Deutsche Bahn

2018 Integrated Report

On track towards a better railway

At a glance

			Change	
Selected key figures	**2018**	2017	absolute	%
KEY FINANCIAL FIGURES (€ MILLION)				
Revenues adjusted	44,024	42,704	+1,320	+3.1
Revenues comparable	44,486	42,703	+1,783	+4.2
Profit before taxes on income	1,172	968	+204	+21.1
Net profit for the year	542	765	-223	-29.2
EBITDA adjusted	4,739	4,930	-191	-3.9
EBIT adjusted	2,111	2,152	-41	-1.9
Equity as of Dec 31	13,592	14,238	-646	-4.5
Net financial debt as of Dec 31	19,549	18,623	+926	+5.0
Total assets as of Dec 31	58,527	56,436	+2,091	+3.7
Capital employed as of Dec 31	36,657	35,093	+1,564	+4.5
Return on capital employed (ROCE) (%)	5.8	6.1	-	-
Redemption coverage (%)	17.6	18.7	-	-
Gross capital expenditures	11,205	10,464	+741	+7.1
Net capital expenditures	3,996	3,740	+256	+6.8
Cash flow from operating activities	3,371	2,329	+1,042	+44.7
KEY PERFORMANCE FIGURES				
Passengers[1] (million)	4,669	4,685	-16	-0.3
RAIL PASSENGER TRANSPORT				
Punctuality DB passenger transport (rail) in Germany (%)	93.5	94.1	-	-
Punctuality DB Long-Distance (%)	74.9	78.5	-	-
Passengers (million)	2,581	2,564	+17	+0.7
thereof in Germany	2,087	2,075	+12	+0.6
thereof DB Long-Distance	147.9	142.2	+5.7	+4.0
Volume sold (million pkm)	97,707	95,854	+1,853	+1.9
Volume produced (million train-path km)	781.3	779.0	+2.3	+0.3
RAIL FREIGHT TRANSPORT				
Freight carried (million t)	255.5	271.0	-15.5	-5.7
Volume sold (million tkm)	88,237	92,651	-4,414	-4.8
TRACK INFRASTRUCTURE				
Punctuality (rail) in Germany[2] (%)	92.9	93.6	-	-
Punctuality DB Group (rail) in Germany (%)	93.4	93.9	-	-
Train kilometers on track infrastructure (million train-path km)	1,086	1,073	+13	+1.2
thereof non-Group railways	349.3	331.4	+17.9	+5.4
Share of non-Group railways (%)	32.2	30.9	-	-
Station stops (million)	154.1	153.2	+0.9	+0.6
thereof non-Group railways	37.0	36.1	+0.9	+2.5
BUS TRANSPORT				
Passengers[1] (million)	2,087	2,121	-34	-1.6
Volume sold[3] (million pkm)	6,942	7,220	-278	-3.9
Volume produced (million bus km)	1,602	1,616	-14	-0.9
FREIGHT FORWARDING AND LOGISTICS				
Shipments in land transport (thousand)	106,468	100,452	+6,016	+6.0
Air freight volume (export) (thousand t)	1,304	1,300	+4	+0.3
Ocean freight volume (export) (thousand TEU)	2,203	2,169	+34	+1.6
Warehouse space contract logistics (million m²)	8.3	8.0	+0.3	+3.8
ADDITIONAL KEY FIGURES				
Order book for passenger transport[1] as of Dec 31 (€ billion)	91.0	94.9	-3.9	-4.1
Length of line operated (rail network) as of Dec 31 (km)	33,440	33,488	-48	-0.1
Passenger stations as of Dec 31	5,663	5,660	+3	+0.1
Rating Moody's/S&P Global Ratings	Aa1/AA-	Aa1/AA-	-	-
Employees as of Dec 31 (FTE)	318,528	310,935	+7,593	+2.4
Employee satisfaction (SI)	3.7	-	-	-
Employer attractiveness (rank in Germany)	13	13	-	-
Share of women in Germany as of Dec 31 (%)	23.2	23.0	-	-
Specific greenhouse gas emissions in comparison to 2006 (%)	-33.2	-29.5	-	-
Share of renewable energies in the DB traction current mix (%)	57.2	44.0	-	-
Track kilometers noise remediated in total as of Dec 31 (km)	1,758	1,701	+57	+3.4
Quiet freight cars in Germany as of Dec 31	50,409	39,604	+10,805	+27.3

[1] Previous year's figure adjusted.

[2] Non-Group and DB Group train operating companies.

[3] Excluding DB Arriva.

