiality process.

Analysing materiality

A topic list based on the → **GRI G4 Guidelines,** the → **UN Global Compact,** the main topics of the → **Sustainability Accounting Standards Board (SASB)** and the → **UN Sustainable Development Goals (SDGs)** served as a basis for the 2015 materiality analysis. On the basis of these topics, the environmental, economic and social impact of the BMW Group's activities along the value chain were evaluated and topic boundaries identified. We conducted telephone interviews with 13 representative stakeholders in order to review topics from an external perspective and to validate the impacts. Customers, suppliers, investors, authorities, NGOs and scientists from different regions of the world were among the interviewees. In addition, the topics were reviewed by internal BMW Group experts who are in regular contact with the main stakeholders.

The analysis was accompanied by an internal document review of the sustainability context. In the course of an internal materiality workshop, the identified impacts were then validated and the relevant sustainability topics prioritised from the perspective of the BMW Group. The relevant corporate areas as well as corresponding executives subsequently validated the materiality matrix. → GRI 102-46

An updated materiality matrix with 19 topics classed as highly material emerged from the process. These were still valid in 2017 and include topics that both stakeholders and the BMW Group considered highly relevant. Furthermore, topics considered to be among the three most important by one of the stakeholder groups surveyed were also taken account of by our management and in this report. These are marked in the materiality matrix with an asterisk. → GRI 102-47, → GRI 102-43, → GRI 102-44

The general feedback from our stakeholders at numerous dialogue events held by the BMW Group on selected sustainability topics helps to continuously verify the results of the materiality analysis.

Introduction

1
Fundamentals
→ 1.1 Strategy and management
1.2 Stakeholder dialogue
1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2
Products and services

3
Production and value creation

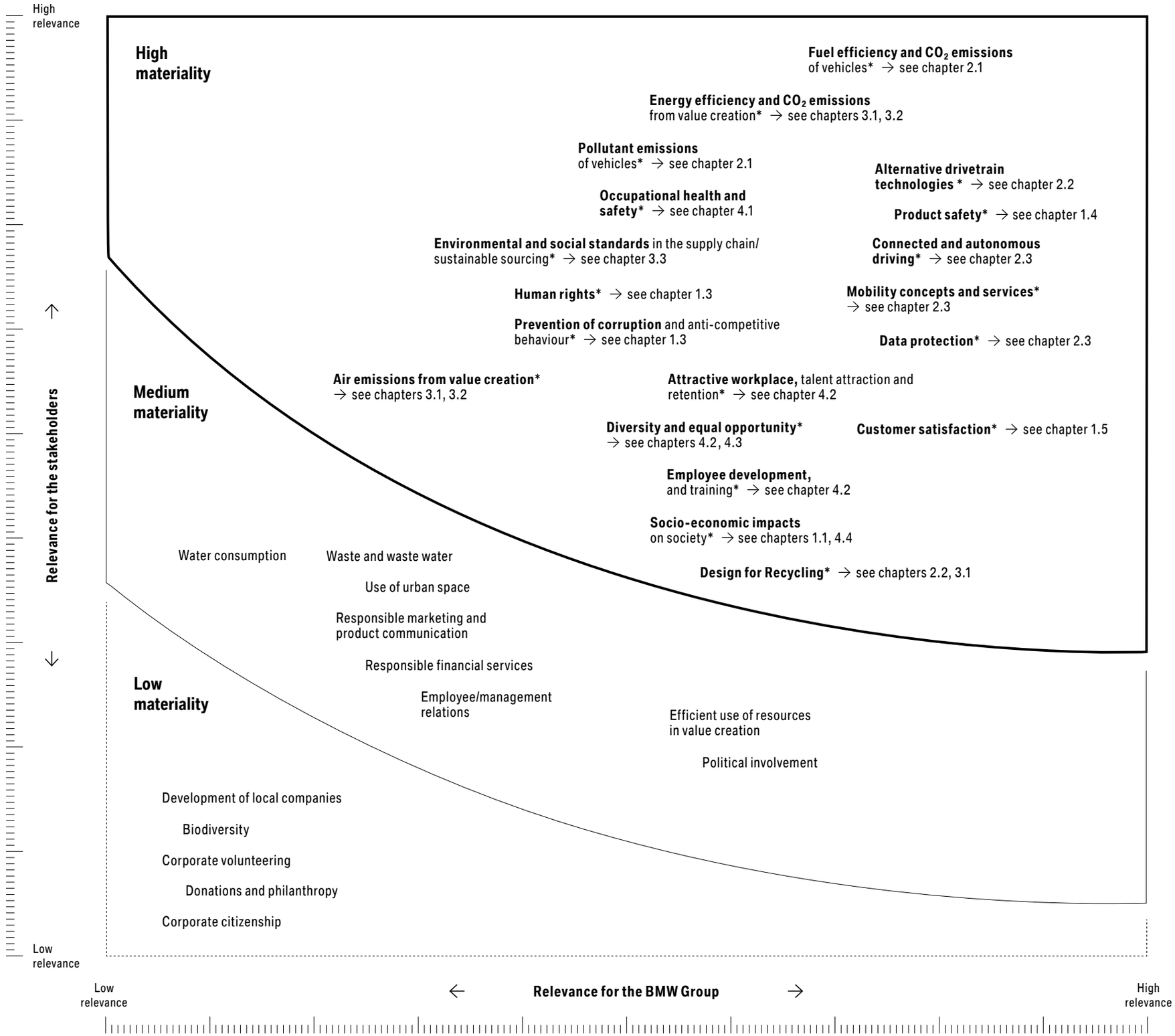
4
Employees and society

Further key indicators

Appendix

Materiality matrix

→ **G1.04**



* These areas were rated highly material, as they were among the three topics the respondent stakeholder groups considered most important.
Further information: → **Identified material aspects and boundaries.**

Introduction

1

Fundamentals

→ 1.1 Strategy and management
1.2 Stakeholder dialogue
1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2

Products and services

3

Production
and value creation

4

Employees and society

Further key indicators

Appendix

Contributing towards social prosperity

Sustainable management combines long-term business success with added value for society. As a global company, the BMW Group acknowledges its responsibility to contribute to social prosperity. For this reason, we are not only aiming at increasingly creating value, but also making specific contributions towards economic development and quality of life at our locations. In 2014, we conducted an → **impact assessment at our largest production site in Spartanburg/USA in order to determine the indirect impact of our operational activity.** The study revealed that the BMW Group had noteworthy economic impact on the prosperity of the US state of South Carolina. The overall contribution to economic output was estimated at US$16.6 billion, achieved by the generation of jobs, contributions to local household incomes and the impact on the gross domestic product of the state. Thus, the BMW Group creates considerable economic multiplier effects in South Carolina. The studies in San Luis Potosi/MX and Leipzig/DE delivered similarly positive results. → GRI 203-2

Lasting profitable growth of the BMW Group facilitates a reasonable return for investors, attractive salaries for employees as well as our contribution to society through income tax payments. These are direct economic effects which are quantified by calculating the net value added.

The net value added of the BMW Group is at a consistently high level of €24,978 million (2016: €23,623 million). The largest share of our net value added benefits our employees (2017: 48.3%, 2016: 48.8%). The proportion applied to providers of finance declined to 8.3% compared to the previous year. The government/public sector (including deferred tax expense) accounted for 8.6%. The proportion of net value added applied to shareholders, at 10.5%, was higher than in the previous year. → GRI 201-1

→ see table 1.01

The BMW Group currently employs 129,932 people (2016: 124,729) and is training 4,750 young people at its locations worldwide (2016: 4,613). Our purchase of intermediate products also secures jobs worldwide in our supply chains. As we source the main components for vehicle production locally whenever possible, our business activities create jobs and increase prosperity at our locations. → GRI 203-2

By paying income taxes, and indirectly through the tax payments of our employees and suppliers, we boost the tax revenues of the regions where we and/or our suppliers operate. The BMW Group paid around €1,949 million in income taxes in 2017 (2016: €2,755 million). In addition, we are helping to fund public budgets by paying tariffs and import duties. → GRI 203-1

Introduction

1

Fundamentals

→ 1.1 Strategy and management
1.2 Stakeholder dialogue
1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2

Products and services

3

Production and value creation

4

Employees and society

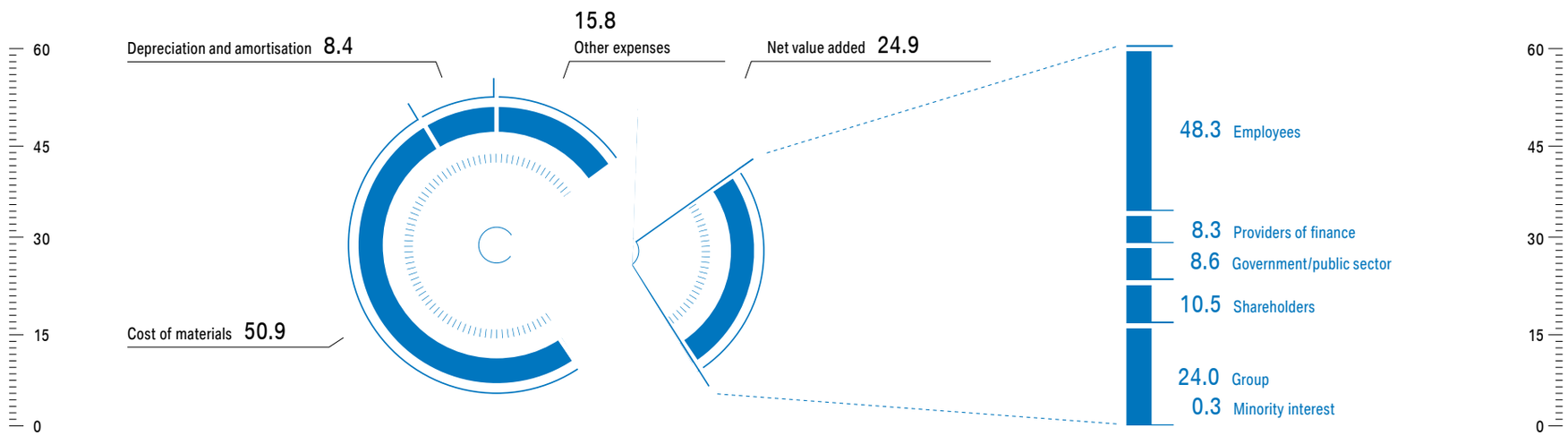
Further key indicators

Appendix

BMW Group value creation

→ T 1.01

in %, basis: production material



→ GRI 201-1

Developing local infrastructure

The BMW Group contributes towards the development of local infrastructure at its locations, both directly and within overarching programmes. For example, with our worldwide programme ChargeNow we are committed to the development of a public charging infrastructure for electric vehicles worldwide. When setting up new plants, we also, for example, build new roads as needed and lay electricity and water supply lines. During planning of a new company location, we first examine how we can contribute to the specific needs of the local community. On the one hand, the community benefits from new, wide-ranging private services which contribute towards more sustainable urban mobility. On the other hand, public infrastructure networks are created that can be used for free. → GRI 203-1

→ see chapter 2.2 → see chapter 2.3

Opening up new business fields

By implementing innovations, the BMW Group opens up new business fields and in doing so fosters the creation of new value chains and jobs. Some successful examples include the → **URBAN-X** accelerator programme and the BMW Startup Garage. Other initiatives that support pioneering technologies and urban mobility as well as the joint venture → **Encory,** which promotes the reuse of lorry parts, also contribute towards sustainable innovation. → GRI 203-1, GRI 203-2

As in previous years, the figures indicating the economic effects of the BMW Group showed an upward trend in 2017. They confirm our contribution to economic development at our locations. → GRI 203-1, 203-2

Introduction

1
Fundamentals

→ 1.1 Strategy and management
1.2 Stakeholder dialogue
1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

Financial figures

→ T 1.02

in € million	2013	2014	2015	2016	2017	Change in %
Capital expenditure[1]	6,711	6,100	5,890	5,823	**7,112**	22.1
Revenues	76,059	80,401	92,175	94,163	**98,678**	4.8
Profit before financial result	7,978	9,118	9,593	9,386	**9,880**	5.3
Profit before tax	7,893	8,707	9,224	9,665	**10,655**	10.2
Income taxes	2,564	2,890	2,828	2,755	**1,949**	–29.3
Net profit	5,329	5,817	6,396	6,910	**8,706**	26.0

[1] Capital expenditure on capitalised investment costs, other intangible assets and property, plant and equipment.

→ GRI 201-1

Capital market ratings for sustainability

The consistent integration of sustainability is evidenced by the fact that, among other things, the BMW Group is listed in numerous sustainability indices and ratings.

→ see graphic 1.05

Graphic 1.05 provides an overview of the positions of the BMW Group in 2017 in the capital market sustainability ratings that are most relevant to us:

Sustainability ratings 2017

→ G1.05

RATINGS		
Dow Jones Sustainability Indexes	CDP DRIVING SUSTAINABLE ECONOMIES	FTSE4Good
ASSESSMENT AND RESULT		
In 2017, the BMW Group was the only German automobile manufacturer to be listed once again in the → **Dow Jones Sustainability Indexes (DJSI)** "World" and "Europe" and is therefore the only company in the automotive industry that has been continuously listed on the index since the very beginning.	In the → **CDP-Rating,** the BMW Group once again achieved the top A rating for transparency and measures to combat climate change and is thus represented in the A list for the eighth time in a row. In addition, the BMW Group achieved the top A rating in the CDP water rating, in which responsible water management is assessed, and is therefore one of 27 companies worldwide that achieved the top rating in both categories.	The company was also once again listed in the → **FTSE4Good Index** in 2017. The FTSE4Good index is part of the British index family on sustainability and corporate governance provided by FTSE in London.

Introduction

1

Fundamentals

→ 1.1 Strategy and management
1.2 Stakeholder dialogue
1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2

Products and services

3

Production
and value creation

4

Employees and society

Further key indicators

Appendix

The BMW Group in China

China is one of the most important automotive markets for the BMW Group and other manufacturers. A particular feature of this market is the strong affinity with innovation in the area of digitalisation. New technologies are adopted and scaled very quickly. An example of this is cashless payment in day-to-day life. The high demand for vehicles presents megacities such as Shanghai and Beijing with great challenges in terms of sustainable transport concepts. Accordingly, the BMW Group's locally based strategy for China also aims to further develop urban mobility in Chinese megacities. The vehicles and services offered in China as well as the research, development and production activities of the BMW Group are outlined in the following.

Production
The Shenyang location of our → **joint ventures BBA,** with the automotive plants Dadong and Tiexi as well as an engine plant with a light alloy foundry, play an important role in the worldwide production network of the BMW Group. It is part of the strategy of balanced global growth with production capacities in the respective regional markets. The BBA production site Shenyang produces exclusively for the Chinese market. The Dadong plant in north-east Shenyang commenced production in 2003 and is currently constructing the BMW 5 Series long wheelbase version. In future, the plug-in hybrid model of the BMW 5 Series as well as the new BMW X3 will also be produced there. The Tiexi plant in the west of the city, which was commissioned in 2012, produces the BMW X1 long wheelbase version (including a plug-in hybrid model), the BMW 1 Series Saloon, the BMW 2 Series Active Tourer, the BMW 3 Series long wheelbase version and the BMW 3 Series Saloon. The engine plant that opened in 2016 produces the latest generation of the BMW TwinPower Turbo 3- and 4-cylinder petrol engines.

Development
The BMW Group carries out research and development at the locations in Beijing, Shanghai and Shenyang. Focus areas are electromobility and new solutions for urban mobility.

Electric vehicles for the Chinese market
In 2017, the BMW Group offered five New Energy Vehicles (NEVs) in China: the BMW i3, BMW i8, BMW X1 PHEV, BMW X5 PHEV and the BMW 7 Series PHEV. The range will be expanded in 2018 with the launch of the PHEV version of the BMW 5 Series.

Autonomous driving and connectivity
The BMW Group is a leader in research and development of technologies for highly automated driving in China. In June 2016, BMW was the first premium manufacturer to demonstrate automatic lane change on the test section of a motorway in Chengdu. By June 2017, the BMW Group had completed more than 16,000 kilometres of highly automated driving on both public and closed roads in China, generating valuable raw data in the process.

Production and recycling of battery cells
In collaboration with Brilliance China Automotive Holdings Ltd., the BMW Group opened the new "High Voltage Battery Center" in Shenyang in October 2017. The battery factory supplies the nearby plant of the joint venture BMW Brilliance Automotive (BBA) in Dadong. The BMW 5 Series plug-in hybrid for the local market will be produced there in future.

The BMW Group has established a partnership with Brunp, a leading battery recycling company in China. The majority of EV battery materials are already being recycled.

ReachNow
Under the name "ReachNow Powered By EVCARD", the BMW Group has since the end of 2017 been offering in Chengdu its first mobility service range in Asia: Customers can pick up or return their vehicles at 25 central locations such as department stores or major roads. The entire fleet consists of BMW i3 vehicles and is thus fully electric.

ChargeNow
Our ChargeNow network aims to cover more than 60 cities in China, including the Tier-1 to Tier-3 cities, and gradually enter the Tier-4 and Tier-5 cities, where the NEV market is booming. For example, the ChargeNow service covers 100% of administrative regions in Beijing and Shanghai. Around 47,000 charging points were at the disposal of our customers at the end of 2017 in China. In addition, we further improved the charging capacity of the Wallbox distributed by BMW i for charging at home.

Designworks
The goal of Designworks is to use the innovation culture and the innovative design of the BMW Group with a view to pushing ahead with the objectives of its external customers. Mobility and digital living are the driving topics behind the services that Designworks offers. Asia-specific operating concepts and driver assistance systems (e.g. road sign recognition) are developed by an intercultural, predominantly Chinese team on-site, in order to create solutions that are specially developed for Chinese customers by Chinese engineers.

Introduction

1

Fundamentals

→ 1.1 Strategy and management
1.2 Stakeholder dialogue
1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

BMW Next Mobility Youth Camp
40 students and young professionals from the area of mobility (automobile, city planning, traffic, design and the like) were invited to Hangzhou in September 2017 in order to develop mobility proposals which satisfy the requirements of selected cities and regions.

BMW Group Dialogue
In September 2017, the BMW Group organised a stakeholder dialogue in Hangzhou in order to gain direct feedback on its measures pertaining to urban mobility. The challenges of future transport concepts and specific approaches were discussed with attendees from government, science and industry: How will cities change in coming years? How can products and services of the BMW Group help to shape the urban mobility of the future?

MINI LIVING building in Shanghai
Since 2016, MINI LIVING has been looking at innovative living concepts which aim to offer maximum quality of life in a small space – true to the brand motto: "Creative Use of Space". An urban hotspot emerged from a former paint factory in Shanghai in 2017 with plenty of room to work, network and live. Here, MINI LIVING offers apartments, bookable workstations and services such as vehicles for shared use. The concept thus allows for maximum personal flexibility and optimal use of the space. With this project, MINI is for the first time implementing the concepts of the previous installations in a real construction project.

The BMW Next Mobility Youth Camp: the BMW Group developed mobility solutions of the future together with students and young people in Beijing.

Forecast

In order to consistently pursue our existing activities and also take account of new developments, we are making a start in 2018 on overhauling our set of long-term objectives until 2030. Global frameworks such as the Paris Agreement and the Agenda 2030 are taken account of in the process. Our management of the Sustainable Development Goals will be re-evaluated as a matter of priority.

Furthermore, we are supporting the efforts of industry to reach the 2-degree goal of the Paris climate accord. This is also evidenced in our reporting, which already includes some components of the → Task Force on Climate-related Financial Disclosures (TCFD). The Task Force encourages companies to include climate-related challenges and risks in corporate planning. We will review which other company-specific elements can be added.

Introduction

1
Fundamentals

1.1 Strategy and management
→ 1.2 Stakeholder dialogue
1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

1.2 STAKEHOLDER DIALOGUE

As a global corporation, both our manufacturing activities and our products have an effect on the environment as well as on diverse groups of stakeholders. At the same time, the viewpoints, decisions and actions of our stakeholders have a decisive impact on the success of our enterprise. The BMW Group therefore engages in ongoing dialogue regarding sustainability topics with its stakeholders in relevant markets and at all its locations. The more the role of the automobile is called into question as an option for individual mobility in times of fundamental change, the more important this exchange seems to us.

In dialogue with our stakeholders, we want to build trust, understand positions, identify trends as well as build on and consolidate partnerships. In doing so, we also deliberately address critical issues and debates. This helps us to gain a better understanding of what next steps in the individual areas of action in sustainability management are required or are expected of us. At the same time, by engaging in dialogue, we can show in a transparent manner what scope for action we see in current challenges and the prerequisites and framework conditions that are important to us.

In principle, the following applies for all our stakeholder dialogue formats: the feedback of our stakeholders is integrated into the strategic deliberations of the company. In turn, stakeholders get to know the positions of the BMW Group on certain topics and can take account of these in their daily work.

Our Stakeholder Engagement Policy forms the basis for continuous dialogue. It defines the goals of the dialogue, determines the criteria for identifying and prioritising our stakeholders and provides a template for a range of suitable dialogue formats and communication channels.
→ GRI 102-42

Continuous and systematic identification and prioritisation of relevant stakeholders and their topics of interest is a cornerstone of stakeholder dialogue. To this end, we regularly carry out “stakeholder mapping” on strategically important topics at all relevant locations.

Introduction

1
Fundamentals

1.1 Strategy and management
→ 1.2 Stakeholder dialogue
1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

STAKEHOLDER DIALOGUE IN DETAIL

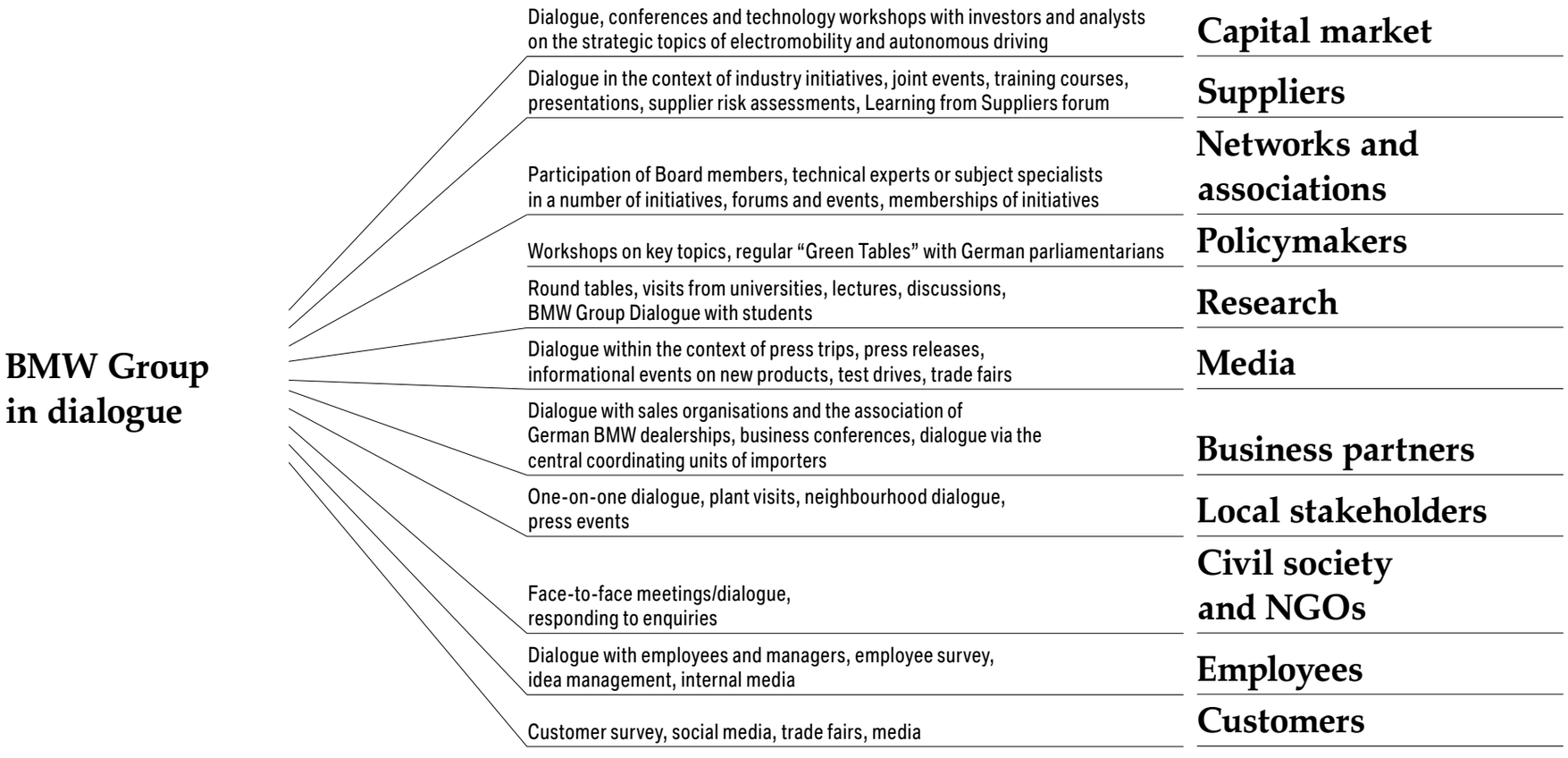
Systematically exchanging views with stakeholders

Our subsidiaries, our political offices in the different markets and the representatives from our plants engage in regular dialogue with local stakeholders on relevant topics. In addition, a range of committees and channels allow our different corporate departments to contact relevant stakeholders directly.

→ see graphic 1.06

An overview of dialogue forms and stakeholder groups of the BMW Group can be found in the graphic.

Stakeholder groups and forms of dialogue
→ G1.06



→ GRI 102-40, GRI 102-43

Introduction

1

Fundamentals

1.1 Strategy and management
→ 1.2 Stakeholder dialogue
1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2

Products and services

3

Production
and value creation

4

Employees and society

Further key indicators

Appendix

Addressing current issues both globally and regionally

The BMW Group has set itself the goal of organising a stakeholder dialogue event in its most important sales regions in Europe, Asia and North America each year. In the course of these dialogues, we decide on topics according to their relevance and make comparisons between individual regions. In 2017, we held stakeholder dialogues on the topic of "urban mobility" in Milan/IT, Chicago/US, Hangzhou/CN, Mexico City/MX and Delhi/IN. The main target group of these events were decision-makers who shape urban mobility in the respective cities. In the coming year, we will once again place the key topics of "digitalisation" and "urban mobility" on the agenda.

An overview of the results of the BMW Group dialogue events in 2017 can be found in the graphic. They are integrated into our product and service strategies. → see graphic 1.07

In dialogue with stakeholders: in May 2017 in Milan/IT, BMW Group experts discussed the challenges of urban mobility.

Further information on the → **BMW Group Dialogue** is published on the BMW Group website.

The five most important pieces of feedback from our stakeholders in the 2017 dialogue events on urban mobility
→ G1.07

Local public transport

Most cities do not have sufficient resources to fully rely on local public transport. In this respect, individual transport in cities continues to have a future.

Mobility services

Providers of new mobility services play an increasingly important role in urban mobility.

Air quality

Among the greatest challenges the municipalities face are high traffic volumes, poor air quality and the negative impacts of traffic planning on the cityscape and thus on people's quality of life.

Private cars

The role of private cars in megacities is coming under increasing criticism. As an alternative, many municipalities are pursuing the goal of developing local public transport and offering sharing concepts to meet the needs of individual mobility.

Electromobility

Combustion engines are expected to play a less important role in cities in future. Ideally, vehicles will fully rely on electromobility in the long run.

→ GRI 102-44

Introduction

1

Fundamentals

1.1 Strategy and management
→ 1.2 Stakeholder dialogue
1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2

Products and services

3

Production
and value creation

4

Employees and society

Further key indicators

Appendix

In addition to these events, we also have direct contact with individual stakeholders on selected topics. For example, there were queries related to environmental and human rights issues in the supply chain in 2017. In order to comply with the needs of our stakeholders to talk about these issues, we made contact with the relevant organisations and discussed their queries. In the process, general sustainability standards in the BMW Group's supply chain were presented and specific projects and measures discussed in depth. One example in this context is the raw material cobalt, which is required for the production of battery cells. The BMW Group worked closely on this with different non-governmental organisations (NGOs). In November 2017, for example, the company was the only carmaker worldwide to be invited by Amnesty International to the release of a new cobalt study in San Francisco.

Driving forward electromobility: in 2017, the BMW Group opened a high-voltage battery centre in Shenyang/CN.

Strengthening dialogue with investors

Regular and intensive dialogue with the capital market has always been a high priority for the BMW Group. When making investment decisions, investors are increasingly focusing on how the BMW Group integrates aspects such as the environment, society and corporate governance into its business model and takes them into account in its products and activities. This particularly applies to institutional investors with long-term strategies.

In 2017, we maintained and expanded our contacts with our sustainability-oriented investors and analysts. In a number of individual and group discussions at SRI roadshows and conferences (SRI: Socially Responsible Investment) in the financial centres of Europe and the USA, we presented our current progress in the area of sustainability as well as the focus topics of our Strategy NUMBER ONE > NEXT. At a technology workshop at the end of the year, investors and analysts gained an insight into the topics of electromobility and autonomous driving. The workshops's focus areas were flexible vehicle architectures for combustion engines, plug-in hybrids and battery-powered electric vehicles as well as further steps into the world of autonomous driving. Besides profitability, key topics of our investor discussions in 2017 were future challenges of the automotive industry. These are addressed by the BMW Group using the ACES approach (Automated, Connected, Electrified and Shared).

Engaging in dialogue with political decision-makers

By engaging in active and open dialogue with political decision-makers, union representatives, associations and NGOs, we play a constructive and transparent role in helping to shape the general political framework for our business activities. We offer our expertise to help promote fair competition for all involved and find sustainable solutions. We regard this as an important aspect of our corporate responsibility.

Our political offices concern themselves with public affairs as they affect environmental, financial and socio-political topics and deal with relevant economic policy and industry-specific issues. In the period under report, the main topics in this regard were favourable conditions for electromobility, antitrust complaints, exhaust gas purification for diesel vehicles, the changeover to modern diesel engines and potential human rights violations in the BMW supply chain.

Introduction

1

Fundamentals

1.1 Strategy and management
→ 1.2 Stakeholder dialogue
1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2

Products and services

3

Production
and value creation

4

Employees and society

Further key indicators

Appendix

Supporting effective framework conditions for electromobility

Legal regulations on vehicle emissions are becoming increasingly stringent worldwide. These pose new challenges to the automotive industry. As early as 2000, the BMW Group set the course for reducing fuel consumption as well as CO_2 and pollutant emissions with its EfficientDynamics strategy. Electromobility is essential for achieving further reductions.

Favourable framework conditions have proven conducive to the successful introduction of new technologies. When engaging in dialogue with political stakeholders in the main markets, the following topics are key for the BMW Group:

— Promotion of electromobility

— Consistent development of charging infrastructure

— Political control of emission limits without discriminating against individual vehicle categories

— Supporting new efficiency technologies

— Realistic connection between targets and measuring methods

— Consistency of supply-side and demand-side policy measures

— Ensuring sufficient provision of critical raw materials

Electric vehicles are currently still niche products in most markets. Private demand in Germany is very low. It requires government support to make the purchase of an electric car attractive to customers and to effectively tap into the market potential of alternative drivetrains across markets. Some of the world's leading markets in the development of electromobility are China, California and Norway. They are characterised by excellent infrastructure and government incentives. We would like to see similarly effective incentive measures for electromobility being taken in all markets.

Thoroughly investigating antitrust allegations

In July 2017, antitrust violations in the German automotive industry were reported in the media. Employees of the European Commission conducted an inspection at the BMW Group in Munich in October 2017. The BMW Group supports the European Commission in its work.

→ text box page 36

Introduction

1
Fundamentals

1.1 Strategy and management
→ 1.2 Stakeholder dialogue
1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

Vehement rejection of claims about inadequate AdBlue containers

In addition to media reporting on an alleged cartel in the automotive industry, there was also the allegation of insufficient exhaust gas purification in Euro 6 diesel vehicles of the BMW Group due to small urea/water mixture containers. The BMW Group continues to vehemently reject this claim.

In diesel vehicles of the BMW Group, a combination of several components is used for exhaust gas purification, depending on the size of the engines. As a result, we exhibit – in our view – very good real-world emissions behaviour. This is also confirmed by the study carried out by the International Council on Clean Transportation (ICCT).

→ see graphic 2.03

→ see chapter 2.1

In Germany, the BMW Group supports the initiative to update the software of the Euro 5 diesel cars with the experience gained in the field and to speed up the fleet penetration of Euro 6 diesel cars.

Fully supporting the changeover to modern diesel engines in Germany

From the perspective of the BMW Group, the diesel engine can also make an important contribution towards achieving national and international CO_2 reduction goals. Political framework conditions in Europe can provide important incentives for speeding up the market penetration of modern diesel.

In Germany, government and automotive groups agreed on an extensive set of measures at the “Nationales Forum Diesel” (National Diesel Forum) at the beginning of August 2017:

To speed up the changeover from diesel-engine cars that comply with older standards than Euro 5 to vehicles with the latest exhaust re-treatment or e-vehicles, the BMW Group and other German carmakers have undertaken to fund and offer incentives in the near future (for example “changeover bonuses”). Across Europe, the BMW Group grants all owners of diesel-engine cars with Euro 4 exhaust emissions standards or older who trade in their vehicles at their BMW partner an environmental bonus. This amounts to €2,000 for the purchase of a BMW or new MINI vehicle, or €1,500 for a demonstration vehicle or a pre-owned late model. In order to ensure that these measures help to reduce CO_2 emissions, this bonus is only paid out for new BMW i3, plug-in hybrid or Euro 6 vehicles (first registration) with a maximum CO_2 value of 130g/km (according to the NEDC). The environmental premium is not offset against other existing governmental incentives to buy, such as the environmental bonus currently offered in Germany for the purchase of electrified vehicles – it can be claimed in addition. A purchaser of the BMW i3 can therefore get an overall price reduction of €6,000 on a new vehicle. The special offer will initially run until the end of June 2018.

The German government and the automotive industry will together establish a new “Sustainable Mobility for the City” fund which is expected to be endowed with a total of €1 billion. The BMW Group and other German carmakers will contribute to the industry’s part of the fund according to their market shares.

Introduction

1
Fundamentals

1.1 Strategy and management
→ 1.2 Stakeholder dialogue
1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

Countering social and environmental risks in the cobalt supply chain with joint measures and transparency

Cobalt is a key component in the production of electrified vehicles and high amounts of it are contained in high-voltage batteries of electric vehicles and plug-in hybrids. As cobalt mining runs the risk of human rights violations, we are working on increasing transparency in the cobalt supply chain at different levels. In addition to internal measures to increase transparency in the supply chain, we are involved in projects such as the Responsible Cobalt Initiative (RCI).

→ see chapter 3.3

Supporting free trade

As a global enterprise, the BMW Group has always supported the further opening of worldwide markets as well as the continuous reduction of tariff and non-tariff trade barriers. We manufacture vehicles worldwide, take advantage of global sourcing and are convinced that free trade is a key component of a sustainable growth and employment policy.

Supporting democratic parties

The BMW Group supports the sociopolitical work carried out by the following democratic parties in Germany: CDU, CSU, SPD, FDP and Bündnis90/Die Grünen. The company places high value on transparency in this regard and complies with the relevant legislation. Since 2014, the BMW Group no longer supports the work of political parties with donations, but rather solely through content-based partnerships, for example by sponsoring public discussion forums and dialogue formats. All partnerships are subject to the sponsoring regulations of the BMW Group.

→ see chapter 3.2

BMW Group at the 23rd UN Climate Change Conference in Bonn

The 23rd UN Climate Change Conference (COP 23) took place in Bonn in November 2017. For the first time, an island country severely affected by climate change – Fiji – was host.

The withdrawal of the USA from the Paris Agreement made this year's conference all the more intense. However, the countries in attendance reaffirmed their commitment to working together in order to achieve the climate goals.

At the 23rd world climate conference, the BMW Group made its presence felt at a number of different events and provided impetus and professional expertise in discussions and presentations. The focus was on the renewed involvement of the BMW Group as a headline sponsor of the Sustainable Innovation Forum (SIF). The SIF has ranked among the key sustainability conferences of the UN COP events for years. The world's leading stakeholders from politics, industry and society utilise it as a platform for discussions on the challenges of sustainable development. The BMW Group was thus part of the two-day business forum "Sustainable Innovation Forum 2017" with an opening address by Markus Duesmann, Member of the Board of Management of BMW AG, Purchasing and Supplier Network. Furthermore, the BMW Group was involved in a panel on the topic "Decarbonisation of the Transport Sector" during the Low Emissions Solutions Conference with top-ranking representatives of national and international delegations and civil society. Representatives of the BMW Group held an intensive discussion with Patricia Espinosa Cantellano, Executive Secretary of the United Nations Framework Convention on Climate Change, as well as the Californian delegation and environment ministers from Oregon, Washington State and California. On the occasion of the UN Climate Change Conference, the BMW Group announced significant changes to its energy strategy.

Introduction

1

Fundamentals

1.1 Strategy and management
→ 1.2 Stakeholder dialogue
1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2

Products and services

3

Production
and value creation

4

Employees and society

Further key indicators

Appendix

Combining dialogue with society and corporate citizenship

The BMW Group obtains countless requests for support each year – from applications for the financial support of a project through to ad placement in a magazine. In order to fulfil the trust placed in us, the BMW Group independently initiates sustainable projects around the world. We consider corporate citizenship to be a cornerstone of our business activity. We use our expertise to provide assistance in areas we know well.

→ see chapter 4.4

What's more, we deal with current societal challenges and focus on areas where we can make the greatest impact on the basis of our core competencies and bring about concrete, measurable improvements.

Regularly seeking dialogue with employees

The BMW Group conducts a survey among its employees every two years and regards its workforce as a key stakeholder. Participation of 75% of all employees worldwide resulted in a representative result for 2017 and was a percentage point higher than two years earlier. The following statement had the best result with 90% agreement: "I am proud to work for the BMW Group." From the perspective of employees, there is room for improvement in streamlining decision-making processes (41% positive response). The best improvement compared to 2015, with an increase of eight percentage points to a 77% positive response, was in the understanding of Strategy NUMBER ONE > NEXT.

Introduction

1
Fundamentals

1.1 Strategy and management
1.2 Stakeholder dialogue
→ 1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

1.3 COMPLIANCE AND HUMAN RIGHTS

Sustainability goal:
With our compliance management, we aim for legal conformity of all activities of the BMW Group

Responsible and lawful conduct as well as respect for human rights is both in line with our convictions and our corporate culture. We also require this of our business partners. The BMW Group is considered a company of integrity and a reliable partner throughout the world. This builds trust among our customers, shareholders, business partners and among the general public, thereby ensuring the long-term success of our company.

Key measures:
Empowering employees and improving business processes in order to reduce compliance risks for the long term

The basis of our Compliance Management System is the BMW Group Legal Compliance Code. In it, the Board of Management acknowledges compliance as a joint responsibility and reaffirms the commitment of all employees to responsible action and compliance with the applicable law.

In the year under review, we concluded the establishment of local compliance management functions and are therefore implementing a Compliance Management System that is consistent throughout the Group. The Financial Services division of the BMW Group is covered by this system. It is geared towards the risk situation of the company. With defined structures and processes, its instruments set a company-specific regulatory framework so that each employee is familiar with their compliance responsibility and lawful conduct is systematically ensured. These key components of the system include internal compliance regulations, employee training, communication, complaint and case management as well as compliance controls. The Compliance Management System is applied for all compliance topics, in particular corruption prevention and antitrust compliance. By integrating human rights requirements into this Compliance Management System, we intend to systematically ensure adherence to human rights, in particular in compliance with the ILO core working standards, at all our locations. In our annual compliance report, we ask all organisational units of the BMW Group about the local risk assessment of potential human rights violations, among other things. There are particular human rights risks in the supply chain due to international and collaborative value creation processes in the automotive industry. For this reason, we have integrated human rights into our BMW Group sustainability standard for the supplier network and established an appropriate risk management process.

In our → **Annual Report 2017,** we provide comprehensive information on the Compliance Management System and reveal the main features of the measures taken. In the Sustainable Value Report, we touch upon the compliance topics of corruption prevention, antitrust compliance and respect for human rights as areas of focus.

Due diligence processes:
Systematically ensuring lawful conduct

In order to protect itself systematically against compliance-related and reputational risks, the Board of Management set up a Compliance Committee in 2007 to control and monitor the activities necessary to prevent violations of law. We determine the scope and intensity of our compliance activities on the basis of an annually updated Group-wide compliance risk assessment. The tasks of Group-wide compliance management are implemented by the BMW Group Compliance Committee Office on an operational level. In 2017, we

Introduction

1
Fundamentals

1.1 Strategy and management
1.2 Stakeholder dialogue
→ 1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

concluded the implementation of local compliance functions. Responsibilities are assigned via a binding organisation and task description.

Compliance with and the implementation of the BMW Group Legal Compliance Code and internal compliance regulations are audited regularly by Corporate Audit and the BMW Group Compliance Committee Office. The controls of the Compliance Committee Office are sample checks, so-called compliance spot checks which we carry out several times a year alongside a forensic service provider. The organisational units to be audited are selected on the basis of the Group-wide compliance risk analysis.
→ GRI 205-1

Our employees can contact their managers or the compliance helpline ("BMW Group Compliance Contact") with questions regarding compliance. Possible violations of the law can be reported anonymously via the BMW Group SpeakUP Line. BMW Group Compliance Contact is available to external persons who want to provide information in this regard. The BMW Group Compliance Committee Office investigates reports and initiates measures to remedy potential defects where appropriate.

The Financial Services business presents specific risks on the basis of its products and processes. We focus on anti-money laundering, data privacy protection, fraud prevention, legislative and regulatory monitoring as well as consumer protection in the provision of credit. In order to take account of the risks in these areas, the specialist unit of compliance coordination was set up in the Financial Services division as a delegated function of the BMW Group Compliance Committee Office. On the basis of a yearly trend analysis, it identifies new or amended regulatory requirements in the area of financial services and determines resultant necessary measures. Implementation on the part of global financial services companies of the BMW Group is monitored on a quarterly basis. Compliance is a component of the target process in the area of financial services. The integration of specific goals in our balanced scorecard system underlines the significance of the topic and ensures the monitoring of implementation. In the year under review, we also introduced a management system to identify risks of non-compliance with internal and external regulations at an early stage.

Results and performance indicators: Compliance training stepped up, human rights obligations complied with by business partners

Strengthening compliance within the corporate culture is a key success factor in ensuring that the Compliance Management System is as effective as possible. We therefore continued with and stepped up our internal communication measures and our compliance training offering in 2017. Since the BMW Group Compliance Management System was launched in 2008, more than 41,000 managers and employees worldwide have completed the online training course "Compliance Essentials", which mainly deals with the topic of corruption prevention. More than 24,000 managers and employees have participated in the online training course "Antitrust Compliance". Furthermore, we have introduced additional classroom courses on antitrust law, particularly for managers as well as employees in the areas of development, purchasing, production, financial services, fleet management as well as national sales companies in Europe and China, who are regularly in contact with competitors. All managers are also required to sign a compliance declaration.

We also hold specific training courses on the topic of human rights. → GRI 205-2, GRI 412-2 The BMW Group takes account of human rights obligations when selecting company sites and making investment decisions. In 2017, 100% of the order volume for our material investments in property, plant and equipment (including production equipment and buildings) worldwide were covered by human rights clauses. → GRI 412-3

Introduction

1

Fundamentals

1.1 Strategy and management
1.2 Stakeholder dialogue
→ 1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2

Products and services

3

Production and value creation

4

Employees and society

Further key indicators

Appendix

In addition to the international purchasing conditions, all dealer contracts in the European Economic Area, Korea, Thailand, Singapore, Malaysia and Indonesia as well as importer agreements across the globe currently contain a clause on compliance and human rights. We aim to establish these clauses with all dealers throughout the world by 2020. → GRI 205-2, GRI 412-3

Number of employees trained in Compliance Essentials since 2008

Over 41,000
↗ 2017

Over 32,500
2016

Number of employees trained in Antitrust Compliance since 2011

Over 24,000
↗ 2017

Around 17,000
2016

Introduction

1

Fundamentals

1.1 Strategy and management
1.2 Stakeholder dialogue
→ 1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2

Products and services

3

Production and value creation

4

Employees and society

Further key indicators

Appendix

COMPLIANCE AND HUMAN RIGHTS IN DETAIL

Our activities currently focus on corruption prevention, antitrust compliance and respect for human rights. Activities of the BMW Group include customised training and communication measures for specific target groups, individual consulting, consistent investigation of compliance-related queries and concerns as well as steering of compliance processes and controls. Compliance measures are supplemented by a whole range of internal policies, guidelines and instructions, which in part specify the applicable law.

→ see chapter 3.3

Training employees in compliance

With a systematic training programme, we impart the necessary understanding of compliance topics to our employees, taking account of their specific tasks.

Our online training on compliance essentials imparts the content of the → **BMW Group Legal Compliance Code** using specific case studies. The topic of corruption prevention covers, for example, the aspects of corporate hospitality and gifts as well as benefit types that are particularly relevant to the business model of the BMW Group, such as provision of vehicles and sponsoring. Participation in the training is mandatory for all BMW Group managers. The online training course is also available to all other employees throughout the Group. → GRI 205-1, GRI 205-2, GRI 412-2

We impart a basic understanding of antitrust compliance to our employees in target-group-specific classroom and online training courses. The target audience are all managers as well as employees who exchange information with competitors. Since 2011, more than 24,000 employees of the BMW Group have successfully completed the online training course “Antitrust Compliance”. Over 1,900 managers and other relevant employees took part in the classroom training courses in the year under report. In the coming years, compliance with antitrust law will play an important role in our compliance activities. For this reason, we are planning further training courses at the national and international level as well as the revision of our existing online training course.

Furthermore, we are training our employees in the area of human rights. These training courses are primarily targeted at managers and focus groups, for example in purchasing. Participants receive information on what needs to be observed in their everyday work and who they can contact with queries. Furthermore, the topic of human rights was a feature of compliance classroom courses in 2017, for example at our Global Compliance Conference.

Introduction

1

Fundamentals

1.1 Strategy and management
1.2 Stakeholder dialogue
→ 1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2

Products and services

3

Production
and value creation

4

Employees and society

Further key indicators

Appendix

Position: BMW Group on antitrust allegations

Employees of the European Commission conducted an inspection at the BMW Group in Munich in October 2017. The subject of this inspection was antitrust allegations against five German automobile manufacturers who have been reported about on several occasions since July 2017.

The Board of Management made it clear that it attaches great importance to carrying out a thorough internal investigation of these allegations. An internal team made up of representatives of Legal Affairs, Compliance and Corporate Audit, with the support of external lawyers and the entire organisation, has started to address this topic. This is the usual practice in regards to such allegations.

The BMW Group supports the European Commission in its work. In this context, the clear distinction between potential infringements of antitrust law and unauthorised manipulation of exhaust gas purification is important to the BMW Group. The latter is not part of the inspection by the EU commission. → GRI 206-1

Demanding lawful conduct from business partners

We expect consistently lawful conduct from our business partners along the entire value chain and see this as an important prerequisite for sustained business relationships.

→ see chapter 3.3

The international and collaborative value creation processes in the automotive industry entail a variety of risks in the areas of corruption, antitrust law and human rights. For this reason, we integrate compliance and human rights clauses into agreements with our business partners. We regard this as an important step towards increasing awareness among our business partners and demanding lawful conduct in the value chain. → GRI 205-2, GRI 412-3

In addition to contractual agreements, we check the integrity of our business partners by means of various due diligence processes. This includes our IT system "Business Relations Compliance" which stipulates a comprehensive risk assessment with regards to compliance aspects such as corruption and antitrust law.