10-year summary

To the interactive key
figure comparison

(€ million)	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
STATEMENT OF INCOME										
Revenues	44,065	42,693	40,557	40,403	39,728	39,107	39,296	37,979	34,410	29,335
Overall performance	47,156	45,593	43,298	43,102	42,422	41,756	41,910	40,436	36,617	31,271
Other operating income	2,998	2,954	2,834	2,772	2,824	2,853	3,443	3,062	3,120	3,864
Cost of materials	-22,258	-21,457	-20,101	-20,208	-20,250	-20,414	-20,960	-20,906	-19,314	-15,627
Personnel expenses	-17,301	-16,665	-15,876	-15,599	-14,919	-14,383	-13,817	-13,076	-11,602	-11,115
Depreciation	-2,688	-2,847	-3,017	-4,471	-3,190	-3,228	-3,328	-2,964	-2,912	-2,825
Other operating expenses	-6,088	-5,890	-5,677	-5,750	-5,057	-4,817	-4,719	-4,375	-4,092	-3,360
Operating profit (EBIT)	1,819	1,688	1,461	-154	1,830	1,767	2,529	2,177	1,817	2,208
Results from investments accounted for using the equity method	12	14	33	22	8	3	14	19	17	9
Other financial result	-14	-30	-16	0	-3	-15	-13	3	-23	-4
Net interest income	-645	-704	-772	-800	-898	-879	-1,005	-840	-911	-826
Profit before taxes on income	1,172	968	706	-932	937	876	1,525	1,359	900	1,387
Net profit for the year	542	765	716	-1,311	988	649	1,459	1,332	1,058	830
Dividend payment (for previous year)	450	600	850	700	200	525	525	500	-	-
VALUE MANAGEMENT										
EBITDA adjusted	4,739	4,930	4,797	4,778	5,110	5,139	5,601	5,141	4,651	4,402
EBIT adjusted	2,111	2,152	1,946	1,759	2,109	2,236	2,708	2,309	1,866	1,685
Capital employed as of Dec 31	36,657	35,093	33,066	33,459	33,683	33,086	32,642	31,732	31,312	28,596
Return on capital employed (ROCE) (%)	5.8	6.1	5.9	5.3	6.3	6.8	8.3	7.3	6.0	5.9
Redemption coverage (%)	17.6	18.7	18.1	19.0	20.3	20.8	22.2	22.0	18.8	20.4
Net debt/EBITDA (multiple)	4.8	4.5	4.6	4.3	4.0	3.9	3.7	3.8	4.3	4.0
CASH FLOW/CAPITAL EXPENDITURES										
Cash flow from operating activities	3,371	2,329	3,648	3,489	3,896	3,730	4,094	3,390	3,409	3,133
Gross capital expenditures	11,205	10,464	9,510	9,344	9,129	8,224	8,053	7,501	6,891	6,462
Net capital expenditures	3,996	3,740	3,320	3,866	4,442	3,412	3,487	2,569	2,072	1,813
BALANCE SHEET AS OF DEC 31										
Non-current assets	46,646	45,625	45,290	45,199	45,530	43,949	44,241	44,059	44,530	41,308
thereof property, plant and equipment and intangible assets	44,487	43,207	42,575	42,821	43,217	41,811	41,816	41,541	42,027	39,509
Current assets	11,881	10,811	11,034	10,860	10,353	8,945	8,284	7,732	7,473	5,995
thereof cash and cash equivalents	3,544	3,397	4,450	4,549	4,031	2,861	2,175	1,703	1,475	1,470
Equity	13,592	14,238	12,657	13,445	14,525	14,912	14,978	15,126	14,316	13,066
Equity ratio (%)	23.2	25.2	22.5	24.0	26.0	28.2	28.5	29.2	27.5	27.6
Non-current liabilities	29,104	27,510	28,525	28,091	28,527	26,284	25,599	24,238	24,762	23,359
thereof financial debt	20,626	19,716	20,042	19,753	19,173	18,066	17,110	16,367	16,394	14,730
thereof pension obligations	4,823	3,940	4,522	3,688	4,357	3,164	3,074	1,981	1,938	1,736
Current liabilities	15,831	14,688	15,142	14,523	12,831	11,698	11,948	12,427	12,925	10,878
thereof financial debt	2,618	2,360	2,439	2,675	1,161	1,247	1,503	1,984	2,159	1,780
Net financial debt	19,549	18,623	17,624	17,491	16,212	16,362	16,366	16,592	16,939	15,011
Total assets	58,527	56,436	56,324	56,059	55,883	52,894	52,525	51,791	52,003	47,303
RAIL PERFORMANCE FIGURES										
PASSENGER TRANSPORT										
Passengers (million)	2,581	2,564	2,365	2,251	2,254	2,235	2,152	1,981	1,950	1,908
Long-distance transport	148	142	139	132	129	131	131	125	126	123
Regional transport	2,433	2,422	2,226	2,119	2,125	2,104	2,021	1,856	1,824	1,785
Volume sold (million pkm)	97,707	95,854	91,651	88,636	88,407	88,746	88,433	79,228	78,582	76,772
Long-distance transport	42,827	40,548	39,516	36,975	36,102	36,777	37,357	35,565	36,026	34,708
Regional transport	54,880	55,306	52,135	51,661	52,305	51,969	51,076	43,663	42,556	42,064
FREIGHT TRANSPORT										
Freight carried (million t)	255.5	271.0	277.4	300.2	329.1	390.1	398.7	411.6	415.4	341.0
Volume sold (million tkm)	88,237	92,651	94,698	98,445	102,871	104,259	105,894	111,980	105,794	93,948
INFRASTRUCTURE										
Train kilometers on track infrastructure (million train-path km)	1,086	1,073	1,068	1,054	1,044	1,035	1,039	1,051	1,034	1,003
thereof non-Group railways	349	331	322	290	261	247	231	220	195	170
SOCIAL DIMENSION										
Employees (annual average; FTE)	316,901	308,671	302,204	297,170	296,094	293,765	286,237	282,260	251,810	239,888
Employees as of Dec 31 (FTE)	318,528	310,935	306,368	297,202	295,763	295,653	287,508	284,319	276,310	239,382
Employer attractiveness (rank in Germany)	13	13	16	20	11	21	26	-	-	-
Employee satisfaction (SI)	3.7	-	3.7	-	3.7	-	3.6	-	-	-
ENVIRONMENTAL										
Specific greenhouse gas emissions in comparison to 2006 (%)	-33.2	-29.5	-27.3	-24.5	-22.8	-18.6	-12.0	-9.9	-7.8	-3.3
Quiet freight cars in Germany as of Dec 31	50,409	39,604	32,396	20,460	14,334	8,408	7,349	-	-	-

Deutsche Bahn Universe

Deutsche
Bahn
Universe

The enclosure is missing?
“Deutsche Bahn Universe” is
also available **online.**

About this report

Integrated reporting – what does it mean?

Integrated reporting is more than just a simple combination of the Annual Report and the Sustainability Report. Our aim is to present a comprehensive and overarching overview of DB Group and the implementation of our sustainable DB2020+ strategy with its three dimensions: **economic** 👍, **social** 👫 and **environmental** 🌱**.**

How to use this report?

In order to simplify use of this report, we have added a few supportive features.

🗋 **Further information within the report**
We link to additional information contained within a certain section of the Integrated Report, marked as follows: 🗋 **xxx.**

! **In-depth information**
We highlight individual topics of particular interest to us with an exclamation point.

⚡ **Critical topics**
We mark important topics with a lightning icon and explain them in greater detail; these topics are critical to our success, but neither we nor third parties are yet performing as required.

grün. **This is green.**
"This is green." serves to show the milestones and diversity of our green projects. Every project is marked with its own number and a message. We have marked them as follows: **project grün. no. XY.**

GRI **Where is a specific GRI standard covered?**
The GRI Content Index will show you where you can find information regarding a specific indicator. We have marked the respective locations with the symbol GRI next to the text and listed the indicators below it.

⇩ **Table available online to download**
The download icon ⇩ indicates that the corresponding content can be downloaded online as an Excel file.

➚ **Link collection**
You can find further information in the online report on our link page at ➚**db.de/links_ir18** or on the Internet. The respective links are marked with the symbol ➚**term.**

Online report

You can find an online version and a PDF version on the Internet: ➚**db.de/ib-e.**

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BECOMING BETTER

OUR AGENDA FOR A BETTER RAILWAY

OUR AGENDA FOR A BETTER RAILWAY

The trend toward more railway use continues unabated. One thing is for certain: the railway will be the mode of transport of the 21st century – reliable, safe, comfortable, environmentally friendly and digital. Through our Agenda for a Better Railway, we want to ensure the future viability of DB Group and especially of the integrated rail system. Our target is becoming better and better for our customers. The first step is our five-point plan, which should already yield concrete improvements in 2019.

Deutsche Bahn AG Management Board (from left to right): Martin Seiler, Berthold Huber, Prof. Dr. Sabina Jeschke, Dr. Richard Lutz (Chairman), Alexander Doll, Ronald Pofalla

CVs

EXPAND, IMPROVE, DIGITALIZE

OUR FIVE-POINT PLAN FOR 2019:

[1]

We are progressively improving our punctuality.

We want to offer high levels of punctuality, quality and reliability. So that we can make improvements right away, we have introduced comprehensive immediate actions and expect to achieve a trend reversal.

[2]

We are investing more than ever.

To ensure our long-term, sustainable growth, we are improving the capacity and availability of key resources, such as infrastructure, vehicles and staff.

[3]

We offer more reliable information and improved comfort.

We want our customers to have a comfortable journey. For example, new digital services create more time for on-board train services and keep customers better informed.

[4]

We are expanding our offers.

We are consistently broadening our rail offers while developing new, innovative offers to complement rail transport.

[5]

We are restructuring DB Cargo and becoming even greener.

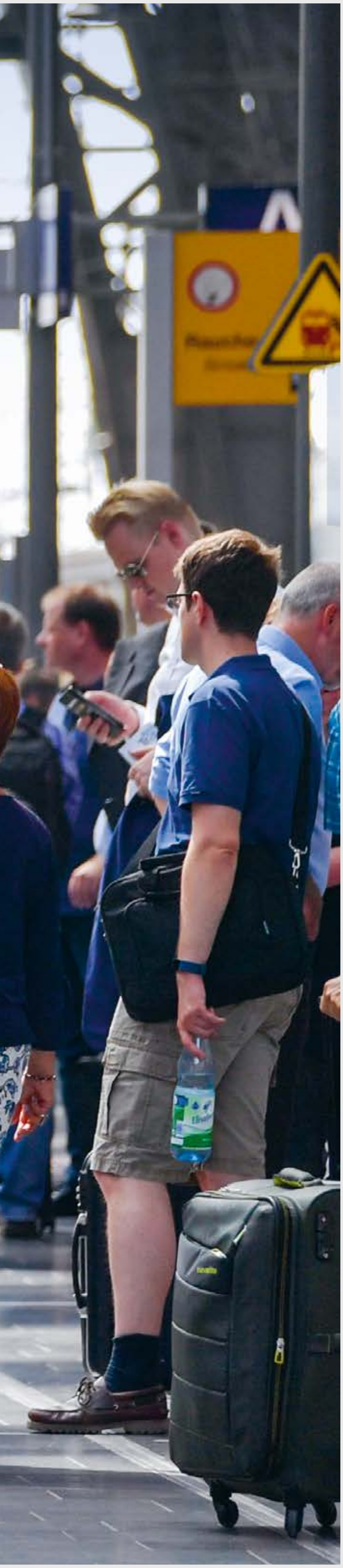
We are working on our target to shift more passenger and freight transport onto the environmentally friendly rail. A crucial prerequisite for this is also to improve the performance capability of DB Cargo.

EXPAND

CAPACITY AND AVAILABILITY ARE THE DECISIVE FUNDAMENTALS FOR GROWTH

The rail system has a huge amount of potential, but we are reaching the limits because our growth is leading to bottlenecks. We need more capacity to cope with the traffic of today and tomorrow. That is why we are determined to expansion – in the network, with new trains and more employees. This forms the basis for our sustainable success and further growth.


8
A
8
B



About

9

billion euros will be invested together with the Federal Government in the existing network and in network expansion in 2019 alone.

INCREASING NETWORK CAPACITY

The utilization of our rail network capacity has strongly increased since the 1994 rail reform, with the intensity of use per track kilometer increasing by a massive 50 %. Having a high-performance infrastructure is the key to a stronger shift of traffic from the road to the rail. We must increase the capacity of our rail tracks accordingly. An essential part of this is to improve the management of our construction sites. In the so-called plan corridors we want to keep to a minimum the effects on the overall system that spread from sensitive sections.

Over **800**

construction sites per day are putting pressure on our network at peak times. Consolidated construction sites and professional management, including through our construction management center, help to reduce restrictions caused by construction sites. A special team coordinates all construction activities within DB Group and minimizes daily disruption caused by these activities.

1/3

more trains than ever before need to be able to travel through construction sites. This requires additional staff, the shifting of closure times to peripheral low-traffic regions, and the use of high-performance machines.

BRINGING MORE TRAINS ONTO THE RAIL

Some of our work to keep our customers' journeys reliable includes consistently expanding our long-distance transport fleet and modernizing existing vehicles. Over the next five years we will make comprehensive capital expenditures in the fleets of DB Long-Distance, DB Regional and DB Cargo. In 2019, we will already deploy significantly more trains with the new ICE 4 and IC 2 trains, as well as through the modernization programs for the ICE 3 and IC 1 trains. Through improved maintenance, we also hope to increase availability. In total, at least 225 ICE trains are therefore available every day, which is an increase of 5%.

137

ICE 4 trains will become part of our ICE fleet by 2025. The fleet is currently being expanded.

More than

200

new employees will be hired in 2019 for the improvement of maintenance, including in our ICE facilities in Hamburg and Cologne. At the same time we are pushing forward the digitalization of maintenance processes.

HIRING ADDITIONAL EMPLOYEES

With more employees, we make our products better and more reliable. In 2019 we will increase the number of employees in the integrated rail system in Germany by about 8,000. Our primary focus is on recruiting train drivers, dispatchers, employees from the construction industry, maintenance technicians and IT experts. At the same time we will also increase our capacity in training and development by one-third.