Ensuring due diligence with regard to human rights

Our due diligence process for human rights follows the → **UN Guiding Principles on Business and Human Rights.** In particular, we expect our employees to respect human rights and protect them in their daily actions. We also require our business partners to comply with human rights.

Introduction

1

Fundamentals

1.1 Strategy and management
1.2 Stakeholder dialogue
→ 1.3 Compliance and human rights
1.4 Product safety
1.5 Customer satisfaction

2

Products and services

3

Production and value creation

4

Employees and society

Further key indicators

Appendix

International conventions and principles

Our models for ensuring compliance with environmental and social standards along the value chain are based on various internationally recognised guidelines. The BMW Group is thus committed to adhering to the Organisation for Economic Cooperation and Development (OECD) → **Guidelines for Multinational Companies,** the contents of the → **ICC Business Charter for Sustainable Development** as well as the → **United Nations Environment Programme Cleaner Production Declaration (UNEP).**

By signing the → **United Nations Global Compact** in 2001 and, together with employee representatives, issuing a → **Joint Declaration on Human Rights and Working Conditions in the BMW Group,** the Board of Management gave its commitment to abide worldwide by internationally recognised human rights and with the fundamental working standards of the → **International Labour Organization (ILO).**
→ GRI 102-12, GRI 102-16

Since integrating human rights requirements into our global Compliance Management System in 2016, adherence to human rights at all our locations is increasingly controlled and monitored within existing compliance processes. Our annual compliance reporting run, which covers all organisational units of the BMW Group, includes questions about the local risk assessment of potential human rights violations, among other things. We use the relevant feedback to derive further local measures to minimise risk. In 2017, we also conducted a Human Rights Compliance Assessment, which covered more than 90% of the company's organisational units. The assessment did not reveal any major weaknesses. However, there were indications of individual optimisation potential which we will address in 2018 together with the units concerned. → GRI 412-1

In order to implement the National Action Plan for Industry and Human Rights, we are in contact with the Federal Foreign Office and the Federal Ministry of Labour and Social Affairs to stay informed on the further development of specifications and taking account of these accordingly. In accordance with the international reporting requirements regarding the implementation of the UN Guiding Principles on Business and Human Rights, the first report in line with the UK Modern Slavery Act was published in May 2017. For this purpose, we evaluated relevant suppliers, initiating improvement measures and holding corresponding employee training courses where applicable. In preparation for the voluntary application of the EU Directive on conflict minerals, the BMW Group set up a working group in order to introduce targeted measures to further reduce the risk of human rights violations in the supply chains concerned.

→ see chapter 3.3

The BMW Group takes account of human rights obligations when selecting locations and making investment decisions. In 2017, all key orders from across the globe relating to fixed asset investments (including production facilities and buildings) were covered by human rights clauses. → GRI 412-3

Introduction

1
Fundamentals

1.1 Strategy and management
1.2 Stakeholder dialogue
1.3 Compliance and human rights
→ 1.4 Product safety
1.5 Customer satisfaction

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

1.4 PRODUCT SAFETY

Sustainability goal:
The BMW Group offers its customers and other road users the highest safety standards

As a provider of premium-quality individual mobility, we regard the safety of our vehicles as the central element of our product responsibility. The BMW Group considers product safety to be a holistic challenge. We equip our vehicles with active and passive safety systems, offer driving safety courses and provide our customers with the necessary product information. We want to contribute towards safety in road traffic with these measures.

Key measures:
Fully addressing product responsibility

By means of active and passive safety systems in our vehicles, we reduce the risk of accident and injury for our customers and other road users. We also prepare our customers for dangerous situations with driving safety courses. Starting at the design stage of our vehicles, we pay attention to the avoidance of potential hazardous materials and minimisation of emissions in the passenger compartment. In addition, we provide our customers with comprehensive information on how to use our products and mobility services correctly.

Due diligence processes:
Guaranteeing safety with systematic management

Vehicles of the BMW Group are developed and manufactured under strict application of quality management systems. All models are subject to thorough audits with regard to vehicle safety. We also monitor our vehicles on the market and follow up on any reports relating to safety. If required, we immediately inform the responsible authorities and introduce all necessary measures to protect our customers. The BMW Group has established corresponding committees, processes and organisations for this purpose.
→ GRI 416-1

Results and performance indicators:
Continuously stepping up safety

Ongoing further development and creation of new safety systems increases the safety of users of our vehicles. At the same time, our measures contribute towards enhancing the safety of third parties in road traffic.

Introduction

1

Fundamentals

1.1 Strategy and management
1.2 Stakeholder dialogue
1.3 Compliance and human rights
→ 1.4 Product safety
1.5 Customer satisfaction

2

Products and services

3

Production
and value creation

4

Employees and society

Further key indicators

Appendix

PRODUCT SAFETY IN DETAIL

Delivering safety across the board

Safety is a central element of our product responsibility and is addressed comprehensively within the BMW Group. Our vehicles are equipped with active and passive safety systems which satisfy the most stringent quality standards.

Active safety includes perfect chassis tuning, optimal traction and effective brakes. Electronic chassis control systems as well as a range of driver assistance systems also help to prevent accidents. In addition, numerous passive safety systems are installed in our vehicles in order to minimise the consequences of an accident. These include energy-absorbing crumple zones, passenger safety cells, seat belt systems and airbags.

With the BMW and MINI Driving Experience in 30 countries, we also offer general and specialised training courses for BMWs, MINIs and BMW motorcycles which help to ensure the safety of our customers and other road users. We provide customers with training on the correct procedure in certain hazardous situations. In doing so, we adapt our offer to the needs of customers. On the whole, we trained over 100,000 participants in international training locations in 2017. In the coming year, we want to add the focus areas of electromobility and autonomous driving to our offer.

On the race track, in snow or as driver safety training: BMW Driving Experience is an experience for all drivers.

Using non-hazardous materials

We consider the safety of materials from the very beginning of product development. We assess the materials to be used in terms of their risk potential and thus rule out problematic materials from the outset as far as possible. In this way, we ensure that the legal requirements in terms of product safety, protection of human health and the environment are complied with worldwide for each phase of the vehicle life cycle (from development to utilisation, through to recycling and disposal).

Since the 1990s, the BMW Group has been working closely with independent toxicologists to evaluate passenger compartment emissions. This way, we ensure that the precautionary levels are complied with in all new vehicles. We verify this in our passenger compartment emission test stations for various use profiles. Furthermore, all vehicles of the brands BMW, MINI and Rolls Royce are equipped with passenger compartment filters as standard. All air is filtered three times (mechanically, electrostatically and depending on equipment with activated charcoal) before it enters the passenger compartment. This way, particles such as dust, pollen and pollutants from the outside air are practically completely filtered out.

Introduction

1

Fundamentals

1.1 Strategy and management
1.2 Stakeholder dialogue
1.3 Compliance and human rights
→ 1.4 Product safety
1.5 Customer satisfaction

2

Products and services

3

Production and value creation

4

Employees and society

Further key indicators

Appendix

Providing product and service information

We provide our customers with information regarding the correct use of our vehicles as well as the risks and hazards in line with the relevant applicable legal regulations. The product liability requirements of customer information are guaranteed by a professional and legal assessment during the approval process. This concerns operating manuals on safe product use in particular. Each component of our vehicles can be traced back to the supplier via its part number. In light of growing digitalisation, aspects of data security, access and cyber security will play an increasingly important role in coming years. The BMW Group follows the premise “safety first, business later” as a matter of principle: in the interest of the customer, safety aspects must be regulated before solutions can be offered. Safety is the prerequisite for customer confidence in connected and autonomous driving.

Information on the safety of our vehicles and on the protection of our customers’ health is available in the in-vehicle operating manuals, in printed form or as an app for smartphones and on the Internet. This data is supplemented by information on the vehicle and additional background information on services, accessories and components.

Introduction

1

Fundamentals

1.1 Strategy and management
1.2 Stakeholder dialogue
1.3 Compliance and human rights
1.4 Product safety
→ 1.5 Customer satisfaction

2

Products and services

3

Production
and value creation

4

Employees and society

Further key indicators

Appendix

1.5
CUSTOMER SATISFACTION

The topic of sustainability is growing in importance for product design and for the overall image of the company. The BMW Group has therefore made sustainability one of the fundamental principles of its brands. Various aspects of sustainability also form part of the customer surveys, the results of which we take into consideration in our decisions. After all, satisfied customers are essential to the long-term success of the company.

Most of our customers today hold companies responsible for developing their products and services in a sustainable manner. They also expect sustainability to be an integral part of our business model.

We conduct surveys on an annual basis in order to optimise our products and services according to the needs of our customers. → GRI 102-43 In addition, we continuously establish the satisfaction of our customers on the basis of uniform global standards.

Responding to customer expectations

The results of customer surveys and studies are evaluated both at the BMW Group level and also at our subsidiaries and dealerships so that we can respond quickly to customer wishes in a targeted manner. The subsidiaries of our major sales markets (including in the USA, China and Germany) regularly report to a committee that includes Board of Management members. In addition, specific customer concerns are analysed at the management level to identify potential process weaknesses and develop appropriate solutions.

In 2017, we continued to adapt the consumer survey to a new survey concept, a process which was started in the previous year. We give customers the chance to answer open-ended questions so that they can focus their feedback on the topics which are most important to them. This enables us to take even better account of our customers' expectations and push ahead with ongoing improvement processes.

We were once again able to achieve positive results this year. Our surveys reveal that satisfaction remains at a good high level. We see this as confirmation of the effectiveness of our ongoing efforts, which we will continue to maintain in the future.

Further developing sustainability in dialogue with our customers

The brands of the BMW Group address sustainability in multiple ways, from the development of fuel-efficient and electrified drivetrains and the use of renewable raw materials or recycled materials in the passenger compartment all the way to our mobility services. We intend to take on a leading role in the automotive sector with our sub-brand BMW i, which was developed holistically as a sustainable mobility solution.

→ see chapter 2.2

Introduction

1
Fundamentals

1.1 Strategy and management
1.2 Stakeholder dialogue
1.3 Compliance and human rights
1.4 Product safety
→ 1.5 Customer satisfaction

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

In doing so, we comply with our customers' increasing awareness of environmental issues. However, as a purchase decision depends on many different factors, there are also contradictions between our customers' expectations of sustainability and their individual preferences when making purchase decisions. For example, short-term trends such as low fuel costs may reduce demand for the most fuel-efficient vehicle types. Conversely, sustainability aspects are reflected more clearly in the purchase decisions of our fleet customers. Low consumption figures and CO_2 emissions are particularly decisive criteria for these customers.

In addition to surveys on customer satisfaction, we carried out a study in Germany, the UK, Italy, France and Spain in the year under review in order to gain a better understanding of what criteria are important to our customers when they are considering which type of drivetrain to select. This information is predominantly used to help us shape the transformation process towards electrified drivetrains according to the preferences and wishes of our customers. → GRI 102-44

In another study conducted in Germany, we gathered information on how to increase customer acceptance of recycled and renewable materials. With the broader use of sustainable materials, for example, we focus on creating added value for customers. → GRI 102-44

Implementing feedback from customer studies: the Initial Quality Study (IQS) USA

In the annual IQS USA, new-vehicle customers in North America are asked about problems with their vehicle after a period of three months. The study is conducted on an annual basis by the market research company J.D. Power, which is similar to leading consumer survey organisations in other countries in the perception of customers. Since 1968, it has studied customer satisfaction, product quality and consumer behaviour for a wide variety of industries in a number of countries.

In the 2017 study, the BMW Group achieved a positive result with distinction for the BMW 2 Series, the BMW 4 Series, the BMW X6 and the MINI Cooper.

We use the feedback from the IQS studies to further develop our products according to the wishes of customers. For example, we converted the wiper and indicator lever from a tipping to a latching concept in the BMW 5 Series launched in 2017 in order to increase its user-friendliness. We also visibly positioned the button for steering wheel heating on the steering wheel spoke in the same model. In accordance with customer wishes, the door-locking function is located next to the door opener so that it can be reached from the outside when the window is open. → GRI 102-44

Introduction

1
Fundamentals

2
→ Products and services

2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

Search
Back

PRODUCTS AND SERVICES

2

Vehicles and mobility services are at the core of our business model. The BMW Group product portfolio is currently undergoing a fundamental transformation: alongside vehicles with combustion engines, electrified vehicles are playing an increasingly important role.

The BMW Group is watching various trends that will have a significant influence on the company's product policy, especially with regard to electrified vehicles.

As an example, whereas the product life cycle remains around seven years for electrified vehicles, in battery cells, the technological developments are currently much faster than that. The BMW Group aims to make these technological developments in battery cells available to customers as directly as possible, rather than wait for the next product life cycle.

Demand for electrified drives is heavily dependent on infrastructure, subsidies and regulatory framework conditions. Regulation no longer takes place only at the European or national level, but increasingly at regional and municipal levels, with different instruments. This results in considerable differences in the speed at which new technologies become established, as well as fragmentation of markets that have been uniform in the past.

In the view of the BMW Group, we must therefore continue to assume strongly diverging market conditions. The company meets this challenge with a high level of flexibility in terms of vehicle platforms, vehicle architectures and production processes in the plants. This is the only way in which the company can offer the models with a choice of full electric drive, plug-in hybrid or a high efficiency combustion engine, depending on what the customers need.

Added to this is the continuous development of our mobility services, designed to deliver innovative solutions in future, especially for city mobility.

Introduction

1
Fundamentals

2
→ Products and services

2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

PERFORMANCE INDICATORS

CO_2 emissions of BMW Group Automobiles (EU-28) in g/km

122
↘ 2017

124
2016

CO_2 emission reduction of BMW Group Automobiles (EU-28) compared to the base year 1995 in %

42
↗ 2017

41
2016

Electric and electrified vehicles

Annual sales

103,000
↗ 2017

62,000
2016

Electric and electrified vehicles

Cumulated number

215,000
↗ 2017

112,000
2016

Public charging points accessible with ChargeNow in numbers

137,000
↗ 2017

62,000
2016

Users of DriveNow and ReachNow in numbers

1,108,000
↗ 2017

853,000
2016

EMISSIONS OF CO_2 AND POLLUTANTS

By 2020, the BMW Group will have reduced CO_2 emissions in the European new vehicle fleet (EU-28) by at least 50% compared to the base year 1995.

Efficient and clean: the BMW 320d Touring EffDyn Edition consumes between 4.0 and 4.5 l/100 km.

Introduction

1
Fundamentals

2
Products and services

→ 2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

2.1 EMISSIONS OF CO_2 AND POLLUTANTS

Sustainability goals:
By 2020, the BMW Group will have reduced CO_2 emissions in the European new vehicle fleet (EU-28) by at least 50% compared to the base year 1995

Climate change and the burdens placed on air quality, especially in cities, are some of the key challenges we face as a carmaker. We therefore consistently pursue a reduction in emissions of CO_2 and pollutants in the development of our vehicle fleet. In reducing pollutant emissions, we intend to continue to meet the statutory limit worldwide. With the shift towards low-emission, fuel-efficient vehicles in our portfolio, we also meet our customers' wishes as they become increasingly aware of environmental issues. Our customers also base their purchasing decisions on incentives for sustainable mobility, for example, buyer's premiums and motor vehicle taxes, as well as traffic restrictions and permissions.

Key measures:
Lower emissions from vehicle use with efficiency technologies, solutions for pollutant reduction and electric drivetrains

In our conventional drive vehicles, we currently achieve the most effective impact on lowering CO_2 and pollutant emissions through our efficiency technologies and through specific solutions for pollutant reduction.

All BMW Group diesel vehicles have an NOx storage catalytic converter fitted. In addition, depending on the engine and size of the vehicle, exhaust gas purification is carried out by urea injection with Ad-Blue. We continue to refine these technologies, always taking the latest research advances into account. Since March 2007, we have integrated EfficientDynamics technologies in our vehicles, in accordance with the specific requirements of individual models, engines and the respective markets.

In addition, models with electric drivetrains in our new vehicle fleet do their part towards lowering CO_2 and pollutant emissions. We aim to help our customers become used to the idea of electromobility. Therefore, starting in 2015, we expanded our product range step by step with new plug-in hybrid models, reaching nine by the end of 2017. We added the fully electric BMW i3 in 2013, and now have offerings in all vehicle segments. By 2025, we plan to offer 25 electrified models, of which twelve will be purely electric.

Due diligence processes:
Systematically reducing emissions in product development

The above-mentioned aspects of product responsibility are an integral part of the target systems and organisational processes in our vehicle development units.

We consistently take our reduction targets and market-specific fleet requirements into account during product development. This entails defining specific emission reduction targets for each product line and each new vehicle project

Introduction

1
Fundamentals

2
Products and services

→ 2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

over the whole life cycle. The life cycle of our products extends from the development of vehicles and services, via the supply chain and production, right up to utilisation, and finally vehicle recycling. Life Cycle Engineering helps us carry through our vision of achieving a substantial improvement from one vehicle generation to the next. We manage the implementation of targets and the evaluation of progress in the development process by applying Life Cycle Assessment in accordance with ISO 14040/44.

The BMW Group's Strategy unit is responsible for monitoring and refining our targets. In addition, the Complete Vehicle Architecture unit coordinates the development and implementation of fuel-saving technologies in individual vehicle projects, which are achieved for example through EfficientDynamics measures.

Results and performance indicators: Continuing success in emissions reduction

The BMW Group reduced CO_2 emissions in newly-sold vehicles in Europe by around 42% between 1995 and 2017. Our European vehicle fleet (EU-28) had an average fuel consumption of 4.6[1] l diesel/100 km (2016: 4.6 l diesel/100 km) or 5.6[1] l petrol/100 km (2016: 5.6 l petrol/100 km) and average CO_2 emissions of 122[1] g/km (2016: 124 g/km, internal BMW calculation).

[1] Basis: NEFZ

→ see performance indicators

Average CO_2 emissions in the USA were 168[2] g CO_2/km (2016: 173 g CO_2/km, internal BMW calculation) and in China 154[1] g CO_2/km (2016: 164 g CO_2/km).

[2] Basis: USC (FTP + HWFET)

[1] Basis: NEFZ

Average fleet CO_2 emissions per kilometre in the BMW Group in the core markets (EU, USA, China, Japan and Korea) fell by 2% to 141[3] g CO_2/km (2016: 144 g CO_2/km).

[3] Basis: NEFZ (EU + China), USC (USA + Korea), JC08 (Japan)

→ GRI 302-5, GRI 305-3, GRI 305-5

Since the beginning of the 1990s, we have significantly reduced pollutant emissions by refining our technologies. In Europe, emissions of nitrogen (NOx) and particulate matter (PM) in the new vehicle fleet were lowered by over 90% between 1992 and 2017, in accordance with the limit values of the Euro standards.

The introduction of new models with drive technologies that ensure lower emissions and pollutants continues to have a positive effect on our average fleet CO_2 emissions. Alongside the i3 model available since 2013 and the i8 model introduced in 2014, iPerformance models with plug-in hybrid drive have been available since 2015 in the 2 Series, 3 Series, 5 Series, 7 Series, the BMW X5 and the MINI Countryman. Compared against similar pure combustion engine models, plug-in hybrid models save up to 50% fuel.

Introduction

1
Fundamentals

2
Products and services

→ 2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

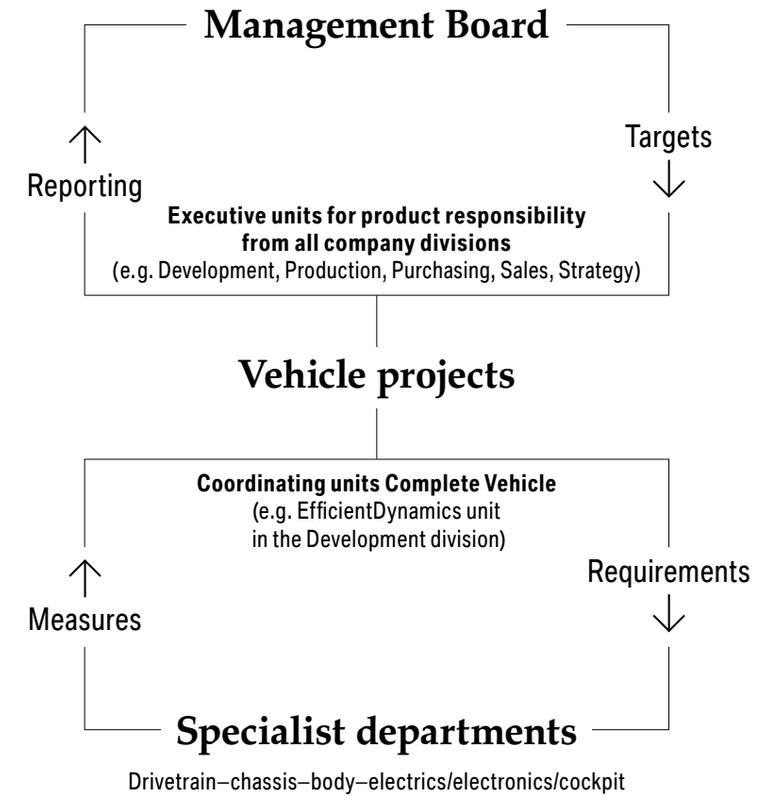
Appendix

EMISSIONS OF CO_2 AND POLLUTANTS IN DETAIL

Lowering CO_2 and pollutants during utilisation through efficiency and environmental technologies

In the BMW Group, the drive for sustainable mobility pushes us to develop innovative technologies. We set ourselves ambitious goals for increasing the efficiency of our drivetrain systems and reducing the emission of pollutants. We take these goals into account from the outset during the product development stage as well as in the corresponding organisational processes.

Product responsibility in BMW Group vehicle projects
→ G2.01



Since March 2007, we have integrated the efficiency technologies (EfficientDynamics Technologies) derived from these in our vehicles. The competitive edge achieved through this is one of the reasons why the BMW Group had its seventh consecutive record year of sales in 2017. Continuously introducing the latest technologies ensures that we achieve the reduction in CO_2 and pollutant emissions that we aspire to. These include efficient engines and gearboxes, optimised aerodynamics (air flap control, air curtain/breather, aero wheel rims), intelligent energy management, light-weight design and tyres with reduced rolling resistance. Additional important efficiency poten-

Introduction

1
Fundamentals

2
Products and services

→ 2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

tial has also been leveraged through the early implementation of energy recovery in low-voltage vehicle electricity systems, Active Coasting and uncoupling the engine from the gearbox when not in use.

Starting with the new BMW 5 Series, the BMW Group offers an improved smart Auto Start Stop function that uses environmental sensors to avoid very brief stops, which have proven themselves to be both inefficient and uncomfortable. In the next few years, 12V systems in smaller vehicles and 48V systems in medium and larger vehicles will increase the recovery and coasting potential with a more efficient electrical system to achieve a CO_2 reduction of 5 to 7%.

Incorporating low-emission drives into the entire fleet

In 2013, we introduced the fully electric BMW i3 to the market. We have used the insights gained from the development of this model since then to expand our portfolio and design more vehicles with electrified drivetrains.

One result of this technology transfer is the BMW iPerformance series with plug-in hybrid drives. Here, the start was made in 2014 with the BMW i8. Since 2015, the BMW Group has expanded its product range step by step to now include the BMW 2 Series, BMW 3 Series, BMW 5 Series, BMW 7 Series, BMW X5 iPerformance and the MINI Countryman. Short and medium-range journeys can be covered in electric mode by the innovative combination of electric engine, lithium-ion battery and intelligent energy management. The TwinPower Turbo petrol engine is only activated when needed. In AUTO eDRIVE mode, intelligent energy management determines the most efficient combination of electric and combustion engine – depending on driving speed and battery level. Typical commutes during the week, for example, could be driven in electric mode, while longer journeys can also be undertaken using the combustion engine. The BMW 740e, for instance, has a range of up to 48 km in fully electric mode. → GRI 302-5

Opening up longer ranges with hydrogen and fuel cell technology

As an addition to purely battery-electric drivetrains, we are continuing to research hydrogen fuel cell technology, which will give us flexibility with regard to alternative drivetrains. Here, hydrogen is used as an energy source that is converted by the fuel cell into electricity and water by drawing on the oxygen in the surrounding air. In the long term, this would make another solution feasible for emission-free driving over long distances, provided that the infrastructure has been developed, and hydrogen become widely available.

Zero-emissions driving with hydrogen: the BMW Group is researching hydrogen fuel cells.

Introduction

1
Fundamentals

2
Products and services

→ 2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

Making urban mobility more sustainable with electric scooters

In 2014, we introduced C evolution, our electric scooter, to the market. The Long-Range version of the fully electrically powered scooter has 48 HP at peak performance and a range of up to 160 km. It is designed to be a commuting vehicle, particularly for travel between the outskirts and the city centre. The main focus here is on two requirements: firstly, the performance, which is comparable to that of a combustion-powered maxi scooter, and secondly, that it has a long range in standard operational conditions.

Clean driving: the police in Barcelona were given 30 C evolution electric scooters.

Lowering CO_2 and pollutant emissions from our vehicles

Our goal remains to reduce CO_2 emissions from our vehicle fleet by at least 50% between 1995 and 2020. So that we can track the development stage towards achieving our target, CO_2 emissions published in this report are collected and calculated in accordance with the legal requirements. → GRI 302-5, GRI 305-5

Development of CO_2 emissions of BMW Group new vehicle fleet in the European Union

→ T2.01

Year	g CO_2/km	Changed compared to base year 1995
1996	212	1%
1997	215	2%
1998	212	1%
1999	207	–1%
2000	203	–3%
2001	203	–3%
2002	195	–7%
2003	195	–7%
2004	199	–5%
2005	189	–10%
2006	186	–11%
2007	168	–20%
2008	156	–26%
2009	150	–29%
2010	148	–30%
2011	145	–31%
2012	138	–34%
2013	133	–37%
2014	130	–38%
2015	127	–40%
2016	124	–41%
2017	**122**	**–42%**

The BMW Group reduced CO_2 emissions of its newly sold vehicles in Europe by around 42% between 1995 and 2017. Our European vehicle fleet (EU-28) had an average fuel consumption of 4.6 l of diesel per 100 km or 5.6 l of petrol per 100 km and average CO_2 emissions of 122 g per km (internal calculation) in 2017. Our goal remains to reduce CO_2 emissions by at least another 50% between 1995 and 2020.

As well as reducing the carbon emissions of our cars, we constantly reduce pollutant emissions. To receive type approval and vehicle registration, vehicles must comply with the latest pollutant regulations. The requirements anchored in law (limits for individual pollutant elements) may differ strongly according to region, e.g. EU, China and USA, and must generally be fulfilled regardless of vehicle model. At the beginning of the 1990s, the first

Introduction

1
Fundamentals

2
Products and services

→ 2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

cycle-based emissions laws were passed in the EU. Since then, the limits for nitrogen oxide (NOx) and particulate matter (PM), both for diesel and petrol-fuelled vehicles, have been massively reduced.

→ see graphic 2.03

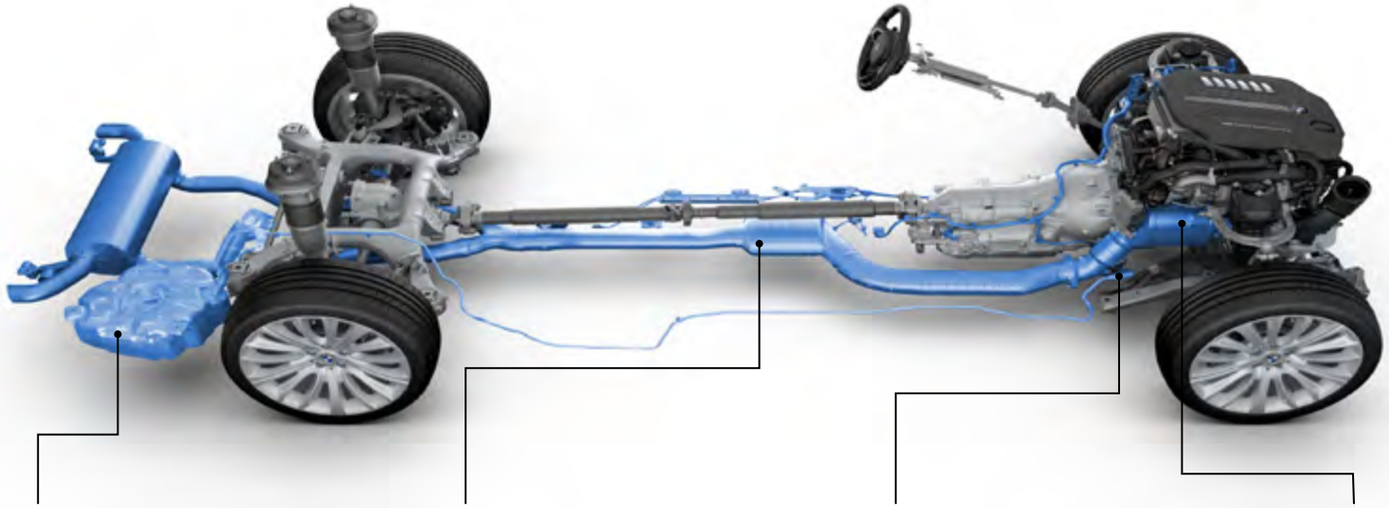
Depending on the vehicle concept, we have used maintenance-free NOx catalytic converters for diesel-fuelled models since the start of the Euro 6 permits or a combination with Selective Catalytic Reduction (SCR) using urea (AdBlue). The BMW Group's first pilot models met the legal requirements under the Euro 6 standard even before these came into effect. The Euro 6 standard in combination with the additional Real Driving Emissions standard (RDE standard) stipulate that, in order to receive type approval,

→ see graphic 2.05

→ see graphic 2.03, 2.04 and 2.05

limits for nitrogen oxide (NOx value) and particulate count (PN value) in petrol and diesel vehicles must be met in real driving situations and be checked in street tests. This applies to new type approvals since September 2017 and in future for all initial registrations from September 2018 onwards for PN and from September 2019 for NOx. As a second level of RDE legislation, NOx limits for real driving situations will be reduced further from January 2020. The RDE PN regulation affects all direct injection engines (petrol and diesel engines). The robust design of petrol DI engines for any and all extreme RDE conditions leads in the end to the use of petrol particle filters, whereas in diesel engines, particle filters have been in series for years due to higher raw emissions.

Measures to reduce emissions in a BMW diesel vehicle
→ G2.02



AdBlue® tank
Heated and with level sensor

The NOx reduction fluid AdBlue® is integrated in its own 20-litre tank (data for BMW 7 Series).

SCR catalytic converter
Insulated with temperature and NOx sensor

In the SCR catalytic converter, selective catalytic reduction converts the amoniac contained in the AdBlue® to water vapour and nitrogen.

SCE dosing module
Dosing module cooled

Precise dosage of AdBlue® into the exhaust gas flow is the basis for an efficient selective catalytic reduction of nitrogen oxides in the SCR catalytic converter.

NOx storage catalytic converter and particle filter
Insulated and in ideal proximity to the engine

The nitrogen oxides are fed into and stored in the NOx storage catalytic converter and reduced by the regeneration that takes place at defined intervals. The particle filter installed in the same housing reduces particle emissions to a minimum.

Introduction

1
Fundamentals

2
Products and services

→ 2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

ICCT shows: very good real emissions behaviour of BMW diesel engines

The BMW Group already has the best average NOx real emissions record for its fleet compared to other manufacturers. This is confirmed by a report from the International Council on Clean Transportation (ICCT), a non-profit organisation that conducts independent research as well as compiling technical and scientific analyses for environmental authorities. The study shows how far away carmakers are from the Euro 5 regulatory limits (180 mg/km for vehicles sold between 2009 and 2014) and Euro 6 (80 mg/km for vehicles sold between 2014 and today). The environmental organisation ICCT gathered measurement data from authorities and other organisations in Europe on a total of 541 diesel cars that fall under the Euro 5 and 6 standards.Euro 6 diesel vehicles (80 mg/km) of the BMW Group achieved the best result with a factor of 1.8. For Euro 5 vehicles (180 mg/km), the BMW Group was above the limit, at a factor of 2.2. These results put the BMW Group in top place, ahead of 15 competitors from a number of automotive segments. In addition, the factor for average NOx emissions of all Euro 6 diesel vehicles tested was 4.5, putting the BMW Group clearly ahead of its competitors. Models manufactured by the following carmakers were tested under real driving conditions: BMW, Volkswagen, Daimler (Mercedes-Benz, Smart), Toyota, Tata (Land Rover), Mazda, Honda, PSA (Peugeot-Citroën), Volvo, Kia, Ford, Suzuki, Hyundai, General Motors (Opel-Vauxhall), Fiat Chrysler (incl. Alfa Romeo and Jeep), Renault-Nissan. → **The conclusions of the ICCT study as well as a detailed graphical overview of the results are found here.**

BMW Group diesel engines are among the cleanest when compared with the competition.

Introduction

1
Fundamentals

2
Products and services

→ 2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
2.3 Mobility patterns

3
Production and value creation

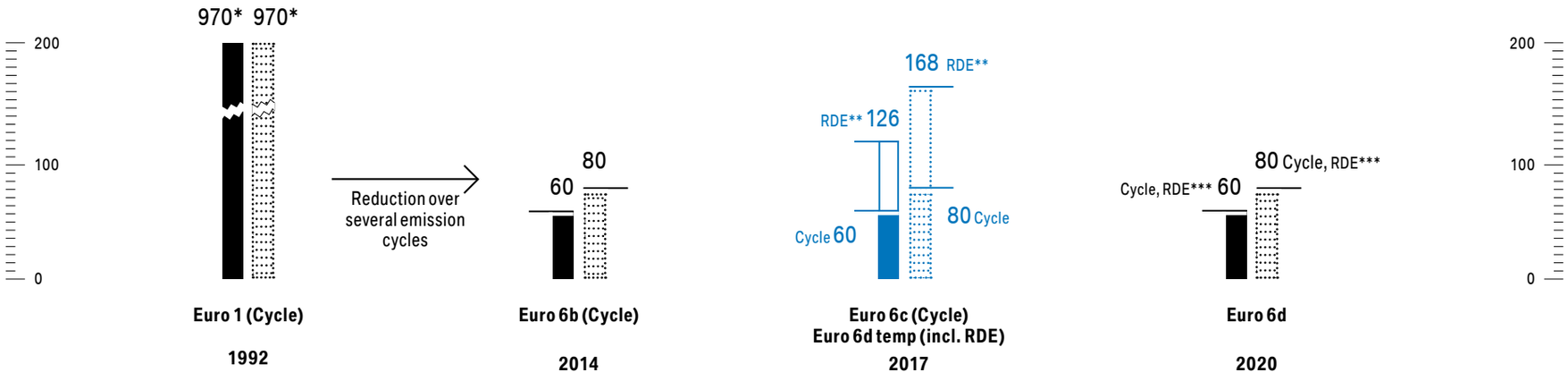
4
Employees and society

Further key indicators

Appendix

Statutory emission limits for cars with petrol and diesel engines (NOx and PM) in the European Union

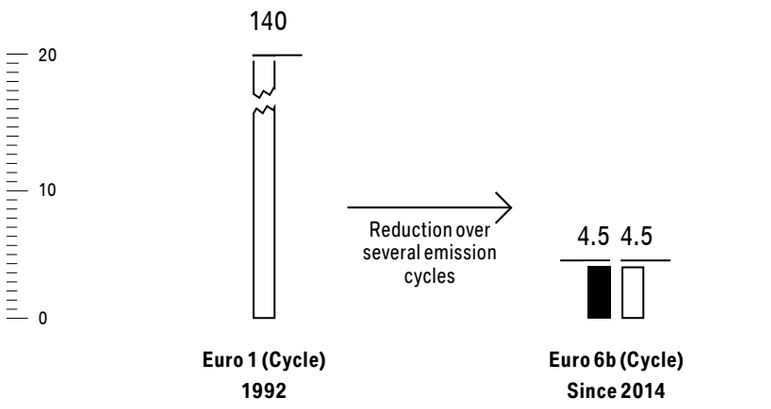
→ G2.03



* Combined limit (HC+NOx).
** RDE limits including measurement tolerance.
*** RDE limits excluding measurement tolerance.
NOx, petrol.
NOx, diesel.

Statutory particle mass limits for cars with petrol and diesel engines (PM) in the European Union

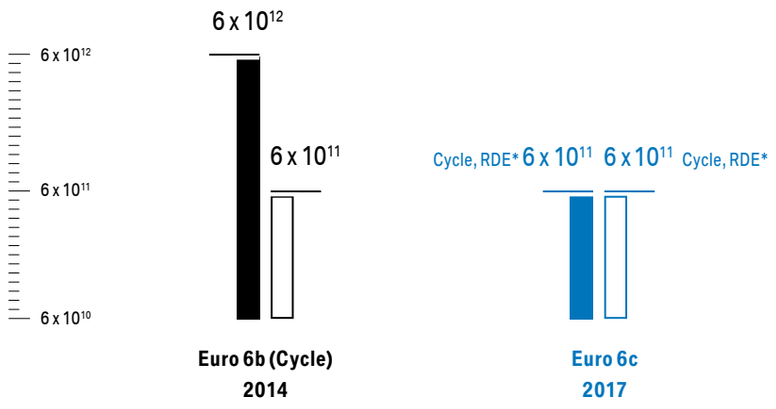
→ G2.04



Particular Matter (PM), petrol.
Particular Matter (PM), diesel.

Statutory particle limits for cars with petrol and diesel engines (PN) in the European Union

→ G2.05



* RDE limits excluding measurement tolerance.
PN, petrol, direct injection.
PN, diesel.

Introduction

1
Fundamentals

2
Products and services

→ 2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

CO_2 regulation in central market regions

→ T 2.02

EUROPE	USA	CHINA
CURRENT REGULATORY APPROACH		
By 2020, the EU will require all manufacturers to reduce European new vehicle fleet emissions to an average of 95 g CO_2/km (based on NEDC).	The USA has also set fuel efficiency and CO_2 targets to be fulfilled by 2025. Based on a gradual reduction starting in model year 2012, the new vehicle fleet of all manufacturers must achieve an average of 202 g CO_2/mile (125 g CO_2/km) by model year 2021 and 163 g CO_2/mile (101 g CO_2/km) by model year 2025. In California, the CO_2 legislation is deemed fulfilled if manufacturers meet the federal requirements. Additional ZEV rules apply in California and ten other states, which stipulate mandatory sales quotas of electrified vehicles for manufacturers.	In China, the fuel efficiency of the vehicle fleet is regulated. For 2020, an average consumption target of five litres per 100 km has been set.
DETAILS OF MEASUREMENT AND TESTING PROCEDURES		
These figures are calculated based on the number of vehicles sold. The European limits for CO_2 emissions refer to the standardised test cycle NEDC. In September 2017, the current NEDC was replaced by the WLTP.	These figures are calculated based on the number of vehicles sold. In the USA, the FTP (Federal Test Procedure) is used. The annual reduction targets are specified for the entire vehicle fleet and thus allow for flexibility in terms of the individual models.	These figures are calculated based on the number of vehicles sold. The consumption limits refer to the standardised test cycle NEDC.
FUTURE APPROACHES TO CO_2 REGULATION		
Follow-up legislation is currently being prepared in the EU for the period up to 2030, which is to be adopted by the beginning of 2019. The EU Commission published a first draft in early November 2017, which suggests a further reduction in CO_2 emissions from the EU new vehicle fleet of 15% by 2025, and 30% by 2030, with reference to the new WLTP cycle. In addition, it intends to introduce a bonus scheme if the indicative requirements for low-emission vehicles (<50 g/km WLTP) are exceeded. As per the Commission's suggestion, the requirements will be 15% for 2025 und 30% for 2030.	In the USA, the Mid-term Evaluation will be continued for the targets in model years 2022 to 2025. A decision is due by the end of March 2018 about whether the current targets will be adjusted. Changes to the currently applicable test process are not being debated. In California, meanwhile, discussions continue about the specifications of future ZEV rules.	A draft bill on consumer regulation in China is expected to be submitted next year. According to the current state of discussions, a further reduction of consumption values in l/100 km by 20% compared to the 2020 target can be assumed. At the same time, there is debate about introducing a China-specific test cycle. The introduction of an NEV mandate will take place in 2019, and a continuation is expected.

NEDC: New European Driving Cycle.
WLTP: Worldwide Harmonised Light Vehicles Test Procedures.
FTP: Federal Test Procedure.
NEV: New Energy Vehicle.
NEV mandate: the NEV mandate sets a quota of NEVs to be fulfilled by every manufacturer based on the total sales of that manufacturer.
ZEV: Zero Emission Vehicle.
ZEV mandate: the ZEV mandate sets a quota of ZEVs to be fulfilled by every manufacturer based on the total sales of that manufacturer.

Introduction

1
Fundamentals

2
Products and services

→ 2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

Dealing with internationally divergent framework conditions

The current and planned measures for CO_2 regulation in central market regions show that, viewed globally, carmakers are faced with a large number of regulations as well as differing measurement and testing processes. → see table 2.02

Further examples of divergent requirements are the restrictions on issuing number plates in Chinese metropolitan areas, as well as the debate around banning diesel in European cities. It should be noted in this context that announcements about imminent restrictions can already influence customer behaviour.

The BMW Group supports the development of nationally, and where possible internationally, harmonised guidelines in the individual world regions, since they make an important contribution towards combating climate change and improving air quality. The diversity and lack of harmonisation of different regulations at the national and supranational level is however a fundamental challenge for the BMW Group as a globally active enterprise. We assume that governments will further intensify limit regulations based on existing and future scientific analyses, as well as what is technologically possible. These future limits are expected to be very ambitious and will entail considerable investment and development work for manufacturers.

In addition, falling fuel prices and the associated changes in customer demand present new challenges that make it harder for us to achieve the fleet targets set for 2020. Finally, diverging consumer behaviour results in regional deviations in fleet consumption. One reason for this could be differences in preferences for particular drivetrains or vehicle concepts like SUVs (Sport Utility Vehicles) in each of the regions. → GRI 305-5

Another influence on purchasing decisions are vehicle-related taxes, which are set by individual governments and can therefore vary enormously. As an example, changes in taxation on diesel fuel or vehicles (as in France since 2016) can lead to a long-term reduction of diesel vehicles in the fleet mix. This in turn negatively impacts average CO_2 emissions, since diesel engines emit 15% less CO_2 on average than petrol engines.

Regardless of the potential savings generated by efficiency technologies, the specific fuel consumption and the resulting CO_2 and pollutant emissions in each vehicle also depend on how individual drivers use the vehicles (for example driving style, capacity utilisation and fuel quality).

Introduction

1
Fundamentals

2
Products and services

→ 2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

The discussion about diesel engine exhaust emissions

Since 2015, the discussion around diesel engine exhaust emissions has led to ongoing criticism of the automotive industry, especially in Europe and the USA.

In the course of this discussion, the impression was often created that almost all manufacturers had manipulated exhaust values.

For the BMW Group, compliance with legal requirements, including local test requirements, has top priority. The BMW Group has corresponding Compliance Management Systems to ensure that legal requirements are met. We are willing to explain our test procedures to the relevant authorities and to make our vehicles available for examination at any time.

The ongoing criticism of companies in the automotive sector shows that the image of the German automotive industry has also suffered considerably in the past year. The company sees a need to collaborate with other carmakers to regain trust in the industry. In view of the challenges we will be facing – increasing urbanisation, digitalisation and automation – this is in the interest of society. We want to contribute our expertise and our problem-solving skills towards co-creating the future of mobility.

The BMW Group believes diesel cars continue to have a future. Against the backdrop of air quality impact in high-traffic city centres, which is partly also due to NOx emissions from diesel vehicles, legislators have been working since 2010 on regulating these, creating an effective remedy in the 2015 Real Driving Emission (RDE) law for cars. The RDE law already requires type testing to include monitoring and disclosure of emission deviations between the testing facility and actual road driving. In addition, since September 2015, successively binding limits must be complied with, which will be further intensified in a second step as of January 2020. The BMW Group took early action to keep NOx emissions as low as possible through the entire life cycle by further refining its diesel exhaust treatment systems. Since 2012, the BMW Group has implemented a combination of NOx catalytic converter (NSC) and Selective Catalytic Reduction (SCR) in Europe and subsequently in the USA. This allows for the respectively better system to be used at low speeds and light loads in city traffic as well as during motorway driving with heavy loads.

Introduction

1
Fundamentals

2
Products and services

→ 2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

Forecast

It is our aspiration to be the driving force in the development of sustainable individual mobility and to achieve this in a responsible and sustainable manner. EfficientDynamics has been delivering this since 2007 – our aim here is to further reduce the petrol consumption of our vehicles, as well as CO_2 and other emissions. The BMW Group focuses on efficient and clean combustion engines and electromobility.

In addition to the expansion of expertise in the areas of combustion engines, aerodynamics and lightweight construction, the next step towards more sustainability entails a large number of innovations in other technological areas. Besides drive electrification, digitalisation offers additional potential for further reductions in consumption and emission levels. Significant initial milestones in this area were already reached with navigation-data-supported transmission control and the driving assistant.

Modern diesel engines will continue to play a role as drivetrains in future. For our 2018 vehicle portfolio, we will therefore continuously introduce highly effective technologies for climate protection and air purity. And we will keep on setting standards in combustion engines with 48-volt recuperation systems and maximum emission reduction.

We will continue to address any critical questions and debates around diesel technology in the coming year. We will regain the trust of our customers and the public in the automotive sector through transparency.

Urban and active driving: the new BMW X2 was presented in 2017 and is available from March 2018.

ELECTROMOBILITY

The BMW Group is a leader with its holistic approach to premium electromobility.

The new BMW i8 Roadster: a combination of sportiness and zero-emissions driving.

Introduction

1
Fundamentals

2
Products and services

2.1 Emissions of CO_2 and pollutants
→ 2.2 Electromobility
2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

2.2 ELECTROMOBILITY

Sustainability goal:
The BMW Group is a leader with its holistic approach to premium electromobility

Electromobility is one of the central topics of the future when it comes to making urban living and traffic sustainable. This is reflected again and again in our dialogue with stakeholders. E-vehicles have zero local emissions, along with the potential of significantly reducing the emission of CO_2 and air pollutants over the whole product life cycle, while also markedly reducing traffic noise in cities. The BMW Group develops electric vehicles that combine the advantages of sustainable mobility with a new driving experience for customers. Innovative and spacious interior concepts, along with rapid acceleration and higher efficiency of the electric engine, are the crucial selling points here.

We intend to set standards in electromobility. To underline our claim to leadership, we are aiming to have sold a total of 500,000 vehicles with electric and plug-in hybrid drive by the end of 2019. In 2017 alone, we already reached our goal of selling 100,000 electrified vehicles.

Key measures:
Improving life cycle, range and framework conditions

We are lowering emissions of CO_2 and other pollutants over the whole life cycle of our electric vehicles by utilising light construction, renewable resources and a particularly resource-efficient and environmentally friendly production. The BMW value chain stands out for its use of renewable energy sources: from the manufacture of energy-intensive materials such as CFRP (carbon fibre reinforced polymer), to vehicle production and the green energy package for our customers in the utilisation phase. Other approaches include the recycling and reuse of batteries, for example in large storage units.

We are working on extending the range of our electric vehicles with a series of measures; this is a central challenge for the continued success of this technology. In collaboration with other carmakers, charging station operators, energy suppliers and grid operators, we are attempting to lower entry barriers and simplify the charging process as well as lend both technical expertise and financial support. In addition, as part of the BMW 360° ELECTRIC service portfolio, we offer private and fleet customers state-of-the-art charging solutions. We are also continuing to refine the BMW Group ChargeNow service.

In many countries, there is still a need for governments to catch up in terms of political support for electromobility. The BMW Group seeks out dialogue with policy-makers regarding the consistency of policy measures on the supply and demand sides.

To ensure that we reach the sales targets for our electric and hybrid vehicles, we are gradually expanding our product portfolio, providing opportunities to test the BMW i3 as part of our DriveNow car-sharing scheme. We are always expanding our network of dealerships and training specialised staff. This package of measures is rounded out with focused marketing campaigns and financing offers.