IMPROVE

OUR CUSTOMERS ARE AT THE CENTER OF WHAT WE DO. OUR FOCUS: CUSTOMER AND QUALITY

Our clear target is to increase punctuality, quality and reliability. Our efforts are primarily focused on improving the journey experience for our customers, progressively increasing punctuality, and providing more reliable information to our customers throughout the travel chain. We want to bring more traffic to the environmentally friendly rail network, particularly in freight transport.

About

21

percentage points: the level of improvement we achieved in the percentage of on-schedule departures at the ten biggest long-distance hub stations with our PlanStart program. The PlanStart activities were expanded all over Germany, and alongside on-schedule departures, they also focus on hub exits and adherence to stopping times at selected stations. In addition, plan corridors were set up to optimize our traffic on highly frequented lines.

MAKING TRAINS MORE PUNCTUAL

Whether it’s regional and long-distance transport or freight trains, the continuous growth of traffic on the German rail network needs ever more effective control and coordination. Our PlanStart teams are a good example of this. They ensure that trains depart on schedule. There are additional strains on punctuality due to the continually increasing levels of construction activity. By optimizing capacity during construction, including through consolidation, faster construction procedures and additional construction infrastructure, we can markedly reduce the burden.

90

percent of our long-distance trains should depart on schedule from the ten most highly frequented long-distance stations. This is thanks to our hub coordinators, who analyze different factors and influences that can cause operational delays and then initiate measures to address them.

80

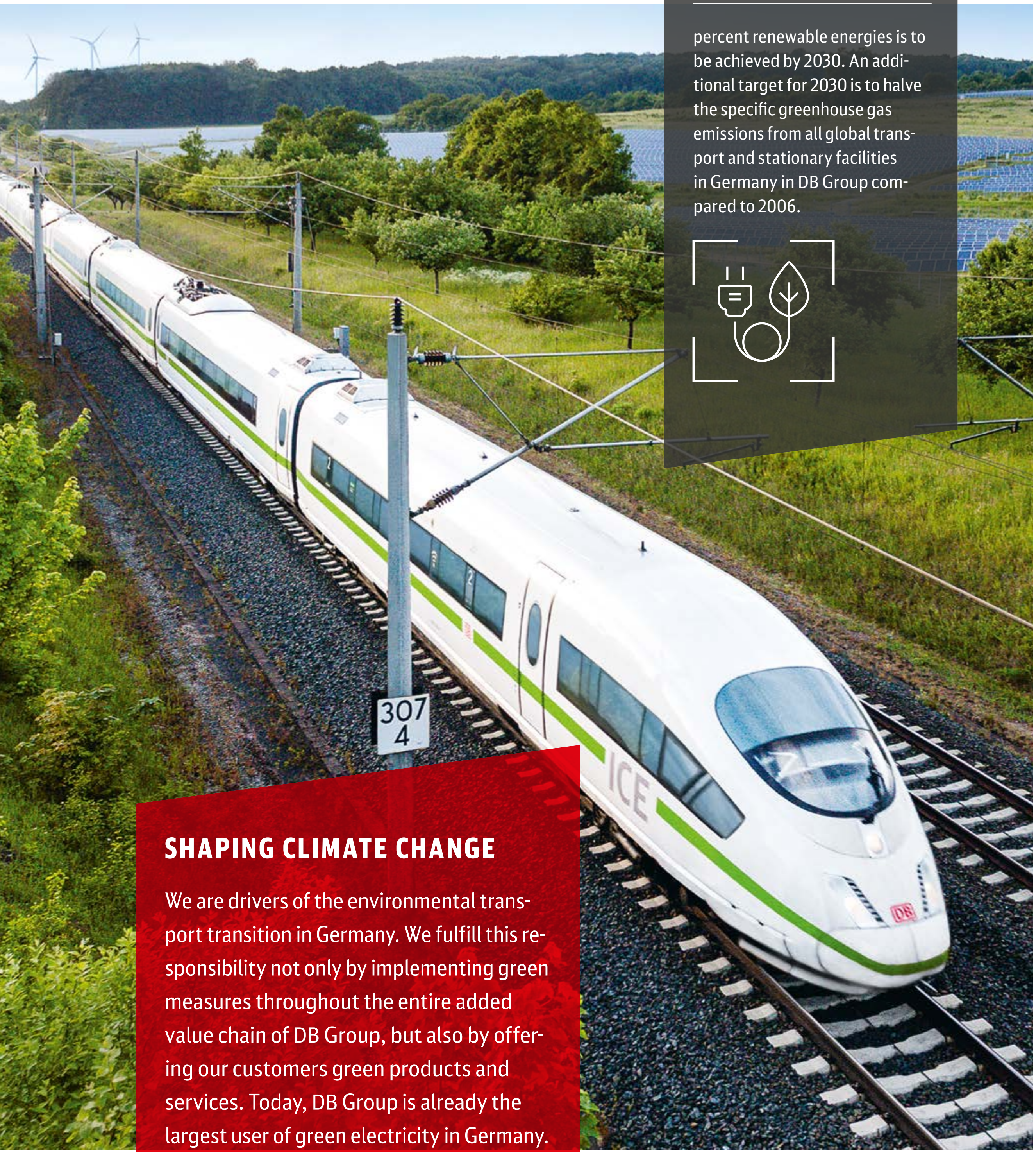
stations are to be switched over to a new passenger information system by the end of 2019. The new system is consistent with other information channels and has improved displays. By 2024, we plan to switch over more than 6,000 selection displays, about 800 automatic announcement systems and all of the about 6,600 dynamic text displays. This will fundamentally improve passenger information.

INFORMING CUSTOMERS BETTER

We want to continually modernize and develop stations as needed. The passenger information of the future project is about focusing on the central needs of our customers to have complete, prompt and consistent passenger information through all information channels. A crucial element of this project is the complete replacement of the entire backend system. By further developing IRIS to the new IRIS+ system, we are investing in an up-to-date and, most importantly, future-proof system. We will also be introducing a new generation of displays, monitors and panels at our stations, which will be installed successively over the coming years.

80

percent renewable energies is to be achieved by 2030. An additional target for 2030 is to halve the specific greenhouse gas emissions from all global transport and stationary facilities in Germany in DB Group compared to 2006.



SHAPING CLIMATE CHANGE

We are drivers of the environmental transport transition in Germany. We fulfill this responsibility not only by implementing green measures throughout the entire added value chain of DB Group, but also by offering our customers green products and services. Today, DB Group is already the largest user of green electricity in Germany. By 2050, we want to become a climate-neutral group. In doing so, we make a major contribution to managing climate change in Germany.

SEIZING GROWTH OPPORTUNITIES

We are driving forward the restructuring of DB Cargo: by stabilizing production and achieving a more competitive cost structure, making additional capital expenditures in new trains, freight cars and green technologies, as well as a sales campaign, we will bring even more goods onto the rails. We want to seize growth opportunities, expand our market share and win new customers.

DIGITALIZE

THROUGH INNOVATIVE PLATFORMS AND SERVICE OFFERS, WE ARE CREATING NEW SOLUTIONS FOR OUR CUSTOMERS

Digitalization and new technologies are also changing our core business. We use digitalization technologies and methods to offer attractive new products and to strengthen those we already have. Whether on board the train, at the station or on the rail, going digital enables us to enhance or simplify our services. In doing so we increase our capacity, as well as becoming more environmentally friendly.

DIGITALIZING THE NETWORK

Not least thanks to new technologies, we are already creating a more robust rail infrastructure in the short term to minimize negative impacts on our customers. The consistent optimization of command and control technology is playing a particularly important role here. Our program Digital Rail for Germany represents a technological quantum leap for the entire railway industry.

Up to

20

percent higher capacity in the rail network achieved through a standardized, digital system. Our aim here is to achieve improved performance, better quality, greater efficiency and more growth on the rail network. Digital rail is also providing a boost for Germany as an industrial location.

23

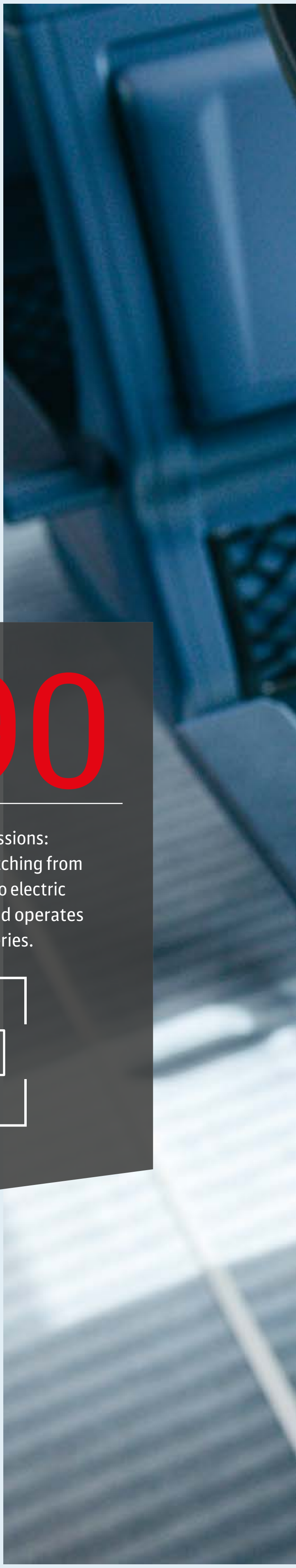
kilometers of the Hamburg S-Bahn (metro) is being prepared for highly automated driving by 2021, and four vehicles are being equipped with the technology needed to control them digitally.

ENABLING FLEXIBILITY

We want to offer modern, flexible and individual mobility solutions and services that are accessible to all. On-demand services such as ioki and ArrivaClick place customers and their mobility needs at the center, complementing public transport with innovative and digital services. In Summer 2018, DB Arriva launched an innovative, demand-based transport system in Liverpool using minibuses, which also covers John Lennon Airport.

About
112,000

journeys, significantly more than in the previous year, were made with our ioki fleet in 2018. The size of the fleet and the number of journeys made using our new mobility offerings such as ioki are constantly increasing, thanks to the expansion of our offers and services.



–90

percent CO_2 emissions: the result of switching from diesel-powered to electric trucks. The T-Pod operates entirely on batteries.

TESTING INNOVATIVE SOLUTIONS

DB Schenker and Einride have launched the first commercially used, fully electric, autonomous truck on DB Schenker property in Jönköping, Sweden – the T-Pod. The T-Pod drives to and from a warehouse entirely autonomously. In 2019, the T-Pod is also set to receive approval for driving on roads in Sweden, and will then drive autonomously on public roads for the first time.

Over

2

million comfort check-ins since the service was launched in July 2017. Most of these check-ins were for the Munich – Hamburg line.

SIMPLIFYING ACCESS

Whether on board a train or at the station, we work hard to make our customers more comfortable, and we make their journeys easier through digitalization. For example, we now offer new functions in our travel apps DB Navigator and DB Route Agent. For long-distance journeys, comfort check-in is available for all ICE passengers with a mobile or online ticket. We are extending WiFi services on IC trains, local public transport, and at our stations, too.

To our stakeholders

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Chairman’s letter

DR. RICHARD LUTZ
CEO and Chairman of the Management Board
of Deutsche Bahn AG

GRI 102-14

Ladies and gentlemen,

2018 was an eventful year for Deutsche Bahn. In particular in the railway business – in terms of punctuality and comfort – we had to fight. One thing is clear: we have to get better in 2019. And we are already on the way to a better railway.

Several of our challenges have a common cause: scarce capacity. The sustained growth of rail transport is becoming increasingly noticeable – unfortunately too often our customers are noticing it, too. The solution: additional capital expenditures. If we want to make the railway more reliable and attractive, we must create more capacity, whether in the infrastructure, in the vehicle fleet or in our staff.

More capacity is the key both to further growth and to good operational quality and high punctuality. Of course, the capital expenditures required are not small. But they are essential if we wish to make the railway system in Germany fit for the future, and create growth and employment.

We at Deutsche Bahn, together with the Supervisory Board and our owner, have therefore made the necessary decisions: in favor of more capacity and availability, additional expenses to benefit customers and improve quality, and, not least, further capital expenditures in digitalization and innovation. We brought all of this together at the end of 2018 into the Agenda for a Better Railway, a wide-ranging package of measures to achieve real improvements, which will also be used as the basis in 2019 of a newly formulated DB Group strategy.

Growth in the rail business provides us with a tailwind: never before have so many people expressed their trust in us. Nearly 148 million customers used our long-distance trains in the year under review. That is about six million more than in the previous year – an increase of four percent. This means that we have again broken the record for the number of passengers in long-distance transport.