Introduction

1
Fundamentals

2
Products and services

2.1 Emissions of CO_2 and pollutants
→ 2.2 Electromobility
2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

Due diligence processes: Anchoring carbon footprints in product development

A holistic, life cycle-oriented regard for environmental impact is an integral part of the target systems and organisational processes in our vehicle development.

We manage the implementation of targets and evaluation of progress in the development process by applying the Life Cycle Assessment in accordance with ISO standard 14040/44. We consistently take our reduction targets and market-specific fleet requirements into account during product development. To do so, we define specific targets for optimisation over the whole life cycle for each product line and for every new vehicle project.

The BMW Group's Strategy unit is responsible for monitoring and refining our targets. One important tool in this context is the environmental performance evaluation, which enables a comparison between vehicle generations.

Results and performance indicators: Electric vehicles improved overall and sales increased

Our goal for 2017 was to sell 100,000 vehicles with electric and plug-in hybrid drives, and we exceeded this with 103,080 vehicles sold in total. Similarly, we have made significant progress in recent years in the area of range extension. → see performance indicators

Since 2016, new and existing customers have had the option of choosing a longer-range BMW i3 model, or to upgrade to it (up to 300 km, New European Driving Cycle). This model is also available with a Range Extender that offers an additional 150 km in normal daily operation. By the end of 2017, the BMW Group had also been active in over 40 projects for improving the charging infrastructure and initiated the installation of over 9,500 charging points. High-performance direct-current charging stations charge a BMW i3 to 80% in around 40 minutes. → see performance indicators

The BMW Group and other carmakers together founded the IONITY joint venture, which aims to build up a high-performing fast-charge network across Europe along important traffic corridors. Our ChargeNow service gives access to currently more than 137,000 public charging points from different providers in 29 countries worldwide. In China, more than 47,000 charging points were available to our customers at the end of 2017. We have also improved the charging performance of the Wallbox distributed by BMW i for charging at home.

On a political level, the BMW Group is involved, for example, in the "Nationale Plattform Elektromobilität" (National Platform for Electromobility–NPE) in Germany and the "Agora Verkehrswende" (Agora traffic transition). Internationally, the BMW Group is a member of the Foreign Expert Panel of a high-level advisory committee for the Chinese central government, as well as in the Plug-In Electric Vehicle Collaborative in the US state of California, which promotes electromobility and of which BMW was a founding member.

In the reporting year, we also pursued and expanded our approaches to the holistic environmental optimisation of BMW's electromobility. As part of BMW i 360° ELECTRIC services, we now offer our customers electricity from renewable sources in 13 countries. We continued to invest in the reutilisation of used i3 batteries as a storage solution to support our own power supply and the public grid. And we improved our expertise in recycling batteries, so a recycling rate of around 75–80% is currently possible.

Introduction

1
Fundamentals

2
Products and services

2.1 Emissions of CO_2 and pollutants
→ 2.2 Electromobility
2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

ELECTROMOBILITY IN DETAIL

Ensuring environmental protection throughout the life cycle

The environmental and societal impact a vehicle has during its life cycle is primarily determined during the development phase. Some decisive influencing factors are the choice of materials, production technologies, supplier selection, the choice of drivetrain types and the recyclability of the vehicle's components. We have been particularly consistent in taking account of these factors for our BMW i series, in which we have developed electric vehicles since 2007.

→ see graphic 2.06

In line with our Design for Recycling approach, we create our vehicles in such a way that their components can largely be reused or recycled efficiently throughout their whole life cycle. → GRI 102-11

The definition of electromobility as seen from the perspective of the BMW Group

Different definitions of electromobility are circulating through both the automotive industry and the public sphere. For example, many manufacturers consider even mild hybrids without a charging option as electric vehicles. Other carmakers go so far as to count any vehicle with automatic start/stop as an electrified vehicle.

The BMW Group believes that electric vehicles must have a charging facility and be capable of driving purely electrically. In the view of the company, that would be the only justification for calling them electric vehicles and counting them as plug-in hybrid or fully electric vehicles.

Charging electric vehicles on renewable energy

An electric car can only reach its full potential in terms of sustainability when it runs on electricity that is as carbon-neutral as possible. The partner companies with which the BMW Group is collaborating in this area include both market-specific providers of green energy and manufacturers of solar energy systems for carports, house and garage roofs. This allows customers to produce carbon-free green energy in their own homes to recharge their BMW i3, BMW i8 or BMW iPerformance plug-in hybrid vehicle.

Introduction

1
Fundamentals

2
Products and services

2.1 Emissions of CO_2 and pollutants
→ 2.2 Electromobility
2.3 Mobility patterns

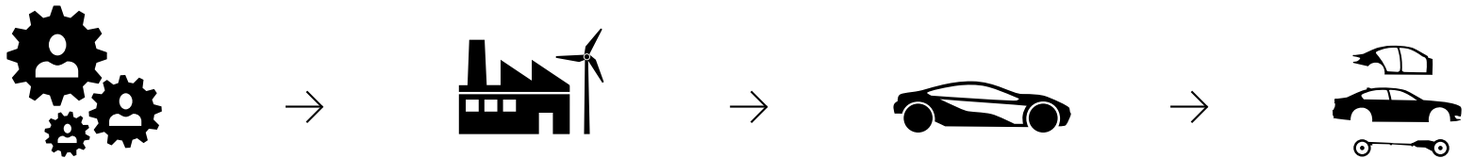
3
Production and value creation

4
Employees and society

Further key indicators

Appendix

Sustainability over the entire life cycle
→ G2.06



Network integration of electric vehicles: Charge Forward

Electric vehicles will play an important role as flexibility reserves in future smart electricity grids. As the time needed to recharge the battery storage unit is usually much shorter than the actual parking and charging time, the process is highly flexible in terms of when the flow of electricity for charging actually takes place.

This was the starting point for the → **Charge Forward** pilot project: BMW i electric vehicle drivers simply enter the time they plan to use their car again – the smart BMW charge controller takes care of the rest. In this way, charging can be synchronised with the electricity grid. During high-utilisation periods, charging is delayed in order to avoid peak loads. For optimum integration of renewables, charging can also be scheduled for periods of high renewable energy feed from wind power and photovoltaics, and additional value can even be created by selling flexibility and storage capacity.

With the Charge Forward pilot project, which was carried out in collaboration with energy utility Pacific Gas and Electric and one hundred BMW customers in San Francisco between July 2015 and December 2016, these concepts were proven to be practicable in day-to-day use. Further Charge Forward pilot projects were launched in 2017 to further build on the knowledge gained so far. At the same time, a service that will be offered as standard to our customers is already in development.

Improving carbon footprint by reusing and recycling batteries

Batteries that are too old for in-vehicle use are reused for stationary energy storage, where possible. During this "second life", they can help to integrate renewable energy into the power grid and reduce energy costs. Such battery storage provides balancing power, which compensates for fluctuations that are created when renewable energy is fed into the grid, for example. The BMW Group

Introduction

1
Fundamentals

2
Products and services

2.1 Emissions of CO_2 and pollutants
→ 2.2 Electromobility
2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

has demonstrated the technical and economic feasibility of this approach by operating a large number of pilot systems in Europe, Asia and the USA. We are continuing to develop the process. Stationary storage systems with new BMW i3 batteries can be augmented in a simple way with used batteries at a later date. Within BMW, too, our facilities worldwide are gradually being optimised in energy terms with battery storage. We are making renewable energy available for our own use and expanding our internal charging infrastructure with a battery supply. Used BMW i3 batteries from former development vehicles are already in use in office buildings and at several of our production sites, for example in the plant in Leipzig/DE. We will expand this in future.

For batteries that are no longer suitable for use as a stationary storage unit, we aim to achieve the highest possible rate of recycling of the valuable resources. In collaboration with a university partner, the BMW Group has developed a procedure by which we can achieve a recycling rate of around 75 to 80%. This is much higher than the conventional rate of just over 50% and will reduce the carbon footprint of the recycling process by around half. In the project run until the end of 2018, we want to determine other potentials for increasing the procedure efficiency and measures for increasing the recycling rate to over 90%. As part of Basic Engineering, we are evaluating the feasibility of the concept in industrial use for interested recycling partners. This allows us to contribute towards the development of market-ready recycling processes for lithium-ion batteries. In the final project phase starting mid-2018, we want to exclude a downcycling to low-value secondary materials and, if possible, gain recyclates of suitable quality for producing new lithium-ion batteries.

Innovative, sustainable and profitable second-life use of car batteries: the BMW Group's storage farm in Leipzig.

Carbon footprint of electrified vehicles

Additional information can be found in the Environmental Reports (PDF download):

→ **BMW i3 Environmental Report (PDF, 765 KB)**
→ **BMW i8 Environmental Report (PDF, 638 KB)**
→ **BMW 530e iPerformance Environmental Report (PDF, 645 KB)**
→ **BMW 740Le iPerformance Environmental Report (PDF, 755 KB)**

As an example, the BMW 530e iPerformance Environmental Report shows that, assuming standard consumption levels, the life cycle CO_2 footprint is around 15% lower than in the BMW530i with conventional drive. Furthermore, when charging electricity comes from renewable energy, the CO_2 footprint is reduced by around 47%.

Introduction

1
Fundamentals

2
Products and services

2.1 Emissions of CO_2 and pollutants
→ 2.2 Electromobility
2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

Promoting the market success of vehicles with electric and hybrid drives

Market success in electromobility depends crucially on increasing vehicle range, as well as on charging speeds and infrastructures. We already offer attractive vehicles in this area as well as services, which we continue to develop in collaboration with our partners.

In addition, policy-makers can do a lot to encourage the spread of electromobility by creating corresponding incentives. This could be done by privileging public parking spaces, as has happened under the German electromobility law, for example.

Enabling innovative charging with BMW 360° ELECTRIC
As part of the → **BMW 360° ELECTRIC** portfolio, we offer private and fleet customers state-of-the-art charging solutions at home and on the road (wall boxes, charging cables, brokering green energy contracts and solar solutions).

In 2016, the BMW Group launched a new BMW i Wallbox generation. The benefits of the BMW i Wallbox lie in its improved charging time: it charges up to six times faster than the charging cable provided as a standard component. In addition, several users can set up personal profiles in the BMW i Wallbox Plus and BMW i Wallbox Connect models and generate individual invoices.

Charging six times faster: the BMW Group's latest wall box generation.

Introduction

1
Fundamentals

2
Products and services

2.1 Emissions of CO_2 and pollutants
→ 2.2 Electromobility
2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

The BMW Group also offers an installation service that checks which BMW i Wallbox can be installed at the customer's home. If requested, qualified electricians from our partner installation company can also deliver, install and start up the box, and provide instructions to customers.

The BMW Digital Charging Service integrates the vehicle into the customer's individual charging situation at home. Based on the electricity rate and a solar-energy array, the BMW Digital Charging Service automatically charges at the most cost-effective times, enabling optimised and sustainable charging for the vehicle. It is also possible to view the vehicle's energy usage, the current charging process and an overview of all completed charging processes.

Expansion of charging infrastructure: the easier it is to charge in cities, the greater the appeal of electric vehicles.

Supporting expansion of the charging infrastructure

Expanding the charging infrastructure is a fundamental condition for the breakthrough of electromobility. Positive political framework conditions can further support the process. This has become clear in fast-growing markets for electromobility, such as Norway and California. Customers only switch to electric cars if they can rely on an adequate charging infrastructure for everyday driving and enjoy advantages in the form of privileges compared to vehicles with combustion engines.

In founding the → **IONITY** joint venture, the BMW Group, Daimler AG, Ford Motor Company and Volkswagen Group, including Audi and Porsche, are setting the course for creating the most high-performance rapid charging network for electric vehicles in Europe. Construction and operation of around 400 rapid charging stations in total by 2020 are important steps to ensure electromobility on longer distances, too, and establishing these in the market. At the start of 2018, the IONITY team will already include 50 employees and will continue to expand step by step.

Introduction

1
Fundamentals

2
Products and services

2.1 Emissions of CO_2 and pollutants
→ 2.2 Electromobility
2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

Light & Charge

Light & Charge is a cost-saving alternative to conventional charging stations that integrates the charging point into existing urban infrastructure, for example street lamps, and thus requires no structural intervention. The use of this technology makes sense particularly in residential areas where people park on the street and rely on an adequate charging infrastructure for charging their vehicles overnight. Thanks to the small dimensions of the charging stations, the visual interference in the public space is minimal.

To this end, BMW AG has entered into a cooperation with the → **eluminocity** start-up, commissioning it to develop and distribute Light & Charge. With energy-efficient lamps, lean and cost-efficient charging stations and smart sensor technology, Light & Charge helps BMW contribute towards expanding publicly accessible charging infrastructure. It is active, for example, in Munich/DE and Seattle/US, in close cooperation there with our DriveNow and ReachNow car-sharing service.

Charging at street lights:
with Light & Charge, urban electricity sources become charging stations.

Supporting positive framework conditions for electromobility

Regarding the political conditions for electromobility, the challenges consist mainly of the wide variation in the intensity and type of promotional measures from country to country, region to region and city to city. Even within the same community, municipal and non-municipal institutions may pursue divergent and possibly even conflicting goals. In addition, customers currently react very quickly when incentives are removed (e.g. tax incentives), which is reflected in a reduction in demand. This is apparent in the case of the Netherlands: after reducing tax benefits for plug-in hybrids in 2016, demand for these vehicles dropped.

Overall, there are marked differences in conditions worldwide. We would like to see all markets take similarly effective measures to promote electromobility as those already in place in Norway, China and California. Particularly within the EU, harmonising the support measures and expanding the charging infrastructure more intensively would be welcome, as this would also help with achieving EU emission reduction targets.

As part of the political dialogue, we advocate for measures to promote electromobility, whether by way of financial support or non-monetary packages of measures (for example the use of bus lanes and/or introduction of dedicated lanes, and preferential parking).

In addition, the BMW Group is involved in local partnerships with other companies and policy-makers: we established an e-alliance partnership in Munich/DE, which will take strategic approaches towards improving the framework conditions necessary for electromobility in the long term. In 2017, we agreed a strategic

Introduction

1
Fundamentals

2
Products and services

2.1 Emissions of CO_2 and pollutants
→ 2.2 Electromobility
2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

partnership with the →**city of Hamburg/DE**. Both partners believe that a rapid scaling of electromobility can only be achieved in close cooperation between local authorities and the industrial sector. Hamburg/DE will therefore massively expand its public charging infrastructure and privileged parking spaces for car-sharing vehicles and electric cars, creating extra incentives. In return, DriveNow will gradually electrify its fleet by the end of 2019. This is how we aim to solve the issues around available charging infrastructure for electric vehicles while also significantly increasing the visibility of electromobility for people in their day-to-day lives.

Position: supporting electromobility with mandatory sales quotas

Today, market shares of newly registered electrified vehicles are at low single-digit percentages in most of the global markets where there are no incentive systems for customers. In principle, the BMW Group supports political measures that increase market penetration by electric vehicles. However, introducing mandatory sales quotas for carmakers by itself is not sufficient for actual market success, in our view.

This becomes clear when we look at California, a pioneer that was the first US state to introduce such a quota. Local legislators require that medium-sized and large car manufacturers have a certain number of Zero Emission Vehicles (ZEV) in the market. Manufacturers receive Credit Points for the sale of ZEVs; failing to collect enough of these presents the risk of expensive fines. ZEV Credit Points may also be purchased from other manufacturers.

Due to the market development remaining below initial expectations, the quota requirements in California have been revised downwards several times in recent years. It is crucial to meeting quota plans to have supportive framework conditions, such as good coverage of the charging infrastructure, as well as financial and non-monetary incentives, especially in the market start-up phase. In the medium and long term, customer demand depends on the quality, options and price/performance ratio of the product range. At present, the BMW Group offers nine electrified vehicle models for sale worldwide, an offering it intends to expand with further models by 2025, as well as increasing the electric range of the vehicles.

In general, we do not think it makes sense to simply transfer such a complex quota system to countries with different regulatory approaches. Successful implementation requires consistency with other political measures. Especially at the EU level, such a system has little chance of being established successfully, since individual member states have responsibility for expanding the charging infrastructure and for customer incentives, and no homogenous market for electromobility exists. In California, by way of comparison, such flanking measures for quotas are the responsibility of the same authority.

Introduction

1
Fundamentals

2
Products and services

2.1 Emissions of CO_2 and pollutants
→ 2.2 Electromobility
2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

Forecast

We are continuing to invest in the planning and development of new vehicle models in order to expand our portfolio to 25 electrified models in all vehicle segments by 2025, twelve of which will be fully electric. We are intending to offer our high-volume models as pure battery vehicles as well. We want to extend the range of our fully electric vehicles to up to 700 km. The next steps are the launch of electrified models of the BMW i8 Roadster (2018) as well as battery-electric versions of the BMW X3 (2020) and MINI (2019).

The BMW Group is deliberately focusing its efforts on building a broad drive technology base so that in the coming years we can offer innovative solutions for the different mobility needs of our customers worldwide. With the BMW iNext in 2021, we will be introducing the fifth generation of our electric drive, which will be available as a scalable modular assembly unit. This uncouples the vehicle architecture from the drivetrain technology, meaning that every model can be fitted with a conventional, electric or hybrid drive as required.

We intend to continue to invest in expanding the charging infrastructure in 2018, so as to accelerate the spread of electromobility. With IONITY, we will implement a rapid charging network with 400 rapid charging stations by 2020 at a European level. We will also make it easier for our own employees to switch to electric vehicles by making more charging stations available to them.

In 2018, we will take further steps to optimise our electric vehicles environmentally over their whole life cycle. We plan to improve the recycling process for battery cells, so that the recycling rate can be lifted to over 90% and avoid downcycling to low-value secondary materials. We are planning to open our new competence centre for battery cells in January 2019.

Sustainability goal
Products and services

→ MOBILITY PATTERNS

The BMW Group will have permanently changed mobility patterns in selected metropolitan areas by 2020 through the introduction of integrated mobility services.

100 fully electric BMW i3 vehicles in Chengdu: the BMW Group cooperates with car-sharing company EVCard in China.

Introduction

1
Fundamentals

2
Products and services

2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
→ 2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

2.3 MOBILITY PATTERNS

Sustainability goal:
The BMW Group will have permanently changed mobility patterns in selected metropolitan areas by 2020 through the introduction of integrated mobility services. We measure this goal in particular by the number of DriveNow and ReachNow customers.

The BMW Group offers its customers individual mobility at premium quality. The focus is always on our brand promise, driving enjoyment. This has become a challenge, especially in densely populated urban spaces, but also on the motorways around large cities. By 2030, a projected 60% of people worldwide will live in cities. The increasing volume of traffic in cities often goes hand in hand with a significant rise in noise and air pollution, consumption of space as well as increased risk of accidents. We are proactive in taking these challenges into account as we develop our networked vehicles and mobility services.

Renewing our business model is also necessary due to profound changes in the mobility market. The integration of cars into an intermodal, increasingly digital transport system–especially in urban areas–is seen as a great entrepreneurial challenge. The technological shift towards electrification, simultaneous digitalisation and new providers for mobility services is changing the sector as well. Our aim here also includes providing comprehensive data protection and precluding manipulations.

Key measures:
Enabling sustainable mobility patterns through services as well as connected and automated vehicles

We want to enable efficient and resource-saving traffic and are continuously developing our mobility services with this aim in mind. This includes our car-sharing services DriveNow and ReachNow (on-demand mobility services), our digital parking service ParkNow and digital networking BMW Connected Services. We are also conveying the benefits of our mobility services in pilot projects in selected cities.

Automated and digitally networked vehicles have the potential to significantly reduce the number of accidents and traffic congestion, reduce emissions and increase the quality of life in cities. This applies especially when using electrification. With our planned BMW iNEXT model, we want to set new standards by 2021 and bring solutions for highly and fully automated driving up to series maturity. In the same year, we intend to master the quantum leap from partly to highly automated driving on motorways, and simultaneously test fully automated driving in urban environments with selected customers. To achieve these goals, we are relying both on our own technological strength and on collaboration with innovative partners, through which we will also develop open industry standards for highly and fully automated driving (non-exclusive industry platform).

In this context, the protection of information and data is an integral part of business processes at the BMW Group. Data protection adheres to the relevant laws, in particular the EU General Data Protection Regulation (from May 2018). Our information protection complies with the international security standard ISO/IEC 27001. Personal data from customers is only collected, processed or used if this is legally permissible and the person in question has given consent. We address complaints in a timely way. In order to protect our digital systems from manipulations, we systematically search out weak points and close any potential gaps in good time before releasing the respective compo-

Introduction

1
Fundamentals

2
Products and services

2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
→ 2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

nent. We continuously convert new insights into mandatory standards.

The BMW Group promotes the development and market launch of innovations in the areas of mobility services, connectivity and automatisation through regular investment in start-ups.

Due diligence processes:
Taking changes and effects of urban mobility behaviour into account at an early stage through dialogue, initiator and research projects, preventative data protection

In order to understand changes, impacts and needs of urban mobility patterns worldwide in good time, the BMW Group takes part in projects focused on dialogue, initiators and research. The insights gained from these are systematically integrated into the development processes for new vehicle models and services. Major activities are carried out, for example, by the BMW competence centre for urban mobility, the multi-stakeholder platform "Urbane Mobilität" in Germany, the BMW Institute for Mobility Research (Institut für Mobilitätsforschung, ifmo) and in BMW Group Dialogues with stakeholders.

At the core of our data protection efforts are extensive preventative measures. Guidelines applicable across the Group are documented in a comprehensive policy, which ensures the careful handling of confidential data, the safe utilisation of information systems and the transparent handling of risks. Regular training courses as well as communication and awareness measures create an understanding of security and risk awareness among all participants. There are also clear guidelines for information and data protection for cooperation and partner relationships. Technical safety measures encompass industry-wide standards and Best Practices. Final responsibility for data protection and information security in every group company lies with the Board of Management or the respective Executive Board.

Results and performance indicators:
Mobility services expanded and innovation centre for networked and automated driving opened

→ see performance indicators

By 31 December 2017, the DriveNow car-sharing service had more than one million customers across Europe (2016: over 815,000 across Europe). DriveNow is currently available in 13 cities. Our ReachNow service in the USA counted more than 82,000 customers by the end of the year (2016: 38,000), and is available in three cities. The fleet for both programmes currently comprises more than 6,000 vehicles in Europe, of which around 15% are purely electric BMW i3 vehicles. A further 1,300 vehicles are available in the USA.

DriveNow is one of the strongest drivers of electromobility in Germany. To date, around 334,000 customers have driven some 16.4 million carbon-free kilometres using DriveNow's BMW i3 electric vehicles.

The ParkNow app service, part of our Connectivity Services, has been offered in cities in Germany, Austria, France and Switzerland since 2016. It is also available in the USA and enables users to find parking spaces easily.

BMW Connected Services integrates different modes of transport into personal route planning (intermodal routing). This is the BMW Group's contribution towards increasing intermodal mobility in cities.

To reach our targets for automated and networked vehicles by 2021, existing alliances with MobilEye and Intel were deepened, as were those with the HERE navigation service. In 2017, the BMW Group also bundled all competencies for vehicle connectivity and automated driving in a new "Autonomous Driving Campus" in Unterschleissheim near Munich/DE.

Introduction

1
Fundamentals

2
Products and services

2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
→ 2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

Active driver assistance systems, such as the steering and lane control assistant, autonomous cruise control and part-automated lane changing on motorways, which were available to date in the BMW 5 Series and 7 Series models, were introduced into smaller vehicle classes with the BMW X3. At present, the first fully automated research vehicles not only drive on motorways but are used for testing purposes in city traffic in Munich/DE, too. We are aiming to extend this to cities in China and the USA. During these tests, drivers are in the vehicle who can take over control in any situation.

In 2017, BMW introduced CarData, a service offer that gives customers the option of deciding about the utilisation and transmission of data from their vehicles to third parties. One of the biggest sources of risk in the digitalisation and automatisation of street traffic is cyber security. New unauthorised access threat scenarios arise in the automotive sector due to the comprehensive and ubiquitous networking of vehicles with the environment. Protection against the bandwidth of possible threats must therefore be addressed and coordinated in a continual and consistent way. The BMW Group is therefore in ongoing dialogue with national and international safety and cyber security authorities. By using a backend system for data transfer, the BMW Group minimises the vulnerability of the vehicle fleet to hacking attacks, as direct and often unprotected data connections between the vehicle and third parties can be prevented.

In 2017, the BMW Group invested, amongst others, in the Carbon and Caroobi start-ups through iVentures.

Introduction

1
Fundamentals

2
Products and services

2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
→ 2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

MOBILITY PATTERNS IN DETAIL

Reducing traffic volume with Premium on Demand mobility services

Since 2011, the BMW Group and Sixt SE have been offering their joint venture car-sharing service → **DriveNow,** which is currently available in 13 European cities. On 8 April 2016, the BMW Group launched an advanced car-sharing programme in the USA under the name → **ReachNow.** To date, ReachNow is available in Seattle, Portland and Brooklyn in the USA. Since the end of 2016, ReachNow has been piloting innovative services in addition to the classical car-sharing programme. They include personal drivers ("Ride") as well as a reservation and delivery service for vehicles that are rented for longer periods from two to five days ("Reserve"). "Fleet Solutions" targets companies and ReachNow members in selected residential areas. They have exclusive use of a fleet of premium vehicles that are permanently parked nearby. Another pilot being tested by ReachNow is the opportunity to rent out your own car to the fleet ("Share").

"ChargeNow": → see chapter 2.2

In Beijing/CN, we have been testing a ReachNow "Fleet Solution" in pilot operation since the end of 2016. Another pilot in Chengdu/CN with 100 BMW i3 vehicles started at the end of 2017, in cooperation with EVCard, a local partner.

Various studies are available on the effect of car-sharing on traffic volumes. "Evaluation Carsharing EVA-CS", a study carried out by the city of Munich/DE, sees a positive relationship between them: car-sharing reduces the number of cars and kilometres driven. With better conditions for car-sharing and a correspondingly larger fleet, significantly stronger effects can be expected for the urban environment, according to this analysis. A study by the city of Vienna showed a substitution potential of up to three to eight vehicles per car-sharing vehicle – and thus also a reduction in demand for parking spaces in the city.

Car-sharing in Seattle: the BMW Group offers new mobility solutions for urban spaces.

Due to considerably higher utilisation rates and the lower demand for parking spaces, car-sharing enables cities to win back living space – this space can be used for other mobility concepts, e.g. bike-sharing, bicycle lanes, mobility stations – or it can be repurposed for neighbourhood residents and their individual requirements.

Changing parking patterns with ParkNow

→ **ParkNow** enables ticketless and cashless parking on the street. For parking in car parks (off-street), ParkNow supports searching, reserving and paying. Both services reduce traffic from searching for parking. ParkNow has been offered in cities in Germany, Austria, France and Switzerland since 2016. The service is also available through the American smartphone app and BMW vehicles in the USA.

Introduction

1
Fundamentals

2
Products and services

2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
→ 2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

Offering sustainability to fleet customers with Alphabet Fleet Management

Sustainable solutions for fleet customers are taking on increasing importance. This is the specialty of → **Alphabet** Fuhrpark Management GmbH, the BMW Group company that provides leasing and fleet management services. Today, energy efficiency and a sustainable fleet are the main focus for many of our fleet customers, and this is also often required by their own car policies. In consultation with the customer, we work out how to develop and operate a more environmentally friendly fleet. Driver training courses in environmentally friendly driving habits as well as a sustainable drivetrain mix are possible solutions. For example, depending on how the fleet is used, hybrid and electric cars can be a very good alternative to conventional fleet vehicles.

→ see chapter 2.2

Designing urban mobility in partnership

Designing individual and sustainable mobility in increasingly densely populated conurbations is a core challenge for future traffic concepts. The BMW Group is bringing ideas for resource-efficient and climate-friendly city transport into the public debate. For example, the BMW competence centre for urban mobility offers a framework in which stakeholders and experts can co-design joint visions for liveable cities. Measures derived from these will be implemented locally as pilot projects, for example in → **Hamburg/DE** or → **Berlin/DE.** The BMW Group is also active on the → **"Urbane Mobilität" (Urban Mobility) platform,** an alliance between German cities and members of the Association of the Automotive Industry, which is pursuing the same concept. Successful projects should be scaled as quickly as possible and transferred to other cities.

Integrating different mobility products: the example of Copenhagen

The example of Copenhagen shows how a local authority in cooperation with a private company can give positive incentives to avoid traffic, to relocate the traffic or make it more tolerable.

DriveNow in Copenhagen is operated by the city's public transport company Arriva. With their "Rejsekort", a card for almost all mobility services in the whole of Denmark, users also gain access to DriveNow. Copenhagen is the only city in Europe in which we have operated our car-sharing service from the start with a fleet of purely electric BMW i3 cars. The good charging infrastructure in the city offers ideal conditions for this.

→ see chapter 2.2

Copenhagen recognised the opportunities arising from close collaboration between public and private transport and now actively supports this development. The BMW Group has developed an attractive product range in this context.

Introduction

1
Fundamentals

2
Products and services

2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
→ 2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

We analyse questions about the future of mobility in research projects, among other things so that we can review the effects of our approaches to urban mobility at an early stage. In 2017, the BMW Group-owned → **Institut für Mobilitätsforschung (ifmo)** stepped up its focus on the topic of urban mobility. Cities are a crystallisation point of changes in the area of mobility. A profound understanding of trends in cities is a requirement for developing sustainable mobility solutions for the future. It is also essential here to regularly integrate research insights into the corporate strategy and the BMW Group's specialist departments.

In 2017, the first decentralised switchh point opened as part of the "firstmover. hamburg" pilot project, which was initiated by the BMW competence centre for urban mobility.

Position: promoting electromobility and on-demand mobility services

The BMW Group believes that designing urban mobility with the goals of quality of life and economic development necessitates a change in mindset. Accordingly, we are focusing on the development of innovative technologies and concepts. How successful electromobility and on-demand mobility services are in becoming established also depends to a large degree on the prevailing framework conditions. A significant market penetration of electromobility requires not only the availability of charging infrastructure and further purchasing incentives. If the users of electric or car-sharing vehicles gain privileged access to public parking spaces, for example, then this means a significant advantage they can enjoy on a daily basis. Such support measures have the potential to influence purchasing and utilisation decisions in the desired direction.

The German electromobility and car-sharing laws allow the granting of privileges for the respective vehicles in public spaces. However, privileging certain vehicles can also cause conflict, especially because parking spaces in cities are so scarce and in high demand. To debate the existing opportunities with residents and local stakeholders, and develop and implement these, the BMW Group has initiated → **pilot projects in Hamburg/DE** and → **Berlin/DE**. The point is to start the ball rolling with residents and to communicate the results to other cities and communities. In our view, this contributes to a faster dissemination of sustainable mobility concepts.

City planning and mobility: in Berlin, the BMW Group worked with residents to implement new concepts for car-sharing solutions and the urban environment.

Introduction

1
Fundamentals

2
Products and services

2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
→ 2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

CONNECTED AND AUTONOMOUS DRIVING IN DETAIL

Personalising and simplifying mobility

In 2016, we launched → **BMW Connected** in Europe and the USA as a holistic digital concept that provides seamless support for individual mobility. Based on a flexible platform, the Open Mobility Cloud, a range of devices such as smartphones and smartwatches can be connected with the vehicle. The user's self-learning digital BMW-ID enables BMW Connected to provide personalised experiences across a large number of "touchpoints".

In this way, the digital services provided by BMW Connected simplify day-to-day planning of journeys and appointments. As part of this, we offer the traffic congestion avoidance service RTTI (Real Time Traffic Information). Depending on the devices that are connected, BMW Connected identifies mobility-relevant information such as addresses in calendar entries and passes these on directly to the vehicle. In good time before the journey, the user receives a notification on his or her smartphone that advises on the best time to depart based on real-time traffic information. In addition, the system automatically stores personal mobility patterns and locations that are accessed regularly, so that it can better support the driver.

Ensuring customers' data sovereignty

We introduced the CarData service in 2017, which measurably improves customers' data sovereignty. By being able to decide at any time about the utilisation and transmission of their private data, customers also benefit from third-party services. These include individualised insurance premiums as well as time saving when visiting a repair shop by transmitting information in advance. Ideally, data synchronisation makes it possible to order spare parts in advance, before customers bring their cars to the repair shop.

→ **BMW CarData** also offers customers the option of managing the release of their telematics data to service providers very easily themselves. A mouse click is enough to permit or reject the data release and to withdraw a previously granted data release, meaning that customers always have their data under control. The BMW Group is the first automotive supplier to have introduced this service. We already adhere to the EU General Data Protection Regulation planned for 2018 by having implemented the areas of data sovereignty, transparency and the right to data access. This ensures transparency as through the ConnectedDrive portal, customers can request a CarData report about data transmitted or a CarData archive at any time.

Increasing safety, convenience and efficiency through automated driving

Automation will lead to a quantum leap for traffic safety, not only for drivers but also for their surroundings. Under the umbrella of BMW Personal CoPilot, the BMW Group brings together its technologies and systems on the path towards autonomous driving: from currently available driver assistance systems to highly or fully automated and finally autonomous driving.

Our focus in terms of automating driving is on high-precision digital cards, sensor technology, cloud technology and artificial intelligence.

Introduction

1
Fundamentals

2
Products and services

2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
→ 2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

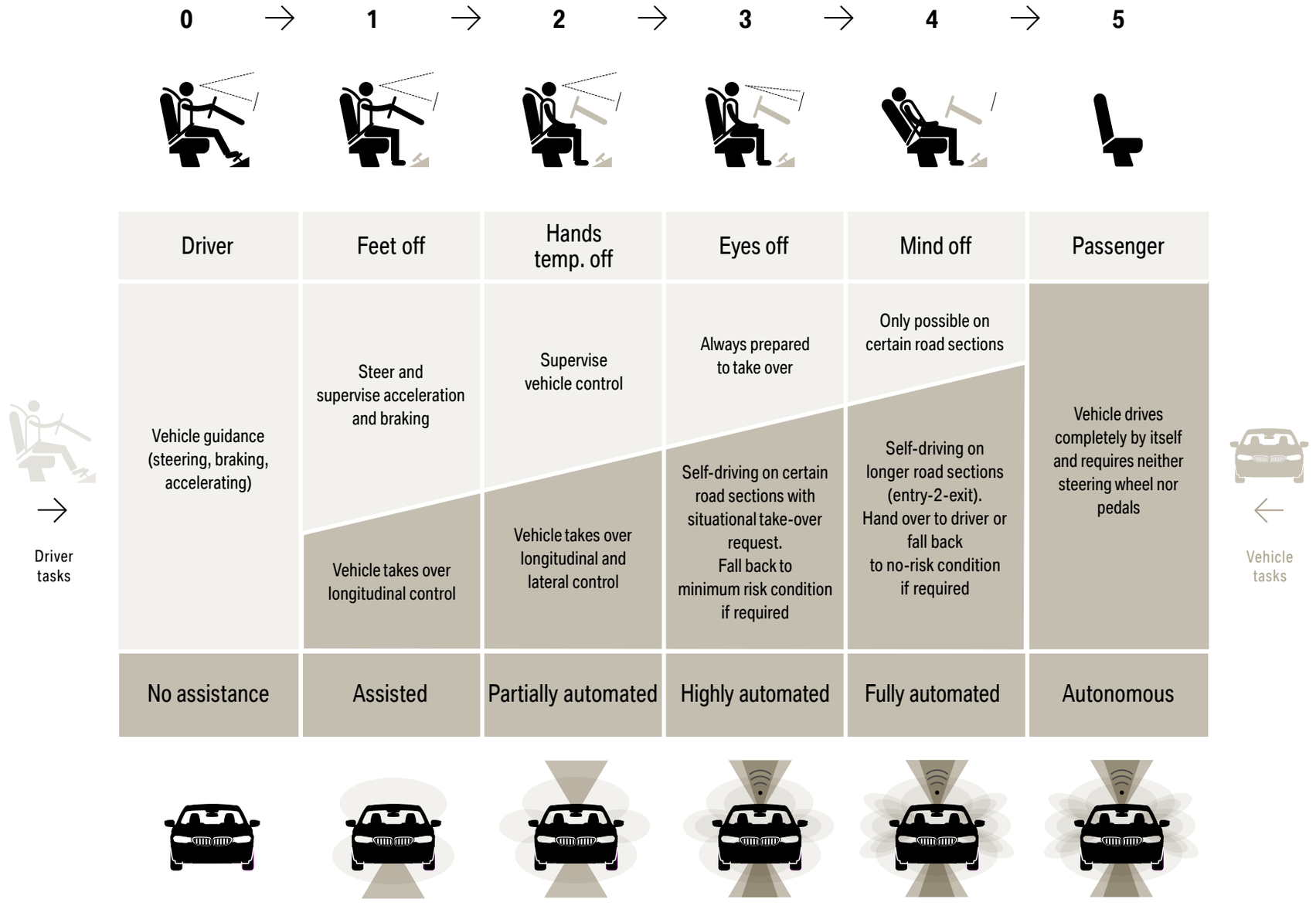
Appendix

Accompanying progress in automation with fact-based communication

The BMW Group wants to avoid creating unrealistic expectations among its customers and the public in connection with automated driving.

Therefore, our communication on this topic is confined to pure facts: we rely on a differentiated presentation of the degree of automation and do not promise customers more than our systems can deliver.

The five development stages of automation
→ G2.07



Introduction

1
Fundamentals

2
Products and services

2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
→ 2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

In the future, we want to enable our customers to partially or fully delegate driving to the vehicle in non-challenging and monotonous driving situations, for example in traffic congestion or in stop-start traffic. The basic principle is that it is the driver who decides whether the vehicle should switch to a more automated mode or not. Automated driving entails a series of technical, regulatory and societal challenges. At the same time, however, we see a great opportunity to revolutionise mobility in the development of automated driving. In addition to the safety aspects, we also expect a considerable gain in terms of time and convenience for our customers – as well as improved driving efficiency. This creates significant freedom for our customers to use their time as they see fit while the vehicle does the driving.

The benefits of automation at a glance
→ G2.08

Premium driving convenience
Support for driver–when under/over-challenged (traffic jam, bottleneck); in-vehicle free time due to automation

↓ ↑

Increased safety
The vehicle can see quickly, comprehensively, simultaneously, tirelessly; safe driving with and without automation

↓ ↑

Enhanced efficiency
Optimised use of road infrastructures, congestion avoidance; use of extended traffic services and mobility concepts; reduction in air and noise pollution

Framework conditions and challenges of automated driving

At the centre of our concepts and technical developments for automated driving are the safety of drivers, passengers, pedestrians and other road users. Therefore, clear legal framework conditions need to accompany the introduction and development of this technology. The data transfer that accompanies digitalisation and automation also intensifies the requirements placed on aspects of manipulation and data privacy, which we are meeting appropriately.

With an increasing degree of automation, the challenges are not only legal, but also societal and ethical. The legal framework is being adjusted worldwide with 100,000 test vehicles licensed in the USA, for example. With regard to legislation about automated driving, Germany is currently in a leading role. Also, a separate ethics commission on behalf of the federal government has developed 20 guidelines for programming automated drive systems.

The ultimate goal is to make our vehicles even safer and to make the highest possible contribution to traffic safety. We systematically search out weak points and close any potential gaps in good time before releasing the respective component. This release also tests the safety of control devices to protect our digital systems from manipulation.

Introduction

1
Fundamentals

2
Products and services

2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
→ 2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

Expanding automated driving with collaborations and research

The BMW Group is significantly extending its capacities in the area of automated driving and, together with our partners in research and industry, we take part in a variety of research and standardisation initiatives, in order to develop the best solutions and bring them into series production as quickly as possible. Key research areas are various technical solutions, traffic management and driving safety systems, as well as virtual safeguarding methods and artificial intelligence as a foundation of automated driving in urban areas. Technical solutions include safe return to the driver, increased safety and availability of components in the vehicle from sensor systems to control devices, brakes and steering, addressing disruptions and barriers, and predictive driving.

HERE:
precise maps for automated driving

With its investment in → **HERE,** the BMW Group will shape the development of highly accurate maps for automated driving. The major advantages are

- close connection between map, data centre and vehicle development
- rapid adjustment in the event of evolving needs of automated driving
- development of highly accurate maps in accordance with the needs recognised through testing and market development

In 2017, the BMW Group pooled its capacities within a new development centre for autonomous driving, the "Autonomous Driving Campus" in Unterschleissheim/DE, and will expand these there. In total, the new centre will offer jobs to around 2,000 employees of the BMW Group and its cooperation partners. This prepares us for the technical challenges we face as we gradually introduce automation and it creates many new jobs at the same time. New organisational and working structures will enable efficient, agile product development, which bundles the required competencies on the one hand, and speeds up the development process on the other.

Warning, emergency corridor: authorities can send drivers warning messages to the screens in vehicles with ConnectedDrive.

Introduction

1
Fundamentals

2
Products and services

2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
→ 2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

INNOVATION SUPPORT IN DETAIL

Promoting innovative mobility concepts

With its investment fund → **BMW i Ventures,** headquartered in Silicon Valley, the BMW Group takes part in the success of promising start-ups. We invest in start-ups in the areas of mobility services and e-mobility as well as in pioneering technologies in the areas of autonomous driving and digitalisation – specifically in the investment fields of "Enabling Technology", "Digital Vehicle Technology", "Mobility and Digital Services", "Customer Experience" and "Advanced Production Technology".

BMW i Ventures' investments include:

— **Economical road traffic with → Zendrive**
Drawing upon mobile technologies and large data volumes, Zendrive provides driver-specific analyses at any time, for example about the economy of their driving style.

— **Intermodal route planning with → Moovit**
The Moovit app integrates comprehensive information about the bus and train schedules of local transport companies by using their timetable data as well as real-time information from the "Moovit Community".

— **3D printing for car parts with → Carbon**
At the interface between hardware, software and molecular science, Carbon provides innovative 3D printers which can manufacture various elements for automotive production.

— **Online repair shop with → Caroobi**
The online repair shop's website enables customers to book different services for their car, to be carried out at one of over 400 partner repair shops in Germany.

Recognising and picking up trends early through investing in start-ups

Carmakers such as the BMW Group are currently confronted with considerable changes to their business environment and must fundamentally change in order to continue to be successful in the future.

Start-up investment in business models and technologies that are fit for the future enable the BMW Group to act with more autonomy and continue to identify and engage with trends in the world of mobility. This is a clear advantage in view of the fact that the IT and tech sectors have faster development cycles than the automotive industry. Our partners in turn benefit from our many years of experience, our reach and our broad network of established brands.

Introduction

1
Fundamentals

2
Products and services

2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
→ 2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

BMW Startup Garage

BMW Startup Garage, located in Munich/DE, is a programme that aims to secure access to innovative start-up technologies. The BMW Group acts as a venture client towards the start-up. This means that we become a client to the start-up company very early on. This approach is very efficient for everyone involved, as it enables the start-up companies to validate their solutions at an early stage, and the BMW Group can then have these solutions tailored to its needs. → **BMW Startup Garage**

Fast and agile: the BMW Group supports start-ups and the most innovative ideas.

URBAN-X

URBAN-X is an accelerator for start-ups that develop new concepts for living in cities. Every six months, URBAN-X invests a maximum of US$100,000 in up to ten companies. URBAN-X supports start-ups in the particular challenges that result from working with municipalities and their stakeholders, from transportation to the real estate sector, through to government agencies or local service and utility companies. URBAN-X includes the areas MINI and Urban Us. MINI experts advise founders with regard to design, production, engineering, marketing, community building and branding. Urban Us connects start-ups with leading founders, investors, companies and government agencies. Using this method, URBAN-X has already supported a number of start-ups that are leaders in the area of solutions for urban mobility. → **URBAN-X**

→ text box page 16

Supporting innovation and involving employees

In 2016, the research and innovation management team and the new "Digital Products and Services" unit founded the innovation works accelerator. The goal of the project is to tap into the innovation potential of intrapreneurs, especially with regard to the development of novel mobility products and services.

In the last one and a half years, around a a dozen projects have been successfully completed in the accelerator using the start-up methodology. Interdisciplinary teams of employees develop a product or service within twelve weeks to a stage of maturity at which a decision about possible scaling becomes possible. The teams are accompanied by internal or external "lean start-up" coaches.

Ideas for accelerator projects are generated by the initiative of intrapreneurs and through crowdsourcing campaigns. On a crowdsourcing platform, employees have an opportunity to submit their ideas and to review the ideas of their colleagues. Both the selection of projects and the preparation for the transfer towards commercialisation are carried out by a panel of judges from different departments and units.

The accelerator is also designed to lend targeted support to the development of innovations in the context of SDG 11 (Sustainable Cities and Communities).

Introduction

1
Fundamentals

2
Products and services

2.1 Emissions of CO_2 and pollutants
2.2 Electromobility
→ 2.3 Mobility patterns

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

Forecast

We will continue to work on the intelligent interconnection of mobility services, vehicles and infrastructure in order to make urban mobility more flexible, convenient, sustainable and safe. The BMW Group brings its strong brands, technological expertise and innovative strength into new strategic partnerships and collaborations to develop ground-breaking solutions.

According to forecasts, by 2030 many vehicles in urban traffic will be automated, networked and electric. In dialogue with municipalities and in public partnerships, we will contribute more towards offering sustainable and tailored mobility offers like the DriveNow and ReachNow on-demand services to all residents. In 2018, we also intend to markedly expand the availability of our intelligent parking and charging services ParkNow and ChargeNow. As well as individual convenience, this is designed to reduce traffic volumes and emissions and make a reclaiming of urban space possible for the residents.

We are making every effort to bring new technologies into series production as quickly as possible. For instance, at the start of 2018, around 1,000 new employees are to begin their work on the "Autonomous Driving Campus" in Unterschleissheim/DE. In China and the USA, fully automated test vehicles are to be introduced into street traffic in future. In Europe, the BMW Group is constructing a new test site in the Czech Republic in order to test all typical use cases for automated driving in an ideal environment. In particular, critical safety situations with other road users can be tested in a realistic, but controlled space.

Autonomous, electric and fully interconnected: to achieve this goal, the BMW Group pools development expertise in the new campus in Unterschleissheim, close to Munich.

Introduction

1
Fundamentals

2
Products and services

3
→ Production and value creation

3.1 Consumption of resources
3.2 Renewable energy
3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

PRODUCTION AND VALUE CREATION

3

Climate change, scarcity of resources and social inequality are some of the greatest challenges facing society today. In order to live up to our claim of being the most sustainable premium manufacturer, we are continuously reducing CO_2 emissions and resources used per vehicle produced and are setting a good example within our own production network. We are increasingly using renewable energies at our locations worldwide. At the same time, we foster the implementation of social and environmental standards as well as transparency and resource efficiency in our supply chain. We place particular emphasis on the support of initiatives to ensure that sustainability criteria are met in the mining and processing of critical raw materials. As electromobility spreads, these measures are becoming increasingly important.

In this manner, we want to make a contribution towards solving the challenges faced by society, decrease risks and reduce production costs.

Introduction

1
Fundamentals

2
Products and services

3
→ Production and value creation

3.1 Consumption of resources
3.2 Renewable energy
3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

PERFORMANCE INDICATORS

Improvement in resource consumption and emissions per vehicle produced since 2006 in %

53
↗ 2017

50
2016

Reduction of resource consumption and emissions per vehicle produced compared with the previous year in %

5.3
↗ 2017

4.9
2016

Share of production-relevant purchasing volume in the CDP Supply Chain Programme in %

77
↗ 2017

69
2016

Share of suppliers in the CDP Supply Chain Programme with at least a B rating in %

25
→ 2017

—
2016: Indicator calculated for the first time in 2017

Share of renewable energy purchased from third parties in %

81
↗ 2017

63
2016

Sustainability goal
Production and value creation

CONSUMPTION OF RESOURCES

The BMW Group will reduce its resource consumption (energy, water, waste, solvents) per vehicle produced by 45% by 2020 (base year 2006).

Resource-conserving and efficient: the new paint shop at the main plant in Munich.