The high-speed Berlin—Munich route also contributed to this. One year after the line was given the green light, the new connection has become the number 1 means of transport between the two major cities – beating flying and driving! About 4.9 million passengers traveled on the route – twice the number of the previous year.

2018 was also a demanding year for Deutsche Bahn from an economic perspective. With revenues of about 44 billion euros, we are significantly ahead of the previous year's figure – to the tune of some 1.3 billion euros. The adjusted EBIT was 2.1 billion euros, and was thus in line with our July forecasts. DB Netze Track, DB Long-Distance and DB Schenker showed particularly strong development.

As I already mentioned above, punctuality failed to meet our expectations in 2018. The average of 93.5 percent achieved did not fully match the 94.1 percent achieved in the previous year. In long-distance transport, annual average punctuality was 74.9 percent and 94.0 percent in regional transport.

In all of the challenges, one thing is clear: people are as mobile as ever. That benefits not only us but also the environment. As a green mode of transport, we make a substantial contribution to the issue of climate change and fulfill our particular responsibilities as a supplier of mobility and logistical services. Our new, ambitious target: to cover a whole 80 percent of our traction current requirement with renewable energies by 2030. In 2018, it was already 57 percent. All the divisions of DB Group in Germany make a contribution here: take, for example, the Hamburg S-Bahn (metro), which since 2018 has been running completely on renewable energies.

At the same time, we are advancing digitalization across our rail network – for example, through the Digital Rail for Germany program jointly initiated across the sector. In 2018, the first digital interlocking in Europe was put into operation in Annaberg-Buchholz. The project heralded the start of a technological revolution in command and control technology. It marks the starting point for the further development and nationwide implementation of an innovative generation of interlocking systems. This will make the railway more reliable and high-performing.

Another giant leap towards the improved attractiveness of the railway: we will be investing an additional one billion euros in new and modernized trains for long-distance transport. Specifically, we are ordering more ICE 4 trains and extending those we have already ordered. In addition, we are investing in the modernization of ICE 1. For our customers, more and longer trains mean more seats and more comfort as a result of more capacity. We have also agreed a framework contract for up to 100 long-distance trains. As a first batch, we have ordered 23 new trains with a capital expenditure value of about 550 million euros. The first trains should be operational from 2023. This increases the planned mid-term capital expenditures to more than seven billion euros overall.

We are also forging new paths in how we interface with our customers. Today, the journey to or from the station using the subway, S-Bahn (metro), tram or bus is now included in the train ticket in over 120 German cities. And by integrating ever more transport associations, we are transforming our DB Navigator app into a hub for all local and long-distance transport. In the year under review, we also began offering our customers the comfort check-in function in the app: once checked in, there are no ticket checks on board, making the journey even more relaxing.

Smart mobility offers are also available from ioki, our business division for intelligent on-demand mobility. For the first time, an on-demand offer from ioki provided through the digital on-demand bus in Wittlich was integrated into the existing public passenger transport system. We currently offer services like these in rural areas, but we are only just getting started in urban areas. For example, in Hamburg we have joined with partners to start an individual shuttle service, which is ordered through an app and offers flexible routes to bring passengers to their destinations, in a process that is fully integrated into the regional transport offer.

DB Regional won a large amount of the regional transport services awarded in 2018. Our aim remains to secure our existing transport contracts and to win new ones. This also requires innovations that excite customers. For example, we are currently trialing free WiFi on the Munich S-Bahn (metro). DB Regional is also continuing to work on the Idea Train (Ideenzug) project that we presented to the public in 2018.

In international logistics we have also established innovations that we are systematically developing further. Thus, DB Schenker and Cisco in Houston have opened a joint Innovations Lab, where new technologies in the field of logistics are tested and marketed. Via the eSchenker portal, customers can also configure and order 3D printing.

The DB Cargo freight car fleet in Germany is to be fitted with the latest telematics and sensors by 2020. About 10,000 refitted freight cars are already on the way. The knowledge gained should accelerate the introduction of freight cars that are quieter, more energy efficient and more economic than those currently in operation.

One thing is clear: we are already on the way to the future. In 2019, our focus is on concrete improvements for our customers and on implementing the Agenda for a Better Railway in a disciplined manner. To that end, we and our nearly 198,000 employees in Germany will give our all. And throughout all our efforts, we will always bear the issue of sustainability in mind. For Deutsche Bahn has explicitly committed to the principles of the UN Global Compact.

We have compiled the current integrated report for you with all of the information on the 2018 financial year. At the same time, we are looking forward, too: forward to what moves us and what we want to undertake. For it is our mission to help truly shape the future of mobility and logistics. We look forward to what awaits us!

Sincerely,

Richard Lutz

Dr. Richard Lutz
CEO and Chairman of the Management Board
of Deutsche Bahn AG

Report of the Supervisory Board

MICHAEL ODENWALD
Chairman of the Supervisory Board
of Deutsche Bahn AG

GRI 102-18 ↓ In the year under review, the Supervisory Board of Deutsche Bahn AG (DB AG) observed the entirety of the responsibilities incumbent upon them by virtue of the law, the company's statutes and its bylaws. The Supervisory Board extensively advised and supervised the Management Board in the management of the company and business operations. The Management Board reported regularly, without delay and in detail to the Supervisory Board regarding corporate planning and the economic, strategic and financial development of DB AG and its subsidiaries. All significant business events were discussed by the Supervisory Board and the responsible committees based on reports of the Management Board. Significant deviations in actual business development were explained by the Management Board and reviewed by the Supervisory Board. The Chairman of the Supervisory Board maintained close contact at all times with the Chairman of the Management Board, who regularly reported on the latest business developments at DB AG, upcoming business decisions and risk management.

Meetings of the Supervisory Board

The Supervisory Board was involved in all decisions of fundamental significance for DB AG.

In the year under review, the Supervisory Board held four ordinary meetings and two extraordinary meetings, as well as one strategy meeting and one further two-day strategy retreat. The Supervisory Board also received detailed responses to questions on the Stuttgart 21/Wendlingen—Ulm project and the annual financial statements in two information meetings.

All Supervisory Board members fully participated in at least half of the meetings in the year under review. In the reporting period, any decisions were recorded in written form. Meetings of the Executive Committee, the Personnel Committee and the Audit and Compliance Committee were held in preparation for the meetings of the Supervisory Board of DB AG.

The main issues discussed in the plenary meetings were the development of Deutsche Bahn Group's (DB Group's) revenue, profit and employment situation, as well as significant capital expenditure and equity investment projects. The Supervisory Board regularly discussed the progress and the cost development of the major Stuttgart 21/Wendlingen—Ulm project in its scheduled meetings and also in one special meeting during the reporting period, on each occasion joined by the Chairman of the Advisory Board of DB Projekt Stuttgart—Ulm GmbH.

In another extraordinary meeting of the Board, Michael Odenwald was elected as Chairman of the Supervisory Board of DB AG, following the departure of the previous Chairman, Prof. Dr. Dr. Utz-Hellmuth Felcht.

As part of the annual strategy meeting, the Board discussed the measures for the railway in Germany to be derived from the Federal Government's transport policy as set out in the coalition agreement of the 19th legislative period. In addition, the Supervisory Board discussed operational conditions, particularly punctuality and operational quality and the customer and digitalization campaigns in long-distance and passenger transport.

In a further two-day strategy retreat, the Supervisory Board discussed in detail the measures necessary to stabilize and improve operational quality. Issues discussed included the management and improvement of network capacity, improvement of vehicle availability, the economic and operational situation of individual business units and the overarching measures to stabilize and optimize processes.

The Supervisory Board went on to make the necessary decisions, having received appropriate advice on significant individual circumstances, such as the procurement of additional ICE 4 train sets.

In addition, in December 2018, the Supervisory Board provided advice on mid-term planning for 2019 to 2023 for DB Group and approved DB Group's budget for the 2019 financial year and DB Group's capital expenditure plan for 2019 to 2023.

Meetings of the Supervisory Board committees

The Supervisory Board of DB AG has established four permanent committees to facilitate its work efficiently.

The Supervisory Board's Executive Committee met six times in the year under review and was in regular contact with the Management Board regarding all major business policy issues. In its meetings, it focused in particular on preparing the focal topics for each of the Supervisory Board meetings.

The Audit and Compliance Committee met six times in the year under review, addressing, in particular, the current economic situation of DB Group and of individual business units, the risk reporting, and the quarterly and half-year financial statements. The Audit and Compliance Committee discussed the progress and cost development of the major Stuttgart 21 project on the basis of the quarterly reporting from the Management Board, which was accompanied by a review from the auditors and an engineering firm, and, in a separate meeting, advised in detail on the further development of reporting to the Supervisory Board and the committee. In its December meeting, the committee also discussed in detail the budget and capital expenditure plan submitted and the mid-term planning of DB Group. The situation of another major capital expenditure project – the S21 section of the Berlin S-Bahn (metro) – was submitted for separate review and discussed in detail by the committee. The committee also continued to address updates in corporate governance and the internal control system necessitated by the Accounting Law Modernization Act (Bilanzrechtsmodernisierungsgesetz; BilMoG). The Audit and Compliance Committee also received regular information on compliance-related investigations and internal audit findings. In addition, the committee discussed the hiring of the auditor for the financial statements and the progress of the auditing process for the reporting period. The committee also received information on economically significant individual circumstances, such as on the vehicle situation at DB Regional (once again taking up an issue that had already been considered in 2018), the changes in staffing requirements and availability, staff management key indicators, and questions on IT governance, the IT project portfolio and cybersecurity. The Chairman of the Audit and Compliance Committee was in regular contact with the Management Board and the external auditor, and reported regularly and in detail on the committee's work to the full Supervisory Board.

In the year under review, the Personnel Committee held four regular meetings and two extraordinary meetings or telephone conferences to prepare Management Board-related matters for discussion by the Supervisory Board, and discussed questions regarding compensation for the members of the Management Board, and prepared the corresponding resolutions for the Supervisory Board as a result.

The Mediation Committee established in accordance with section 27 (3) of the Co-Determination Act (Mitbestimmungsgesetz; MitbestG) did not have occasion to meet in the year under review.

Corporate governance

During the year under review, the Management Board and Supervisory Board of DB AG again considered the further development of corporate governance. In a Cabinet decision on July 1, 2009, the Federal Government adopted the Public Corporate Governance Code (PCGK). The PCGK sets out the essential provisions of applicable law governing the management and monitoring of non-listed companies in which the Federal Republic of Germany holds a majority stake, while outlining the internationally and nationally acknowledged principles of good and responsible corporate governance. The Supervisory Board of DB AG dealt with the application of the PCGK within DB Group and adopted the necessary resolutions.

Annual financial statements

The annual financial statements and management report of DB AG, as prepared by the Management Board, and the consolidated financial statements and Group management report for the period ending on December 31, 2018 were audited and awarded an unqualified audit opinion by PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (PwC), the auditor appointed by resolution of the Annual General Meeting. The auditor also reviewed the risk management system as part of the annual audit of the financial statements, noting no objections.

The auditors' report was reviewed by the Audit and Compliance Committee in its meeting held on March 22, 2019, and was discussed in full at the Supervisory Board's financial statements meeting held on March 27, 2019 in the presence of the auditors who signed the audit reports. The auditors reported on the salient audit findings and were available to answer questions. The Supervisory Board concurred with the audit findings.

The Supervisory Board reviewed the annual financial statements and management report of DB AG, the consolidated financial statements and Group management report for the year under review, and the proposal for the disposition of profit, noting no objections. The DB AG annual financial statements for the 2018 financial year were approved and thereby adopted.

The auditor additionally reviewed the report on relationships with affiliated companies prepared by the Management Board. The auditors issued an unqualified audit opinion and reported on their audit findings.

The Supervisory Board also reviewed this report, raising no objections concerning the Management Board's concluding declaration contained in the report or the result of the audit conducted by PwC.

Changes in the composition of the Supervisory Board and the Management Board

In the reporting period, the following changes were made in the Management Board and Supervisory Board of DB AG:

Martin Seiler took up his position as member of the Management Board responsible for Human Resources and Legal Affairs on January 1, 2018. Alexander Doll took up his position as member of the Management Board responsible for Freight Transport and Logistics on April 1, 2018. Both Board members were appointed previously in 2017. Since January 1, 2019, Alexander Doll has been managing the Finance, Freight Transport and Logistics Board division of DB Group, following the merging of the finance functions previously managed by the Board division of the CEO with the business units of the Freight Transport and Logistics division.