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

→ 3.1 Consumption of resources
3.2 Renewable energy
3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

3.1 CONSUMPTION OF RESOURCES

Sustainability goal:
The BMW Group will reduce its resource consumption (energy, water, waste, solvents) per vehicle produced by 45% by 2020 (base year 2006)

Our company is facing the challenge of conserving resources and tackling climate change. This is also very relevant for the production processes of the BMW Group. We require a reliable supply of resources for the production of our vehicles and the energy we consume generates emissions. For this reason, we continuously increase our energy and resource efficiency and minimise CO_2 and pollutant emissions from our production. In addition, these measures help us reduce production costs, meet the needs of our stakeholders and prepare for new legal requirements.

Key measures:
Conserving resources by means of optimised processes and new technologies

We continuously work on improving our resource efficiency in order to achieve a 45% improvement by 2020, taking 2006 as a base year. In order to reduce energy consumption as well as CO_2 and VOC emissions, we optimise processes and invest in more efficient technologies. We also rely on optimised processes and state-of-the-art technology to reduce our water consumption as well as waste and waste water. What's more, starting in the product development phase, we ensure thrifty use of resources and design products in such a way that as many material cycles as possible can be closed.

Due diligence processes:
Controlling consumption of resources with environmental management

In 2001, the BMW Group signed the → **United Nations Environment Programme's International Declaration on Cleaner Production** and expressly committed to keeping the environmental impact and resource consumption of our production activities as low as possible.

Management and control of resource consumption along with identification of potential risks in order to achieve our goals form an integral part of environmental management at our plants. The steering committee of the BMW Group's international environmental network controls these measures. Each machine, building and space in each plant is allocated to an operator. This person is responsible for the products, processes, machines and technical systems as well as their environmental impacts in their allocated area.

We have established environmental management systems at all of our existing production plants and plan to install them at all future locations. With the exception of motorcycle production in Manaus/BR, where this step is

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

→ 3.1 Consumption of resources
3.2 Renewable energy
3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

planned in the near future, all of our production locations, German dealerships, as well as six others in Europe (Vienna/AT, Zurich/CH, Madrid/ES, Barcelona/ES, Milan/IT and Rome/IT) are now certified according to ISO 14001. In 2017, we finalised the adaptation of our environmental management systems to the revised 2015 version of ISO 14001 and carried out additional audits. In doing this, we incorporated our research and innovation centre in Munich/DE into the certification. In accordance with ISO 50001, we also incorporated the energy management system into our environmental management system.

Results and performance indicators: Resource efficiency further increased

Since 2006, the BMW Group has reduced its consumption of energy and water in vehicle production, waste and waste water volume as well as solvents and CO_2 emissions per vehicle produced by an average of 53.2%. In the same period, due to our efficient use of resources, we made cost savings totalling €161 million. In 2017, utilisation of resources and emissions per vehicle produced were reduced by an average of 5.3% compared with the previous year.

We have already achieved our internal objectives in the areas of CO_2 and VOC emissions, waste and process waste water. Nevertheless, we will continue our efforts to make further improvements. Our main focus is now on energy and water consumption. In this area, we systematically follow our reduction plans and continue to work on achieving our objectives.

→ see performance indicators

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

→ 3.1 Consumption of resources
3.2 Renewable energy
3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

CONSUMPTION OF RESOURCES IN DETAIL

We intend to further improve the positive figures achieved in recent years in our environmental management. We continuously work towards this end at all existing and new locations. At the same time, it is important to respond to external trends such as new scientific findings or rising raw material prices. All these aspects are fed into our strategic planning and considerations.

→ see table 3.01

Improvement in resource consumption and emissions from vehicle production since 2006
→ T3.01

Energy consumption	–36.5%
CO_2 emissions	–61.0%
Waste for disposal	–79.6%
Water consumption	–31.9%
Process waste water	–51.2%
Solvent emissions	–59.0%

The BMW Group has five environmental centres of competence (CoCs) in the areas of emissions, water, waste, training and environmental management system. They are staffed by environmental experts from the different plants and by specialists from Corporate Environmental Protection. All participating managers of the plants as well as the Corporate Energy Management department of the BMW Group work closely together in the area of energy efficiency. Both the competence centres and Energy Management discuss legal requirements and best-practice solutions with technology experts from the production plants and develop reference systems on which to base future planning and process improvements. Environmental improvements that have been effective at one location are implemented at other locations wherever possible. Furthermore, we pass on our experiences to our suppliers in order to improve sustainability in our supply chain where possible.

→ see chapter 3.3

Resource efficiency and digitalisation in our new paint shop in Munich/DE

In May 2017, we commissioned a new high-tech paint shop at our plant in Munich/DE. With an investment worth more than €200 million, the facility is part of an extensive future package for the plant. It facilitates an integrated paint process during which two layers of paint are applied one after the other, omitting the interim drying step which was previously required. As a result, significantly fewer resources are used when compared to conventional paint processes. With the drying step taken out of the equation, natural gas consumption and CO_2 emissions during the topcoat application are expected to be reduced by around half and power consumption by 27%. The innovative dry separation process does not require water, chemicals or other additives. In addition, the exhaust air emitted is reduced by two thirds thanks to the use of innovative air-circulation technology.

The paint shop increasingly harnesses the benefits of intelligent network-enabled systems. They increase the level of flexibility in process flows and allow for automated preventive maintenance. This way, intelligent test systems perfect the appearance of the painted bodies and guarantee maximum quality. The data collected in this process can be used to draw valuable conclusions regarding the precision of upstream painting processes, which are optimised on an ongoing basis in order to identify potential for error at an early stage and avoid reworking.

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

→ 3.1 Consumption of resources
3.2 Renewable energy
3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

Optimising energy efficiency

In 2017, we continued to expand our highly efficient in-house energy generation. We were able to increase electricity generation from combined heat and power systems by around 9% to 361,000 MWh in the period under review. Further expansion is well underway. To give an example, we installed a new machine at our plant in Oxford/UK which will be put into operation in 2018. We are already preparing for the continued development of combined heat and power by carrying out preliminary work on the heating grids at the Munich/DE plant.

New combined heat and power systems at the BMW plants in Dingolfing and Landshut in Germany: compared to conventional technologies, the CO_2 savings will amount to 75,000 tonnes per year. For this contribution towards environmental protection, the Group plans to invest around €90 million in total at the two locations.

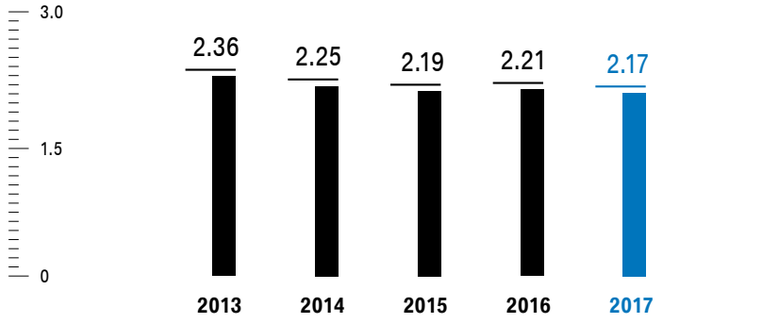
In 2017, we also almost completed the process of replacing lights by LEDs in our production plants. As a result of this switch, we saved over 67,700 MWh in energy and avoided CO_2 emissions of around 28,000 tonnes in the period under review.

There was another key process improvement at our plant in Landshut/DE. By developing pig preheating, we were able to reduce energy consumption in the light alloy smelter by a considerable amount. In preheating chambers that use exhaust gas heat from other processes we now heat aluminium ingots to a temperature of 400 °C before they are melted in smelters. As a result of the reduced melting time, we save over 11,000 MWh of energy per year and significantly reduce the CO_2 emissions of the melting process. In the period under report we already achieved a reduction of 1,500 MWh after the changeover was completed in October 2017. The cost savings resulting from this transition amount to around €350,000 per year.

In 2017, we also launched a digitalisation project in the area of energy consumption and production data. Optimal operating conditions are determined by analysing power consumption figures of complex manufacturing structures and the facility management system. Based on this information, we continuously optimise processes and increase energy efficiency using innovative approaches.

Energy consumption per vehicle produced[1]
→ T3.02

in MWh/vehicle



[1] Efficiency indicator = electricity, heat, natural gas and heating oil consumption from vehicle production (without motorcycles) minus CHP losses, divided by the total number of vehicles produced, including BMW Brilliance Automotive Ltd. joint venture, not including the vehicles from the Magna Steyr/AT and Nedcar contract production plants.

→ GRI 302-3, GRI 302-4

→ see table 3.02

In 2016, energy consumption slightly increased due to the construction and configuration of new production facilities. In 2017, we were able to slightly reduce energy consumption from our vehicle production with 2.17 MWh per vehicle produced compared to the previous year.

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

→ 3.1 Consumption of resources
3.2 Renewable energy
3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

This relatively low increase in energy efficiency can essentially be attributed to the fact that the new, highly efficient plants and production facilities mostly need to be operated in parallel to the old facilities. When the old facilities have been completely replaced in 2018, we expect an important boost to our energy efficiency. We are coming much closer to our goal of reducing consumption per vehicle by 45% by 2020 compared to 2006. The corresponding measures have proved effective. So far, we have achieved a reduction of 36.5% compared to the base year of 2006. → GRI 302-3, GRI 302-4

Systematically reducing CO_2 emissions

In light of climate change, the reduction of CO_2 emissions is highly relevant for the BMW Group. Reducing CO_2 emissions not only makes environmental sense – it is also a business opportunity for the company. By consuming less energy and saving on CO_2 levies thanks to lower emissions, we can reduce costs and create concrete competitive advantages. In addition, our fleet customers in particular have high expectations with regard to the environmentally-friendly manufacture of vehicles. So we are reducing CO_2 emissions both in our own production as well as along the value chain, including the upstream chain.

Minimising CO_2 emissions at company locations

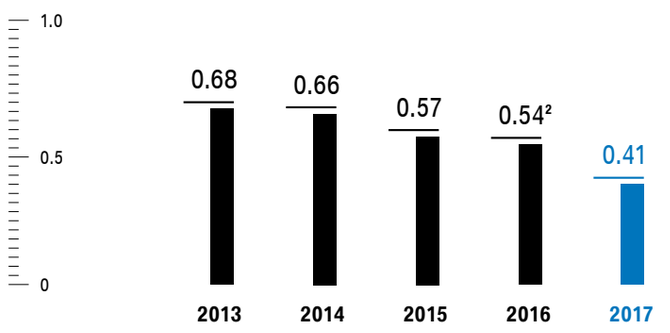
CO_2 emissions at the BMW Group locations are generated directly from burning fossil fuels (Scope 1 emissions) and indirectly through the company's electricity and heat consumption (Scope 2 emissions). We focus on reducing CO_2 emissions from our production facilities, which account for around 90% of these Scope 1 and 2 emissions. We are pursuing our vision of carbon-free energy supply at all locations.

Through our measures to increase energy efficiency, as well as our own generation and purchase of electricity from renewable sources at our production sites, CO_2 emissions from vehicle production per vehicle produced decreased in the reporting period by another 24.1% to 0.41 t compared to the previous year (2016: 0.54 t CO_2 per vehicle). Despite an increase in the production volume, we were able to reduce absolute emissions in the production network for the third year in a row (2017: 989,111 t CO_2; 2016: 1,254,961 t). We see the consistent decrease in CO_2 emissions in recent years as confirmation of the effectiveness of our measures. → GRI 305-4, GRI 305-5

→ see table 3.03

CO_2 emissions per vehicle produced[1]
→ T3.03

in t/vehicle



[1] Efficiency indicator = CO_2 emissions (from vehicle production, without motorcycles) from Scope 1 and Scope 2 minus CHP losses divided by the total number of vehicles produced, not including the vehicles from the Magna Steyr/AT and Nedcar contract production plants.
[2] Market-based emissions in accordance with GHG Protocol Scope 2 Guidance. Climate-affecting gases other than CO_2 not included.

→ GRI 305-4

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

→ 3.1 Consumption of resources
3.2 Renewable energy
3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

Reducing CO_2 emissions in the value chain

Both upstream and downstream in the value chain, we continually reduce emissions caused by the use and disposal of our products, in our supply chain, in transport logistics and by employees commuting to and from work (Scope 3 emissions). Almost 70% of these emissions are generated during utilisation of the vehicles sold. The emissions generated during fuel production are not counted here. With our Efficient Dynamics technologies, we are continually reducing the average fleet emissions of CO_2 per kilometre. In 2017, the mean value in our core markets – the European Union, the USA, China, Japan and Korea – was 141 g CO_2/km (2016: 144 g CO_2/km). This is equivalent to a decrease of 2.1% compared to the previous year.

→ see chapter 2.1

Around a fifth of Scope 3 emissions were generated in the upstream supply chain. We constantly work with our suppliers to look for further possibilities to use resources more efficiently.

→ see chapter 3.3

Zero-emissions logistics: at the main plant in Munich, Germany, a variety of electric trucks are in operation, making a positive contribution towards air quality in the city.

Furthermore, around 2% of Scope 3 emissions are caused by the global transport volume required to supply our production plants with materials, to deliver our vehicles and to supply spare parts to the markets. In order to keep these CO_2 emissions to an absolute minimum, we work on the principle "production follows the market". A key measure to reduce CO_2 emissions is the preferential use of low-carbon energy and transport modes. For example, all railway lines in Germany used to supply the internal production sites up to the export ports were converted to green electricity.

Rail also plays an important role in distributing vehicles. More than half of all new vehicles leave our plants by this mode of transport. Following a change in the regional distribution of our production, however, there was a slight reduction in the share of all new vehicles that leave our plants by rail to 55.4% (2016: 59.7%). Furthermore, we are deploying the first all-electric as well as gas-powered lorries in plant supply in cooperation with logistics service providers. Other opportunities to use alternative drive-trains and fuels are currently being investigated.

With Design for Recycling, we ensure that as many of the components as possible flow back into the materials cycle once the vehicle has reached the end of its life cycle. This leads to lower CO_2 emissions in the value chain.

→ see chapter 2.1

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

→ 3.1 Consumption of resources
3.2 Renewable energy
3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

BMW Group CO_2 footprint

→ T 3.04

in t CO_2	2013	2014	2015	2016	2017
Total emissions[1]	64,019,874	66,913,264	68,991,955	70,818,970	**72,826,736**
SCOPE 1: DIRECT GREENHOUSE GAS EMISSIONS					
Total emissions	492,798	494,931	536,168	562,146	**625,072**
Emissions of BMW Group locations[2]	399,473	403,810	443,575	472,021	**529,728**
Emissions of company vehicles	88,695	85,695	87,358	85,008	**88,782**
Emissions of company-owned planes	4,630	5,426	5,235	5,117	**6,562**
SCOPE 2: INDIRECT GREENHOUSE GAS EMISSIONS					
Total emissions[3]	922,843	966,067	923,313	868,089	**510,911**
Electricity/heat purchased by BMW Group locations[3]	922,843	966,067	923,313	868,089	**510,911**
SCOPE 3: INDIRECT GREENHOUSE GAS EMISSIONS					
Total emissions	62,604,233	65,452,266	67,532,474	69,388,735	**71,690,753**
Emissions of logistics	1,383,774	1,518,304	1,402,082	1,427,399	**1,473,087**
Emissions of business trips	113,388	137,601	138,522	142,250[7]	**169,233**
Emissions of employees' commuter traffic[4]	122,584	121,428	133,690	139,797	**140,187**
Emissions of upstream chain[5]	13,274,865	14,331,118	14,886,300	15,391,154	**16,786,192**
Emissions of utilisation phase[6]	46,696,786	48,239,470	49,582,958	51,079,073	**51,887,708**
Emissions of disposal[5]	1,012,836	1,104,345	1,145,158	1,185,148	**1,234,346**

[1] Addition of emissions from employees' commuter traffic, from 2012 onwards emissions from supply chain, utilisation phase and disposal as well as from 2015 onwards BMW Group location emissions from BMW Motorrad Berlin/DE and corporate functions, development and administration in Munich/DE. The emissions listed account for around 90% of the Scope 1 to Scope 3 emissions of the BMW Group. Climate-relevant gases other than CO_2 are not included in Scope 1 and 2 emissions.
[2] Figures from 2015 onwards not directly comparable to previous years due to changes in system boundaries: emissions from company production locations, including BMW Motorrad Berlin/DE as well as corporate functions, development and administration in Munich/DE. Application of VDA emissions factors revised in 2017.
[3] Figures from 2015 onwards not directly comparable to previous year due to changes in system boundaries: emissions from company production locations, including BMW Motorrad Berlin/DE as well as corporate functions, development and administration in Munich/DE. Market-based emissions in accordance with GHG Protocol Scope 2 Guidance. Application of VDA emissions factors revised in 2017. Scope 2 emissions calculated using "location-based" method – overall third-party electricity and heat purchased calculated using VDA factors: 1,572,432 t CO_2.
[4] Extrapolation from the table "Means of transport used by BMW Group employees and indirect CO_2 emissions from employees' commuter traffic".
[5] Thinkstep's LCA tool Gabi calculates emissions from supply chain and disposal processes, based on the carbon footprints of representative vehicles from the product lines (including the climate-relevant gases CO_2, CH_4, N_2O, SF_6, NF_3, among others). Corresponding with the CO_2 e-emissions, energy consumption (lower heating value) is calculated based on the environmental footprints: around 77,545,000 MWh in the supply chain as well as 502,000 MWh at the disposal companies.
[6] The fleet emissions are extrapolated from the average fleet emissions of the main sales markets of the BMW Group. The calculation was based on an average mileage of 150,000 km.
[7] Correction due to data cleansing.

→ GRI 302-2, GRI 305-1, GRI 305-2, GRI 305-3

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

→ 3.1 Consumption of resources
3.2 Renewable energy
3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

We are supporting other measures to avoid CO_2 emissions with our BMW Energy Services division. We have developed various digital business models in order to participate in the energy market of the future and push ahead with decarbonisation of electricity generation. Since 2015, we have been selling our flexibility reserves emerging from the company's heat and power generation as "balancing energy". This business model is applied at our plant in Leipzig/DE, for example. In October 2017, we commissioned a storage park there which acts as a substantial flexibility reserve, holding up to 700 BMW i3 batteries. As a result of this, discarded high-voltage vehicle batteries are supplied for second-life use and the usage duration of the batteries is extended beyond the vehicle life cycle in a resource-friendly manner. In addition to participation in the balancing energy market and the associated stabilisation of the public electricity grid, the storage park also helps optimise the use of self-generated electricity from renewable sources in the Leipzig/DE plant and thus reduces the CO_2 footprint of the plant.

→ see chapter 2.2

Furthermore, BMW Energy Services identifies potential for energy flexibility and develops appropriate solutions for companies and private customers through the joint venture → **Digital Energy Solutions,** which we founded in 2015 in collaboration with Viessmann.

Using raw materials intelligently

The environmentally friendly use of raw materials is taken into account as early as the vehicle development phase via "Life Cycle Engineering". We shape our supply chain and material cycles accordingly, allowing us to gradually increase the use of secondary raw materials in our vehicles. Up to 20% of the thermoplastic materials in our vehicles are now made from recyclates. These materials account for an average of 12% of vehicle weight. We use up to 50% secondary aluminium in high-strength cast aluminium parts. → GRI 301-2 Wherever it makes technical, business and environmental sense and is socially viable, we replace artificial materials with renewable materials. For example, we replaced supports of door trim panels with natural fibres. These are used in the BMW i3, BMW 7 Series and BMW 5 Series models, among others. This way, we make a significant contribution towards resource efficiency.

→ see graphic 2.06

We carefully consider weight, function and costs in the use of rare earths. Rare earths are key raw materials for a number of components in modern vehicles. How we use rare earths can contribute towards reducing fuel consumption, for example by increasing the efficiency of electrical systems. In some components, such as basic loudspeakers, we have completely replaced potentially supply-critical rare-earth elements.

Currently, the BMW Group is already developing the fifth generation of its electric drivetrains, to be launched in 2021. One advantage of this new generation is that the electric engine is being designed to not require rare earths.

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

→ 3.1 Consumption of resources
3.2 Renewable energy
3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

End-of-life vehicle recovery and recycling

We do not consider end-of-life vehicles as waste to be disposed of, but rather as a secondary source of raw materials. Established recovery systems for end-of-life vehicles, components and materials ensure that they are reintegrated into the raw materials cycle. Together with its sales organisations in each country, the BMW Group has installed recovery systems for end-of-life vehicles in 30 nations and offers vehicle owners environmentally friendly vehicle recycling at dedicated recovery centres. → GRI 301-3

From the body to the cable harness: old vehicles are scrapped at the recycling and disposal plant.

All BMW Group vehicles brought onto the market since 2008 meet the statutory requirements for the recycling of end-of-life vehicles, components and materials (95% total recycling, 85% reuse and material recycling).

At our recycling and dismantling centre (RDZ), we test new recycling concepts for innovative vehicle components on an ongoing basis. Furthermore, we promote the implementation of new recycling technologies, such as the recycling of high-voltage batteries and carbon fibre components through cooperation with research institutes and suppliers. We also intend to close the material cycles in this area by using secondary raw materials in the production of lithium-ion batteries.

Avoiding and recycling production waste

We have already achieved our goal of reducing waste volume in vehicle production by 45% by 2020 compared to the base year 2006. In spite of this, we continue to minimise the amount of waste for disposal, and integrate as many residual materials as possible into a complete life cycle management system. In China, for example, foundry sand is used to produce concrete. We have reduced waste for disposal in the Leipzig/DE, Goodwood/UK and Rayong/TH plants almost entirely. Given the different waste streams in the various plants, the varying legal requirements and the existing disposal structures, this is not possible in all plants.

The waste from production that cannot be recycled or re-used amounted to an average of 3.86 kg per vehicle produced in 2017 (2016: 3.51 kg). In 2017, waste for disposal increased due to the ramp-up of the new plant in Dadong, where recycling or re-usage concepts for certain waste flows were not yet implemented or will not become effective until 2018. Our overall recycling and re-usage rate was 98.9% (2016: 98.9%). We regard this as an indicator of the effectiveness of our reduction efforts.

→ see table 3.05

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

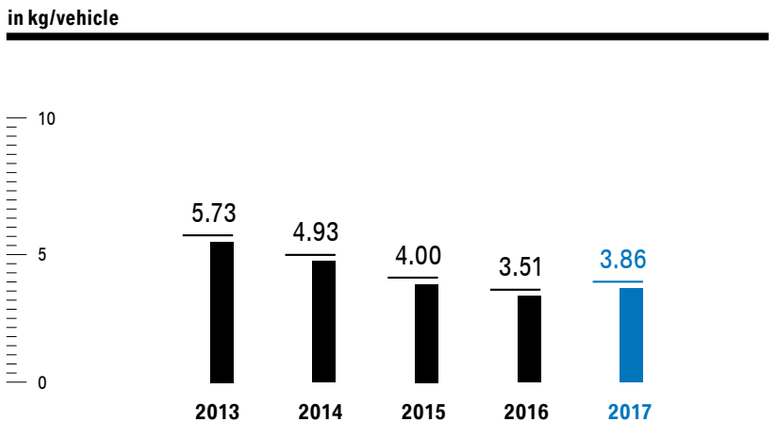
→ 3.1 Consumption of resources
3.2 Renewable energy
3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

Waste for disposal per vehicle produced[1]
→ T3.05



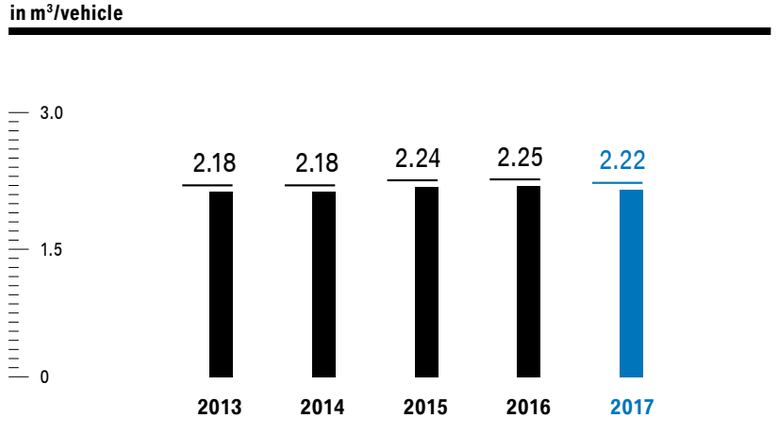
[1] Efficiency indicator = waste for disposal from vehicle production divided by the total number of vehicles produced, incl. BMW Brilliance Automotive Ltd. joint venture, not including the vehicles from the Magna Steyr/AT and Nedcar contract production plants.

Reducing water consumption and waste water

We work on an ongoing basis to reduce our water consumption. In doing so, we place a special focus on production plants in countries with an increased water risk such as South Africa, the USA or China. There are currently no water supply risks at our production plants.

The largest water consumers at the BMW Group are the sanitary facilities for our workforce (54%), evaporation, mainly at cooling towers (28%), and the production processes, in particular at the paint shops (18%). We are continuously improving our resource efficiency in all three areas. For example, closed cooling towers help to steadily reduce water consumption in the new buildings in Dingolfing/DE and Munich/DE. We use treated waste water in the paint shop in Tiexi/CN.

Water consumption per vehicle produced[1]
→ T3.06



[1] Efficiency indicator = water consumption from vehicle production divided by the total number of vehicles produced, incl. BMW Brilliance Automotive Ltd. joint venture, not including the vehicles from the Magna Steyr/AT and Nedcar contract production plants.

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

→ 3.1 Consumption of resources
3.2 Renewable energy
3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

We reduced water consumption per vehicle produced by 1.3% to 2.22 m³ in 2017 compared to the level of the previous year (2016: 2.25 m³). Compared to the base year of 2006, water consumption was reduced by 31.9%. We aim to achieve the strategic goal for 2020 (reduction of 45% compared to base year 2006), primarily by implementing two measures: we want to replace water jet cutting at our foundries by a waterless method and use treated process waste water instead of freshwater at our plant in Spartanburg.

→ see table 3.06

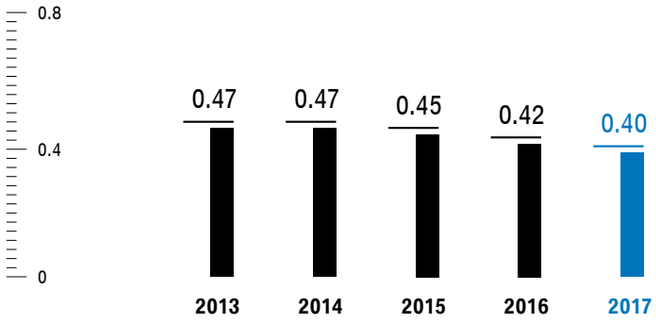
We continuously work on implementing our vision of water-free processes in production. In 2017, consumption of process waste water per vehicle produced was reduced by 4.8% to 0.40 m³ compared to the previous year (2016: 0.42 m³). By continuously improving our plants, and in particular optimising our paint shops and waste water treatment plants, we aim to continue reducing consumption in future. With a reduction of 51.2% compared to 2006, we have already achieved our 2020 goal (45% compared to 2006).

→ see table 3.07

Process waste water per vehicle produced[1]

→ T3.07

in m³/vehicle



[1] Efficiency indicator = process waste water from vehicle production divided by the total number of vehicles produced, incl. BMW Brilliance Automotive Ltd. joint venture, not including the vehicles from the Magna Steyr/AT and Nedcar contract production plants.

Minimising solvents

In our Group-wide environmental efforts, we also aim to continue to minimise the impact of our emissions of volatile organic compounds (VOC) on the environment. These are primarily generated in our paint shops. At the end of 2017, the reduction in VOC emissions per vehicle produced amounted to 59.0% compared to 2006, significantly exceeding the goal we had set ourselves of a 45% reduction by 2020.

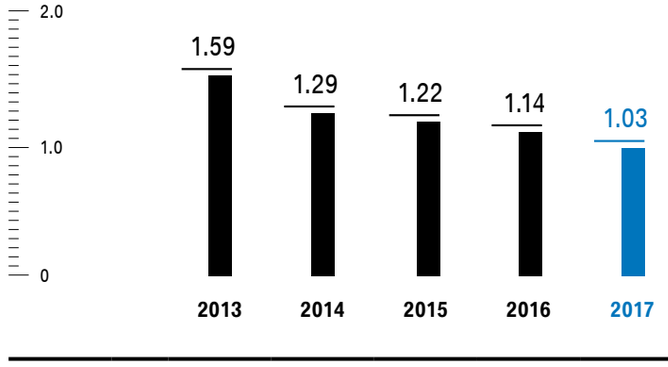
In 2017, we achieved an average of 1.03 kg of VOC emissions per vehicle produced. In line with our expectations, the maximum levels stipulated by the individual countries are complied with at all BMW production sites. We are frequently below these maximum levels. VOC emissions per vehicle produced fell slightly once again by 9.6% in 2017 compared to 2016. This reduction was achieved by using new painting technology at various plant locations.

→ see table 3.08

Solvent emissions per vehicle produced[1]

→ T3.08

in kg/vehicle



[1] Efficiency indicator = VOC emissions from vehicle production divided by the total number of vehicles produced, incl. BMW Brilliance Automotive Ltd. joint venture not including the vehicles from the Magna Steyr/AT and Nedcar contract production plants.

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

→ 3.1 Consumption of resources
3.2 Renewable energy
3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

Forecast

In the coming years, we will continue to pursue our efforts to increase resource efficiency. Our planned measures in the area of energy efficiency include the final stage in the switch to LED lights at our locations as well as the further use of waste heat from our combined power and heat systems. For example, the old gas turbines at our Dingolfing/DE plant are expected to be upgraded to the latest gas engines in 2018.

On account of a new state-of-the-art paint shop in our main plant in Munich/DE as well as various process optimisations within the production network, we are anticipating a further reduction in VOC emissions in 2018.

From 2019 onwards, our new plant in Mexico, which is currently under construction, will make a significant contribution to resource efficiency. From its first full production year in 2020, it is expected to become the most resource-efficient plant of the BMW Group.

Furthermore, the production sites to be refurbished by 2020 will make a contribution towards achieving the environmental goals of the BMW Group.

Reducing VOC emissions at the new paint shop in Munich, Germany: Volatile Organic Compounds are steadily being cut back.

→ RENEWABLE ENERGY

The BMW Group is the leader in the use of renewable energy in production and value creation.

Practical ways of reusing battery storage facilities: the BMW Group's new storage farm in Leipzig increases the efficiency of the wind power plant on the company's premises.

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

3.1 Consumption of resources
→ 3.2 Renewable energy
3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

3.2 RENEWABLE ENERGY

Sustainability goal:
The BMW Group is the leader in the use of renewable energy in production and value creation

Renewable energy plays a crucial role in the reduction of CO_2 emissions. In order to tackle the effects of climate change, the BMW Group aims to purchase its electricity worldwide exclusively from renewable energy sources from 2020 onwards. We are expanding our own production of renewable electricity at our locations and increasingly using electricity from external renewable sources. This way, we improve our environmental performance and match our stakeholders' expectation that we support sustainable energy production. Last but not least, this approach is consistent with our understanding of sustainable mobility with vehicles that are produced with the lowest emissions possible.

Key measures:
Increasing the use of renewable energy along the entire value chain

When promoting the use of renewable energy, our main focus is on our own plants. Depending on the site, we decide on the basis of local conditions which renewable energy resources can be utilised efficiently. A variety of technologies is therefore applied at our locations. We always make producing our own renewable energy a priority. If this is not entirely possible due to prevailing technical and economic conditions, we purchase electricity from local renewable sources if feasible.

Our site in Austria has been supplied with 100% green electricity since 2016. In 2017, we expanded our commitment and now also supply the plants in Germany and the UK fully with renewable electricity. This means that all of our production locations in Europe draw their electricity exclusively from renewable sources – through guarantees of origin, among other things. In China, too, we have started to purchase local green energy and were therefore able to use 178 GWh of electricity from wind turbines in the period under review. This accounted for 44% of all electricity purchases of our Chinese plants. In 2018, we aim to continue to increase the green electricity share of the BMW Group, with the goal of using electricity from renewable energy sources exclusively worldwide from 2020 onwards.

Another large share of CO_2 emissions caused by manufacturing our products is generated by our suppliers. That's why we support the use of renewable energy in our supply chain too. As part of the Supply Chain Programme of the Carbon Disclosure Project (CDP), we ask our suppliers to provide information on CO_2 emissions and reach agreements with them on increasing the share of renewable energies.

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

3.1 Consumption of resources
→ 3.2 Renewable energy
3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

Due diligence processes: Central management and local tracking of the use of renewable energies

Management and control of the use of renewable energy in buildings of the BMW Group are the responsibility of the Real Estate division, Facility Management and Corporate Security in close cooperation with the main department for Sustainability and Environmental Protection as well as Corporate Energy Procurement. The BMW Group also set up a steering group at the main department level. Since 2013, it has coordinated current and future measures and taken on a monitoring role in order to regularly check whether targets have been met. We have defined independent processes throughout the Group for the planning and implementation of measures, which assign clear roles and responsibilities to the central strategy departments, regional control stations as well as plants at the local level. Furthermore, the BMW Group works in close cooperation with its energy suppliers in the local markets in order to respond to any changes in the supplied electricity quality in terms of the green electricity share and CO_2 freight. In 2017, we also professionalised the monitoring of legislative amendments in the energy sector and established a partnership with appropriate external experts. All this helps the BMW Group to respond to corresponding developments at an early stage.

As part of the CDP Supply Chain Programme, we ask our suppliers to take measures to reduce their CO_2 emissions and track their overall process using their CDP rating. So far, we have set goals for the resource efficiency of participating suppliers. We have yet to define specific goals or due diligence processes for the sub-area of renewable energy.

Results and performance indicators: Use of renewable energy further increased

→ see performance indicators

In 2017, we further increased our use of renewable energy for our electricity supply to 81% (2016: 63%). On the basis of agreements with our suppliers participating in the CDP Supply Chain Programme, we were able to increase the amount of renewable energy in their overall energy consumption to an average of 2% (2016: 1.6%) in our supply chain.

We regard the continuous growth in the share of renewable energy both in our production and in the supplier network as confirmation of the effectiveness of our measures.

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

3.1 Consumption of resources
→ 3.2 Renewable energy
3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

RENEWABLE ENERGY IN DETAIL

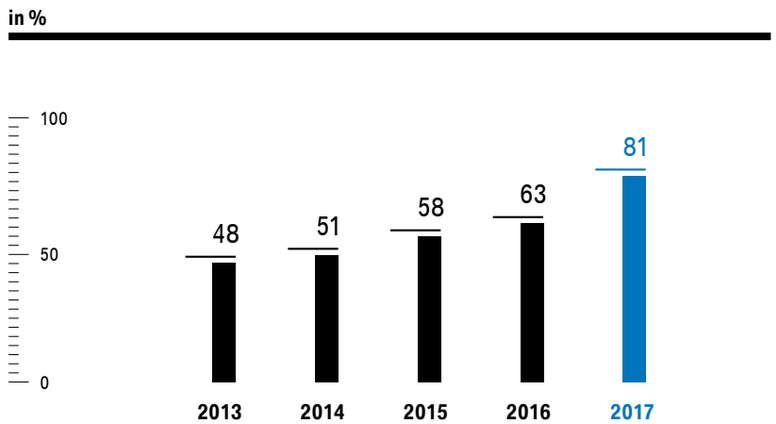
Expanding use of renewable energy at BMW Group locations

At all locations, we continuously work on increasing the amount of electricity from renewable sources. For this purpose, we conduct regular country analyses in which we assess the political and economic conditions. We completed this analysis for the USA in 2017, so that we can now focus on the implementation of defined measures, as has been done in Germany, Austria and the UK. These include both on-site electricity generation and the purchase of renewable electricity. What's more, we are developing the necessary regulatory expertise for other energy markets in which we have plants. For example, we are currently conducting these analyses in Brazil and Mexico.

In several of our plants we started the planning and tendering process for new photovoltaic systems. A free-standing facility with a maximum output of 5 MWp was tendered at our new plant in Mexico. This will help to cover the entire base load of the plant with renewable electricity. In China we have made a start on the construction of several carport and on-roof facilities at our plants with a maximum output of 7.3 MWp. Once completed, these two projects will be the most powerful photovoltaic systems in the BMW production network. After the construction of wind turbines with a maximum output of 10 MW in Leipzig/DE, we will continue with the expansion of renewable energy on a large scale.

Renewable energy is not only used in our production plants but also in other buildings of the BMW Group. For example, all warehouses and dealerships as well as corporate headquarters and the Research and Development centre in Munich/DE are fully supplied with green energy.

Share of renewable energy purchased from third parties[1]
→ T3.09



[1] Calculated based on volumes of green energy purchased (among other things via certificates of origin) as well as the conservative calculation of country-specific green energy shares for the rest of electricity purchased from third parties. Figures from 2015 onwards not directly comparable to figures for 2013–2014. Figures from 2015 onwards include all BMW Group production locations, incl. BMW Brilliance Automotive Ltd. joint venture, as well as corporate functions, development and administration in Munich/DE.

→ see table 3.09

The continuous increase in the amount of renewable energy in our electricity supply confirms the effectiveness of our measures. Our strategy to expand renewable energy has proven to be an effective foundation for the planning of concrete measures, which can be applied in a wide variety of country contexts. This year we were able to confirm this in the country-specific analysis for the expansion of renewable energy in our electricity supply in the USA.

The changing regulatory, political and economic conditions prevent an even quicker expansion at many locations. Changes in the relevant regulations in particular often present us with great challenges, as they make

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

3.1 Consumption of resources
→ 3.2 Renewable energy
3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

long-term planning more difficult. For example, amendments to the Renewable Energy Act in Germany brought about significant changes to the economic assessment of facilities, which has a considerable impact on the planning process. Another case concerns our plan to fully supply the plant in San Luis Potosí/MX with renewable electricity from the outset: the Mexican electricity market is currently being deregulated by the government. This process involves unclear planning premises and confronts us with a complex starting point for achieving our goal of full supply with green energy. We therefore continuously strive to identify changes at an early stage in order to find both technically and ecomically as well as politically viable solutions.

Making use of what is available: a biogas plant in South Africa supplies the Rosslyn plant with environmentally friendly electricity.

Promoting renewable energy in the supply chain

The supply chain currently accounts for more than a fifth of our total emissions (Scope 1, 2 and 3). This is many times the emissions at our plant locations. Given the switch to electromobility, we expect that the emissions in our supply chain will soon also exceed the emissions from the utilisation phase of our vehicles. In order to further reduce total emissions, encouraging the use of renewable energy in the supply chain is a priority for us.

→ see chapter 3.3

Our work begins at the strategic level: based on information we draw from our suppliers as part of the → **Supply Chain Programme of the Carbon Disclosure Project (CDP)** we reach agreements with our suppliers that they will increase the share of renewable energy they use. We are currently developing a new concept on how to agree on bilateral targets with suppliers. This way, we intend to continuously increase the average share of renewable energy in the supply chain.

→ see chapter 3.3

We ask suppliers that have achieved a positive rating in the CDP ranking to check that their emission goals conform to the 2-degree objective and to formulate science-based targets. The 2-degree goal is the objective of the international climate policy to keep global warming under 2 °C. In 2017, we urged 98 suppliers to formulate corresponding targets. 27 of our suppliers participating in the CDP programme reported a target that was at least in line with the 2-degree goal, and 44 other suppliers are planning to define such a target within the next two years. It is necessary that suppliers develop clear strategies for the use of renewable energy in order to reach the 2-degree goal. For this reason, we assess the corresponding target definition as an important indicator of a strategy change among suppliers.

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

3.1 Consumption of resources
→ 3.2 Renewable energy
3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

This approach gives our suppliers time to gain an understanding of the mechanisms and establish necessary structures. In future, we plan to incorporate CDP figures into the tendering process. As a result, we expect that this will have a considerable impact on the reduction of CO_2 emissions.

Forecast

With the goal of drawing our electrical energy worldwide exclusively from renewable sources from 2020 onwards, we want to continue to expand electricity supply from renewable sources at our plants outside of Europe in particular in the coming year. This will enable us to further reduce the specific CO_2 emissions of the production network. For example, in 2018 we will already be looking into achieving complete supply with renewable power also in individual countries outside Europe.

The experience that we gather at our locations forms the basis for demanding corresponding measures from our suppliers. In 2018, we intend to build on bilateral agreements with suppliers in order to increase the share of renewable energy.

SUSTAINABLE, RESOURCE-EFFICIENT SUPPLY CHAIN

The BMW Group will significantly increase supply chain transparency and resource efficiency by 2020.

Search
Back

Securing a sustainable supply chain: a large number of natural raw materials are used in BMW Group vehicles.

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

3.1 Consumption of resources
3.2 Renewable energy
→ 3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

3.3 SUSTAINABLE, RESOURCE-EFFICIENT SUPPLY CHAIN

Sustainability goal:
The BMW Group will significantly increase supply chain transparency and resource efficiency by 2020

Our supplier network provides the majority of our value creation (around 80%). Compliance with social and environmental standards along the entire value chain is therefore a key component of our understanding of sustainability as well as an important demand placed by our stakeholders. A major challenge in this regard are the increasingly complex supply chains. At the same time, the demand for raw materials is changing due to the expansion of electromobility. We work closely with our suppliers to ensure that sustainability standards are complied with and increase transparency and resource efficiency in all supply chains. In addition, we support initiatives to enforce sustainability requirements for the extraction and processing of selected critical raw materials and materials along the entire supply chain. Only by fulfilling our social and environmental responsibility alongside our suppliers can we secure the sustainability of our business model.

Key measures:
Enhancing sustainability in the supply chain with systematic management

The most important measure to enforce our sustainability requirements is the application of due diligence processes. It is an integral component of our procurement process and should be applied for all nominated and potential supplier locations.

We also analyse the impact of selected critical resources and materials on the environment and society along the entire supply chain and carry out pilot projects to increase sustainability performance. As a result, we become familiar with the impact mechanisms and influencing factors that are involved in improving sustainability performance. We feed these experiences into the management of our supply chains and into standardisation initiatives specific to products or materials as well as to industry and across sectors.

As participants in the Supply Chain Programme of the Carbon Disclosure Project (CDP), we support our suppliers in the enforcement of CDP requirements. Annual reporting for the programme increases the level of transparency with regards to resource efficiency in the supply chain and acts as a basis for developing approaches for increasingly efficient handling of resources together with our suppliers. It is our aim that 60% of our suppliers participating in the CDP Supply Chain Programme have at least a B rating in the CDP scoring system by 2020 (A is the highest and D is the lowest rating in terms of implementing the CDP criteria).

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

3.1 Consumption of resources
3.2 Renewable energy
→ 3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

Due diligence processes: Increasing transparency and minimising risks

The basis for increasing transparency and resource efficiency in our supply chain is the BMW Group Supplier Sustainability Standards which establish social and environmental criteria (e.g. compliance with human rights and environmental standards) for our direct suppliers as well as their suppliers. The Sustainability Standards are an integral part of the request for proposal documentation for suppliers.

We use the due diligence process to ensure that our Sustainability Standards are complied with. The process starts with the identification, analysis and prioritisation of risks of supplier locations. Each production and distribution location is assessed for nomination on the basis of an industry-specific sustainability questionnaire regarding environmental, social and governance criteria. Where appropriate, improvement measures are defined which must be implemented in order to gain a nomination. By means of independent sustainability audits or BMW Group sustainability assessments, we check and certify selected supplier locations that demonstrate an increased risk of non-compliance with sustainability standards.

By establishing sustainability requirements and due diligence measures in the procurement process, we increase its efficiency, reduce potential risks, create transparency along the supply chain, raise awareness for the topic among the top management of suppliers' and trigger development and improvement processes at their companies.

Results and performance indicators: Further supplier locations assessed and transparency increased

In the period under review, we assessed 4,886 (2016: 4,112) nominated and potential supplier locations on the basis of the industry-wide sustainability questionnaire.

→ see performance indicators

Suppliers who reported their resource efficiency via the Supply Chain Programme of the CDP in 2017 accounted for around 77% of the BMW Group purchasing volume (2016: 69%). We were thus able to further increase transparency in our supply chain. We are now focusing more on increasing resource efficiency among participating suppliers. In 2017, 25% achieved at least a B rating. Participating suppliers reduced their CO_2 emissions by 34 million t in 2017 (2016: around 36 million t).

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

3.1 Consumption of resources
3.2 Renewable energy
→ 3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

SUSTAINABLE, RESOURCE-EFFICIENT SUPPLY CHAIN IN DETAIL

For us, it is essential that our business partners meet the same environmental and social standards we have set ourselves. The → **BMW Group Supplier Sustainability Standards** stipulate compliance with internationally recognised human rights as well as binding environmental, labour and social standards for all suppliers of the BMW Group. Each potential new supplier must satisfy the BMW Group sustainability requirements set out in the sustainability standards and also forward these to its sub-suppliers.

All supplier agreements concluded by the BMW Group for materials required for production as well as agreements concluded by BMW AG for materials not required for production contain clauses based on the principles of the → **UN Global Compact** and the → **International Labour Organization (ILO).** These agreements also specify that a contractual commitment must be made to comply with human rights, labour and social standards as well as to implement environmental management systems and specific environmental protection measures. → **BMW Group Global Supplier Network.** When they sign the contract, our suppliers also commit to ensuring that their suppliers in turn comply with these agreements. Accordingly, our suppliers are instructed to ensure that sustainability criteria are also met in the upstream supply chain.

In order to raise awareness for sustainability in the supply chain among our suppliers and purchasers, we hold specific training programmes. We explain cause and effect and clearly communicate our expectations to them. In this way, we enable participants to contribute towards greater sustainability in the supply chain.

Thomas Thym (left), Vice President Strategy Purchasing and Supplier Network, in dialogue with stakeholders about human rights in the supply chain.

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

3.1 Consumption of resources
3.2 Renewable energy
→ 3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

Increasing transparency and minimising risks

We use the due diligence process to ensure that our Sustainability Standards are complied with in the supply chain. It is made up of the following steps: → see graphic 3.01

Due diligence process of the BMW Group
→ G3.01

1. IDENTIFY, ANALYSE AND PRIORITISE RISKS	2. EXECUTE PREVENTATIVE OR REMEDIAL MEASURES	3. REVIEW, MONITOR AND VALIDATE PROGRESS
Identification and analysis of locations of potential high-risk suppliers using a risk filter, media screening and an industry-wide questionnaire.	Execution of audits and assessments on the basis of the results of the industry-wide questionnaire as well as agreement on corrective measures.	Review and certification of selected supplier locations using the industry-wide sustainability questionnaire, independent sustainability audits or BMW Group sustainability assessments as well as supplier training.

1. Identify, analyse and prioritise risks

In order to identify risks, we use a BMW Group-specific sustainability risk filter. This filter takes account of both regional and product-specific risks. This includes, for instance, an assessment of social risks such as child or forced labour, risks to health due to hazardous process materials and components as well as environmental risks such as harmful emissions and damage to nature. With the aid of an automated media screening and on the basis of regular and direct involvement of our stakeholders in dialogue events, we continuously analyse and prioritise the risks identified. Based on the industry-wide sustainability questionnaire, we also identify specific risks at the supplier location, for example, due to lack of competencies, processes, training measures, management systems or certifications for the application of environmental, social and governance standards.

2. Execution of preventative or remedial measures

We assess the production and distribution locations of nominated and potential suppliers on the basis of the industry-wide sustainability questionnaire. Using this industry-wide approach, we facilitate the application of uniform and standardised requirements for suppliers in the automotive sector. In our BMW Group-specific evaluation of the questionnaire, we have defined minimum requirements for our suppliers, which go beyond the industry-wide minimum and legal requirements, such as the German “CSR-Richtlinie-Umsetzungsgesetz” (CSR Directive Implementation Act). For example, we expect that all suppliers worldwide with more than 500 employees at the corporate level report on their key non-financial performance, even if it is a non-listed company. We consider these requirements in the tendering decision.

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

3.1 Consumption of resources
3.2 Renewable energy
→ 3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

If deficits relating to compliance with the required environmental and social standards are identified on a supplier's questionnaire, we communicate the industry-wide standard recommendations to them. In order to ensure that such a supplier qualifies for nomination in the tendering process, the BMW AG purchaser requires that improvement measures be implemented by start of production at the latest. This corrective action plan is agreed with the supplier in writing as a component of the supply agreement. This ensures that all sustainability requirements are met by the time the supplier begins providing services.

If our sustainability risk filter, media screening or sustainability questionnaire identify selected supplier locations that demonstrate an increased risk of non-compliance with sustainability standards, they are checked and qualified by independent sustainability audits or BMW Group sustainability assessments. In 2017, 17 audits (2016: 15) and 15 assessments (2016: 28) were carried out. → GRI 308-1, GRI 414-1 Crucial areas of action identified by audits and assessments have been highlighted, particularly in the areas of hazardous substance management, waste management and working conditions or occupational safety. → GRI 308-2, GRI 414-2

If the results of an audit or assessment show non-compliance or potential for improvement, we work with the supplier to develop a corrective plan of action and provide as much assistance as possible with implementation, which generally must take place before the start of production.

3. Review, monitor and validate progress

With the aid of the questionnaire and follow-up audits or assessments, we review, monitor and validate the progress of the supplier. If the supplier is uncooperative or in breach of a fundamental BMW Group sustainability clause, our Group-wide escalation process will be initiated. As a result, the contract may not be granted or the business relationship terminated. → GRI 308-2, GRI 414-2 Our goal, however, is to determine the majority of risks during the first two steps and help suppliers raise their sustainability standards. With the ongoing monitoring of measure implementation, we initiate a continuous improvement process among our suppliers.

Further supplier locations assessed and non-compliance tracked

In the period under review, we initiated the process to identify and assess sustainability risks at 4,886 nominated and potential locations of suppliers and sub-suppliers (2016: 4,112). Our focus is on suppliers with a large tendering volume. This included 94% (2016: 89%) of new suppliers of materials required for production with a tendering volume of more than €2 million of BMW AG as well as 77% (2016: 96%) of new suppliers of materials not required for production with a tendering volume of more than €10 million of BMW AG.
→ GRI 308-1, GRI 412-1, GRI 414-1

Sustainability deficits were identified at 2,885 potential and existing supplier locations and corrective measures to remedy the sustainability deficits were defined for 1,747. The key corrective measures from the perspective of the → **UN Global Compact** were related to implementation of the following aspects:

- Environmental management system
- Company policy that clarifies principles regarding collective bargaining, freedom of association and/or bribery
- Environmental policies covering the handling of substances and chemicals that are usable to a limited extent

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

3.1 Consumption of resources
3.2 Renewable energy
→ 3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

Confirmation that the agreed corrective measures have been implemented is a prerequisite for the commissioning of a supplier. 234 supplier locations were not commissioned because they did not meet the sustainability requirements of the BMW Group, among other things. We did not, however, terminate any existing cooperation in 2017. We regard this as confirmation of the success of our approach of addressing and demanding sustainability requirements early on in the procurement process. → GRI 308-2, GRI 414-2

Our Supply Chain Response Team reacts to indications of potential non-compliance with our sustainability principles in the supply chain. This team is made up of a representative from Operational and Strategic Purchasing, Corporate Strategy (sustainability experts), Corporate Communications as well as the works council. In the year under review, we also launched a "Human Rights Contact Supply Chain" as a central telephone number → **+49 89 382-71230** and → **e-mail**. In December 2017, a breach of environmental regulations on the part of a sub-supplier of the BMW Group was reported to the Supply Chain Response Team. The report claimed that the company was illegally disposing of waste water. In response, local environmental authorities visited the supplier on-site and waste water testing was carried out. It was found that a temporary episode took place during construction work. Subsequently, corrective measures were taken in collaboration with the environmental authorities in order to immediately terminate the event and ensure that it would not happen again. In financial year 2017, no further reports about potential breaches were submitted. This team is made up of a representative from Operational and Strategic Purchasing, Corporate Strategy (sustainability experts), Corporate Communications as well as the works council.

Improving resource efficiency

In addition to our sustainability risk management system via the due diligence process, we use the → **Supply Chain Programme of the CDP** to increase resource efficiency and transparency in the supply chain.

In 2017, 189 of our suppliers (2016: 163) participated in the CDP Supply Chain Programme. These suppliers account for 77% of the purchase volume of the BMW Group (2016: 69%). In the annual reporting process, suppliers provide answers to a number of qualitative and quantitative questions: from targets and initiatives, to risk management, through to the integration of sustainability into the corporate strategy, from CO_2 emissions through to the share of renewable energy. An overall evaluation verifies the completeness and content of the answers. The CDP scoring system sets out four levels: the D rating is the lowest and the A rating is the highest. As in the previous year, the average score of our participating suppliers, including the 26 companies that entered the programme in 2017, is C.

The individual scoring results are fed into the purchasing strategies of our relevant departments and a competitive comparison is played back to the key suppliers during their annual supplier development interviews. During these interviews, we discuss with the top managers of our supplier companies any action that needs to be taken and agree on specific improvement measures. In the reporting period, this included further increasing transparency, particularly in the area of indirect emissions. Measures to improve the sustainability management of well-advanced suppliers are geared towards reducing emissions, for example by increasing the share of energy from renewable sources. Reductions of around 34 million tonnes of CO_2 equivalent were reported to us from our supplier network for the year 2017 (2016: around 36 million t). These savings mainly resulted from an increase in energy efficiency in production processes and from optimisation of transport processes.

→ see graphic 3.02

→ see chapter 3.2

→ see Sustainable extraction and procurement of raw materials

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

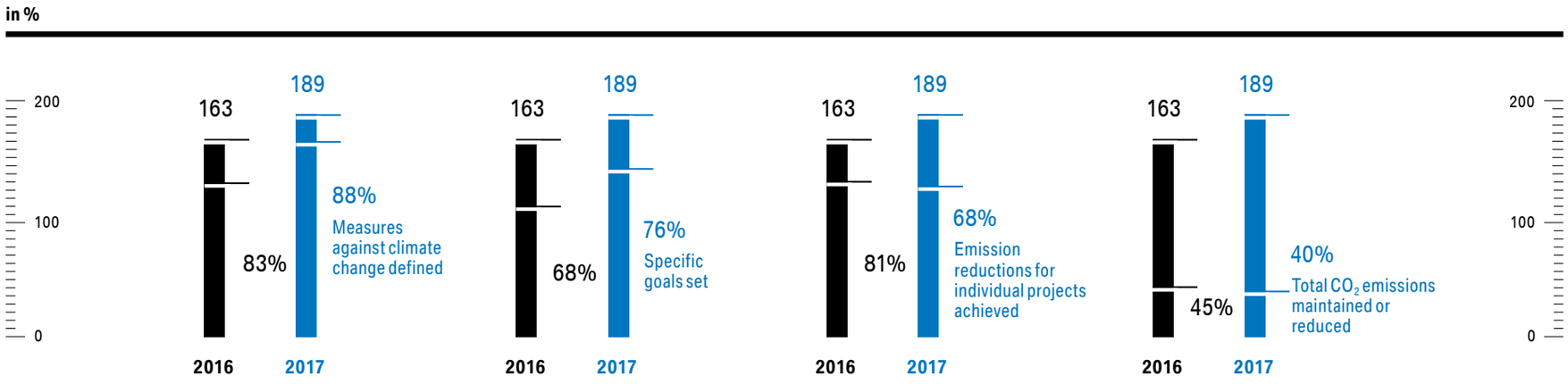
3.1 Consumption of resources
3.2 Renewable energy
→ 3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

Measures taken by suppliers participating in the CDP Supply Chain Programme
→ G3.02



In recent years, the number of suppliers participating in the CDP has grown considerably. Newly participating suppliers usually have fewer measures related to CDP than long-time participants. For this reason, an annual comparison of measures taken is only possible to a limited extent.

The rising number of suppliers in the CDP and the positive results that have been achieved thus far would seem to indicate that our efforts to increase transparency and resource efficiency in the supply chain are effective.

In-depth analyses demonstrate that suppliers who have been reporting for at least three years have a considerably better average performance than those who have participated for just one or two years. The establishment of the programme among long-time participants is therefore well underway and constitutes a solid foundation for further development. In light of the consolidation of the participant group and continuous development among suppliers, we expect further improvement in the results in the coming years.

Sustainable extraction and procurement of raw materials

The BMW Group aims to establish its Sustainability Standards as early as the raw materials purchasing stage. In this process, both we and our suppliers are faced with great challenges in terms of intermediary trading and processing steps as well as in commodities trading on the stock exchange. At the same time, our raw materials requirements are changing due to the expansion of electromobility, the supply chains of which sometimes present particular environmental and social risks.

The BMW Group Supplier Sustainability Standards oblige our suppliers to ensure that their own suppliers also comply with our sustainability requirements. However, our potential influence on sub-suppliers is restricted given the large number of global suppliers. We have therefore identified particularly critical raw materials in our material strategy. For these, we carry out analyses and pilot projects in order to define the respective need for action and implement targeted measures with our supplier network. In 2017, we addressed the supply chains of conflict minerals, cobalt, aluminium and steel and were able to make signifi-

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

3.1 Consumption of resources
3.2 Renewable energy
→ 3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

cant progress. In the medium term, we intend to apply our findings to other products and raw materials and pass them on in industry-wide initiatives in order to ensure increased impact via standardisation.

Improving transparency for critical raw materials

In order to rule out the use of minerals that contribute towards financing conflicts or human rights violations, we have set ourselves the goal of creating full transparency in supply chains that involve tin, tungsten, tantalum and gold by 2022. In the reporting period, we launched a process to observe corporate due diligence for these supply chains, based on the OECD Guidelines. This process is incorporated into the procurement process via the sustainability questionnaire, on the basis of which the transparency and performance of the relevant suppliers regarding the use of conflict minerals is continuously assessed.

A "conflict mineral team" is responsible for monitoring relevant figures and regularly reports to top management. Furthermore, we joined the → **Responsible Minerals Initiative** in order to promote sustainable management of conflict minerals. By supporting the Responsible Minerals Assurance Process, we are helping to increase the share of certified smelters worldwide on a continuous basis.

Another relevant raw material is cobalt. Cobalt is a key component in the production of electrified vehicles and large amounts of it are contained in high-voltage batteries of electric vehicles and plug-in hybrids. As cobalt is a raw material that involves high risks in terms of human rights, we are working towards establishing maximum transparency in the supply chain. We are in constant contact with our suppliers and, for some years now, we have required that they disclose the origin of this raw material. At the end of 2017, we made information on smelters and countries of origin of cobalt → **available to the public.**

Individual companies alone cannot reduce the human rights risks associated with cobalt extraction. As a result, we have initiated an ongoing exchange with suppliers, other companies as well as representatives of civil society and actively take part in the Responsible Cobalt Initiative (RCI), in which we are represented on the Board as a founding member. The objective of this initiative is to increase the level of transparency and to implement measures pertaining to overcoming social and environmental risks in the cobalt supply chain. In addition, we commissioned a scientific study together with other companies, in which households, miners as well as other players involved were surveyed in the Democratic Republic of Congo. Together with an independent partner, we are carrying out a feasibility analysis to examine how the long-term social and environmental situation in model mines in artisanal mining in the Democratic Republic of Congo can be improved.

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

3.1 Consumption of resources
3.2 Renewable energy
→ 3.3 Sustainable, resource-efficient supply chain

4
Employees and society

Further key indicators

Appendix

Symposium on extraction of natural rubber: the BMW Group in dialogue with its suppliers.

Executing pilot projects and supporting initiatives

Steel and aluminium are some of the main raw materials used in the production processes of the BMW Group. Given this particular relevance, we aim to gradually increase transparency in the respective supply chains. To this end, the BMW Group is active in international initiatives in order to encourage the definition of standards and the establishment of certification programmes. In the → **Aluminium Stewardship Initiative (ASI)**, we are represented as a founding member both on the Board and the standards committee. In the reporting period, we helped to further refine the initiative. Among other things, a pilot phase was carried out in order to review the applicability of the performance standard and the Chain of Custody certification. In the Responsible Steel Initiative (RSI), we were involved in 2017 in several stakeholder discussions and supported the initiative in its development phase. The goal of the initiative is to design a certification process for steel products.

In national and international initiatives and associations, we use our experience to support the standardisation of content, processes and measures for increasing sustainability in supply chains. We are lead partner of the Drive Sustainably initiative founded in 2017, which focuses on raw material sustainability and process integration in the automotive industry. Furthermore, we chair the working group for sustainability in the supply chain of the German Association of the Automotive Industry (VDA). In the scope of this, the BMW Group played a key role in initiating and promoting the standardisation of the industry-wide sustainability questionnaire. We engage in cross-industry activities in the corporate network → **econsense**, for example, which works towards standardising content and tools, such as a practical guide for sustainable supply chain management.

Forecast

Within our materials strategy, we will further increase transparency in our supply chain. In this context, we are planning activities related to the raw material of natural rubber and copper, for example, and we are developing appropriate measures to ensure sustainability in this area.

With regard to the Supply Chain Programme of the CDP, our focus in the coming years will be on improving the average CDP score of our suppliers. We aim to achieve this by agreeing on bilateral measures which are designed to increase the resource efficiency of participating suppliers.

By exchanging experiences within the scope of industry initiatives such as Drive Sustainably, we will also support the industry-wide enhancement of sustainability standards for resource efficiency in the supply chains.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
→ Employees and society

4.1 Health and performance
4.2 Long-term
employee development
4.3 Diversity
4.4 Corporate citizenship

Further key indicators

Appendix

Search

Back

EMPLOYEES AND SOCIETY

4

Foresight and flexibility are what is called for when it comes to the far-reaching changes in the working world brought about by digitalisation and automation coupled with a greater diversity of lifestyles. As a company that is currently active in over 150 countries, the BMW Group is responding to these developments worldwide. Through secure and attractive jobs and the targeted promotion of diversity, we offer our employees long-term career prospects. We foster their individual talents and potential and thereby lay the groundwork for our future success. We are convinced that our approach contributes to overcoming societal challenges and to intercultural understanding.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
→ Employees and society

4.1 Health and performance
4.2 Long-term
employee development
4.3 Diversity
4.4 Corporate citizenship

Further key indicators

Appendix

PERFORMANCE INDICATORS

BMW Group employees at end of year

in numbers

129,932
↗ 2017

124,729
2016

Attrition rate at BMW AG

as a percentage of workforce*

2.6
↘ 2017

2.7
2016

* The attrition rate is not consolidated to BMW Group level.

Employee satisfaction

in %

87
↘ 2017

88
2015

Average days of further training per employee

3.4
↘ 2017

3.8
2016

Share of female employees in total workforce in %

19.3
↗ 2017

18.7
2016

Share of female employees in management positions in %

16.0
↗ 2017

15.3
2016

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
→ Employees and society

4.1 Health and performance
4.2 Long-term
employee development
4.3 Diversity
4.4 Corporate citizenship

Further key indicators

Appendix

PERFORMANCE INDICATORS

Accident frequency in number of accidents with at least one day absent per one million hours worked

3.6
↘ 2017

4.0
2016

Sickness rate at BMW AG in%*

4.6
→ 2017

4.6
2016

* The sickness rate is not consolidated to BMW Group level.

Expenditure on donations by the BMW Group in € thousand

16,205
↘ 2017

70,356
2016

Expenditure on corporate citizenship in € thousand

33,436
↘ 2017

87,837
2016

HEALTH AND PERFORMANCE

To preserve the health and the performance of its employees in the long term, the BMW Group promotes personal responsibility and an appropriately designed work environment.

Preventative health measures: the BMW Group provides a large number of posture-supporting ergonomic aids at its workstations.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

→ 4.1 Health and performance
4.2 Long-term
employee development
4.3 Diversity
4.4 Corporate citizenship

Further key indicators

Appendix

4.1
HEALTH AND PERFORMANCE

Sustainability goal:
To preserve the health and the performance of its employees in the long term, the BMW Group promotes personal responsibility and an appropriately designed work environment

Our employees are our most important success factor. Maintaining their health and performance is therefore a top priority at BMW. High demands are sometimes placed on employees in production plants, but changing lifestyles, mental stress and an ageing society also pose challenges in today's working world. The BMW Group takes its responsibility for the health and safety of its employees at their workplace very seriously. Our occupational health and safety concept therefore includes a holistic health management programme, integrated management of work safety and ergonomics, ageing-appropriate work systems and a wide variety of healthy food in our canteens.

Key measures:
Promote health, manage occupational safety and enable long-term job security

With our "Health Initiative", the BMW Group has since 2011 offered numerous prevention and education programmes to raise awareness of the importance of health among our employees at all locations. The offers range from general medical check-ups and targeted ergonomics and nutritional advice to relaxation exercises and also include dialogue-based events and manager training courses.

A central component of the "Health Initiative" is the programme "Health Management 2020" (GM 2020), launched in 2014. Under this programme, employees and entire departments can request a medical report on work-related health issues and consult a physician for advice on any preventive measures required.

At our plants, we continually evaluate and improve work safety on the basis of location certifications, through health and safety committees, and with the help of the Safety and Ergonomics Risk Assessment system (SERA). This system was introduced in 2016 and extended in 2017 from five to a total of eleven BMW Group locations.

In the "Today for Tomorrow" programme, we develop ageing-appropriate working conditions in order to be prepared to meet the challenges of demographic change. In addition, we make every effort to provide long-term job security for employees with debilitating health issues or newly restricted capabilities.

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

→ 4.1 Health and performance
4.2 Long-term employee development
4.3 Diversity
4.4 Corporate citizenship

Further key indicators

Appendix

Due diligence processes: Evaluating risks and ensuring implementation of the resulting measures at the plants

Responsibility for "Work Environment and Health" is part of our Human Resources portfolio within the Board of Management. All issues in the company that affect occupational health and safety are consolidated here under one umbrella. Alongside health management, these include corporate catering, work safety and ergonomics as well as the programme "Today for Tomorrow". Internationally, occupational health and safety management is under the charge of regional hubs.

At the plants, the on-site managers are responsible for all operating processes. The health management and occupational health and safety teams (company doctors, medical assistants, safety experts and officers) support and advise the respective departments in carrying out the statutory tasks involved in occupational health and safety.

At present, 28 of our 31 production locations have occupational health and safety management systems certified according to OHRIS (Occupational Health and Risk Management System) or OHSAS 18001 (Occupational Health and Safety Assessment Series), the goal of which is to reduce the risk of injuries, accidents and work-related illnesses. In addition, occupational health and safety committees with representation from both the employer and employee sides are active at almost all BMW Group locations making continuous improvements in health and safety at the workplace.

Within the scope of our "Health Management 2020" programme, we are increasing the effectiveness of needs-based health promotion measures based on the principle "plan-do-check-act". We carry out risk and impact assessments on the basis of the SERA risk management system, the BAPA office workplace analysis and the ZEUS central recording system for environmentally relevant substances.

Results and performance indicators: Illness and accident rate further reduced

The success of our efforts is demonstrated by the low rate of absenteeism due to illness, which at 4.6% was last year again below the industry average. Accident frequency was reduced further in 2017, with 3.6 accidents per one million hours worked. → **see performance indicators** **Key sustainability indicators** By 2015, we had already attained the target we set in 2011 to reduce this rate to below 4.5 worldwide by 2020. The number of days absent (number of days absent per one million hours worked) was improved by 23% in 2017 compared to the previous year.* → GRI 403-2

* This figure refers only to BMW AG, as comparable data for the BMW Group will not be available until next year.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

→ 4.1 Health and performance
4.2 Long-term
employee development
4.3 Diversity
4.4 Corporate citizenship

Further key indicators

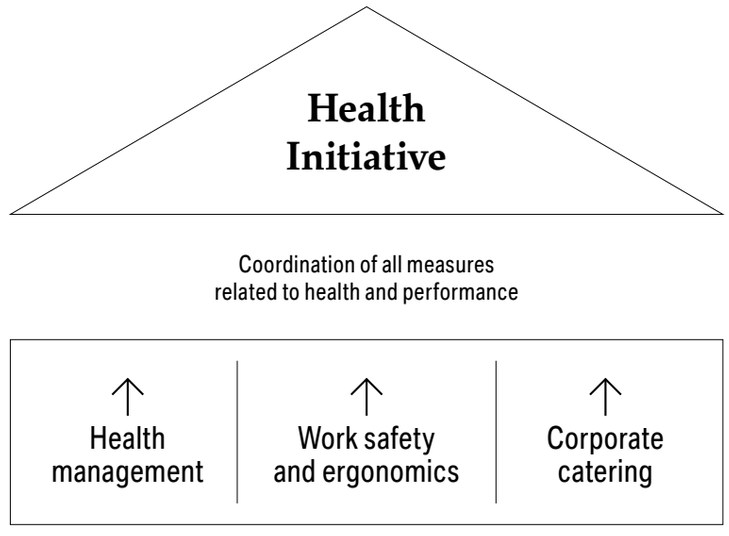
Appendix

HEALTH AND PERFORMANCE IN DETAIL

The "Health Initiative" coordinates the measures to promote the health and performance of our employees in the three areas of health management, work safety and ergonomics as well as corporate catering.

→ see graphic 4.01

The BMW Group "Health Initiative"
→ G4.01



As part of the initiative, we offer an extensive prevention and rehabilitation programme. This includes fitness courses as well as seminars on nutrition, work safety and ergonomics or stress management, also flu vaccinations, if required. The current international campaigns "Healthy drinking", "Safe walking" and "Mental resilience" show employees how even small changes can improve their everyday lives. In addition, regular campaigns draw attention to important topics such as resilience, cancer prevention and addiction hazards. They are designed to motivate employees and managers to become proactive in these areas.

→ see graphic 4.02

The "Health Initiative" forms the communications framework for raising health awareness among BMW employees at all locations. We therefore use a uniform visual concept worldwide for quick recognition.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

→ 4.1 Health and performance
4.2 Long-term
employee development
4.3 Diversity
4.4 Corporate citizenship

Further key indicators

Appendix

Overview of "Health initiative" campaigns to date
→ G4.02

CAMPAIGNS	2013	2014	2015	2016	2017
High blood pressure	●	●			
Hand washing and flu protection		●	●		
Mental resilience			●	●	
Diet (beverages)			●	●	●
Safe walking				●	●
Caring for dependents (GER)				●	●
Musculoskeletal system/focus on back health					●

Corporate catering

The company canteens offer employees a variety of freshly prepared food every workday. Top priority is placed on using high-quality, seasonal and regional ingredients and on the freshness of the products served. Traffic light labelling of food and drink (green: eat plenty, orange: eat in moderation, red: eat sparingly) allows diners to estimate the nutritional value of their choices.

BMW Group catering also wants to introduce a range of healthy snacks, with vending machines and shops offering AKTIV+VITAL brand products.

"NAHtürlich"

After successful completion of the pilot project, new sustainable food choices under the label "NAHtürlich" (Near to Nature) were introduced at the start of 2017 as a standard offering in the canteen of the Research and Innovation Center in Munich/DE. The "NAHtürlich" selections follow the criteria of regional sourcing, seasonality and sustainability. The topics of humane treatment of animals and sustainable fishing also play a large role here. Food preparation focuses on quality and simplicity, in other words: few ingredients prepared fresh and naturally to preserve their original flavour. The response has been very positive. Despite higher prices, canteen guests welcome the choices offered by "NAHtürlich".

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

→ 4.1 Health and performance
4.2 Long-term employee development
4.3 Diversity
4.4 Corporate citizenship

Further key indicators

Appendix

Sustainability in the company cantine: Manfred Schoch (in front), Chairperson of the European and General Works Council tries the "NAHtürlich" menu.

Holistic promotion of health and performance

The "Health Management 2020" programme forms the core of our workplace health promotion and prevention efforts, which are guided by a central coordinating unit in collaboration with the company doctors. The programme takes a holistic, internationally oriented approach. The goal is to preserve the long-term health and the performance of our employees by strengthening their sense of personal responsibility and providing a work environment that meets the respective requirements for optimal health and performance.

Since the introduction of the programme in 2014, over 55,000 BMW Group employees have taken part.

The "Health Management 2020" programme follows a cycle of four stages:

1. Building knowledge about health

2. Identifying health issues by means of a questionnaire and medical check-up

3. Deriving and developing measures based on personal needs

4. A repeat check-up to evaluate improvements in health

All participants receive a personal health report that gives them an easy-to-understand summary of their medical and work-related parameters. Following their check-up, employees are offered an optional medical consultation to talk about which preventive measures can benefit them personally.

At the department level, over 500 aggregate reports have been issued since the programme started, in which strengths and challenges are identified in the relevant aspects of creating a healthy work environment. Measures derived from these findings range from optimising individual employees' work-life balance to making ergonomic improvements.

In 2017, the first employees and departments completed the whole programme and took part in the evaluation. The results were gratifying, with positive effects demonstrated with respect to the three factors examined:

— Ability to work

— Risk of cardiovascular disease

— Blood sugar levels

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

→ 4.1 Health and performance
4.2 Long-term
employee development
4.3 Diversity
4.4 Corporate citizenship

Further key indicators

Appendix

The results show that it was possible not only to mitigate the expected natural effects of ageing but even to improve the health parameters for some employees in the course of the programme.

Health Checkpoint

The "Health Checkpoint" is a mobile station that offers employees at various company locations the option of undergoing a health check-up. The station identifies quickly and simply the individual's main cardiovascular risk factors. The four-minute assessment is free of charge and can be repeated any number of times. The results are anonymous and are displayed instantly on the screen, where users can choose the option to have them sent to them as an email.

The "Health Checkpoint" helps to raise employees' awareness of cardiovascular disease and remind them of the importance of their own health.

Fitness training is available to employees at many locations: here, Leipzig's mayor Burkhard Jung (second from right) tests the equipment at the Leipzig plant.

Integrated health and safety management

At present, 28 of our 31 production locations have occupational health and safety management systems certified according to OHRIS (Occupational Health and Risk Management System) or OHSAS 18001 (Occupational Health and Safety Assessment Series). We plan to certify the plant we are building in Mexico according to the new ISO 45001 standard by 2020.

In addition, occupational health and safety committees with representation from both the employer and employee sides, in particular works councils, are active at almost all BMW Group locations, making continuous improvements in health and safety at the workplace. → GRI 403-4 88.4% of employees are represented on these health and safety committees by union representatives (works councils). This figure also includes temporary workers, interns, thesis students working at the company as well as doctoral candidates. → GRI 403-1

→ see table 4.01

There have been no fatal accidents at the BMW Group for the last twelve years. → GRI 403-2 This year we were once again able to lower the accident rate, to 3.6 accidents per one million hours worked. This is a 10% reduction compared to the previous year. On-site occupational health and safety management systems, the continuous improvement of safety conditions in the workplace as well as targeted safety training are decisive factors for this success.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

→ 4.1 Health and performance
4.2 Long-term
employee development
4.3 Diversity
4.4 Corporate citizenship

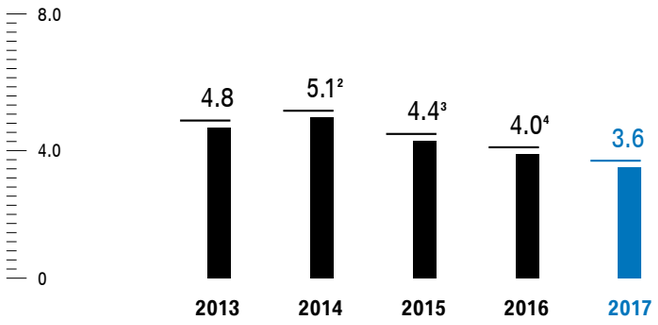
Further key indicators

Appendix

Accident frequency rate at BMW Group[1]

→ T4.01

in %



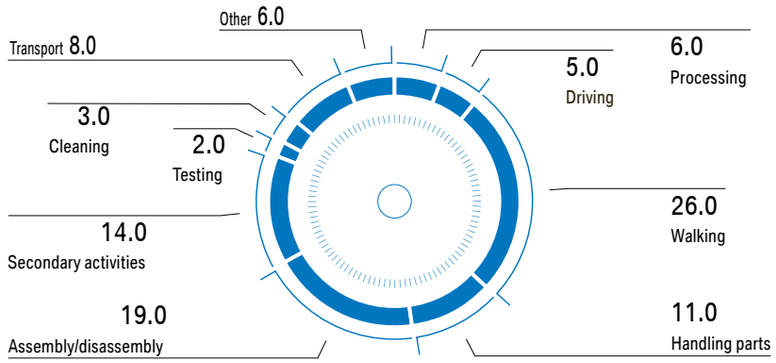
[1] Number of occupational accidents per one million hours worked with at least one day of absence from work.
[2] Figure not directly comparable to those in previous years due to expansion of scope to include the German dealerships. Around 88% of BMW Group employees represented.
[3] Figure not directly comparable to previous year due to expansion of scope to include the plants in Brazil, Thailand and India. Around 90% of BMW Group employees represented.
[4] Expansion of scope to include 100% of BMW Group employees.

→ GRI 403-2

Key accident factors at BMW Group

→ T4.02

in %



→ GRI 403-2

Figure T 4.02 shows the main activities during which accidents occur at the BMW Group. Most accidents happen while employees are walking or doing assembly work. The injuries caused by walking accidents include concussions, fractures, sprains and contusions. Accidents during assembly and disassembly usually result in cuts and bruises.

→ see table 4.02

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

→ 4.1 Health and performance
4.2 Long-term
employee development
4.3 Diversity
4.4 Corporate citizenship

Further key indicators

Appendix

SERA – Safety and Ergonomics Risk Assessment

As a global enterprise, the BMW Group must guard against many potential hazards in the workplace. We met this challenge in 2016 by introducing SERA (Safety and Ergonomics Risk Assessment) to help us identify and adequately address these hazards. SERA simplifies the procedure for assessing hazards and exposure in production, in production-related areas, in development and in the BMW Group repair shops, thus offering a comprehensive solution. The user selects a specific workplace on the tablet-optimised interface and all working steps for that activity are then assessed. The system captures and evaluates for example the forces required for the individual work steps as well as their duration and the posture adopted by the worker. After a workplace has been assessed using SERA, the office for work safety and ergonomics advises on how excessive stress and strain can be minimised by modifying the technical conditions, altering the work step or by staff rotation.

After SERA was introduced at five German locations in 2016, the BMW Group launched it at another eleven international company sites in 2017. Starting in early 2018, SERA is to be used at BMW dealerships as well. The special challenge here is to adapt the system to the requirements of motor vehicle service repair shops.

With regard to work station design on the production line, ergonomics goals have since 2015 been agreed upon for new vehicle projects. The goals are determined based on specific parameters from the SERA assessment system (e.g. Stress and Hazard Index – SHI). Since then, ergonomics goals have been set for 14 vehicle projects of the BMW Group and corresponding measures for their implementation have been introduced.

Creating ageing-appropriate working conditions and supporting people with performance limitations

Demographic change is a challenge that we at the BMW Group are actively addressing. With our long-term "Today for Tomorrow" programme, we are endeavouring to create working conditions worldwide in which young employees can remain healthy as they grow older while older employees can contribute their particular strengths. The BMW Group therefore speaks not of age-appropriate but of ageing-appropriate working conditions.

The programme sets standards for the design of work environments that lastingly meet employees' needs and promote their health and performance throughout their entire working life. Over the years, "Today for Tomorrow" has continued to develop further. 2018 will see the launch of "Today for Tomorrow > NEXT", entailing targeted measures in four action areas.

→ see graphic 4.03

Simplifying work processes: innovative glove with integrated barcode scanner.

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

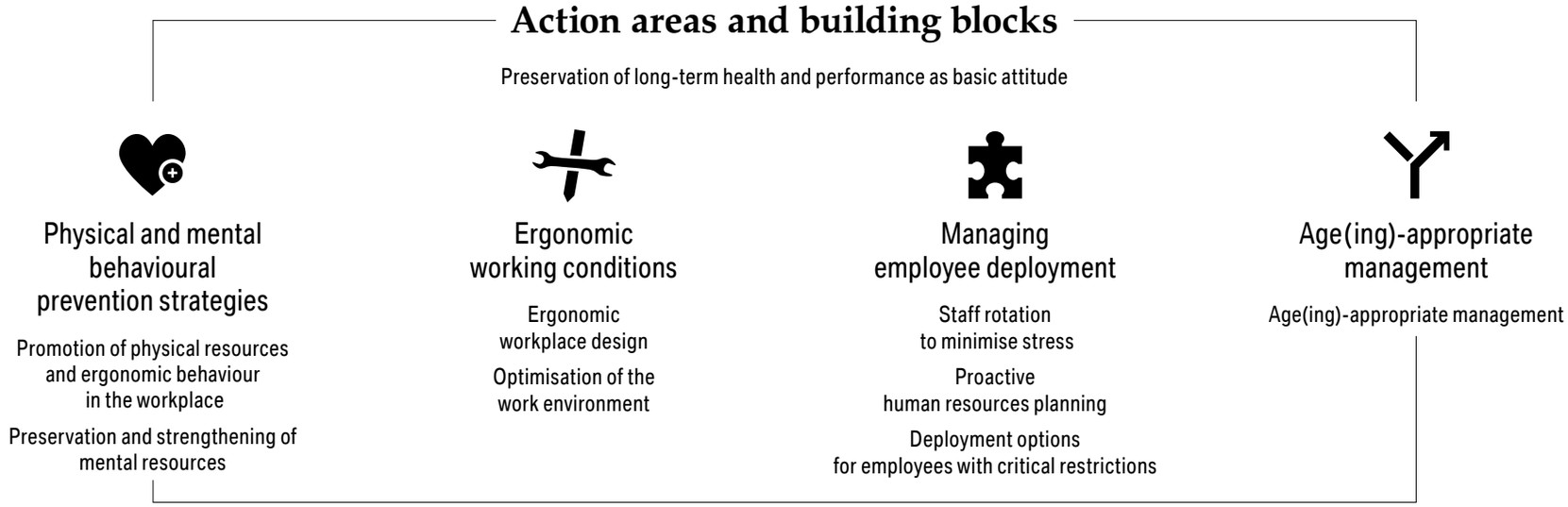
4
Employees and society

→ 4.1 Health and performance
4.2 Long-term employee development
4.3 Diversity
4.4 Corporate citizenship

Further key indicators

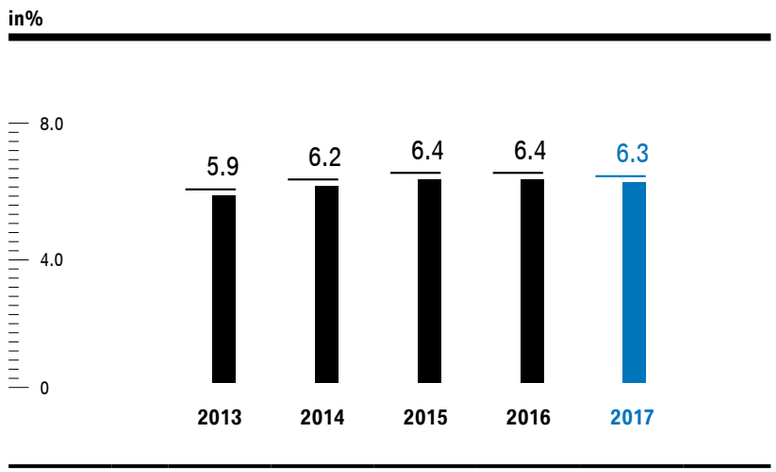
Appendix

Action areas for the programme "Today for Tomorrow > NEXT" from 2018
→ G4.03



At our plants, we make every effort to provide long-term job security for employees with newly restricted capabilities due to an illness or accident. The share of BMW AG employees with severe disabilities was 6.3% in 2017. → see table 4.03

Share of employees with severe disabilities at BMW AG[1]
→ T4.03



[1] The share of employees with severe disabilities is based on the statutory requirements in accordance with the German Social Code (SGB IX). In addition, the BMW Group awarded contracts amounting to around €32.5 million to workshops for the severely disabled in Germany in 2017, of which around €8.3 million can be written off in accordance with the compensatory levy act. The volume of orders was thus at a consistently high level in 2017 as well.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

→ 4.1 Health and performance
4.2 Long-term
employee development
4.3 Diversity
4.4 Corporate citizenship

Further key indicators

Appendix

Over the past year, the BMW Group continued to develop our "Integration Strategy". Its primary aim is to prevent performance limitations by promoting employees' sense of personal responsibility for their health. We endeavour to assign employees work that is in keeping with their particular abilities. The new process ensures that all BMW AG employees in Germany are treated according to the same rules and it applies a uniform procedure. The process has been tested extensively at three company locations in the three pilot areas mechanical production, body assembly and final assembly. A corresponding company agreement was adopted in 2017.

Ergonomics in Motion

In 2015, we launched the cooperative project "Ergonomics in Motion" with the University of Leipzig on the assembly line at our plant in Leipzig/DE. Since then, around 500 people on the line and nearly 50 foremen have participated. The aim of the project is to establish and track ergonomically sound work behaviour in this area.

The first step is to visualise the real ergonomic impact on the employee. The employee then learns how to make ergonomic improvements. Workplace-specific training by medical professionals helps teams learn the right exercises to counteract the identified strains as they develop healthier ergonomic habits in the workplace.

After completion of the project, plans are to incorporate it in the "Today for Tomorrow" programme as an integral component for "behavioural ergonomics".

Forecast

Our main areas of focus for 2018 will be the "Health Management 2020" programme, the introduction of the "Today for Tomorrow > NEXT" programme and the implementation of our new strategy for the integration of employees with performance limitations. Based on the positive results of our evaluation, we have decided to continue and expand our "Health Management 2020" scheme. The plan is to make this programme available over the next few years to a large number of employees.

On the basis of a new company agreement, we will also begin in 2018 to assess risks with respect to psychological stresses in the workplace. In addition, 2018 will see the international launch of the new campaigns "Keep moving" and "Burn what you eat", which are designed to encourage our employees to maintain a healthy lifestyle.

Healthcare for employees: the Rosslyn plant in South Africa has its own pharmacy.

LONG-TERM EMPLOYEE DEVELOPMENT

The BMW Group ensures long-term employee development by seeking out the right employees, making the most of their talents, developing potential and ensuring employability.

Training at the BMW Group: the company provides programmes to young talent at all locations, like here in Mexico.

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

4.1 Health and performance
→ 4.2 Long-term employee development
4.3 Diversity
4.4 Corporate citizenship

Further key indicators

Appendix

4.2 LONG-TERM EMPLOYEE DEVELOPMENT

Sustainability goal:
The BMW Group ensures long-term employee development by seeking out the right employees, making the most of their talents, developing potential and ensuring employability

The success of the BMW Group is based on the dedication and technical expertise of its employees. We make every effort to recruit and keep the best people. In these times of digitalisation and technological change, this means offering them attractive and secure jobs, a range of options for achieving the right work-life balance, comprehensive development and training opportunities, and good long-term career prospects. Due to increasing competition from leading technology companies coupled with a global shortage in skilled workers, and in light of our ageing society, it is vital for the BMW Group to invest in its employees, to offer them opportunities and to foster continuous learning. This approach to long-term employee development helps us to maintain our reputation as an attractive employer.

Key measures:
Offering an attractive work environment and training opportunities

The BMW Group attaches great importance to job security. We pay above-average compensation and give our employees a range of options to help them find the right work-life balance – for example through flexible working hours, sabbaticals or mobile working.

Continuous further training for BMW Group employees is also gaining in importance as a vital factor in keeping pace with the transformation of the automotive industry. We thus consistently pursue the concept of life-long learning. Our global package of measures ranges from vocational training and young talent programmes for student target groups to specialised training and high-potential programmes for future managers. A special focus here is the digital transformation and the transition to more agile working and management methods.

We want our employees to identify with the company and to translate their passion into top performance each and every day. We therefore conduct an employee survey every two years to identify potential for improvement.

Due diligence processes:
Identifying the need for action and steering progress through systematic planning processes

The BMW Group has established a strategic process for human resources planning in recent years in order to detect new skills required at the company in good time and promptly find the right people for the tasks at hand. In the year under review, qualitative and quantitative changes were derived from the company's strategy. The planning results serve as a basis for the systematic alignment of relevant HR tools such as personnel marketing, recruitment, young talent programmes, and education and training. The dimension "Recruiting employees with critical skills" helps us to monitor the progress of these efforts.

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

4.1 Health and performance
→ 4.2 Long-term employee development
4.3 Diversity
4.4 Corporate citizenship

Further key indicators

Appendix

This process takes place every year, and is steered by the "Group Human Resources, Strategy and Goals" department.

Results and performance indicators: Employer attractiveness confirmed and further training programmes expanded

In studies on the attractiveness of employers conducted by trendence and Universum, the BMW Group was once again given top ratings in 2017. These results demonstrate that we are still one of the world's most attractive employers. This was also confirmed by our last employee survey, in which 87% of respondents expressed their satisfaction with the BMW Group, as well as by our low attrition rate of 2.6%.

→ see performance indicators

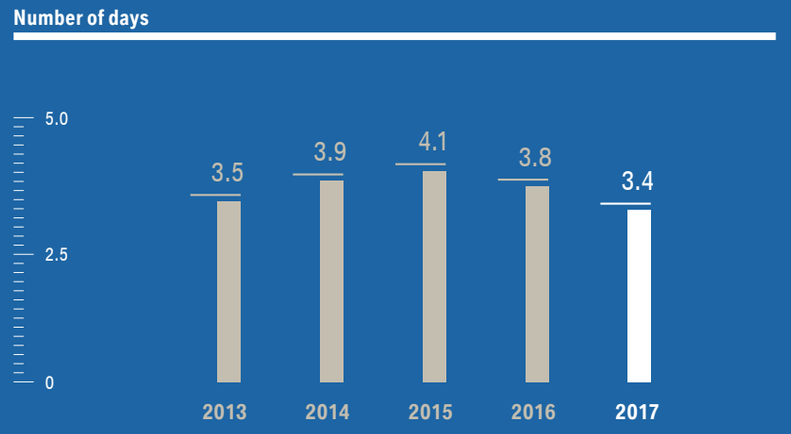
We were able to expand our range of education and training programmes in 2017 and to equip our employees with up-to-date skills where needed. On the reporting date, 4,750 young people had vocational training contracts or were employed in young talent promotion programmes at the BMW Group (2016: 4,613). The average time spent in training and further education per employee was 3.4 days. → GRI 404-1 Every BMW Group employee receives a consistent and comprehensive individual performance and career development review at least once a year. → GRI 404-3

→ see table 4.04

→ see performance indicators

Average days of further training per BMW Group employee[1]

→ T4.04



[1] Data retrieved by direct representation of the number of participants as well as a small share by qualified extrapolation.

→ GRI 404-1

The BMW Group continued to invest substantially in training and further education in 2017, with expenditure of €349 million (2016: €352 million). Our increased commitment to human resources is an investment in the future. It lets us maintain our standing as an attractive employer as we ensure that we achieve our goal of long-term employee development.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

4.1 Health and performance
→ 4.2 Long-term
employee development
4.3 Diversity
4.4 Corporate citizenship

Further key indicators

Appendix

LONG-TERM EMPLOYEE DEVELOPMENT IN DETAIL

Offering fair pay and attractive social benefits

The BMW Group policies for remuneration and additional benefits apply for all of our companies and regardless of employees' gender, religion, origin, age, disability, sexual orientation or country-specific characteristics. We follow the guiding principle that the total remuneration package must be above the average for the respective labour market. The BMW Group conducts annual compensation studies worldwide to determine our current market positioning and ensure that every employee receives compensation commensurate with the relevant labour market.

The total compensation package is made up of monthly remuneration, a performance-based compensation component and a wide range of social benefits, such as a company pension. This enables us to reward personal performance in a fair manner while continuously promoting employee motivation. Our remuneration policy is thus an integral part of a consistent and transparent process of employee development. → GRI 401-2

In order to ensure that remuneration is not only market-neutral but also gender-neutral, the BMW Group has established a multidimensional monitoring process to annually assess the previous year's remuneration. The monthly remuneration of women and men is compared, taking into account the dimensions of full- or part-time work, pay grade and age. The analysis carried out in 2017 for the year 2016 found no significant differences between the overall compensation packages of women and men. → GRI 405-2

We enhance our attractiveness for talented employees by creating new innovative work environments in key development locations and where BMW Group IT is at work on agile software development. In the year under review, we also opened a campus for the development of autonomous driving at the Unterschleissheim/DE company location.

Encouraging work-life balance

The working hours that function best for employees vary depending on what phase of life they are in, their individual life plans and their work situation. To enable the best possible work-life balance, the BMW Group offers its employees a wide range of flexible modules so they can tailor their working hours and locations to their personal needs.

Offering flexible working hours

Through the concept of the working time account, all employees can exert some influence over their working hours. Office employees can take advantage of flexitime, for example, or production staff can trade shifts or reduce their hours to gain some free days. In addition to statutory working time arrangements in some countries such as part-time work or parental or caregiver leave, the BMW Group also offers employees options such as sabbaticals or the "Vollzeit Select" (Full-time Select) scheme to provide further attractive ways to individually plan working hours. Sabbaticals can be arranged by employees worldwide, and our "Vollzeit Select" working time tool allows employees in Germany and Austria to take 20 additional days of leave each year with corresponding adjustments to their salaries, without any complicated red tape. Demand for these options continued to grow in 2017, demonstrating that the offer of flexible working time arrangements meets a real need.

→ see table 4.05

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

4.1 Health and performance
→ 4.2 Long-term employee development
4.3 Diversity
4.4 Corporate citizenship

Further key indicators

Appendix

Enabling mobile working

In 2017, over 31,700 employees, or around 63% of those working outside the direct production areas, chose to work at least one partial and/or full day on a mobile basis. This represents a renewed increase compared to 2016. By organising their working hours more flexibly, employees can for example better integrate childcare or caring for dependents into the everyday work routine. Outside of agreed working hours, employees have the right to switch off and be unavailable. Mobile working at the BMW Group stands for a culture of trust and relies on constructive dialogue.

→ see table 4.05

Supporting employees through family services

The BMW Group has for years been offering its employees family support services. In Germany, for example, experts from the family support service are available to help employees organise childcare and care for dependents as well as arrange household services. In 2017, we responded to 830 employee requests of this nature, 160 of them dealing with the issue of care.

Alternative work forms at BMW AG[1]
→ T4.05

Number of employees	2013	2014	2015	2016	2017
Part-time employees	3,966	3,739	3,943	4,294	4,572
in % of total number of employees	5.7	5.1	5.1	5.0	5.2
Teleworking positions[2]	18,094	22,297[2]	25,072	28,088	31,754
in % of total number of employees	25.9	49.9	53.0	59.4	63.3
Number of employees who use “Vollzeit Select”	2,506	2,668	3,592	3,998	4,690
in % of total number of employees[3]	3.6	3.6	4.7	5.1	5.3
Sabbaticals	511	516	462	598	567
in % of total number of employees	0.7	0.7	0.6	0.7	0.6
Parental leave	1,968	2,271	2,535	3,028	3,389
in % of total number of employees	2.8	3.1	3.3	3.5	3.9

[1] Figures refer to employees with permanent and part-time contracts.
[2] Reporting logic was adapted when teleworking was introduced in 2014. In the past, reporting was based on the technical possibility of teleworking; since 2014, the number of employees who actually engage in teleworking is reported.
[3] Statistical population not including apprentices, interns, thesis students working at the company, and doctoral candidates.

→ GRI 102-8, GRI 401-3

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

4.1 Health and performance
→ 4.2 Long-term
employee development
4.3 Diversity
4.4 Corporate citizenship

Further key indicators

Appendix

In addition, we have set up childcare services at many of our German locations. With the support of parents' initiatives, we were able to accommodate over 460 children aged zero to six years in 2017.

Fostering talent and training employees

In today's dynamic and fast-changing working world, life-long learning is steadily gaining in importance. This is due on the one hand to our longer working lives. On the other hand, digitalisation and increasing vehicle electrification call for new types of skills – for example in the areas of Big Data Analytics, artificial intelligence, agile development methods and high-voltage safety. The BMW Group therefore invests on an ongoing basis in training our employees and fostering their talents. This lets us ensure that our employees have the skills needed to keep pace with future challenges.

Building digital skills

Digitalisation changes the way products and services are developed, manufactured and deployed. Production processes are being transformed, and the BMW Group is also developing new, digitally networked automobiles that will soon be able to drive completely autonomously. These changes will inevitably affect the way our employees work and the skills they must master. This is why we try to equip existing employees with the expertise they need to keep up with future developments as well as to recruit new "digital talents" for our enterprise.

We already take into account these new challenges in our vocational training; for example, BMW AG is launching a training programme for IT specialists in 2018 as well as various training courses that combine information technology with other relevant fields. New skills were already incorporated into existing vocational training programmes in 2017 to equip trainees for the future.

At our production sites in China, the USA, South Africa and the UK as well as in Brazil, Thailand and Mexico, we will continue to rely on the dual system of vocational education and training for young people. In China and Mexico, we have added the occupation of automotive mechatronics technician to the training portfolio. In addition, we have increased the number of trainees in the UK and Mexico.

Developing leadership skills

Through its Group-wide "Corporate Leadership Programme", the BMW Group offers managers a wide range of advanced training opportunities. The further development of leadership skills is geared toward transforming the enterprise in accordance with the corporate Strategy NUMBER ONE > NEXT. Our aim is to develop executives who display personal initiative while also working well with others to successfully lead teams and build networks. They can then act as role models and drivers for the company's digital and cultural transformation.

In 2017, these efforts centred on the initiative "Next Experience": between January and April 2017, nearly 13,000 executives took part in a one-day event involving four workshops and an introduction to the new corporate Strategy NUMBER ONE > NEXT.

To foster international young talent, the BMW Group developed the "Global Leader Development Programme". Integral components of the programme are various practical phases in Germany and abroad, targeted training measures as well as diverse networking and exchange opportunities. Special emphasis is placed on developing intercultural competence. → GRI 404-2

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

4.1 Health and performance
→ 4.2 Long-term
employee development
4.3 Diversity
4.4 Corporate citizenship

Further key indicators

Appendix

Retaining satisfied employees

A Group-wide employee survey is conducted every two years, most recently in the summer of 2017 in the form of a survey of the entire workforce. 87% of those surveyed were satisfied with the BMW Group.

Very positive ratings were given for example to attractiveness as an employer (88%), social benefits (86%) and job security (87%).

→ see table 4.06

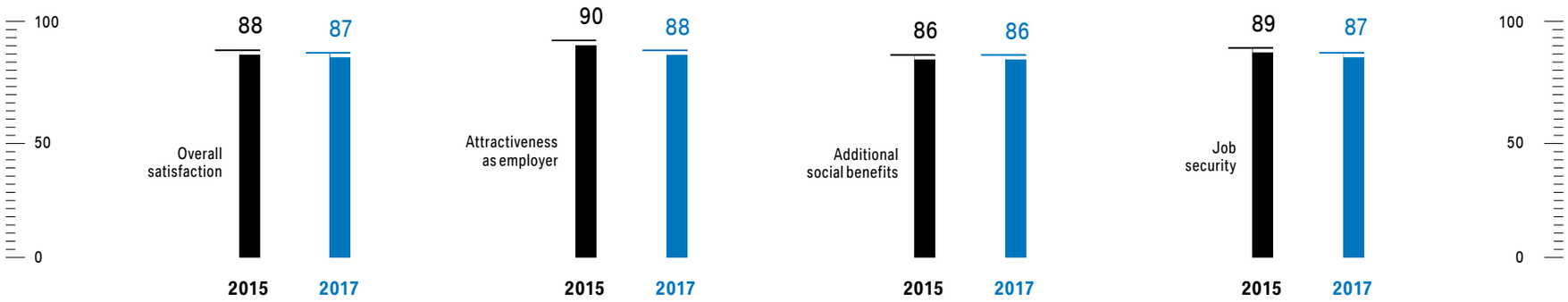
Compared to the 2015 survey, the values fell slightly but are still at a very high level. In the course of a detailed evaluation we will analyse possible influencing factors and derive measures accordingly.

→ see table 4.07
→ see further key indicators
→ see table 4.23

In 2017, the employee attrition rate fell slightly compared to 2016, to 2.6%. This was mainly due to more employees retiring in 2017. If figures for retirement, pre-retirement and death are excluded, the attrition rate for 2017 was 1.1%. This low rate demonstrates the effectiveness of the BMW Group's proven programmes and measures geared toward maintaining its attractiveness as an employer.

Group-wide BMW Group employee survey in 2017
→ T4.06

in %



Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

4.1 Health and performance
→ 4.2 Long-term employee development
4.3 Diversity
4.4 Corporate citizenship

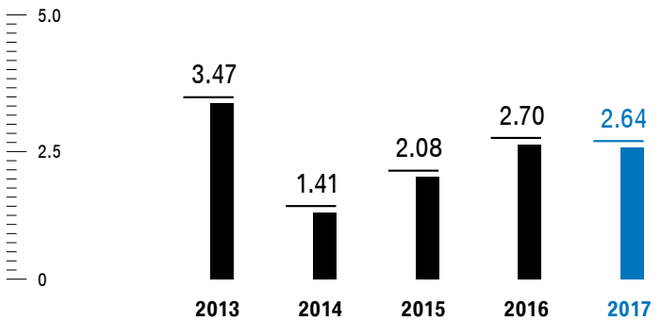
Further key indicators

Appendix

Employee attrition rate at BMW AG[1]

→ T4.07

in %



[1] Number of employees on unlimited employment contracts leaving the company.

→ GRI 401-1

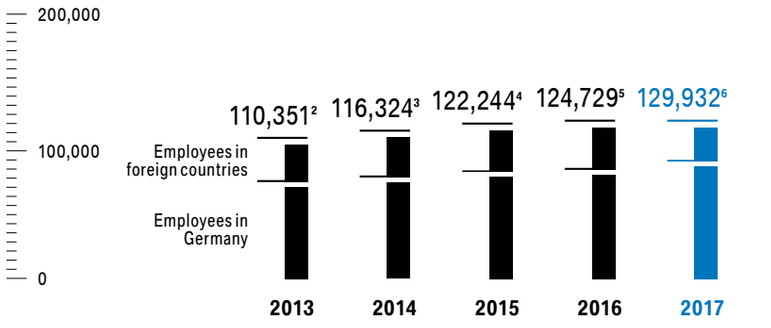
Thanks to the high demand for our products and services, the number of employees working for the BMW Group increased worldwide by 4.2% to a total of 129,932 by the end of 2017. → GRI 102-7, GRI 102-8

→ see table 4.08

BMW Group employees at end of year[1]

→ T4.08

Number of employees



[1] Figures exclude suspended contracts of employment, employees in the non-work phases of pre-retirement arrangements and low-income earners.
[2] Of whom 35.1% are tariff-bound production employees of the BMW Group.
[3] Of whom 36.1% are tariff-bound production employees of the BMW Group.
[4] Of whom 36.3% are tariff-bound production employees of the BMW Group.
[5] Of whom 35.4% are tariff-bound production employees of the BMW Group.
[6] Of whom 35.7% are tariff-bound production employees of the BMW Group.

→ GRI 102-8

Savings through Ideas Management

The Ideas Management scheme at the BMW Group enables all employees to play a part in change within the company by contributing their ideas. The ideas submitted result in improvements to the products and processes as well as cost savings. In 2017, around 2,800 ideas were implemented, leading to €18.2 million in savings. In addition, Ideas Management improves our competitiveness by both reinforcing loyalty to the company and fostering motivation as well as entrepreneurial thinking and action.

Forecast

To keep pace with digitalisation and technological change, we have strategically realigned vocational training at the BMW Group, including placing greater emphasis on the STEM skills in our training portfolio and introducing new digital forms of teaching and learning. Together with the national and international training network, existing occupational profiles were adjusted and new ones introduced, representing the first measures taken in the largest skills realignment process in the history of vocational training at the BMW Group. Further measures are planned in the years to come.

→ DIVERSITY

Through its diverse workforce, the BMW Group increases its competitiveness and enhances its innovative strength.

Thinking internationally: as a global company, the BMW Group fosters diversity–encouraging innovative and different ideas.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

4.1 Health and performance
4.2 Long-term
employee development
→ 4.3 Diversity
4.4 Corporate citizenship

Further key indicators

Appendix

4.3 DIVERSITY

Sustainability goal:
Through its diverse workforce, the BMW Group increases its competitiveness and enhances its innovative strength

Modern society is characterised by a variety of different lifestyles. As an international company, the BMW Group regards an intercultural workforce, an appropriate gender balance and a good age mix as beneficial to our business. We are convinced that a diverse workforce increases our innovative strength and further enhances our competitiveness, for example by helping us to better understand customers' needs. The BMW Group is aware of its social responsibility as an employer to promote equal opportunities in an increasingly versatile society through a diverse workforce.

Key measures:
Promoting diversity and equal opportunity in the company through our Diversity Concept

The Diversity Concept for the BMW Group workforce passed by our Board of Management in 2010 defines three dimensions where diversity is to be strengthened Group-wide while taking due consideration of local conditions: gender, cultural background, and age and experience. The BMW Group focuses for this purpose on event and dialogue formats designed to raise awareness of diversity issues among managers and employees. We also conduct measures in the areas of recruitment and human resources development to foster diversity and equal opportunity throughout the company. In addition, we develop formats that address different target groups in specific company areas and divisions. For example, female managers in production take part in a special onboarding programme when they join the company.

Diversity concepts are also in place for the executive committees (Board of Management and Supervisory Board). We report in detail on these concepts and their implementation in our → **Annual Report 2017.**

Due diligence processes:
Ensuring diversity and equal opportunity through clear policies and a grievance mechanism

The BMW Group Legal Compliance Code prohibits discrimination of any sort. Employees can address related queries to their own managers, the relevant offices of the BMW Group, the HR department or the works council. The BMW Group SpeakUP Line, a telephone hotline available in over 30 languages, furthermore gives our employees worldwide a way to anonymously and confidentially report possible breaches of the Legal Compliance Code.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

4.1 Health and performance
4.2 Long-term
employee development
→ 4.3 Diversity
4.4 Corporate citizenship

Further key indicators

Appendix

The department of Human Resources Policy and Strategy, in cooperation with the operational human resources staff and the disciplinary executives, is responsible for all measures specified by our Diversity Concept. We report on the responsibility for diversity concepts in the Board of Management and Supervisory Board and the monitoring of their implementation in our → **Annual Report 2017.**

Results and performance indicators: A further increase in diversity in the company

In terms of gender diversity, we have been able to increase the proportion of women in both the total workforce (2017: 19.3%, 2016: 18.7%) and in management positions (2017: 16.0%, 2016: 15.3%). With a ratio of 30% women on the Supervisory Board, we are in compliance with the recommendation of the German Corporate Governance Code.
→ GRI 405-1

→ see performance indicators
→ see table 4.09

In the area of cultural diversity, we continue to benefit from the great variety of cultural backgrounds in our workforce. In Germany, we currently have employees from 118 different countries working together successfully, and young talents from eight nations took part in our Global Leader Development Programmes in 2017.

We also continued to promote age diversity in 2017. At BMW AG* the share of employees aged over 50 rose from 27.3% (2016) to 28.3%, a result not only of demographic change but also of our efforts to support age(ing)-appropriate working conditions. → GRI 405-1

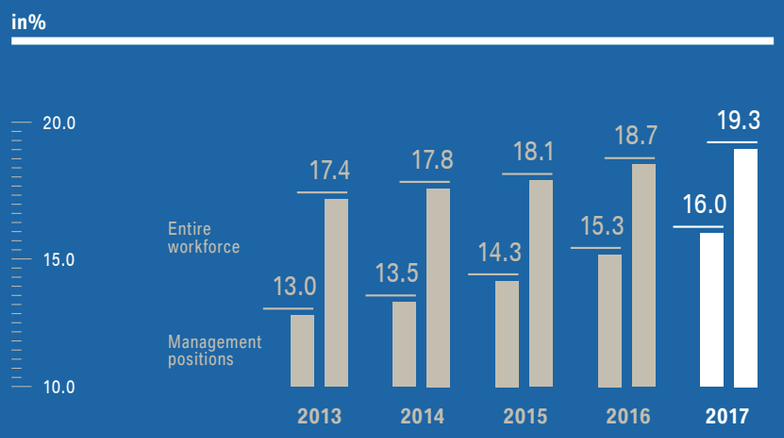
These figures confirm the effectiveness of our measures to further strengthen diversity in the BMW Group.

We report in detail on the achievement of diversity goals for the Board of Management and Supervisory Board in our → **Annual Report 2017.**

* This figure is currently not consolidated to BMW Group level.

Share of female employees in management positions and in the entire workforce at BMW Group[1]

→ T 4.09



[1] The share of female employees at BMW AG is 16.1% of the total workforce and 14.0% in management positions. The share of women on the Supervisory Board is 30.0% and 12.5% on the Board of Management.

→ GRI 405-1

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

4.1 Health and performance
4.2 Long-term
employee development
→ 4.3 Diversity
4.4 Corporate citizenship

Further key indicators

Appendix

DIVERSITY IN DETAIL

Each and every one of our employees, in all their diversity, is accorded equal levels of appreciation, respect and opportunity. The declared goal of our worldwide Diversity Concept is to promote human diversity in the company, because employees' unique and different talents and personalities are a valuable resource for the BMW Group.

As in past years, the BMW Group organised a large number of activities in 2017 for → **German Diversity Day,** an initiative that helps businesses and institutions raise awareness of diversity issues. 2017 was also a year of dialogue: for example, we launched a regular roundtable to discuss and drive forward diversity activities in cooperation with employee networks.

Promoting female employees and managers

The BMW Group's Diversity Concept aims to bring the share of women in management positions into line with the overall employee structure. In 2011, together with the other DAX 30 companies, we made a commitment to increase the share of females in management positions. We were able during the period under review to further increase the proportion of women in the total workforce who are in management positions and young talent programmes. At 19.3%, the ratio of female employees in the BMW Group workforce (BMW AG: 16.1%) is now above our self-imposed target range of 15–17%. The share of female managers in the BMW Group rose to 16% (BMW AG: 14%). → GRI 405-1 Supporting this development are proven events such as "Freude am Führen" (Embracing Leadership) and new formats such as the evening fireside series "In the Driver's Seat". At these events, interested women meet with female managers at the company and have an opportunity to share their experiences with role models. In the vocational training programmes, the ratio of women in the year under review was around 44% for the trainee programme and about 31% for the academic youth talent programmes.

→ see table 4.09

Stronger together: at the BMW Group, gender is not important, it's performance alone that counts.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

4.1 Health and performance
4.2 Long-term
employee development
→ 4.3 Diversity
4.4 Corporate citizenship

Further key indicators

Appendix

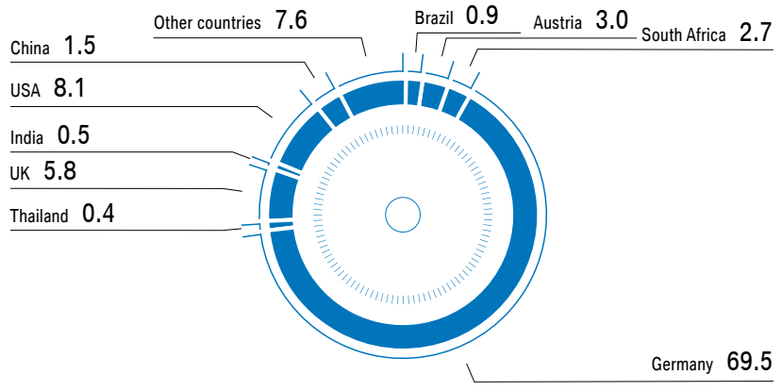
Understanding customers better through cultural diversity

Employees from 118 different countries currently work together successfully at the BMW Group locations in Germany. → GRI 405-1 As a company active in more than 150 countries, we value how this cultural diversity helps us to understand the specific needs of our customers worldwide. Moreover, we are convinced that mixed teams are more creative and perform better than very homogeneous groups.

To further promote an international perspective and intercultural understanding among our new employees, we designed our BMW vocational training as well as the "Global Leader Development Programme" with the needs of international participants in mind. As a company with an intercultural workforce, we also focus on recruiting managers with international experience while working to increase the share of employees of non-German origin in the long term. The international character of the Board of Management and the Supervisory Board likewise reflects the global scope of the company's business.

Share of employees per country with production location(s) in 2017
→ T4.10

in %



A good two thirds of BMW Group employees are employed in Germany, followed by the USA with 8.1% and UK with 5.8%.

→ GRI 102-8

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

4.1 Health and performance
4.2 Long-term employee development
→ 4.3 Diversity
4.4 Corporate citizenship

Further key indicators

Appendix

Taking account of age diversity

At the BMW Group, we take into consideration the diversity of ages represented in our workforce so we can focus on tapping into the specific strengths of different age groups while avoiding age structure issues. When setting up new locations or divisions we recruit people from a range of age groups. Since 2013, the share of BMW Group employees aged between 30 and 50 years has been steadily decreasing. At the same time, the proportion of those over 50 years of age has grown.

→ see table 4.11

BMW AG employees according to age group, divided into functions and gender[1]
→ T 4.11

in %	< 30 years old	30 – 50 years old	> 50 years old
2015 total	13.0	60.6	26.5
2016 total	12.5	60.2	27.3
2017 total	12.0	59.7	28.3
direct[2]	16.0	53.4	30.6
indirect[3]	9.5	63.6	26.9
male	10.7	59.4	29.9
female	19.4	61.3	19.3

[1] Figures refer to employees with permanent contracts.
[2] Clock-controlled and production employees.
[3] All employees without clock control .

→ GRI 405-1

Our goal is to take early action to ensure sound ageing management while encouraging a productive exchange between the generations. In addition to safeguarding knowledge, we want to make sure young and old work together productively and that each employee can optimally realise their potential.

Age diversity: many BMW Group programmes encourage collaboration between younger and older employees.

The number of years each employee works for the BMW Group is increasing. This is a result of earlier entry into the company and later exit, due for example to rising retirement ages. To maintain employees' performance as the workforce ages, we adapted the "Today for Tomorrow" programme in 2017. To complement this, we raise awareness among managers of the challenges posed by mixed-age teams.

→ see chapter 4.1

Forecast

The BMW Group will relaunch its Diversity Concept in 2018. The goal is to strengthen our holistic approach by including diversity aspects that go beyond the dimensions of gender, cultural background and age, such as disability and sexual orientation. We are also developing a new communication concept to draw attention throughout the year to the topic of diversity. In addition, we plan to install a grievance office for discrimination at our Munich location in 2018. Based on already existing company rules and facilities, employees can address any grievances they have with regard to discrimination due to race, ethnic origin, gender, religion or belief, disability, age or sexual identity. By introducing a grievance office for discrimination, which is staffed based on equal representation, employees have a downstream procedure available so that they can track the progress of their grievance.

CORPORATE CITIZENSHIP

The BMW Group is a leader in intercultural understanding.

The BMW Group is active all over the world: from Germany to Russia and Thailand, Mexico and many other countries.

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

4.1 Health and performance
4.2 Long-term employee development
4.3 Diversity
→ 4.4 Corporate citizenship

Further key indicators

Appendix

4.4 CORPORATE CITIZENSHIP

Sustainability goal:
The BMW Group is a leader in intercultural understanding

Effective corporate citizenship forms an integral part of the BMW Group's vision of itself as a business enterprise. As a global company, we address current issues in society, focusing on areas where we can best bring our competencies to bear to achieve concrete, measurable improvements.

Through our corporate citizenship efforts, we demonstrate our sense of responsibility as a business operating in society. We are convinced that our activities contribute to overcoming societal challenges while also creating added value for both the company and society. This is accomplished, for example, by taking up new ideas that arise when a variety of social stakeholders work together. Experiences thus gained can go toward strengthening innovation in our core business.

Key measures:
Promoting intercultural understanding and social inclusion

Corporate citizenship at the BMW Group focuses on long-term solutions that are internationally transferable and bring lasting results according to the principle of "helping people to help themselves". We therefore concentrate on our core competencies: intercultural understanding and social inclusion.

With the → **Intercultural Innovation Award,** we collaborate with the → **United Nations Alliance of Civilizations (UNAOC)** to recognise innovative projects that pursue solutions to intercultural tensions and conflict. The winning individuals and initiatives receive support in the form of both a grant and expert advice.

At our international locations, the BMW Group promotes growing social inclusion through educational projects adapted to local needs. We make a lasting contribution to equal opportunity by helping disadvantaged young people to eventually embark on a successful career.

At our "Junior Campus" in Munich, we spark the interest of the youngest generation in the topic of sustainable mobility, for example through workshops and playful driving lessons.

We also foster responsible leadership through the BMW Foundation Herbert Quandt. This foundation encourages leaders to use venture philanthropy and impact investing as effective instruments of social change. The foundation also applies these principles itself, not only by sponsoring social organisations with a demonstrable and sustainable impact with proceeds from its endowment but also by giving leaders concrete opportunities to show their commitment to society. Through the Eberhard von Kuenheim Fund, the foundation additionally invests a share of its core assets in realising not only financial returns but also positive effects on society.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

4.1 Health and performance
4.2 Long-term
employee development
4.3 Diversity
→ 4.4 Corporate citizenship

Further key indicators

Appendix

Due diligence processes:
Avoiding risks by applying clear guidelines and ensuring a lasting impact through systematic evaluation

The hallmarks of the corporate citizenship activities undertaken by the BMW Group are transparency, compliance with all statutory requirements and careful documentation of the measures. The BMW Group policy on "Sponsorship, donations and memberships" was drafted for this purpose in 2011. It prescribes binding rules of conduct for all internal departments and locations of the BMW Group.

The BMW Group wants to make sure that its corporate citizenship efforts address actual needs and have a lasting impact. The Corporate Citizenship department takes the lead in coordinating the conception and evaluation of corporate citizenship activities with the company locations. To obtain a complete overview of all activities, the department conducts an annual global survey in all relevant divisions of the company.

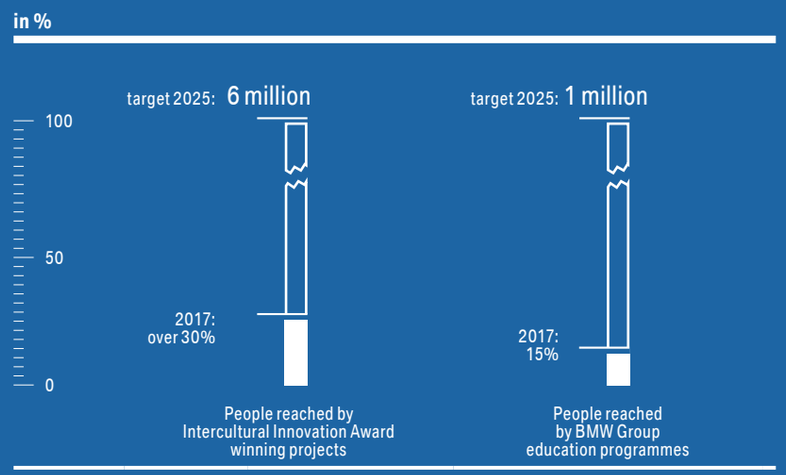
Based in Munich/DE, the department also reviews the impact of the BMW Group as a whole with respect to corporate citizenship. Since 2010, the iooi (Input Output Outcome Impact) method has been used for this purpose. By listing the resources deployed (inputs), the services provided (outputs), the results achieved (outcomes) and the effects attained (impacts), this method makes it possible to differentiate corporate citizenship activities according to the effort involved and the benefits realised, making their impact measurable and demonstrable. This gives us a basis for evaluating and further developing our projects.

Results and performance indicators:
Further increase in the number of people reached

The BMW Group regularly formulates clear objectives that allow us to measure the effects of our sponsorship measures. In 2015, we already achieved the goal we had set ourselves of reaching out to one million people by 2020 with our corporate citizenship activities. In 2017, we therefore formulated some new goals: between 2011 and 2025, we want to reach six million people through the diverse projects recognised with the Intercultural Innovation Award. We are on the right track. By the end of 2017, we were able to help over two million people through the winning projects, meaning we had already reached over 30% of our target.

In addition, between 2017 and 2025 we intend to provide a solid education for one million young people – particularly in the technical field. Our education and training programmes had already reached 150,000 young people at international BMW locations by the end of 2017. This represents a 15% achievement of our target.

People reached by corporate citizenship activities of the BMW Group
→ T 4.12



Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

4.1 Health and performance
4.2 Long-term employee development
4.3 Diversity
→ 4.4 Corporate citizenship

Further key indicators

Appendix

These results confirm our contribution to strengthening intercultural understanding and social inclusion worldwide.

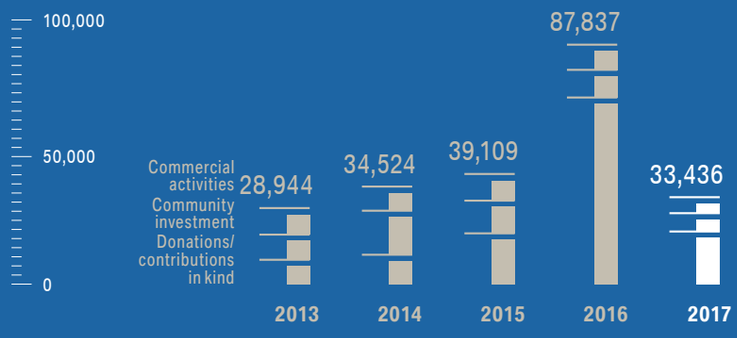
In 2017, the BMW Group spent a total of €33.4 million on our corporate citizenship activities (2016: €87.8 million). To see how these funds were allocated to our various areas, please refer to tables 4.13 and 4.14. The drop is due to a one-off donation to the BMW Foundation Herbert Quandt to mark BMW's centenary in 2016, increasing its capital from €50 million to €100 million.

→ see table 4.13 and table 4.14
→ see performance indicators

Amount of expenditure on corporate citizenship, by type of activity[1]

→ T4.13

in € thousand



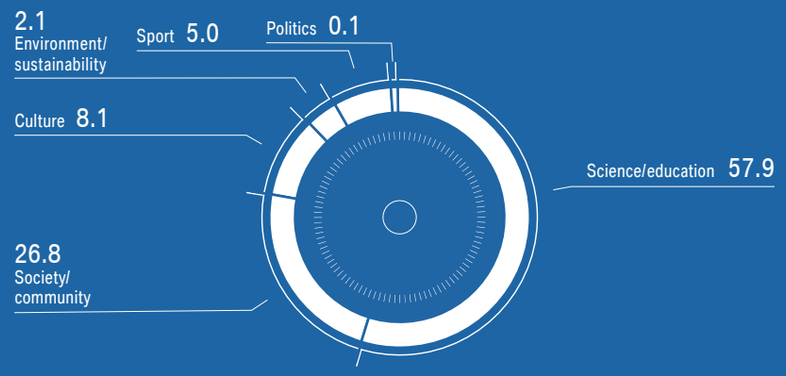
[1] The activities of the BMW Group in the area of corporate citizenship are divided into three main areas: first, monetary donations and donations in kind; second, community investment, which refers to investment in project initiatives conceived in-house, cooperative endeavours and partnerships as well as corporate volunteering by BMW Group employees; and third, commercial activities, i.e. sponsorship and cause-related marketing.

→ GRI 201-1

BMW Group donations worldwide in 2017

→ T4.14

in %, total amount €16,205,021[1]



[1] The sum indicated here does not include either cause-related marketing or sponsorship and does not contain the projects and activities carried out in the context of the company's corporate citizenship and cultural activities.

→ GRI 201-1

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

4.1 Health and performance
4.2 Long-term
employee development
4.3 Diversity
→ 4.4 Corporate citizenship

Further key indicators

Appendix

CORPORATE CITIZENSHIP IN DETAIL

We want support from the BMW Group to bring lasting benefits. We therefore do not see ourselves primarily as a sponsor of social projects but instead accompany our partners directly at our company locations, putting our knowledge and networks at their disposal. This results in long-term projects that make a real contribution to improving the social situation on the ground.

Promoting intercultural understanding

As a global corporation with a multinational workforce, the BMW Group has a vital interest in tolerance and understanding between different nations, religions and ethnic groups. This is why we bestow the → **Intercultural Innovation Award** each year in collaboration with the → **United Nations Alliance of Civilizations (UNAOC).** The award recognises innovative projects that seek solutions for intercultural tensions and conflict. In addition to a grant, the individuals and initiatives honoured receive advisory support from the BMW Group and can take part in workshops where they can learn from the experiences of award-winners from previous years. The award and workshops have given rise over the years to a platform for "Intercultural Leaders" where people can inspire one another to greater intercultural understanding. According to studies by the UNAOC, the projects sponsored by the BMW Group through this award had reached over two million people worldwide by the end of 2017.

Rewarding volunteer work
Since 2017, the Intercultural Leader platform has also been open to the winners of corporate citizenship awards in order to expand the exchange of experiences. The BMW Group has been recognising the volunteer efforts of its employees since 2011 with a "Social Responsibility Award", under the auspices of Board of Management member Milagros Caiña Carreiro-Andree. The jury selects three projects that have created exceptional added value for society. An additional special prize awarded by the Doppelfeld Foundation honours the efforts of younger employees. In the past several years we have received nearly 600 applications from a wide range of countries and sectors. The diverse projects range from refugee assistance to capacity building in developing countries and also include support projects for disadvantaged or disabled young people with a migrant background.

Improving social inclusion through education

Many markets are characterised by pronounced inequality. We know the realities on the ground and therefore want to take advantage of the global presence of the BMW Group to do our part for social inclusion.

A good education is the key to success for children and young people all over the world. The BMW Group therefore wants to support students on their way from basic through higher education and onward to starting vocational training or embarking on a career. We conduct corresponding projects at our company locations that are tailored to the respective local needs – in 2017 in the USA, Thailand, India, Brazil, Mexico, China, Korea and Germany, for example.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

4.1 Health and performance
4.2 Long-term
employee development
4.3 Diversity
→ 4.4 Corporate citizenship

Further key indicators

Appendix

In Thailand, in cooperation with the German-Thai Chamber of Commerce, the BMW Group has developed a training programme that has been running successfully since 2012. Participants receive mechanical engineering training and, after successful completion, have the opportunity to start as a technician at the BMW Group. The "BMW Scholars Programme" in Spartanburg, South Carolina/USA lets young people learn a trade based on the German model of dual vocational training.

In Mexico, in parallel with our new plant, we are building a comprehensive programme for vocational and advanced training. As part of the CONALEP programme (Colegio Nacional de Educación Profesional Técnica), high-school students can already begin preparing for vocational training in technical occupations. In addition, the boarding school "Colonia Juvenial" offers a launchpad specifically for gifted young people from rural areas. The BMW Group provides financial support for the education of these gifted young people.

In Brazil, the BMW Group has set up a centre at the Araquari plant where children receive extra instruction from their first year of public primary school to their third year of public secondary school. Children aged nine years and under receive tutoring in reading and writing, while from the age of nine they receive help with mathematics. All children are provided with three meals and day and can take part in plenty of sports, culture and art activities at the 1,220-square-metre facility. In China, the project "Joy Home" was established in 2008. It offers children in rural areas a place where they can get help with their homework and also take part in additional educational offers. Sports activities were added in 2017. The project is sponsored and financed by local BMW dealers and customers, many of whom also participate as volunteers.

In India, we have been sponsoring since 2015 the non-profit organisation Magic Bus, part of the "Livelihood for Youth" programme. The organisation gives disadvantaged young people access to an adequate basic education in order to pave the way for higher education or vocational training. In Korea, the mentor programme "Young Engineer Dream" provides support for disadvantaged students at technical universities. BMW Group technicians from local operations assist the students with planning their education and career.

In Germany, too, there are young people who have difficulty finding a suitable trainee placement. In cooperation with the "Joblinge" organisation, the BMW Group assists them in their search.

Extra-curricular education support and sports for children: Joy Home is a project of the BMW Brilliance joint venture.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

4.1 Health and performance
4.2 Long-term
employee development
4.3 Diversity
→ 4.4 Corporate citizenship

Further key indicators

Appendix

Care4Water – Community Engagement

→ **Care4Water** is a global initiative founded in 2015 by BMW Group Financial Services in collaboration with the organisation Waves for Water. The mission is to ensure that people in the countries where the BMW Group is represented have access to clean drinking water. Employees in Brazil, India, Mexico, South Africa and Thailand join the experts from Waves for Water to distribute water filters in the communities. A continuous evaluation process ensures the sustainable use of the filters. With the volunteers on site and donations of over US$500,000 by the end of 2017, BMW Group employees worldwide thus make a substantial contribution to ensuring access to clean drinking water for as many people as possible.

Clean water: with the Care4Water project, the BMW Group helps make drinking water available to people in many countries.

Getting school-age children excited about sustainable mobility

In recent years, the design and production of our vehicles has increasingly been geared toward sustainable mobility. To convey this abstract concept to even the youngest among us, we opened the "Junior Campus" at BMW Welt in Munich/DE, where children can learn how it is possible to harness the physical forces of nature to build energy-efficient and environmentally friendly cars. Along with workshops, there are also driving lessons in which children can learn about traffic rules. We contribute in this way to the safety of the youngest road users. The project was so successful in Germany that it has now been exported to Russia and Korea as well.

Vehicles and high-voltage training equipment for research and education

The BMW Group has been promoting young talent for years by providing vehicles free of charge to educational institutions in Germany and abroad. Starting this year, we are also providing specially developed equipment for high-voltage training, set up with the help of the BMW Vocational Training department at the locations of Munich/DE and Dingolfing/DE. In this way, the BMW Group helps keep education and research up to date with the latest technological advances while also promoting training in the area of electromobility.

Worldwide, over 1,600 vehicles are now pursuing their "educational mission".

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

4.1 Health and performance
4.2 Long-term employee development
4.3 Diversity
→ 4.4 Corporate citizenship

Further key indicators

Appendix

BMW Foundation Herbert Quandt: helping to improve society

The work of foundations associated with the BMW Group provides an important source of inspiration for our activities. On the occasion of its centenary in 2016, BMW AG expanded its commitment to corporate citizenship: the two corporate foundations, the → **BMW Foundation Herbert Quandt** and the → **Eberhard von Kuenheim Foundation,** have since then pooled their activities for an even greater global impact. The BMW Group doubled the capital of the BMW Foundation Herbert Quandt from €50 to €100 million in 2016 and plans to support its ongoing activities with annual donations. To do justice to the increasingly international nature of the foundation, it was renamed in 2017 from the German "BMW Stiftung Herbert Quandt" to the English "BMW Foundation Herbert Quandt".

The foundation encourages leaders worldwide to take action as "Responsible Leaders" to help shape a peaceful, just and sustainable future. The framework for these efforts is provided by the Agenda 2030 adopted by the United Nations. The foundation pursues the following goals:

- It inspires leaders to deepen their social and political commitment
- It connects leaders through its global Responsible Leaders network, which drives positive change through concrete action
- It invests in action-oriented organisations and encourages leaders to use venture philanthropy and impact investing as effective instruments of social change

Forecast

As the BMW Group becomes increasingly international, so do its activities in the area of corporate citizenship. At the same time, we make sure our projects are tailored to local needs. And the individual projects should not simply be left to their own devices. To better connect the various efforts, we intend in 2018 to strengthen the exchange of experiences between the project managers in the various markets by way of an online platform.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

→ Further key indicators

Fundamentals
Products and services
Production and value creation
Employees and society

Appendix

FURTHER KEY INDICATORS

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

→ Fundamentals
Products and services
Production and value creation
Employees and society

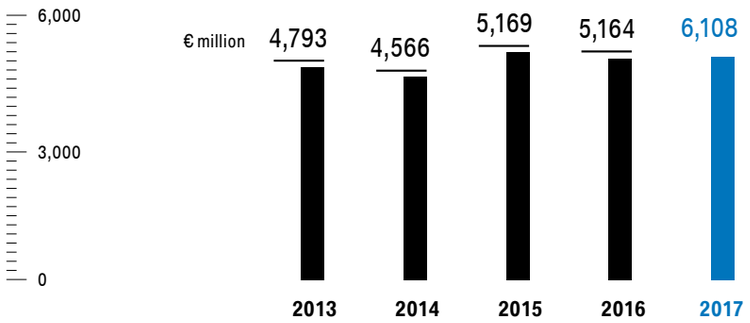
Appendix

Further key indicators: Fundamentals

Research and development expenditure

→ T 1.03

in € million

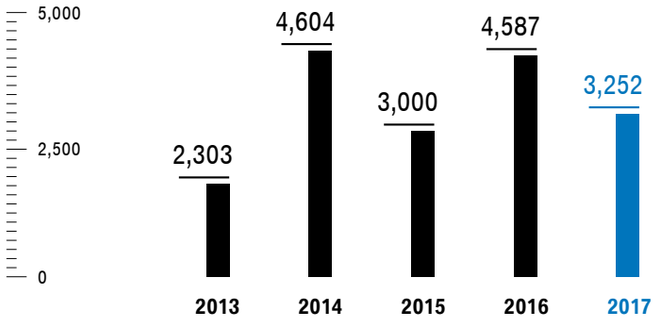


In the reporting period, expenditure on research and development, in particular on projects to safeguard the future, remained at the same level as in the previous year at €6,108 million (2016: €5,164 million). It accounted for 6.2 (2016: 6.5), thus remaining virtually unchanged since the previous year.

Provisions for pensions

→ T 1.05

in € million



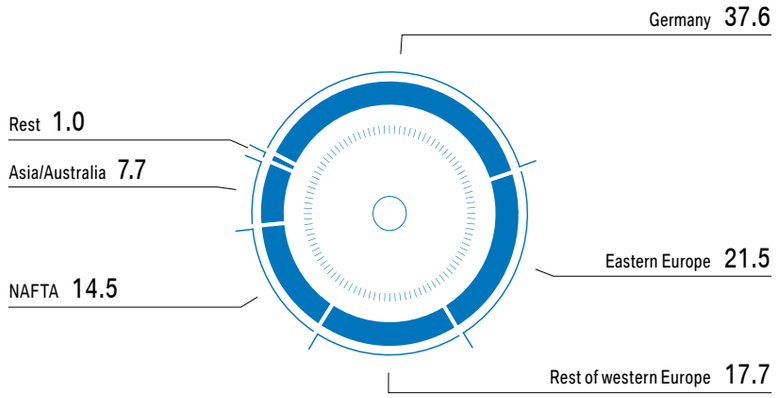
The bulk of the agreed pension benefits are covered in full by fund-based pension systems as well as accounting provisions. Fund assets increased to €19,477 million (2016: €18,315 million). Pension provisions dropped significantly to €3,252 million (2016: €4,587 million); this is primarily due to profits from planned assets. From a legal perspective, the fund assets of the BMW Group are managed in trusts, separately from its corporate assets.

→ GRI 201-1, GRI 201-3

Regional distribution of BMW Group purchase volumes in 2017

→ T 1.04

in %, basis: production material



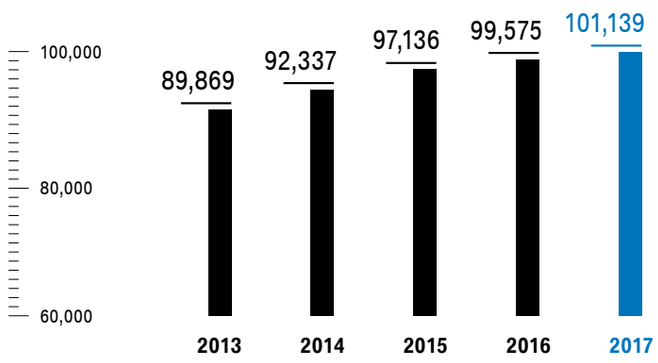
The global distribution of the purchase volume of production material and raw materials continues to correlate closely with the global production volume, whereby the focus of growth in 2017 was in Europe due to model cycles, and the purchase volume in NAFTA decreased slightly due to model changes and currency effects.

→ GRI 102-9

BMW Group personnel costs per employee[1]

→ T 1.06

in €



[1] Figures exclude suspended employment contracts, employees in non-work phases of pre-retirement part-time arrangements, trainees, students and low income earners.

Maintaining a competitive level of expenditure on personnel plays a major role in the success of the company. In addition to focusing on cost, the aim is also to increase efficiency at all levels of the business. The high degree of motivation amongst employees and the positive approach taken by the company towards the workforce are underscored by rewards that are determined individually on the basis of performance and success.

→ GRI 201-1

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

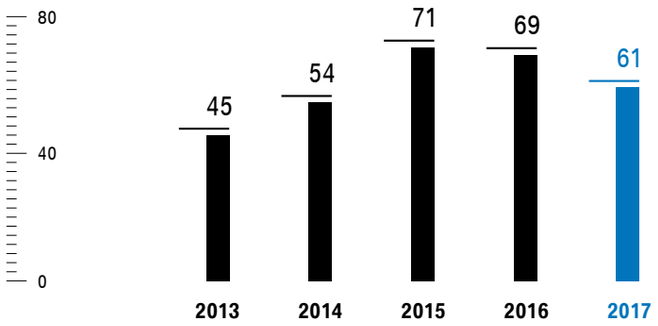
→ Fundamentals
Products and services
Production and value creation
Employees and society

Appendix

Public sector grants: public subsidies in the form of reduced taxes on assets and consumption-based taxes

→ T 1.07

in € million



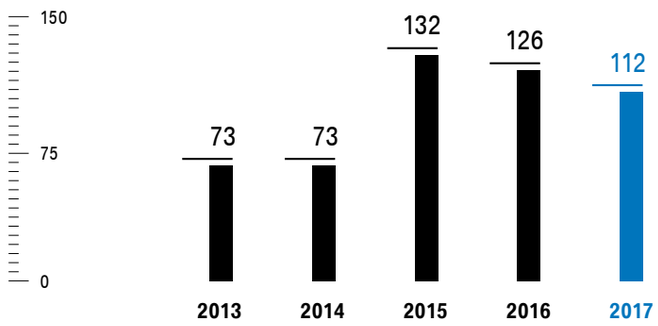
As in the previous years, public sector grants consisted of two parts in 2017. First, production costs were reduced due to public subsidies in the form of reduced taxes on assets and consumption-based taxes amounting to €61 million (2016: €69 million). Second, other operating income at the BMW Group also includes performance-based public sector grants totalling €112 million (2016: €126 million).

→ GRI 201-4

Public sector grants: performance-based grants from the public sector

→ T 1.08

in € million



→ GRI 201-4

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

→ Fundamentals
Products and services
Production and value creation
Employees and society

Appendix

Vehicle production of BMW Group by plant

→ T 1.09

	2016	2017	Change in %	Share of production in %
Dingolfing, DE	339,769	376,580	10.8	15.0
Spartanburg, US	411,171	371,316	–9.7	14.8
Regensburg, DE	346,291	338,259	–2.3	13.5
Leipzig, DE	246,550	246,043	–0.2	9.8
Munich, DE	216,769	196,455	–9.4	7.9
Tiexi[1], CN	161,901	269,309	66.3	10.8
Dadong[1], CN	143,825	127,440	–11.4	5.1
Oxford, UK	210,971	223,817	6.1	8.9
Rosslyn, ZA	63,117	53,105	–15.9	2.1
Rayong, TH	17,844	21,084	18.2	0.9
Araquari, BR	15,408	12,768	–17.1	0.5
Chennai, IN	8,568	8,952	4.5	0.4
Goodwood, UK	4,179	3,308	–20.8	0.1
Graz (Magna Steyr)[2], AT	53,528	50,272	–6.1	2.0
Born (VDL Nedcar bv)[2], NL	87,609	168,969	92.9	6.7
Assembly plants (Jakarta, Cairo, Kaliningrad, Kulim)	32,256	38,064	18.0	1.5

[1] BMW Brilliance Automotive Ltd., Shenyang/CN (joint venture).
[2] Contract production.

→ GRI 102-7

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Fundamentals
→ Products and services
Production and value creation
Employees and society

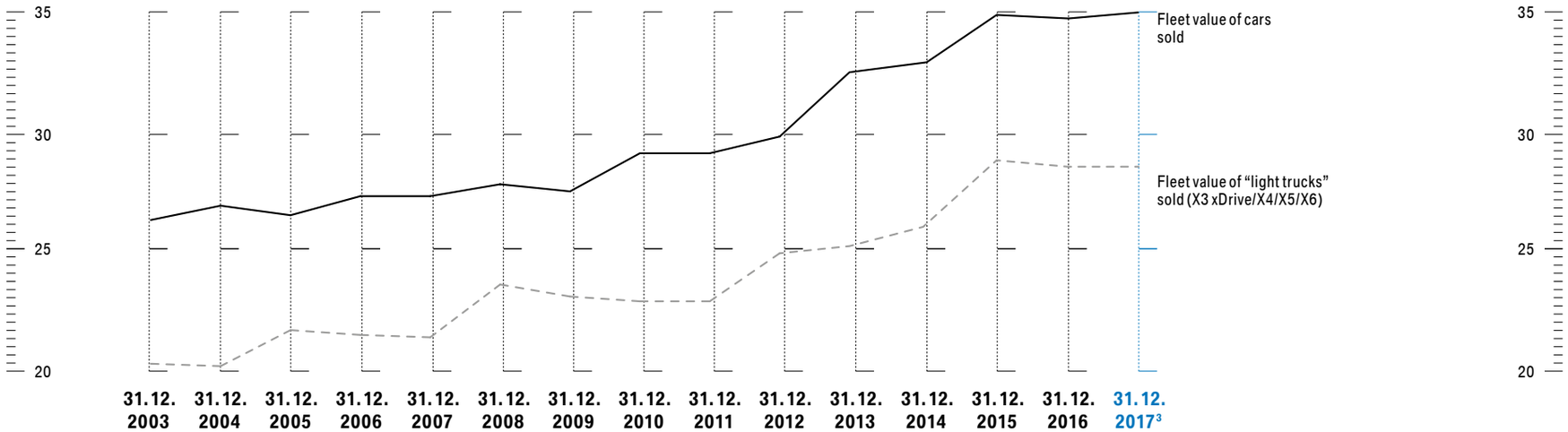
Appendix

Further key indicators:
Products and services

Fleet consumption of BMW Group vehicles sold in the USA (according to CAFE[1])

→ T 2.03

in mpg[2]



[1] CAFE: Corporate Average Fuel Economy.
[2] mpg: miles per gallon.
[3] BMW Group forecast, not yet officially confirmed by National Highway Traffic Safety Administration (NHTSA).

The BMW Group's EfficientDynamics Strategy aims to make fuel economy technologies accessible to all customers worldwide as soon as possible. EfficientDynamics features are thus part of the standard equipment in our vehicles. The slight decrease is primarily due to the drop in fuel prices and the accompanying increase in customer demand for larger models and more powerful engines.

→ GRI 302-5

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Fundamentals
Products and services
→ Production and value creation
Employees and society

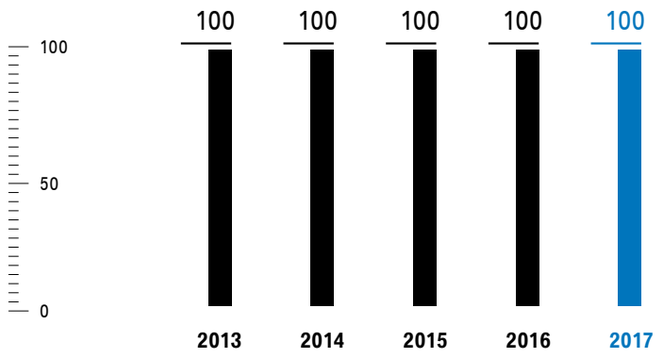
Appendix

Further key indicators:
Production and value creation

Coverage rate of the production locations with quality management systems

→ T 3.10

in % of the workforce at the production and development locations



Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Fundamentals
Products and services
→ Production and value creation
Employees and society

Appendix

Energy consumption in detail

→ T 3.11

in MWh	2013	2014	2015[1]	2016[1]	2017[1,2]
TOTAL ENERGY CONSUMPTION (UPPER HEATING VALUE IN CASE OF FOSSIL FUELS)					
Total energy consumption	4,721,174	4,867,094	5,479,002	5,783,841	**5,852,666**
of which vehicle production	4,721,174	4,867,094	5,054,722	5,328,856	**5,362,618**
of which motorcycle production	—	—	80,535	85,559	**95,493**
of which central functions, development and administration in Munich/DE	—	—	343,745	369,426	**394,555**
TOTAL ENERGY CONSUMPTION IN DETAIL (UPPER HEATING VALUE IN CASE OF FOSSIL FUELS)					
Electricity (external source)	1,910,065	2,141,222	2,485,881	2,584,570	**2,588,409**
Community heating	316,532	281,216	366,593	381,340	**408,735**
Community cooling in MWh	—	—	1,002	1,084	**1,095**
FOSSIL FUELS					
Fuel oil	14,023	7,459	4,829[3]	3,698[3]	**4,450**
Natural gas	2,165,362	2,198,202	2,393,723	2,575,089	**2,624,557**
of which CHP losses	191,840	210,740	214,569	245,899	**258,380**
NON-FOSSIL FUELS					
Biogas (landfill gas)	315,192	238,654	226,146	237,446	**224,819**
of which CHP losses	94,486	73,638	98,670	108,536	**84,166**
Wood pellets	—	—	430	220	**220**
RENEWABLES					
Solar (photovoltaics)	142	341	397[3]	394[3]	**381**

[1] To further increase transparency, energy consumption from the corporate functions, development and administration in Munich/DE as well as the motorcycle plant in Berlin/DE were included in the report for the first time in 2015.
[2] Including motorcycle production in Manaus (Brazil) and Rayong (Thailand) as well as central fields in Tiexi (China) since 2017.
[3] Correction due to modified allocation.

In 2017, in spite of some new highly efficient plants and production systems running in parallel, we were able to reduce the energy consumption of our vehicle production by 1.8% compared to the previous year, to 2.17 MWh per vehicle produced. This was mainly due to the decommissioning of two older production plants as well as the commissioning of new production plants and the swift transfer to efficient regular operations in Shenyang (China). In addition, we were able to almost complete the total transfer to LED lighting at our production plants.

→ GRI 302-1

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Fundamentals
Products and services
→ Production and value creation
Employees and society

Appendix

Certified environmental management systems in production facilities of the BMW Group

→ T 3.12

Site	Environmental management system	Most recent year of ISO 14001 certification
Berlin plant, DE	ISO 14001/ EMAS	January 2018[2]
Dingolfing plant, DE	ISO 14001/ EMAS	January 2018[2]
Eisenach plant, DE	ISO 14001/ EMAS	January 2018[2]
Goodwood plant, UK	ISO 14001	January 2018[2]
Hams Hall plant, UK	ISO 14001	January 2018[2]
Landshut plant, DE	ISO 14001/ EMAS	January 2018[2]
Leipzig plant, DE	ISO 14001/ EMAS	January 2018[2]
Munich plant, DE	ISO 14001/ EMAS	January 2018[2]
Oxford plant, UK	ISO 14001	January 2018[2]
Regensburg plant, DE	ISO 14001/ EMAS	January 2018[2]
Rosslyn plant, ZA	ISO 14001	January 2018[2]
Spartanburg plant, US	ISO 14001	January 2018[2]
Steyr plant, AT	ISO 14001/ EMAS	January 2018[2]
Swindon plant, UK	ISO 14001	January 2018[2]
Wackersdorf plant, DE	ISO 14001/ EMAS	January 2018[2]
CKD plant Araquari, BR	ISO 14001	January 2018[2]
CKD plant Chennai, IN	ISO 14001	January 2018[2]
CKD plant Jakarta, ID (external production)	ISO 14001	May 2016
CKD plant Cairo, EG (external production)	ISO 14001	August 2017
CKD plant Kaliningrad, RU (external production)	ISO 14001	August 2017
CKD plant Kulim, MY (external production)	ISO 14001	November 2016
CKD plant Manaus, BR	National standard[1]	Implemented
CKD plant Rayong, TH	ISO 14001	January 2018[2]
BMW Brilliance Automotive Ltd., Shenyang, CN (joint venture)	ISO 14001	May 2017
SGL Automotive Moses Lake, US (joint venture)	ISO 14001	March 2015
SGL Automotive Wackersdorf, DE (joint venture)	ISO 14001	March 2015
Magna Steyr Fahrzeugtechnik Graz, AT (contract production)	ISO 14001/ EMAS	July 2015
TVS Motor Company Hosur, IN (contract production)	ISO 14001[1]	January 2017
VDL Nedcar, Born, NL (contract production)	ISO 14001	October 2017

[1] Fulfilment of legal requirements.
[2] Certification to follow in 2017.

Environmental management systems are in place at all BMW Group production facilities worldwide as well as in the central planning departments. With the exception of the Manaus/BR plant, these systems are certified in accordance with ISO 14001:2015. External auditors confirmed that the German and Austrian sites additionally meet the EMAS European environmental management standard. Certification is planned for 2019 at the Manaus/BR plant.

In 2017, BMW Group certification was performed in accordance with DIN ISO 14001:2015. The area of application of the certified environmental management system was expanded to include the development division.

Introduction

1
Fundamentals

2
Products and services

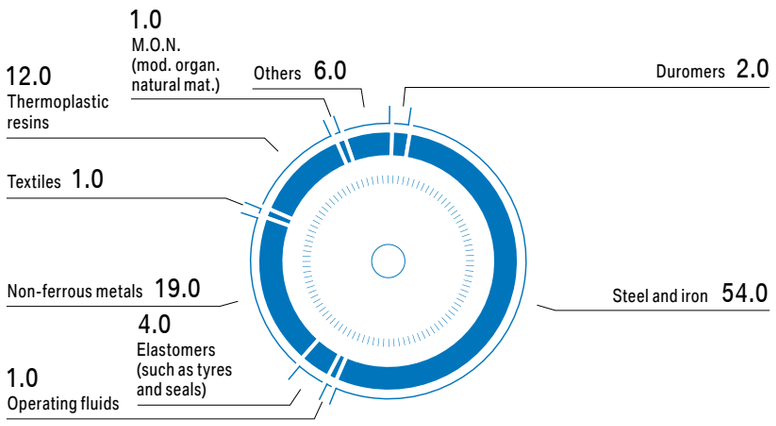
3
Production
and value creation

4
Employees and society

Average distribution of materials in BMW Group vehicles[1]

→ T 3.13

in %



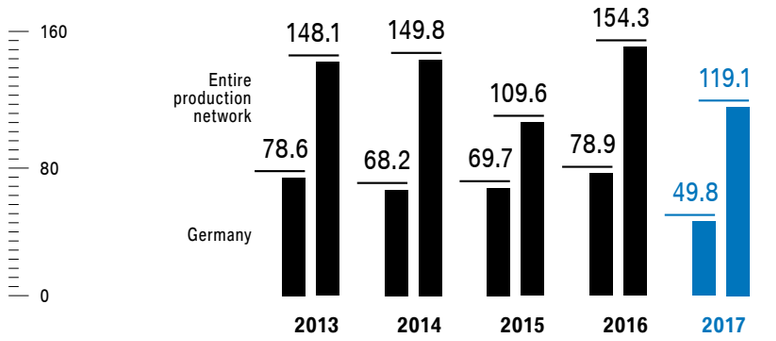
[1] Calculation of representative vehicles includes: BMW 1 Series, BMW 3 Series, BMW 5 Series, BMW 7 Series, BMW X1, BMW X5, MINI Hatchback, MINI Countryman, RR, i3, i8.

→ GRI 301-1

Investment in environmental protection[1]

→ T 3.14

in € million



[1] Calculation of integrated environmental investments of BMW Group production-locations according to VDA standard.

Total investment by the BMW Group in environmental protection sank to €119 million in the reporting period (2016: €154 million). The main reason for this was that the environmentally relevant investments in paint shops decreased compared to the previous years. In addition, our implementation of environmental management measures meant that there were no significant environmental incidences in the entire production network in the reporting period. In particular, no penalties had to be paid.

Further key indicators

Fundamentals
Products and services
→ Production and value creation
Employees and society

Appendix

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Fundamentals
Products and services
→ **Production and value creation**
Employees and society

Appendix

BMW Group input/output assessment for 2017 vehicle production

→ T 3.15

INPUT	
Water[1]	5,073,220 m³
Energy[1]	5,362,618 MWh
OUTPUT	
Total waste[1]	785,209 t
of which recyclable	776,179 t
of which waste for disposal	9,031 t
Total waste water[1]	3,633,306 m³
CO_2 emissions[1,3]	989,111 t
Volatile organic compounds (VOC)[1,2]	2,358 t
NO_x[1,2]	642 t
CO[1,2]	448 t
SO_2[1,2]	10 t
Particulates, dust[1,2]	71 t

[1] Incl. BMW Brilliance (China), excluding contract production.
[2] BMW Group measurements/capture as well as calculations based on energy consumption (primarily heating oil and gas) with the aid of the VDA emission factors.
[3] Calculated using revised emissions factors.

The number of vehicles produced increased in the reporting period by + 6.2% to 2,505,741 vehicles (incl. BMW Brilliance). Based on an average weight of BMW Group vehicles of around 1,600 kg, the total weight of input materials is around 4 million t. To calculate the individual material flows, the total weight is multiplied by the average distribution of the materials in BMW Group vehicles (see T 3.13). A key trend compared to 2016 continues to be the shift from steel to aluminium due to the increase in lightweight construction. The share of aluminium in the average distribution of materials in BMW Group vehicles increased to 19% (2016: 18%).

We aim to increase the use of secondary materials in our vehicles. Our vehicles generally contain shares of secondary raw materials that are average for the industry. For selected materials and components, we apply Life Cycle Engineering to design our supply chains and material cycles as early as in the vehicle development stage. Up to 20% of the thermoplastic materials in our vehicles are made from recyclates. These thermoplastic materials account for an average of 12% of vehicle weight. We use up to 50% secondary aluminium in high-strength cast aluminium parts.

In addition, the efficiency indicators energy/water consumption, process wastewater, waste for disposal, VOC and CO_2 emissions per vehicle improved by an average of 5.3% compared to 2016.

- GRI 301-1, GRI 302-1, GRI 305-1, GRI 305-7

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Fundamentals
Products and services
→ **Production and value creation**
Employees and society

Appendix

Water consumption[1]

→ **T3.16**

	2013	2014	2015	2016	2017
Water consumption in m³	4,105,937	4,434,595	4,819,684	5,017,816	**5,073,220**
of which drinking water in %	86	87	86	87.1	**88.0**
of which groundwater in %	14	13	14	12.5	**11.7**
of which surface water in %	0	0	0	0.5	**0.3**
of which rainwater in %	0	0	0	0	**0.0**

[1] These figures refer to the production sites of the BMW Group incl. the BMW Brilliance Automotive Ltd. joint venture in Shenyang/CN.

Measured against the increase in production (2.7%), total water consumption rose disproportionately, by 1.1% in 2017 compared to 2016. Water consumption per vehicle produced was just under 2% below the previous year's figure, at 2.22 m³ (2016: 2.25 m³). In the reporting period, no sensitive water sources were impacted by water removal (water from nature conservation areas), nor are there any plans in this regard in the future.

Waste water[1]

→ **T3.17**

	2013	2014	2015	2016	2017
Total waste water in m³	2,825,825	2,965,615	3,108,587	3,312,562	**3,633,306**
of which process waste water in m³	882,978	949,601	960,234	944,008	**914,016**
of which waste water from sanitary facilities in m³	1,942,847	2,016,015	2,148,353	2,368,554	**2,719,290**
Total heavy metals and heavy metal compounds in kg	465	492	502	742	**406**
COD[2] in kg	1,770,577	2,081,473	2,152,073	2,085,398	**2,273,678**
AOX[3] in kg	79	74	87	131	**101**

[1] The key performance indicator "Process waste water" is measured after waste water treatment in BMW Group plants (incl. the BMW Brilliance Automotive Ltd. joint venture in Shenyang/CN) has taken place. Together with the waste water from sanitary facilities at the plants, this is the figure for total waste water. Due to factors such as evaporation, water input does not correspond to total waste water.
[2] COD = chemical oxygen demand.
[3] AOX = adsorbable organic halides in water.

Materials input into waste water should be limited to volumes that will not overtax natural decomposition processes. At all of our plants, we have introduced our own BMW-specific waste water standards, some of which considerably exceed local regulations.

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

Waste[1]

→ T3.18

in t	2013	2014	2015	2016	2017
Total waste	680,299	727,079	754,747	762,924	**785,209**
Hazardous waste for recovery	21,884	28,503	31,099	30,855	**36,379**
Hazardous waste for disposal	7,668	7,439	5,483	4,219	**4,992**
Non-hazardous waste for recovery	647,725	688,237	714,887	723,632	**739,799**
Non-hazardous waste for disposal	3,022	2,900	3,278	3,732	**4,039**
Materials for recycling	669,609	716,740	745,986	754,486	**776,179**
Metals for recycling (scrap)	500,589	525,812	569,959	569,841	**571,685**
Waste for disposal	10,690	10,339	8,761	7,951	**9,031**

[1] These figures refer to the production sites of the BMW Group incl. the BMW Brilliance Automotive Ltd. joint venture in Shenyang/CN.

The waste from production that cannot be recycled increased in 2017 to 3.85 kg per vehicle produced. This is an increase of 0.34 kg/vehicle compared to 2016 (3.51 kg per vehicle).

Modes of transport of BMW AG employees[1]

→ T3.19

	2014		2015		2016		2017[2]	
	in %	in t CO_2	in %	in t CO_2	in %	in t CO_2	in %	in t CO_2
Cars	51	60,009	52	65,922	53	70,953	**51**	**69,311**
Public transport	16	3,461	16	3,750	16	4,169	**19**	**5,034**
Plant bus	26	14,244	25	14,552	24	12,950	**23**	**12,571**
Bicycle/on foot	7	0	7	0	7	0	**7**	**0**
Total	100	77,714	100	84,225	100	88,072	**100**	**86,916**

[1] Headquarters, including Research and Innovation Centre Munich/DE, the Munich/DE, Dingolfing/DE, Regensburg/DE, Landshut/DE, Leipzig/DE and Berlin/DE plants.
[2] 62% of BMW Group employees and 92% of employees in Germany captured.

Total emissions of CO_2 decreased by 1.3% and the overall average of CO_2 emissions per employee and working day was lower than in the previous year, at 4.49 kg/employee/d. (2016: 4.63). This is due to an increase in the use of public transport at the company's largest location in Munich/DE.

→ GRI 305-3

Further key indicators

Fundamentals
Products and services
→ Production and value creation
Employees and society

Appendix

Search
Back

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Fundamentals
Products and services
→ Production and value creation
Employees and society

Appendix

Logistics: carriers and CO_2 emissions[1]

→ T 3.20

	2013	2014	2015	2016	2017
INBOUND (MATERIAL PROVISION OF THE PLANTS AND SPARE PARTS DELIVERY)					
Transport volume in million tkm	11,560	12,682	13,822	15,202	**14,338**
CO_2 emissions in t	580,616	630,215	467,023	506,604	**513,940**
OUTBOUND (DISTRIBUTION OF VEHICLES AND SPARE PARTS)					
Transport volume in million tkm	22,226	24,537	25,584	25,006	**25,881**
CO_2 emissions in t	803,158	888,089	935,059	920,795	**959,147**
TOTAL (INBOUND AND OUTBOUND)					
Transport volume in million tkm	33,786	37,219	39,406	40,208	**40,219**
CO_2 emissions in t	1,383,774	1,518,304	1,402,082	1,427,399	**1,473,087**

PERCENTAGE SHARE OF CARRIERS IN TOTAL (INBOUND AND OUTBOUND) IN TERMS OF TRANSPORT VOLUME AND CO_2 EMISSIONS	tkm	g CO_2	tkm	g CO_2	tkm	g CO_2	tkm	g CO_2	tkm	g CO_2
Sea	78.9	51.6	77.8	50.1	78.9	57.0	77.7	55.0	**75.8**	**53.7**
Road	12.4	23.1	13.5	24.3	13.5	27.8	14.9	30.8	**17.2**	**32.2**
Rail	7.5	3.8	7.3	2.7	7.0	3.2	6.9	3.1	**6.4**	**2.5**
Air	1.2	21.5	1.4	22.9	0.6	12.0	0.5	11.1	**0.6**	**11.6**

[1] Figures refer to BMW and MINI, excluding Rolls-Royce Automobiles. CO_2 emissions calculated in accordance with DIN EN 16258. Scope: inbound volumes (material supplies to plants and spare parts delivery) for BMW and MINI vehicle plants worldwide as well as for delivery of spare parts to the parts supply centre. Outbound volumes (vehicle distribution and spare parts) as far as the distribution centres in the world-wide markets and in certain markets as far as the dealership.

While the number of BMW and MINI vehicles produced rose by over 6% compared to the previous year, CO_2 emissions increased to a lesser extent (+3.2%). Based on the number of vehicles, total CO_2 emissions per unit dropped by around 2.9%. Transport volume remained unchanged compared to the previous year. This is mainly due to measures to reduce distances when supplying materials to plants, e.g. we opened an engine plant in China in direct proximity to the vehicle plants. This also led to slight shifts in the shares of transport modes in transport volume and CO_2 emissions.

→ GRI 305-3

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Fundamentals
Products and services
Production and value creation
→ Employees and society

Appendix

Further key indicators:
Employees and society

Occupational health and safety management systems at BMW Group sites

→ T 4.15

Plant occupational health and safety certification	Occupational health and safety management system	Most recent date of certification
Berlin plant, DE	OHSAS 18001	December 2017
Dingolfing plant, DE	OHRIS	May 2015
Eisenach plant, DE	OHSAS 18001	September 2015
Goodwood plant, UK	OHSAS 18001	September 2015
Hams Hall plant, UK	OHSAS 18001	January 2017
Landshut plant, DE	OHRIS	October 2015
Leipzig plant, DE	OHRIS	March 2016
Munich plant, DE	OHRIS	August 2015
Oxford plant, UK	OHSAS 18001	December 2015
Regensburg plant, DE	OHRIS	July 2015
Rosslyn plant, ZA	OHSAS 18001	December 2017
Spartanburg plant, US	OHSAS 18001	April 2016
Steyr plant, AT	OHSAS 18001	January 2016
Swindon plant, UK	OHSAS 18001	December 2015
Wackersdorf plant, DE	OHRIS	July 2015
CKD production Araquari, BR	OHSAS 18001	December 2016
CKD production Chennai, IN	OHSAS 18001	January 2016
CKD production Jakarta, ID (external production)	OHSAS 18001	January 2014
CKD production Cairo, EG (external production)	OHSAS 18001	August 2017
CKD production Kaliningrad, RU (external production)	National standard[1]	Introduced
CKD production Kulim, MY (external production)	OHSAS 18001	December 2015
CKD production Manaus, BR	National standard[1]	Introduced
CKD production Rayong, TH	OHSAS 18001	January 2016
BMW Brilliance Automotive, Shenyang, CN (joint venture)	OHSAS 18001	December 2016
SGL Automotive Moses Lake, US (joint venture)	OHSAS 18001	December 2015
SGL Automotive Wackersdorf, DE (joint venture)	OHSAS 18001	December 2015
Magna Steyr Fahrzeugtechnik Graz, AT (contract production)	OHSAS 18001	July 2015
TVS Motor Company Hosur, IN (contract production)	OHSAS 18001	January 2017
VDL Nedcar, Born, NL (contract production)	National standard[1]	Introduced

[1] Legal requirements complied with.

The BMW Group (including all contract and external production companies) currently has certified occupational health and safety management systems in accordance with OHRIS and OHSAS in place at 28 of its 31 production locations and corresponding systems in accordance with national standards at three further sites.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Occupational safety at BMW Group

→ T 4.16

Rate/number of participants/number	2013	2014	2015	2016	2017
Accident frequency rate[1] BMW Group	4.8	5.1[3]	4.4[4]	4.0[5]	3.6[5]
Safety training by BMW AG occupational safety association (BMW AG only)	2,387	2,750	1,809	1,327	1,275
Web-based training in occupational safety at BMW Group[6]	15,902	17,180	23,548	25,811	71,237
Other training courses in occupational safety at BMW Group	10,892	10,984	17,536	31,212	27,838
BMW Group employees (number)[6]	9,611	6,941	13,635	22,607	20,609
Employees of third-party companies (number)	1,281	4,043	3,901	8,605	7,229
BMW Group risk assessments[2]	26,462	27,300	69,887	78,201	102,930

[1] Number of occupational accidents with at least one day of absence from work per one million hours worked.
[2] Number of safety assessments of workplaces, including with regard to possible ergonomic and health strains. Figures are cumulative and refer to the BMW Group. Figures from 2015 onwards not directly comparable to previous years' figures. The figure shown is the sum of the safety assessments of workplaces in the tariff-bound production area carried out so far (2017: 53,357) and the hazard assessments in the non-tariff areas, which were captured for the first time (2017: 49,573).
[3] Figure not directly comparable to previous years' figures due to addition of German dealerships to scope. Around 88% of BMW Group employees captured.
[4] Figure not directly comparable to previous years' figures due to addition of plants in Brazil, Thailand and India to scope. Around 90% of BMW Group employees captured.
[5] Figure not directly comparable to previous year's figure due to expansion of scope to include 100% of all BMW Group employees for which accidents can be recorded under current data privacy regulations.
[6] Including staff from temporary employment agencies.

The accident frequency rate at the BMW Group decreased by 10% in 2017 compared to 2016. This is due to continuous improvement in occupational health and safety management systems, and also to dedicated safety training courses as well as continuous improvement of technical safety conditions at workstations.

In addition to training by the occupational safety association, a large number of internal training courses are carried out, data of which has been captured since 2011. A total of 27,838 employees of the BMW Group as well as employees of third-party companies took part in internal safety training courses in financial year 2017. In addition, 6,658 people underwent training in first aid at the BMW Group.

→ GRI 403-2

BMW Group employees

→ T 4.17

	2013	2014	2015	2016	2017
Workforce according to segment					
Automotive	100,682	106,064	111,410	112,869	117,664
Motorcycles	2,726	2,894	3,021	3,351	3,506
Financial Services	6,823	7,245	7,697	8,394	8,645
Other	120	121	116	115	117
Share of employees with fixed-term contracts[1] in %	3.9	4.2	4.7	3.7	3.8

[1] Excluding vocational trainees, interns and students.

→ GRI 102-8

Further key indicators

Fundamentals
Products and services
Production and value creation
→ Employees and society

Appendix

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators
Fundamentals
Products and services
Production and value creation
→ Employees and society

Appendix

Accident frequency rate at BMW Group by country[1]

→ T4.18

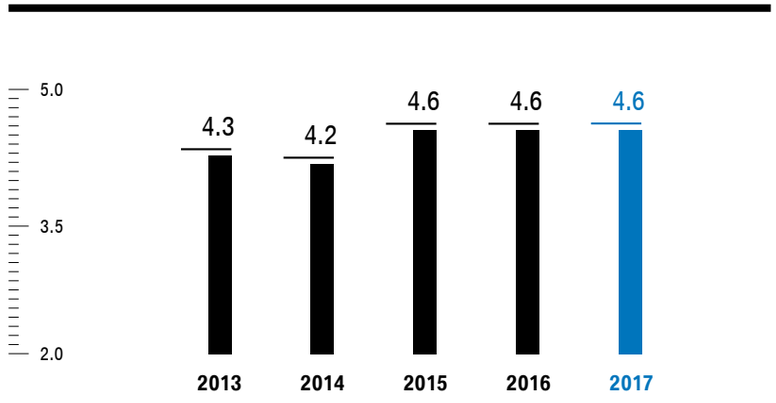
Per one million hours worked	Accident frequency
Australia	0.7
Austria	7.0
Belgium	4.6
Brazil	0.4
Bulgaria	0.0
Canada	0.0
China	0.0
Czechia	0.0
Denmark	0.0
Finland	0.0
France	4.2
Germany	4.3
Greece	0.0
Hungary	0.0
India	0.0
Indonesia	0.0
Ireland	0.0
Italy	7.2
Japan	0.6
Malaysia	0.0
Mexico	0.0
Netherlands	0.0
New Zealand	0.0
Norway	0.0
Poland	0.0
Portugal	0.0
Romania	0.0
Russia	0.0
Singapore	0.0
Slovakia	0.0
Slovenia	0.0
South Africa	1.5
South Korea	0.0
Spain	5.7
Sweden	2.2
Switzerland	0.0
Thailand	0.0
UK	1.5
United Arab Emirates	0.0
USA	2.5

[1] Reported occupational accidents with at least one day of absence from work per one million hours worked.

→ GRI 403-2

Sickness rate at BMW AG

→ T4.19



→ GRI 403-2

Target share of performance-related compensation in BMW AG salaries, by employee category[1]

→ T4.20

in % of salary group	2015	2016	2017
Upper management	52–71	52–72	51–69
Middle management	37–41	37–40	37–40
Lower management	9	9	9

[1] Performance-based remuneration comprises a personal bonus and a corporate earnings-related bonus. The amount of the personal bonus depends on personal performance as well as achievement of the individual's targets. The amount of the corporate bonus depends on the company's performance. The variable part of remuneration increases as more responsibility is taken within the company.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

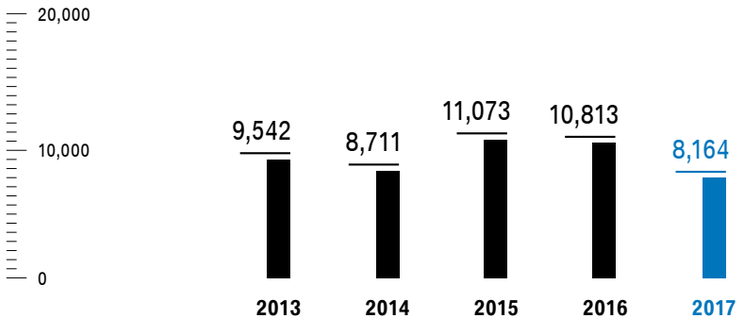
Fundamentals
Products and services
Production and value creation
→ Employees and society

Appendix

Total days of work missed at BMW AG due to occupational accidents[1]

→ T 4.21

Number



[1] Figures for BMW AG, including dealerships. Days of absence from work due to occupational accidents and/or accidents on the way to or from work with at least one day of absence from work.

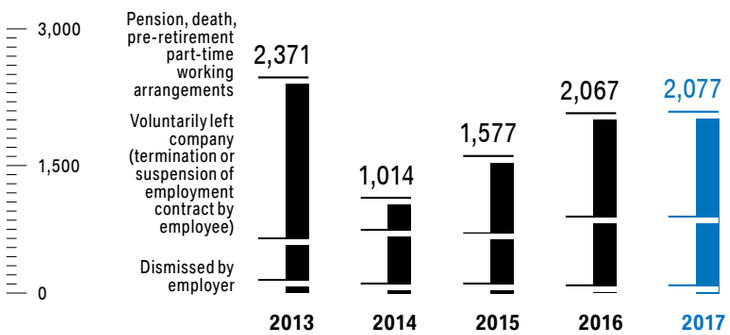
The number of occupational accidents with days absent from work dropped by 24.5% in 2017 compared to the previous year. In addition, 68.7 days' absence from work per one million hours worked were counted for the BMW Group, where there was an overall total of 13,903 days' absence from work. These figures were captured for the entire BMW Group for the first time in the reporting period.

→ GRI 403-2

Total number of employees leaving BMW AG, by reason for leaving[1]

→ T 4.23

Number



[1] Figures refer to employees with permanent contracts.

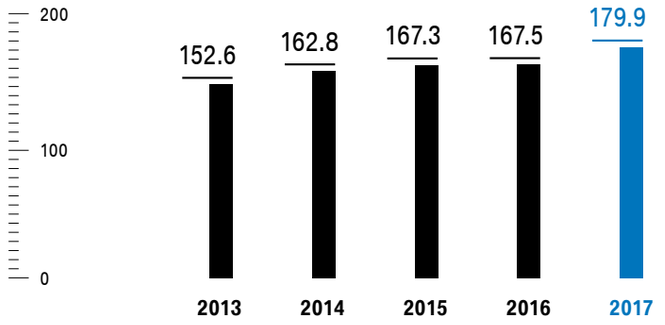
The number of people leaving the company was at the same level as the previous year. The share of women in the total number of people leaving the company (2,077) was 14% in 2017. The share among permanent new contracts was 22%.

→ GRI 401-1

Profit sharing scheme at BMW AG by year of payment[1]

→ T 4.22

in % of monthly salary/in % of personal base value



[1] The profit share paid out in the year under review is calculated based on the BMW Group results of the previous financial year, using the three parameters of Group earnings after tax, after tax return on sales, and dividends. New employees receive full bonuses after four years of employment.

Since the 2010 financial year (payout in 2011), bonuses at BMW AG have been determined according to a uniform system across all hierarchical levels. Starting in the 2011 financial year (payout in 2012), this system was also introduced for employees worldwide as a standardised corporate success component in nearly all BMW Group companies. The consistency of this component is thus ensured both hierarchically (from production worker to board member) and geographically (worldwide). This portion of the bonus depends on the earnings performance of the BMW Group and is calculated according to these three parameters: group earnings after tax, after-tax return on sales, and dividends. In particular the inclusion of the post-tax return on sales in the calculation of bonuses (also for the Board of Management and the upper executives) ensures an orientation towards the profitable and therefore sustainable growth of the BMW Group.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Fundamentals
Products and services
Production and value creation
→ **Employees and society**

Appendix

Share of women in the workforce per country with production site(s) in 2017

→ T4.24

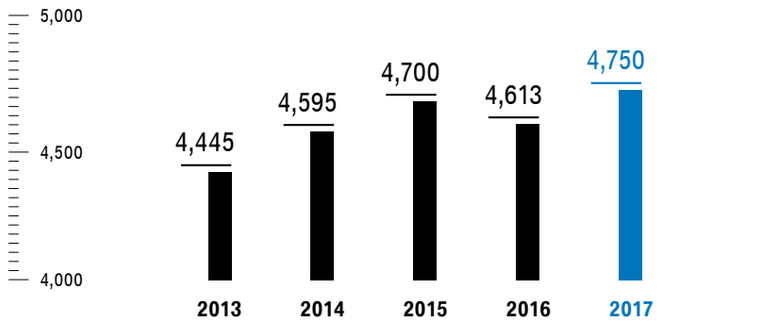
The share of women in the workforce varies strongly in the different functional areas: In Germany, the share of women in production-related activities is less than 10%, while it is over 20% in sales-related activities.

At international level too, the share of women is lower in production-intensive countries.

→ GRI 405-1

BMW Group apprentices as at 31 December

→ T4.25



In view of digitalisation and technological change, we started to strategically realign vocational training at the BMW Group. This includes both a realignment of the training portfolio towards STEM-related skills as well as the introduction of new digital methods of learning and teaching. In collaboration with the national and international training network, we already implemented initial measures to adapt existing occupational profiles and introduce new ones. This is the most extensive restructuring of our skillset in the history of the BMW Group and further measures are planned in the next few years. The number of people starting their careers at the company's German training centres remained constant, at 1,200. On the reporting date, 4,750 young people had vocational training contracts or were employed in young talent promotion programmes (2016: 4,613).

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Share of local employees in management positions at major company locations[1]

→ T 4.26

in %	2013	2014	2015	2016	2017
Munich plant, DE	98.8	98.9	99.0	99.1	**99.2**
Dingolfing plant, DE	99.7	99.7	99.7	99.7	**100.0**
Berlin plant, DE	100.0	100.0	100.0	100.0	**100.0**
Landshut plant, DE	99.2	100.0	100.0	100.0	**100.0**
Leipzig plant, DE	98.2	99.2	99.2	100.0	**99.3**
Regensburg plant, DE	100.0	100.0	100.0	99.5	**100.0**
UK	89.3	85.2	85.2	87.5	**86.3**
USA	89.0	86.8	86.1	89.4	**87.7**
Austria	84.7	86.2	75.1	84.8	**82.8**
South Africa	89.0	89.9	85.4	85.4	**83.0**
China[2] (incl. joint venture)	63.0	50.6	65.2	65.8	**76.5**
India	59.5	61.8	71.1	66.7	**70.0**
Thailand	75.0	61.3	72.4	65.6	**56.8**

[1] "Local" refers to managers with local contracts. Persons deployed to work at the location who do not have a local employment contract are not included. Such persons are reflected in the difference from 100% in each case.
[2] Including employees of the joint venture BMW Brilliance Automotive, which is not consolidated in the BMW Group.

→ GRI 405-1

Share of employees represented by a trade union or falling under collective agreements

→ T 4.27

in %	2013	2014	2015	2016	2017
Germany[2]	100	100	100	100	**100**
UK[1]	86	86	86	85	**86**
China (plant)	100	100	100	100	**100**
Austria[2]	100	100	100	100	**100**
South Africa	61	60	59	58	**53**
USA (no collective agreements exist)	0	0	0	0	**0**

[1] From 2012 onwards, all employees in corporate functions as well as the employees at the Goodwood/UK plant were included in this figure.
[2] Excluding executives.

At the BMW Group, institutionalised co-determination is implemented Group-wide according to the applicable national regulations. At all BMW AG plants and dealerships as well as in Austria and the UK, elected works councils observe co-determination for the employees. In China and South Africa, employees are represented by local workers' representatives, while at the company locations in the USA no collective agreements exist in general.

The BMW Group complies with conventions 87 and 98 of the ILO (International Labour Organization), which guarantee workers freedom of association and the right to collective bargaining. This also includes the right to establish and to join independent C93 trade unions and other advocacy organisations as well as protection against discrimination on the grounds of membership in an employee representative body. Freedom of association is thus one of the principles set down in the → **Joint Declaration on Human Rights and Working Conditions at the BMW Group**. The timely and comprehensive involvement of employee representatives is ensured in the BMW Group by the Supervisory Board of BMW AG with equal representation of all parties as well as by works councils and local employee representatives.

→ GRI 102-41

Further key indicators

Fundamentals
Products and services
Production and value creation
→ Employees and society

Appendix

Introduction

1
Fundamentals

2
Products and services

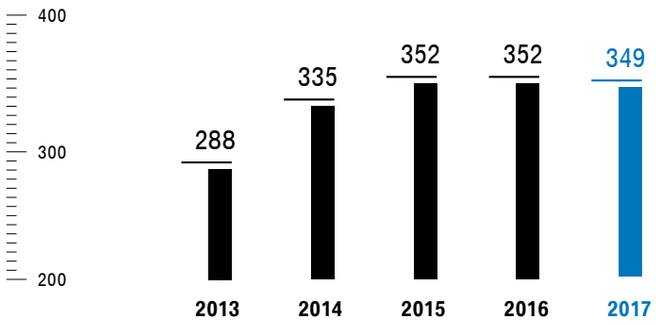
3
Production
and value creation

4
Employees and society

Investment in further education and training at the BMW Group

→ T 4.28

in € million



The BMW Group sees targeted employee training as an investment in the future. For this reason, investment in education and further training remained at the same level as in the previous year. Building up and maintaining skills expertise within the Group's workforce are key aspects of strategic corporate governance.

Average training hours at the BMW AG Academy, by employee category

→ T 4.29

Employee category	2015	2016	2017
Non-tariff employees	26.6	30.0	**19.2**
"Meister" (master craftsmen)	36.8	27.8	**17.7**
Tariff	18.2	17.3	**12.8**
Days of further training for managers in the BMW Group			
Number	18,775	16,985	**16,883**

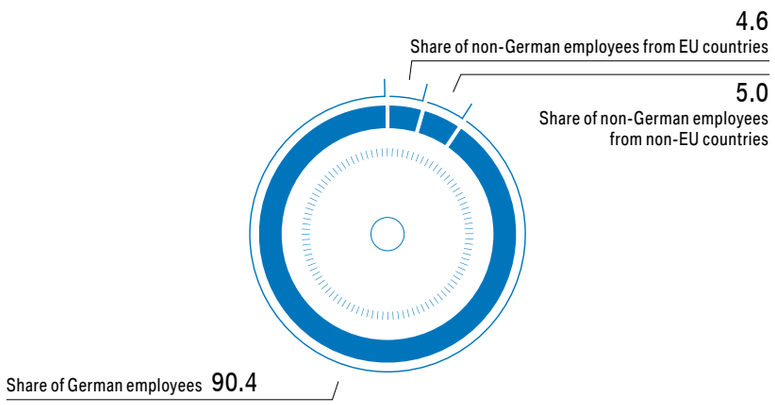
Worldwide, the BMW Group invests continuously in training its managers. The number of days of participation in the classical executive training courses was almost exactly the same as in the previous year. In addition to the figures listed, almost all managers took part in the one-day dialogue event Strategy NUMBER ONE > NEXT Next Experience between January and April 2017 (around 14,000 participants). Furthermore, 595 participant days were recorded for executive dialogue events (e.g. "Treffpunkt Führung Next" – Leadership Meet-up Next).

→ GRI 404-1

Share of employees at BMW AG from Europe outside Germany as well as from non-EU countries

→ T 4.30

in %



As at 31 December 2017, employees from 118 different countries worked at BMW AG.

→ GRI 405-1

Further key indicators

Fundamentals
Products and services
Production and value creation
→ Employees and society

Appendix

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

→ Appendix

GRI Content Index

Our reporting concept

Independent Practitioners'
Limited Assurance Report

Fuel consumption and
CO_2 emissions

Imprint

APPENDIX

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

GRI CONTENT INDEX

Identified material aspects and boundaries

	BMW Group value creation chain		
	Supply chain	Production	Sales and utilisation, recycling and disposal
Human rights	++	+	+
Combatting corruption and anti-competitive behaviour	++	++	++
Product safety			++
Customer satisfaction			++
Fuel efficiency and vehicle CO_2 emissions			++
Vehicle pollutant emissions			++
Alternative drivetrain technologies			++
Design for Recycling			++
Data protection	+	+	++
Networked and autonomous driving			++
Mobility concepts and services			++
Pollutant emissions in the value chain	++	+	+
Energy efficiency and CO_2 emissions in the value chain	++	+	+
Environmental and social standards in the supply chain	++		
Occupational safety and health	++	++	++
Attractive workplace, talent identification and retention	+	++	+
Employee development, training and education	+	++	+
Diversity and equal opportunity	+	++	+
Socio-economic impacts on society	+	++	

++ High impact + Low impact

→ GRI 102-47, GRI 103-1

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

GRI 101: Fundamentals 2016
GRI 102: General information 2016

Code	Page number	Omissions and comments
	Organisational profile	
102-1	**Name of the organisation** → Imprint, page 214	
102-2	**Activities, brands, products and services** → Introduction, pages 8, 10	
102-3	**Location of headquarters** → Imprint, page 214	
102-4	**Location of operations** → BMW Group 2017 Annual Report BMW Group vehicle sales by region and market → Business performance in vehicle production of BMW Group by plant → Business performance of company locations → Organisational structure and business model	
102-5	**Ownership and legal form** → BMW Group 2017 Annual Report → Organisational structure and business model → Disclosures relevant for takeovers → Consolidated financial statements	
102-6	**Markets served** → BMW Group 2017 Annual Report BMW Group vehicle sales by region and market → Business performance in vehicle production of BMW Group by plant → Business performance of sales subsidiaries → Organisational structure and business model	

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

Code	Page number	Omissions and comments
102-7	**Scale of the organisation** → Introduction, page 8 → Chapter 4.2, page 135 → Further key indicators, page 153	
102-8	**Information on employees and other workers** → Chapter 4.2, pages 132, 135, 140 → Further key indicators, page 164	The number of non-managerial staff is subject to very strong short-term fluctuations particularly during the main holiday period of the core workforce in the summer. Statements about the number of non-managerial staff as well as their composition by gender are therefore valid only for a very short time. Freelance staff are not relevant for most of the work in the BMW Group. A breakdown of employees with fixed-term and part-time contracts by gender and region is not available for the BMW Group as a whole. For BMW AG, these breakdowns are not reported for reasons of confidentiality. Explanations of how data is compiled can be found in the footnotes for the respective tables. (UNGC 6)[1]
102-9	**Supply chain** → Introduction, page 10 → Further key indicators, page 151	
102-10	**Significant changes to the organisation and its supply chain** → Our reporting concept, page 209 → BMW Group 2017 Annual Report Group reporting entity → Principles	

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

Code	Page number	Omissions and comments
102-11	**Precautionary principle or approach** Observing the precautionary principle through our comprehensive and integrated strategy → **pages 12–20** Observing the precautionary principle through a comprehensive understanding of product responsibility → **page 61** Environmental protection within the organisation and Clean Production approach → **pages 86–88, 155, 157–158** Precautions through supplier selection and management → **pages 105–113** Safeguarding employees through a healthy work environment → **pages 117–127** Fostering understanding between different nations religions and ethnic groups → **pages 143–149** → **BMW Group 2017 Annual Report** → **Compliance in the BMW Group** → **Report on Risks and Opportunities**	(UNGC 7)[1]
102-12	**External initiatives** → **Chapter 1.3, page 37**	
102-13	**Memberships of associations**	**Memberships in national associations:** — The German Association of the Automotive Industry (VDA), and indirectly through the VDA the Federation of German Industries (BDI), member of the Association for the Promotion of German Industry — Bavarian Employers' Associations for the Metal-working and Electrical Industries (bayme vbm) — Confederation of German Employers' Associations (BDA) **International industry associations:** — European Automobile Manufacturers' Association (ACEA) — Alliance of Automobile Manufacturers (Auto Alliance)

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

Code	Page number	Omissions and comments
	Strategy	
102-14	**Statement from senior decision-maker** → Introduction, pages 5–7	
102-15	**Key impacts, risks and opportunities** Fundamentals → pages 24, 32, 38, 41 Products and services → page 43 Production and value creation → page 83 Employees and society → page 114	
	Ethics and integrity	
102-16	**Values, principles, standards and norms of behaviour** → Chapter 1.3, page 37 → BMW Group Legal Compliance Code → BMW Group values-oriented human resources policies → Joint Declaration on Human Rights and Working Conditions at the BMW Group → BMW Group environmental guidelines → BMW Group sustainability standard for the supplier network	(UNGC 10)[1]
102-17	**Mechanisms for advice and concerns about ethics** → BMW Group 2017 Annual Report → Compliance in the BMW Group	(UNGC 10)[1]

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

Code	Page number	Omissions and comments
	Governance	
102-18	**Governance structure** → Chapter 1.1, page 12 → BMW Group 2017 Annual Report → Composition and Work Procedures of the Supervisory Board of BMW AG and its Committees	The BMW Group governance principles are set down in the → Corporate Governance Code.
102-19	**Delegating authority** → Chapter 1.1, pages 12–13	The Supervisory Board does not delegate any authority.
102-20	**Executive-level responsibility for economic, environmental and social topics** → Chapter 1.1, pages 12–13	
102-21	**Consulting stakeholders on economic, environmental and social topics** → BMW Group 2017 Annual Report Annual General Meeting → Statement on Corporate Governance Employee representatives (company employees and union representatives) on the Supervisory Board → Members of the Supervisory Board	

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

Code	Page number	Omissions and comments
102-22	**Composition of the highest governance body and its committees** → **BMW Group Company Profile** Term Stakeholder representation → **BMW Group 2017 Annual Report** **Management:** → **Members of the Board of Management** → **Members of the Supervisory Board** → **Composition and Work Procedures of the Supervisory Board of BMW AG and its Committees** **Independence:** Composition Objectives of the Supervisory Board → **Composition and Work Procedures of the Supervisory Board of BMW AG and its Committees** **Mandates:** → **Members of the Board of Management** → **Members of the Supervisory Board** **Gender:** → **Members of the Board of Management** → **Members of the Supervisory Board** **Social groups:** Composition objectives of the Supervisory Board → **Composition and Work Procedures of the Supervisory Board of BMW AG and its Committees** **Stakeholder representation:** → **Members of the Supervisory Board** **Competencies:** Composition objectives of the Supervisory Board → **Composition and Work Procedures of the Supervisory Board of BMW AG and its Committees**	

Introduction

1 Fundamentals

2 Products and services

3 Production and value creation

4 Employees and society

Further key indicators

Appendix

→ GRI Content Index

Our reporting concept

Independent Practitioners' Limited Assurance Report

Fuel consumption and CO_2 emissions ratings

Imprint

Code	Page number	Omissions and comments
102-23	**Chair of the highest governance body** → Chapter 1.1, page 12 → BMW Group 2017 Annual Report → Composition and Work Procedures of the Supervisory Board of BMW AG and its Committees	The Chairman of the Supervisory Board has no executive function.
102-24	**Nominating and selecting the highest governance body** → BMW Group 2017 Annual Report → Composition and Work Procedures of the Board of Management of BMW AG and its Committees → Composition and Work Procedures of the Supervisory Board of BMW AG and its Committees	
102-25	**Conflicts of interest** → BMW Group Legal Compliance Code → BMW Group 2017 Annual Report Shareholdings of members of the Board of Management and Supervisory Board → Other information, Compliance in the BMW Group	There are already upper limits for mandates as well as a legal prohibition on certain ties pursuant to § 100 of the German Stock Corporation Act (AktG). Mandates in Supervisory Board committees and comparable governance bodies of commercial enterprises are published in the Annual Report. The Board of Management and Supervisory Board have pledged to observe the provisions for conflicts of interest in section 5.5 of the German Corporate Governance Code, in particular to disclose conflicts of interest and report on how they are dealt with. Business done with related parties or entities is reported in the financial reports in accordance with the IAS 24 standard (Related Party Disclosures). A quarterly survey of the members of the Board of Management and Supervisory Board is conducted for this purpose.
102-26	**Role of highest governance in setting purpose, values and strategy** → Chapter 1.1, page 12	
102-27	**Collective knowledge of highest governance body** → Chapter 1.1, page 13	
102-28	**Evaluating the highest governance body's performance** → Chapter 1.1, page 13	

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

Code	Page number	Omissions and comments
102-29	**Identifying and managing economic, environmental and social impacts** → **BMW Group 2017 Annual Report** Risk management system → **Report on Risks and Opportunities**	The Board of Management informs the Supervisory Board by way of the Audit Committee on risk management and the risk situation.
102-30	**Effectiveness of risk management process** → **BMW Group 2017 Annual Report** → **Report of the Supervisory Board** Risk management system → **Report on Risks and Opportunities**	
102-31	**Review of economic, environmental and social topics** → **Chapter 1.1, page 12** → **BMW Group 2017 Annual Report** Risk management system → **Report on Risks and Opportunities**	
102-32	**Highest governance body's role in sustainability reporting** → **Our reporting concept, page 210**	
102-33	**Communicating critical concerns** → **BMW Group 2017 Annual Report** → **Compliance in the BMW Group**	The BMW Group Compliance Committee regularly reports on all relevant compliance matters to the Board of Management. A report is compiled once a year to inform the Board of Management and the Supervisory Board about progress in the further development of the BMW Group Compliance Management System, investigations carried out, any known violations and sanctions as well as corrective and preventative measures undertaken. In addition, clearly defined criteria stipulate cases in which the Board of Management or individual members of the Board are to be immediately informed. The BMW Group's Sustainability Board, which the entire Board of Management are members of, addresses current sustainability topics and corresponding developments. Among other things, it assesses the economic, environmental and societal progress made by the company as well as the level of integration of sustainability in the company divisions. In addition, the Strategy Circle, consisting of divisional heads of department, convenes twice a year to address sustainability topics and prepare decisions of the Sustainability Board.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

Code	Page number	Omissions and comments
102-34	**Nature and total number of critical concerns**	This information is confidential and is not communicated externally by the BMW Group.
102-35	**Remuneration policies** → Chapter 1.1, page 13 → BMW Group 2017 Annual Report → Compensation Report	The company pension scheme system is designed consistently for all employee levels. Pensions are determined in line with annual remuneration and the market, based on the individual's category and in/on the relationship between the highest management body, managers and other employees.
102-36	**Process for determining remuneration** → BMW Group 2017 Annual Report Overview of compensation system and compensation components, External compensation consultant → Compensation Report	
102-37	**Stakeholders' involvement in remuneration** → BMW Group 2017 Annual Report Employee representatives on the Supervisory Board → Members of the Supervisory Board → Information on the Company's Governing Constitution Supervisory Board compensation, responsibilities, regulation pursuant to Articles of Incorporation → Compensation Report	

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

Code	Page number	Omissions and comments
102-38	**Annual total compensation ratio**	The BMW Group policies for remuneration and additional benefits apply for all of our companies and regardless of employees' gender, religion, origin, age, disability, sexual orientation or country-specific characteristics. We follow the guiding principle that the total remuneration package must be above the average for the respective labour market. We conduct annual compensation studies worldwide to determine our current market positioning so that we can continue to align overall compensation with the market. This ensures that every employee receives compensation commensurate with the relevant labour market. The ratio of the annual compensation of the highest-paid employee to the median level of all employees is also in keeping with the market thanks to our globally applied approach; it can however vary greatly depending on the market spread between countries. For this reason, no definitive statement can be made. The percentage increase in annual compensation is decided based on various factors such as the inflation rate and in principle follows the market trend.
102-39	**Percentage increase in annual total compensation ratio**	Cf. GRI 102-38
	Stakeholder engagement	
102-40	**List of stakeholder groups** → Chapter 1.2, page 25	
102-41	**Collective bargaining agreements** → Further key indicators, page 168	(UNGC 3)[1]
102-42	**Identifying and selecting stakeholders** → Chapter 1.2, page 24	

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

Code	Page number	Omissions and comments
102-43	**Approach to stakeholder engagement** → Chapter 1.2, page 25 → Stakeholder Engagement Policy	Continuous worldwide in all locations and markets with a variety of different stakeholder groups. Specific stakeholder dialogues are listed as part of the definition of the report content.
102-44	**Key topics and concerns raised** → Chapter 1.1, pages 17–18 → Chapter 1.2, pages 26–29 → Chapter 1.5, page 42	The Materiality Matrix is illustrated in chapter 1. The topics therein and their relevance were determined in part in a stakeholder survey.
	Reporting practice	
102-45	**Entities included in the consolidated financial statements** → Our reporting concept, page 209 → BMW Group 2017 Annual Report Group reporting entity → Principles	
102-46	**Defining report content and topic boundaries aspects** → Chapter 1.1, page 17	
102-47	**List of the material topics** → Chapter 1.1, page 17, GRI Index, page 171	
102-48	**Restatements of information**	Where necessary and possible, restatements are explained in footnotes to the respective graphics.
102-49	**Changes in reporting** → Our reporting concept, page 209	
102-50	**Reporting period** → Our reporting concept, page 209	
102-51	**Date of most recent report** → Our reporting concept, page 209	
102-52	**Reporting cycle** → Our reporting concept, page 209	

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index

Our reporting concept

Independent Practitioners'
Limited Assurance Report

Fuel consumption and
CO_2 emissions ratings

Imprint

Code	Page number	Omissions and comments
102-53	**Contact point for questions regarding the report** → Imprint, page 214	
102-54	**Claims of reporting in accordance with the GRI Standards** → Our reporting concept, page 207	
102-55	**GRI Content Index** → pages 171–206	
102-56	**External assurance** → Independent Practitioner's Limited Assurance Report, pages 210–212	

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

Material topics

GRI Standard	Management approach and indicators, page number	Omissions and comments
	Human rights	
GRI 103 2016	**Management approach** **103-1** Statement on material aspects and their boundaries → **Chapter 1.3, page 32** → **GRI Content Index, page 171** **103-2** Management approach and its components → **Chapter 1.3, pages 32–37** **103-3** Review of management approach → **Chapter 1.3, pages 33, 34**	(UNGC 1, 2, 3, 4, 5, 6)[1]
GRI 412 2016	**Review of compliance with human rights** **412-1** Company locations that have been subject to human rights compliance screening or a human rights impact assessment → **Chapter 1.3, page 37** → **Chapter 3.3, page 109**	Following publication of the UN Guiding Principles on Business and Human Rights, we performed a systematic analysis in 2012 and 2013 of the rights cited in the Universal Declaration of Human Rights with regard to their relevance and implications for different business units of the BMW Group. A Human Rights Compliance Assessment followed in 2017, involving a review of 71 of 75 legal entities worldwide with a local Compliance function. Only the smaller units were not assessed, for example financial services companies in countries where the other units were already included in the review. Human rights are moreover an integral part of our assessment process for new operation sites.

Introduction

1 Fundamentals

2 Products and services

3 Production and value creation

4 Employees and society

Further key indicators

Appendix

→ GRI Content Index

Our reporting concept

Independent Practitioners' Limited Assurance Report

Fuel consumption and CO_2 emissions ratings

Imprint

GRI Standard	Management approach and indicators, page number	Omissions and comments
GRI 412 continued	**412-2** Employee training on human rights policies and procedures → **Chapter 1.3, pages 33, 35**	After the adoption of the UN Guiding Principles on Business and Human Rights, we informed our employees via the hierarchy cascade of the BMW Group's position and the requirements with regard to human rights. Employees in purchasing in particular have since then been required to take part in ongoing compulsory training. Human rights are also part of the training for managers in their capacity as multipliers as well as being addressed in the introductory seminars for new employees and in Web-based training on sustainability. In 2017, the issue of human rights was also a focus in our classroom training in compliance, for example at our Global Compliance Conference in June 2017. As human rights are an integral part of the above training, the actual hours of training are not recorded at present.
	412-3 Significant investment agreements and contracts that include human rights clauses or screening → **Chapter 1.3, pages 33, 34, 36, 37**	Significant investment volumes are investments that account for at least 95% of the total investment in tangible assets reported in the 2017 Annual Report.
	Combatting corruption and anti-competitive behaviour	
GRI 103 2016	**Management approach** **103-1** Statement on material aspects and their boundaries → **Chapter 1.3, page 32** → **GRI Content Index, page 171** **103-2** Management approach and indicators → **Chapter 1.3, pages 32–37** **103-3** Review of management approach → **Chapter 1.3, pages 33, 34**	(UNGC 10)[1]

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

GRI Standard	Management approach and indicators, page number	Omissions and comments
GRI 205 2016	**Anti-corruption**	
	205-1 Company locations assessed for corruption risks → Chapter 1.3, pages 33, 35 → BMW Group 2017 Annual Report → Compliance in the BMW Group	
	205-2 Information and training on anti-corruption strategies and measures → Chapter 1.3, pages 33–36 → BMW Group 2017 Annual Report → Compliance in the BMW Group	EMPLOYEES The BMW Group Legal Compliance Code is available in nine languages and is communicated to all BMW Group employees via the BMW Group Intranet. The document is also available in printed form. BUSINESS PARTNERS We inform our suppliers of our requirements by means of our international terms and conditions of purchase, which contain clauses on "Social Responsibility and Compliance" as well as on human rights. Our "BMW Group sustainability standard for the supplier network" applies in addition for suppliers of production materials. → see chapter 3.3 Service providers receive our brochure "BMW Group Business Relations Compliance", which spells out our expectations. We communicate our requirements to importers and dealers through our "Dealer Information Package".

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

GRI Standard	Management approach and indicators, page number	Omissions and comments
GRI 205 continued	**205-3** Confirmed incidents of corruption and actions taken → **BMW Group 2017 Annual Report** → **Report of the Supervisory Board** → **Compliance in the BMW Group**	Major violations of the BMW Group Legal Compliance Code or the BMW Group Policy "Corruption Prevention" (anti-corruption directive) are reported in the BMW AG Annual Report in the section on legal risks, including their legal investigation. No legal proceedings concerning corrupt practices were concluded during the reporting period. Currently, the BMW Group does not have Group-wide information about employment contract sanctions as a result of violations of the law. For this reason, this aspect of the indicator is not fully reported. Detailed data on the total number of cases in which contracts with business partners were not renewed due to violations related to corruption are not currently available. We plan to incorporate this data into our data collection system in future.
GRI 206 2016	**206-1** Legal actions for anti-competitive behaviour, antitrust and monopoly practices → **Chapter 1.3, page 36** → **BMW Group 2017 Annual Report** → **Report of the Supervisory Board** → **Compliance in the BMW Group**	The position of the BMW Group on the antitrust allegations currently being reviewed by the European Commission is explained in Chapter 1.3. Any risks for the BMW Group in connection with the European Commission's review are detailed in the BMW Group Annual Report in the section on legal risks. Other known or suspected violations of compliance are individual cases without systematic causation. In general, the areas of sales and financial services, in particular in Europe, are at increased risk for possible violations of antitrust law, which have resulted in individual cases in regulatory investigations and fines.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

GRI Standard	Management approach and indicators, page number	Omissions and comments
	Product safety	
GRI 103 2016	**Management approach** **103-1** Statement on material aspects and their boundaries → **Chapter 1.4, page 38** → **GRI Content Index, page 171** **103-2** Management approach and its components → **Chapter 1.4, pages 38–40** → **BMW Group 2017 Annual Report** → **Report of the Supervisory Board** → **Compliance in the BMW Group** **103-3** Review of management approach → **Chapter 1.4, pages 38–40**	
GRI 416 2016	**Customer health and safety** **416-1** Assessment of health and safety impacts of various product and service categories → **Chapter 1.4, page 38**	
	416-2 Incidents of non-compliance with respect to health and safety impacts of products and services → **BMW Group 2017 Annual Report** → **Report of the Supervisory Board** → **Compliance in the BMW Group**	For all compliance-relevant matters, the following applies in general: the reports received and breaches identified in individual cases in 2017 gave no indication of serious or systemically caused breaches of compliance.

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

GRI Standard	Management approach and indicators, page number	Omissions and comments
	Customer satisfaction	
GRI 103 2016	**Management approach** **103-1** Statement on material aspects and their boundaries → **Chapter 1.5, page 41** → **GRI Content Index, page 171** **103-2** Management approach and its components → **Chapter 1.5, pages 41–42** **103-3** Review of management approach → **Chapter 1.5, page 41**	The system for capturing customer feedback is currently being switched from Overall Satisfaction (OSAT) to Net Promoter Score (NPS). The first NPS customer surveys were started among competitors in 2017 and will continue in 2018. OSAT surveys for assessing customer satisfaction will be discontinued in 2018. An initial indication of the "Best Customer Experience" ranking compared to competitors can be provided in the next few years.
	Fuel efficiency and vehicle CO_2 emissions	
GRI 103 2016	**Management approach** **103-1** Statement on material aspects and their boundaries → **Chapter 2.1, page 46** → **GRI Content Index, page 171** **103-2** Management approach and its components → **Chapter 2.1, pages 46–57** **103-3** Review of management approach → **Chapter 2.1, page 47**	(UNGC 7, 8, 9)[1]

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

GRI Standard	Management approach and indicators, page number	Omissions and comments
GRI 305 2016	**Emissions**	
	305-1 Direct greenhouse gas (GHG) emissions (Scope 1) → Chapter 3.1, page 92 → Further key indicators, page 159	
	305-2 Energy-related indirect greenhouse gas (GHG) emissions (Scope 2) → Chapter 3.1, page 92	
	305-3 Other indirect greenhouse gas (GHG) emissions (Scope 3) → Chapter 2.1, page 47 → Chapter 3.1, page 92 → Further key indicators, pages 161, 162	
	305-4 Intensity of greenhouse gas (GHG) emissions → Chapter 3.1, page 90	
	305-5 Reduction of greenhouse gas (GHG) emissions → Chapter 2.1, pages 47, 50, 57 → Chapter 3.1, page 90	The calculations of CO_2 emissions and fuel consumption for our European new vehicle fleet have been based since 2017 on the requirements and assumptions of the Worldwide Harmonised Light Vehicle Test Procedures (WLTP) and, prior to their introduction, on the requirements and assumptions of the New European Driving Cycle (NEDC) and the ACEA self-commitment (European Automobile Manufacturers Association). The values for the US new vehicle fleet are based on CAFE (Corporate Average Fuel Economy). 1995 was chosen as the reference year, as this is also the reference point chosen by the European Commission and because the NEDC was introduced that year.
	305-6 Emissions of ozone-depleting substances (ODS)	According to a BMW Group internal standard, substances with ozone-depleting potential as listed in the legal provisions are not allowed. The BMW standard "Prohibited and declarable substances" contains a ban on chlourofluorocarbons and thus substances that have a strong ozone-depleting potential. The BMW Group thus not only regulates emissions of these substances but prevents them from being used at all.

Introduction

1 Fundamentals

2 Products and services

3 Production and value creation

4 Employees and society

Further key indicators

Appendix

→ GRI Content Index

Our reporting concept

Independent Practitioners' Limited Assurance Report

Fuel consumption and CO_2 emissions ratings

Imprint

GRI Standard	Management approach and indicators, page number	Omissions and comments
GRI 305 2016 continued	**305-7** NOx , SOx and other significant air emissions → **Further key indicators, page 159**	
GRI 302 2016	**Energy** **302-1** Energy consumption within the organisation → **Further key indicators, pages 156, 159** **302-2** Energy consumption outside of the organisation → **Chapter 3.1, page 92**	
	302-3 Energy intensity → **Chapter 3.1, pages 89–90**	Primary energy consumption in the utilisation phase is not reported as this is based on the CO_2 emissions per kilometre.
	302-4 Reduction of energy consumption → **Chapter 3.1, pages 89–90**	
	302-5 Reductions in energy requirements of products and services → **Chapter 2.1, pages 47, 49–50** → **Further key indicators, US fleet fuel consumption, page 154**	The calculations of CO_2 emissions and fuel consumption for our European new vehicle fleet have been based since 2017 on the requirements and assumptions of the Worldwide Harmonised Light Vehicle Test Procedures (WLTP) and, prior to their introduction, on the requirements and assumptions of the New European Driving Cycle (NEDC) and the ACEA self-commitment (European Automobile Manufacturers' Association). The values for the US new vehicle fleet are based on CAFE (Corporate Average Fuel Economy).

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

GRI Standard	Management approach and indicators, page number	Omissions and comments
	Vehicle pollutant emissions	
GRI 103 2016	**Management approach** **103-1** Statement on material aspects and their boundaries → **Chapter 2.1, page 46** → **GRI Content Index, page 171** **103-2** Management approach and its components → **Chapter 2.1, pages 46–57** **103-3** Review of management approach → **Chapter 2.1, page 47**	(UNGC 7, 8, 9)[1]
GRI 305 2016	**Emissions** → **Fuel efficiency and vehicle CO_2 emissions, page 188**	
	Alternative drivetrain technologies	
GRI 103 2016	**Management approach** **103-1** Statement on material aspects and their boundaries → **Chapter 2.2, page 59** → **GRI Content Index, page 171** **103-2** Management approach and its components → **Chapter 2.1, pages 49–50** → **Chapter 2.2, pages 59–68** **103-3** Review of management approach → **Chapter 2.2, page 60**	(UNGC 7, 8, 9)[1]
	Annual sales of electric and electrified vehicles → **Chapter 2.2, page 60**	

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index

Our reporting concept

Independent Practitioners'
Limited Assurance Report

Fuel consumption and
CO_2 emissions ratings

Imprint

GRI Standard	Management approach and indicators, page number	Omissions and comments
	Design for Recycling	
GRI 103 2016	**Management approach** **103-1** Statement on material aspects and their boundaries → **Chapter 2.2, page 59** → **GRI Content Index, page 171** **103-2** Management approach and its components → **Chapter 2.2, pages 59–68** **103-3** Review of management approach → **Chapter 2.1, page 47** → **Chapter 2.2, pages 60, 63**	(UNGC 7, 8)[1]
GRI 301	**Materials** **301-1** Materials used by weight or volume → **Further key indicators. pages 158–159** **301-2** Percentage of materials used that are recycled input materials → **Chapter 3.1, page 93**	

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

GRI Standard	Management approach and indicators, page number	Omissions and comments
GRI 301 continued	**301-3** Recycling of products and their packaging materials → **Chapter 3.1, page 94**	Products: the BMW Group ensures environmentally friendly recycling of end-of-life vehicles. Vehicle owners have the option of bringing their end-of-life vehicle to a specially designated local collection point. Established systems are in place for the recovery of components and materials and their reintegration into the raw materials cycle. The BMW Group thus fulfils all legal requirements relating to the recovery of its products. Packaging: vehicles are delivered to the end customer without packaging. We use covered rail wagons or protective film for transporting vehicles to the dealership. All protective film is recycled after use. When parts are shipped to regional distribution centres, any packaging materials (packaging materials for transport and parts protection for separate parts) are professionally disposed of there. In the further supply chain from the regional distribution centres to the BMW Group dealerships, responsibility for disposal of packaging materials lies with the dealership. Customers who purchase spare parts or lifestyle articles can return the packaging material to the BMW Group dealership.

Data protection

GRI 103 2016	**Management approach** **103-1** Statement on material aspects and their boundaries → **Chapter 2.3, page 70** → **GRI Content Index, page 171** **103-2** Management approach and its components → **Chapter 2.3, pages 70–72, pages 76–79** **103-3** Review of management approach → **Chapter 2.3, pages 70–72**	

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

GRI Standard	Management approach and indicators, page number	Omissions and comments
GRI 418 2016	**Customer privacy** **418-1** Substantiated complaints regarding breaches of customer privacy and loss of customer data	The number of cases is subject to internal confidentiality regulations.
	Networked and autonomous driving	
GRI 103 2016	**Management approach** **103-1** Statement on material aspects and their boundaries → **Chapter 2.3, page 70** → **GRI Content Index, page 171** **103-2** Management approach and its components → **Chapter 2.3, pages 70–72, pages 76–82** **103-3** Review of management approach → **Chapter 2.3, pages 71–72**	
	–	We plan to identify meaningful indicators in the next few years.
	Mobility products and services	
GRI 103 2016	**Management approach** **103-1** Statement on material aspects and their boundaries → **Chapter 2.3, page 70** → **GRI Content Index, page 171** **103-2** Management approach and its components → **Chapter 2.3, pages 70–75, pages 80–82** **103-3** Review of management approach → **Chapter 2.3, page 71**	(UNGC 9)[1]
	DriveNow and ReachNow users → **Chapter 2.3, page 71**	

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

GRI Standard	Management approach and indicators, page number	Omissions and comments
	Pollutant emissions in the value chain	
GRI 103 2016	**Management approach** **103-1** Statement on material aspects and their boundaries → **Chapter 3.1, pages 83, 86** → **Chapter 3.2, page 99** → **GRI Content Index, page 171** **103-2** Management approach and its components → **Chapter 3.1, pages 86–93, 96–97** → **Chapter 3.2, pages 99–103** **103-3** Review of management approach → **Chapter 3.1, pages 87, 90** → **Chapter 3.2, page 100**	(UNGC 7, 8, 9)[1]
GRI 305 2016	**Emissions** → **Fuel efficiency and vehicle CO_2 emissions, pages 189–191**	
	Energy efficiency and CO_2 emissions in the value chain	
GRI 103 2016	**Management approach** **103-1** Statement on material aspects and their boundaries → **Chapter 3.1, pages 83, 86** → **Chapter 3.2, page 99** → **GRI Content Index, page 171** **103-2** Management approach and its components → **Chapter 3.1, pages 86–93, 97** → **Chapter 3.2, pages 99–103** **103-3** Review of management approach → **Chapter 3.1, pages 87, 90** → **Chapter 3.2, page 100**	(UNGC 7, 8, 9)[1]
GRI 302 2016	**Energy** → **Fuel efficiency and vehicle CO_2 emissions, pages 189–191**	

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

GRI Standard	Management approach and indicators, page number	Omissions and comments
GRI 305 2016	**Emissions** → Fuel efficiency and vehicle CO_2 emissions, pages 189–191	
	Environmental and social standards in the supply chain	
GRI 103 2016	**Management approach** **103-1** Statement on material aspects and their boundaries → Chapter 3.3, pages 83, 105 → GRI Content Index, page 171 **103-2** Management approach and its components → Chapter 3.3, pages 105–113 **103-3** Review of management approach → Chapter 3.3, pages 106, 110–111	(UNGC 1, 2, 3, 4, 5, 6, 10)[1]
GRI 414 2016	**Supplier assessment for impacts on society** **414-1** Percentage of new suppliers that were screened using criteria for impacts on society → Chapter 3.3, page 109	
	414-2 Negative impacts on society in the supply chain and actions taken → Chapter 3.3, pages 109–110	We are not aware of any significant negative impacts in our supplier network. No percentage figures can be given based on the number of suppliers as this number cannot be reliably recorded at this time.
GRI 308 2016	**Supplier assessment for impacts on the environment** **308-1** Percentage of new suppliers that were screened using criteria for impacts on the environment → Chapter 3.3, page 109	
	308-2 Negative impacts on the environment in the supply chain and actions taken → Chapter 3.3, pages 109–110	We are not aware of any significant negative impacts in our supplier network. No percentage figures can be given based on the number of suppliers as this number cannot be reliably recorded at this time.

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

GRI Standard	Management approach and indicators, page number	Omissions and comments
	Occupational health and safety	
GRI 103 2016	**Management approach** **103-1** Statement on material aspects and their boundaries → **Chapter 4.1, page 118** → **GRI Content Index, page 171** **103-2** Management approach and its components → **Chapter 4.1, pages 117–127, 163** → **Joint Declaration on Human Rights and Working Conditions at the BMW Group** **103-3** Review of management approach → **Chapter 4.1, pages 119, 123–124, 126, 163–166**	
GRI 403 2016	**Occupational health and safety** **403-1** Employee representation in formal employer-employee committees for health and safety at work → **Chapter 4.1, page 123**	Special committees on occupational health and safety with representatives from both the employer and employee side are active at nearly all BMW Group locations. They are structured in various ways, in some cases with union participation, and they adopt so-called company agreements that often go well beyond the statutory requirements.

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

GRI Standard	Management approach and indicators, page number	Omissions and comments
GRI 403 continued	**403-2** Type and rate of injuries, occupational diseases, lost days and work-related fatalities → **Chapter 4.1, pages 119, 123–124** → **Further key indicators, pages 164–166**	With regard to working conditions (occupational safety), there are no gender-specific differences. Therefore, no gender-specific analysis is currently published and none is planned for the future. On the basis of our BMW Policy, we currently do not report on any differences with regard to the working conditions, because all BMW Group employees are treated equally. Occupational diseases are defined differently in different regions, so that an aggregate statement for the BMW Group on the frequency and type of diseases and injuries is not possible. Work-related diseases are recorded in the English-speaking countries. In Germany, this is not permitted for data privacy reasons. Instead, German figures for occupational diseases are based on the precise definition in the German Social Insurance Code. According to this definition, BMW AG has a rate of occupational diseases in the range of 0.1 per thousand (cases per employee). Thanks to central planning based in Germany, the working conditions for handling hazardous substances and the ergonomic design of workplaces are identical in all BMW Group plants worldwide. In analogy, it can be assumed that the rate of occupational diseases abroad is the same as in Germany. The BMW Group does not collect data from contractors active at our locations, as this information is subject to confidentiality clauses in our contracts. On-site contractors are instructed in occupational health and safety precautions before taking up their work. The accident statistics take into account work accidents that lead to at least one day of absence from work.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

GRI Standard	Management approach and indicators, page number	Omissions and comments
GRI 403 continued	**403-3** Workers with high occurrence or risk of work-related diseases	Thanks to our control mechanisms, BMW Group employees are not subject to any high levels of risk: the key element in our occupational health and safety system is the risk assessment. It forms the basis for systematic and successful safety and health management. If risks are identified, measures are taken in accordance with the STOP principle (Substitution, Technical, Organisational, Person-based measures). Subsequently, instruction guidelines are prepared and the employees are informed about their content. The occupational physician responsible is involved in the process of risk assessment and can thus ensure that illness-related risks are identified early and countermeasures taken. In countries with high risk of infection, e.g. South Africa, prevention programmes such as free HIV tests are also offered. In countries with high risk of infection by mosquitoes, such as the case of the ZIKA virus in Brazil, the local BMW health service carries out prevention campaigns.

Introduction

1 Fundamentals

2 Products and services

3 Production and value creation

4 Employees and society

Further key indicators

Appendix

→ GRI Content Index

Our reporting concept

Independent Practitioners' Limited Assurance Report

Fuel consumption and CO_2 emissions ratings

Imprint

GRI Standard	Management approach and indicators, page number	Omissions and comments
GRI 403 continued	**403-4** Health and safety topics covered in formal agreements with trade unions → **Chapter 4.1, page 123**	Occupational health and safety are regulated by law through the German Occupational Safety and Health Act. There are no formal agreements with trade unions on occupational health and safety issues at any of our worldwide locations. In the BMW Group, occupational health and safety topics are regulated in cooperation with the works councils. In Germany, for example, company agreements have been concluded on the following topics: — Company agreement on assessing the risk of psychological stress — Company agreement stipulating medical screenings for occupational fitness for jobs involving driving, technical control or monitoring activities — Occupational integration management for employees — Step by step occupational reintegration of employees — Help for employees at risk of or suffering from drug addiction
	Attractive workplace, talent identification and retention	
GRI 103 2016	**Management approach** **103-1** Statement on material aspects and their boundaries → **Chapter 4.2, page 129** → **GRI Content Index, page 171** **103-2** Management approach and its components → **Chapter 4.2, pages 128–135** → **Joint Declaration on Human Rights and Working Conditions at the BMW Group** **103-3** Review of management approach → **Chapter 4.2, pages 130, 132, 134–135, 167, 169**	

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

GRI Standard	Management approach and indicators, page number	Omissions and comments
GRI 401 2016	**Employment**	
	401-1 New hires and employee turnover → Chapter 4.2, page 135 → Further key indicators, page 166	The number of new hires at BMW AG and the BMW Group as well as their distribution across age groups is confidential information due to competitive reasons and is therefore not reported. Share of women in new hires at BMW AG: 22%. A breakdown of new hires by gender and region for the BMW Group is not possible as we cannot capture this data systematically. Manual capture of this data would entail a disproportionately high effort. The attrition rate for BMW AG and therefore for about 70% of all employees is captured centrally. The attrition rate at individual international locations is also captured; it is not, however, consolidated at BMW Group level. The absolute as well as the percentage figures for people leaving the company, broken down by region, age and gender are also not currently captured due to system constraints. We plan to integrate this indicator in our data capture processes by 2018.
	401-2 Benefits provided to full-time but not part-time employees or temporary workers → Chapter 4.2, page 131	Our principles apply to all employees. There is no distinction made between full-time or part-time employees or those with fixed-term contracts. For part-time employees, the principle of proportionate remuneration is applied, with some benefits even being granted on a full-time basis.
	401-3 Parental leave → Chapter 4.2, page 132	The current system records only the number of BMW AG employees (approximately 70% of the BMW Group workforce) on parental leave. We plan to integrate detailed data for the entire BMW Group into our data collection process by 2018. Nearly 100% of the returnees stay in their jobs for longer than twelve months.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

GRI Standard	Management approach and indicators, page number	Omissions and comments
	Employee development, training and education	
GRI 103 2016	**Management approach** **103-1** Statement on material aspects and their boundaries → Chapter 4.2, page 129 → GRI Content Index, page 171 **103-2** Management approach and its components → Chapter 4.2, pages 128–135 → Joint Declaration on Human Rights and Working Conditions at the BMW Group **103-3** Review of management approach → Chapter 4.2, pages 130, 132, 134–135, 167, 169	
GRI 404 2016	**Training and education** **404-1** Average hours of training and education per year per employee → Chapter 4.2, page 130 → Further key indicators, page 169	We report on the average days of training and education for employees of the BMW Group. However, our current system allows us to break down this training by employee category only for the BMW AG Academy (over 50% of training). A breakdown by gender is not possible, as the system is currently not able to record the gender distribution among training participants. There are in general no gender-specific differences in training volumes. Due to the current prioritisation of other topics, a suitable tool add-on for collecting this data can be defined at the earliest in 2018 and then implemented step by step throughout the BMW Group.
	404-2 Programmes that support the continued employability of employees → Chapter 4.2, page 133	Through our yearly skills analysis process, which also serves as the basis for planning Group-wide and individual training, we assist our employees in building and maintaining skills throughout their career. We also offer seminars helping employees prepare for retirement from active working life.

Introduction

1 Fundamentals

2 Products and services

3 Production and value creation

4 Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

GRI Standard	Management approach and indicators, page number	Omissions and comments
GRI 404 continued	**404-3** Percentage of employees receiving regular performance and career development reviews → **Chapter 4.2, page 130**	
	Diversity and equal opportunity	
GRI 103 2016	**Management approach** **103-1** Statement on material aspects and their boundaries → **Chapter 4.3, page 137** → **GRI Content Index, page 171** **103-2** Management approach and its components → **Chapter 4.3, pages 136–141** → **Joint Declaration on Human Rights and Working Conditions at the BMW Group** **103-3** Review of management approach → **Chapter 4.3, pages 138–141, 167–169**	(UNGC 6)[1]
GRI 405 2016	**Diversity and equal opportunity** **405-1** Diversity in governance bodies and among employees → **Chapter 4.3, pages 138–141**	A breakdown of employees by age group is currently available only for BMW AG.
	405-2 Ratio of basic salary and remuneration of women to men → **Chapter 4.3, page 131**	The effective ratio of basic salary and remuneration of women to men is not published for reasons of confidentiality.
GRI 406 2016	**Non-discrimination** **406-1** Incidents of discrimination and corrective actions taken → **BMW Group 2017 Annual Report** → **Report of the Supervisory Board** → **Compliance in the BMW Group**	The BMW Group is not currently involved in any court or arbitration proceedings that in the company's estimation might have a significant impact on its financial condition. Further information on cases of discrimination is subject to internal confidentiality regulations.

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

GRI Standard	Management approach and indicators, page number	Omissions and comments
	Socio-economic impacts on society	
GRI 103 2016	**Management approach** **103-1** Statement on material aspects and their boundaries → **Chapter 4.4, page 143** → **Chapter 1.1, page 19** → **GRI Content Index, page 171** **103-2** Management approach and its components → **Chapter 4.4, pages 142–149** → **Chapter 1.1, pages 19–21** **103-3** Review of management approach → **Chapter 4.4, pages 144–145** → **Chapter 1.1, pages 19–21**	(UNGC 7)[1]
GRI 201 2016	**Economic performance** **201-1** Direct economic value generated and distributed → **Chapter 1.1, pages 19–21** → **Chapter 4.4, page 145** → **Further key indicators, page 151**	Indicator is not reported by market.
	201-2 Financial implications and other risks and opportunities due to climate change → **Chapter 1, page 30** → **Chapter 2, page 46** → **Chapter 3, pages 86, 99**	
	201-3 Defined benefit plan obligations and other retirement plans → **Further key indicators, page 151** → **BMW Group 2017 Annual Report** Provisions for pensions → **Notes on the balance sheet**	
	201-4 Financial assistance received from the government → **Further key indicators, page 152**	Indicator is not reported by market.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

→ GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

GRI Standard	Management approach and indicators, page number	Omissions and comments
GRI 203 2016	**Indirect economic impacts** **203-1** Infrastructure investments and services provided → **Chapter 1.1, pages 19–20**	Investment in public infrastructure by the BMW Group is partially commercial, partially non-commercial in nature.
	203-2 Significant indirect economic impacts → **Chapter 1, pages 16, 19–20**	

[1] UNGC: references to the UN Global Compact Principles.
All GRI-relevant information was considered in the report audit. References to the BMW Group Annual Report 2017 were aligned with the audited section of that report.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

GRI Content Index
→ Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

OUR REPORTING CONCEPT

The BMW Group Sustainable Value Report (SVR) 2017 has been published to provide stakeholders with comprehensive information about the company's sustainability strategy and the progress made in integrating sustainability into its corporate processes. The requirements of the German CSR Directive Implementation Act (CSR RUG) obligate Bayerische Motoren Werke Aktiengesellschaft (BMW AG) to publish a non-financial statement at company and Group level for financial year 2017 for the first time. This will be published as an integrated, separate non-financial Group report within this Sustainable Value Report. The legally required information will be provided before the chapter sub-sections of the voluntary reporting in accordance with GRI, and identified accordingly. If information only applies to parts of the BMW Group (e.g. to BMW AG), this will be indicated. The SVR has been compiled in accordance with the "Comprehensive" option of the Global Reporting Initiative (GRI) guidelines. → GRI 102-54 This is the highest GRI transparency level.

CSR Directive Implementation Act
Main topics

Based on the results of the materiality analysis carried out in 2015 in accordance with GRI, as well as the current long-term sustainability goals of the BMW Group, we compiled and derived the main topics to be complied with pursuant to this legislation. Both our own business activities, business relationships (e.g. along the supply chain) as well as products and services were taken into consideration. The topics of high relevance are presented in the integrated, separate non-financial report. An exception to this is the topic of customer satisfaction, which has high relevance in accordance with GRI, but is not included in the selected range of topics for consideration under CSR RUG, as in our opinion it represents the result of the described main activities. The order of the topics described is aligned with the long-term sustainability goals of the BMW Group. An overview of the information on the main topics that is relevant to the legislation is presented at the beginning of each sub-section of the respective chapter. Here, in accordance with the statutory materiality requirements, we have compiled the information that in each case is required for an understanding of the business performance, the financial result and the current situation of the BMW Group and which clearly expresses the effects of business activities on the non-financial aspects specified in the legislation.

Risks

During the reporting process, we assessed whether any risks are associated with our own business activities, our business relationships and the products and services, which would very probably have, either currently or in the future, severe negative effects on the non-financial aspects specified in the legislation. Based on this net-risk assessment as well as the general legal requirement on selecting the main reporting content, we have no risks to report in the context of the CSR RUG.

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

GRI Content Index
→ Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

Connection to figures in financial statements

For each topic, an assessment was carried out to identify any figures in the financial statements that are required in order to understand the Combined separate non-financial report and are therefore to be reported and explained. The assessment concluded that no such information is required.

BMW Bank

Pursuant to the new legislation, we included information on the financial services of the BMW Group. The main topics listed in chapter 1.3 were determined in an internal workshop in 2017.

→ see chapter 1.3

External audit

The Supervisory Board of the BMW Group commissions an independent auditing company for the legislation-relevant information in the integrated, separate non-financial report. The external auditors PwC support the Supervisory Board in fulfilling its obligation to undergo audits within the context of the CSR RUG.

References to information external to the integrated management report are considered additional information that is not part of the integrated, separate non-financial report.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

GRI Content Index
→ Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

OUR REPORTING CONCEPT IN DETAIL

Structure of report

The report is structured along the long-term sustainability goals of the BMW Group. The weighting of the topics in the report is based on the results of our materiality process. These results also form the basis for deriving the main topics for the BMW Group in accordance with the German CSR RUG. The scope of the report and the allocation of topics remain broadly unchanged compared to the SVR 2016. → GRI 102-49

→ see chapter 1

Each chapter starts with a one-page overview of the main performance indicators. The sub-sections of each chapter begin with an overview of the information required in accordance with CSR RUG. Detailed information in accordance with the GRI standard that goes beyond the reporting obligations of the CSR RUG is further explained on the subsequent pages, where we also present additional current and planned activities of the BMW Group.

The report contains the key performance indicators that measure and control the BMW Group's sustainability performance. Where appropriate, references are also provided to supplementary information in the Annual Report or on other BMW Group websites. In addition to the key indicators presented in the main text, the report contains further key indicators on sustainability.

→ see further key indicators

The report is published in German and English. For reasons of clarity and to avoid double references, generic references to the masculine in this document should be understood as referring to both sexes.

Reporting period

The reporting period is the 2017 financial year. The effective date for all facts and figures is 31 December 2017. → GRI 102-50 The Sustainable Value Report is published annually. → GRI 102-52 The last report was published in March 2017 as an interactive pdf covering financial year 2016. → GRI 102-51

The statements made in the Sustainable Value Report 2017 about the BMW Group generally refer to the group of consolidated companies in the 2017 Annual Report. Any deviations from that are indicated and their scope specified in the footnotes of the respective tables and charts. → GRI 102-45 Calculation methods are explained in footnotes to the respective charts. The "Further key indicators" section generally maps the key indicators for 2013–2017 (with the exception of key figures that only became relevant after 2013). They refer to the entire BMW Group. There are, however, some exceptions concerning site-specific topics and local sustainability programmes. Wherever this is the case, the entity the figures apply to is specified accordingly, e.g. BMW AG. Nothing significant has changed in the reporting period with regard to the organisation of the BMW Group or its supply chain. → GRI 102-10

The BMW Group Sustainable Value Report 2017 will be published at the same time as the Annual Report on the BMW Group website. The next Sustainable Value Report will be published in early 2019.

UN Global Compact – Report on progress

The BMW Group committed to implement the principles of the United Nations → **Global Compact** in 2001 and in this report once again provides information on progress achieved in complying with these principles. References to the Global Compact principles have been integrated into the → **GRI Content Index.**

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

GRI Content Index
→ Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

Third-party verification

The entire report (the texts of all chapters as well as further key indicators), including the legally required information at the beginning of each chapter (integrated, separate non-financial report) were audited by PricewaterhouseCoopers AG, with limited assurance in accordance with ISAE 3000 (revised). → **Assurance Report** → GRI 102-56 In addition, indicators from the areas of environmental protection and occupational health and safety were audited by external auditors and experts in accordance with ISO 14001, EMAS and OHSAS.

With the exception of the auditors of the CSR RUG-relevant information–who were selected by the Supervisory Board of BMW AG–the Corporate Reporting, Corporate Communications and Policy as well as Corporate Planning and Product Strategy departments selected the external auditors for the Sustainable Value Report. Ms Ursula Mathar, Head of Sustainability and Environmental Protection and Dr Thomas Becker, Vice President of Governmental and External Affairs are responsible for expert approval of the SVR. Overall responsibility lies with the Board of the BMW Group. Third-party auditing enables us to document for the public the reliability and trustworthiness of the information provided. In addition, we receive impetus for improvement and innovation in the reporting process. → GRI 102-56, GRI 102-32

Forward-looking statements

The BMW Group Sustainable Value Report 2017 contains various forward-looking statements about future developments which are based on the current status of the BMW Group's assumptions and forecasts. They are thus subject to a variety of predictable and unpredictable risks, uncertainties and other factors, so that the actual outcome, including the company's financial and assets position, its development or performance could differ considerably. The BMW Group makes no commitment to update such forward-looking statements or to adapt them to future events or developments.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

GRI Content Index
Our reporting concept
→ Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

Independent Practitioners' Limited Assurance Report on non-financial information and sustainability information

To BMW AG, Munich

We have been engaged to perform a limited assurance engagement on the sustainability reporting (hereinafter "sustainability information") and, in accordance with Section 289b Para. 3 and 315b Para. 3 HGB (German Commercial Code), the integrated, separate non-financial report (hereinafter the "non-financial report") contained therein and highlighted in colour before the respective chapters in the "Sustainable Value Report" of BMW AG, Munich (hereinafter the "Company") for the period 1 January to 31 December 2017 (hereinafter the "Sustainable Value Report").

Management's responsibility

The Company's Management is responsible for the preparation and presentation of the Sustainable Value Report in accordance with the criteria as set out in the Sustainability Reporting Standards of the Global Reporting Initiative (GRI) (hereinafter the "GRI Criteria") and the non-financial report in accordance with Section 315b and 315c in conjunction with 289c to 289e of the HGB.

This responsibility includes the selection and application of appropriate methods to prepare the non-financial reporting and the Sustainable Value Report as well as the use of assumptions and estimates for individual sustainability disclosures and non-financial disclosures which are reasonable in the circumstances. Furthermore, the responsibility includes designing, implementing and maintaining systems and processes relevant for the preparation of the Sustainable Value Report, which is free of material misstatements due to intentional or unintentional errors.

Audit firm's independence and quality control

We have complied with the German professional provisions regarding independence as well as other ethical requirements.

The audit firm applies the national legal requirements and professional standards–in particular the Professional Code for German Public Auditors and German Chartered Auditors ("Berufssatzung für Wirtschaftsprüfer und vereidigte Buchprüfer": "BS WP/vBP") as well as the IDW Quality Assurance Standards 1 (standards for quality control in audit firms–Anforderungen an die Qualitätssicherung in der Wirtschaftsprüferpraxis), published by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany; IDW) (IDW QS 1) – and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Practitioners' responsibility

Our responsibility is to express an opinion on the sustainability information in the Sustainable Value Report and the information in the non-financial report.

Within the scope of our engagement we did not perform an audit on external sources of information or expert opinions, referred to in the Sustainable Value Report.

We conducted our engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): "Assurance Engagements other than Audits or Reviews of Historical Financial Information" published by IAASB. This standard requires that we plan and perform the engagement to obtain limited assurance whether any matters have come to our attention that cause us to believe that

- the sustainability information in the Sustainable Value Report of the Company for the period 1 January to 31 December 2017 has not been prepared, in all material respects, in accordance with the GRI Criteria,

and

- the non-financial report of the Company contained within the Sustainable Value Report of the Company for the period 1 January to 31 December 2017 has not been prepared, in all material respects, in accordance with Section 315b and 315c in conjunction with 289c to 289e of the HGB.

In a limited assurance engagement the evidence-gathering procedures are more limited than for a reasonable assurance engagement and therefore significantly less assurance is obtained than in a reasonable assurance engagement. The auditing firm is responsible for the selection of evidence-gathering procedures, according to their reasonable discretion.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

GRI Content Index
Our reporting concept
→ Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
Imprint

Within the scope of our work we performed amongst others the following procedures and other activities:

- Obtaining an understanding of the structure of the sustainability organisation and of the stakeholder engagement;
- Inquiries of personnel involved in the preparation of the Sustainable Value Report regarding the preparation process, the underlying internal control system and selected sustainability information;
- Identification of probable risks of material misstatements of the sustainability information in the Sustainable Value Report;
- Performance of site visits as part of the inspection of processes for collecting, analysing and aggregating selected data:
  - in the corporate headquarters in Munich,
  - in the production plant in Regensburg (Germany),
  - in the production plant in Munich (Germany),
  - at BMW Brilliance Automotive (BBA) in Dadong (China),
  - at BMW Brilliance Automotive (BBA) in Tiexi (China),
  - in the BMW Brilliance Automotive (BBA) Engine Plant in Tiexi (China),
- Analytical procedures on selected sustainability information of the Sustainable Value Report;
- Inquiries of personnel responsible for the reporting of fleet emissions and fuel consumption, as well as reconciliation of selected data points regarding fleet emissions and fuel consumptions with the official information available from the Federal Office for Motor Traffic of Germany;
- Comparison of selected sustainability information with corresponding data in the financial statements and in the management report;
- Assessment of the presentation of selected sustainability information.

Conclusion

Based on our limited assurance engagement, nothing has come to our attention that causes us to believe that

- the sustainability information in the Sustainable Value Report of the Company for the period 1 January to 31 December 2017 has not been prepared, in all material respects, in accordance with the GRI Criteria,

and

- the non-financial report contained within the Sustainable Value Report of the Company for the period 1 January to 31 December 2017 has not been prepared, in all material respects, in accordance with Section 315b and 315c in conjunction with 289c to 289e of the HGB.

Restriction on Use and Distribution

We issue this report on the basis of the engagements agreed with the Company. The audit has been performed for purposes of the Company and the Limited Assurance Report is solely intended to inform the Company about the results of the audit.

The Limited Assurance Report is not intended for any third parties to base any (financial) decision thereon. We do not assume any responsibility towards third parties.

Munich, 26 February 2018

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft (Auditing firm)

Andreas Fell	Hendrik Fink
Wirtschaftsprüfer	Wirtschaftsprüfer
(German Public Auditor)	(German Public Auditor)

Introduction

1
Fundamentals

2
Products and services

3
Production and value creation

4
Employees and society

Further key indicators

Appendix

GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
→ Fuel consumption and CO_2 emissions ratings
Imprint

FUEL CONSUMPTION AND CO_2 EMISSIONS RATINGS FOR THE VEHICLES REFERRED TO IN THIS REPORT

Model	Urban (l/100 km)	Extra-urban (l/100 km)	Combined (l/100 km)	CO_2 emissions combined (g/km)	Electricity consumption combined (in addition to fuel consumption) (kWh/100 km)
BMW i3 (94 Ah) with Range Extender	Not applicable	Not applicable	0.6	14–13	11.9–11.5
BMW i3 (94 Ah)	Not applicable	Not applicable	0	0	13.6–13.1
BMW i3s (94 Ah) with Range Extender	Not applicable	Not applicable	0.7	14	12.5
BMW i3s (94 Ah)	Not applicable	Not applicable	0	0	14.3

Model	Urban (l/100 km)	Extra-urban (l/100 km)	Combined (l/100 km)	CO_2 emissions combined (g/km)	Electricity consumption combined (in addition to fuel consumption) (kWh/100 km)
BMW 530e iPerformance	Not applicable	Not applicable	2.1–1.9	49–44	14.1–13.1
BMW 740e iPerformance Sedan	Not applicable	Not applicable	2.2–2.1	50–49	13.3–13.1
BMW 740Le iPerformance Sedan	Not applicable	Not applicable	2.2–2.1	51–49	13.3–13.1
BMW 740Le xDrive iPerformance Sedan	Not applicable	Not applicable	2.5–2.4	56–54	13.9–13.7
BMW i8 Coupé	Not applicable	Not applicable	1.9	42	14
BMW i8 Roadster	Not applicable	Not applicable	2.1	46	14.5
BMW X5 xDrive40e iPerformance	Not applicable	Not applicable	3.4–3.3	78–77	15.4–15.3
MINI Cooper S E Countryman ALL4	Not applicable	Not applicable	2.3–2.1	52–49	14.0–13.2

Model	Urban (l/100 km)	Extra-urban (l/100 km)	Combined (l/100 km)	CO_2 emissions combined (g/km)	Electricity consumption combined (in addition to fuel consumption) (kWh/100 km)
BMW 320d EfficientDynamics Edition Touring	5.5–5.0 (5.3–4.8)	3.9–3.6 (3.9–3.5)	4.5–4.1 (4.4–4.0)	118–107 (116–104)	Not applicable
BMW 530i Limousine	7.3–6.9	5.2–4.7	5.9–5.5	136–126	Not applicable
BMW 750d xDrive Sedan	6.9–6.6	5.3–5.1	5.9–5.7	154–149	Not applicable

The data on fuel consumption, CO_2 emissions, power consumption and range were calculated according to the current versions of the prescribed measuring methods Regulation (EC) 2007/715 respectively. The data refer to a vehicle in its basic version in Germany, the ranges account for differences in the selected wheel and tyre size and optional extras.

Further information on the official fuel consumption and specific official CO_2 emissions of new passenger vehicles can be found in the "Guideline for fuel consumption, CO_2 emissions and electric power consumption of new passenger vehicles", available free of charge from all sales outlets and at → **https://www.dat.de/en-int/offers/publications/guideline-for-fuel-consumption.html**.

Introduction

1
Fundamentals

2
Products and services

3
Production
and value creation

4
Employees and society

Further key indicators

Appendix

GRI Content Index
Our reporting concept
Independent Practitioners' Limited Assurance Report
Fuel consumption and CO_2 emissions ratings
→ Imprint

WE LOOK FORWARD TO HEARING FROM YOU

Numerous BMW Group employees participated in creating this Sustainable Value Report 2017. We will be happy to answer your questions and forward them to the relevant department if needed.

If you want to stay up to date on sustainability at the BMW Group, you can → register for the Sustainability Newsletter right here.

Sustainable Value Report 2017 project team

→ Kai Zöbelein → Martina Hilmer → Edgar Berger

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