Prof. Dr. Dr. Utz-Hellmuth Felcht resigned his mandate on the Supervisory Board of DB AG and position as Chairman of the Supervisory Board as of the end of March 31, 2018. Following his resignation from the Federal Ministry of Transport and Digital Infrastructure (Bundesministerium für Verkehr und digitale Infrastruktur; BMVI), the secondment of former Secretary of State Michael Odenwald to the Supervisory Board of DB AG was terminated with effect from the end of April 10, 2018. He was appointed member of the Supervisory Board of DB AG during the extraordinary Annual General Meeting on April 10, 2018 with effect from April 11, 2018 and succeeded Prof. Felcht; and in the extraordinary meeting of the Supervisory Board of DB AG on April 17, 2018, he was elected Chairman of the Supervisory Board of DB AG for the duration of his term.

As successor to former Secretary of State Michael Odenwald, Secretary of State Guido Beermann (BMVI) was seconded to the Supervisory Board of DB AG with effect from April 11, 2018. In the context of his resignation from the Federal Ministry of Economics and Energy (Bundesministerium für Wirtschaft und Energie; BMWi), Parliamentary State Secretary Uwe Beckmeyer resigned from the Supervisory Board of DB AG with effect from April 30, 2018. His position on the Supervisory Board of DB AG was succeeded by Parliamentary Secretary of State Oliver Wittke (BMWi) with effect from July 31, 2018. Dr. Michael Frenzel and Dr. Jürgen Großmann both resigned their mandates on the Supervisory Board of DB AG with effect from the end of July 18, 2018. Their successors, Eckhardt Rehberg (Member of the Federal Parliament) and Stefan Müller (Member of the Federal Parliament), were elected as members of the Supervisory Board of DB AG at the extraordinary Annual General Meetings of September 20, 2018 and November 20, 2018 respectively. Ludwig Koller resigned his Supervisory Board mandate with effect from July 31, 2018. As successor, Jürgen Knörzer was appointed as a member of the Supervisory Board by judicial decision of the Regional Court of Charlottenburg (Amtsgericht Charlottenburg) with effect from September 11, 2018.

The Supervisory Board thanks the departing members of the Supervisory Board for their committed and constructive support of the company.

The Supervisory Board would also like to thank the Management Board, the employees and the works council representatives of DB AG and affiliated companies for their achievements in the year under review.

Berlin, March 2019

For the Supervisory Board

Michael Odenwald
Chairman of the Supervisory Board
of Deutsche Bahn AG

Corporate Governance report

GRI
102-16
102-18
↓

Corporate governance rules are intended to ensure good, responsible, value-focused corporate management. On July 1, 2009, the Federal Government adopted the Public Corporate Governance Code (PCGK) regulating the principles of good corporate and investment management. The PCGK sets out the essential provisions of applicable law governing the management and monitoring of non-listed companies in which the Federal Republic of Germany holds a majority stake, while outlining the internationally and nationally acknowledged principles of good and responsible corporate governance. The objective of the PCGK is to make the corporate management and oversight of companies more transparent and easier to understand as well as to establish more precisely the role of the Federal Government as a shareholder in such companies. Concurrently, the intention is to increase awareness of good corporate governance.

We are convinced that good corporate governance is fundamental to the success of DB Group. Our aim is to sustainably increase the enterprise value so as to promote the interests of customers, business partners, investors, employees and the public, while maintaining and expanding trust in DB Group.

Statement of compliance

The Management Board and Supervisory Board of DB AG jointly state:

“Since the last statement of compliance was published on March 21, 2018, DB AG has complied with the recommendations adopted by the Federal Government on July 1, 2009 concerning the PCGK, with the exception of point 3.3.2 (the insurance deductible when taking out D&O liability insurance for the Supervisory Board). DB AG will continue to comply with the recommendations of the PCGK in the future, with the exception mentioned above until a decision is reached concerning deductibles for the Supervisory Board.”

Cooperation between the Management Board and Supervisory Board

As a German Aktiengesellschaft (joint stock corporation), DB AG is subject to a two-tier management and monitoring structure in the form of the Management Board and Supervisory Board. These two bodies are strictly segregated in terms of both their membership and their competencies. The Management Board manages the company solely on its own joint responsibility. The Supervisory Board monitors the activities of the Management Board and is responsible for appointing members to, and dismissing members from, the Management Board.

In the interests of optimum company management, we see it as very important for the Management Board and the Supervisory Board to maintain continuous dialog with each other and to work together efficiently and in an atmosphere of mutual trust for the benefit of the company. The Management Board provides the Supervisory Board with regular, prompt, comprehensive information on all matters relevant to the company, particularly those concerning planning, business development, risk position and risk management, as well as the internal control system.

An overview of the **members of the Management Board and of the Supervisory Board 🗋 247 ff.** of DB AG, including the mandates they hold, is provided in the Notes to the consolidated financial statements.

Management Board

The Management Board manages the company solely on its own joint responsibility. It is required to safeguard the interests of the company and is committed to achieving the sustainable growth of enterprise value. It specifies the business goals and defines the strategies to be implemented in order to attain these targets. The Management Board is responsible for making decisions on all matters of fundamental and key importance for the company.

Martin Seiler took up his position as member of the Management Board responsible for Human Resources and Legal Affairs on January 1, 2018. Alexander Doll took up his position as member of the Management Board responsible for Freight Transport and Logistics on April 1, 2018. Both Board members were appointed previously in 2017. Since January 1, 2019, Alexander Doll has been managing the Finance, Freight Transport and Logistics Board division of DB Group, following the merging of the finance functions previously managed by the Board division of the CEO with the business units of the Freight Transport and Logistics division.

The Management Board of DB AG therefore continues to consist of six divisions. In addition to the Board division of the CEO, the Management Board is also responsible for the "Human Resources and Legal Affairs," "Digitalization and Technology," "Passenger Transport," "Finance, Freight Transport and Logistics," and "Infrastructure" Board divisions.

Management Board members must discuss any conflicts of interest with the Supervisory Board immediately and must also provide their colleagues on the Management Board with information about any such conflicts. There were no conflicts of interest during the year under review.

Supervisory Board

The Supervisory Board advises and monitors the Management Board in its management of the company.

In line with the requirements of the Co-Determination Act (Mitbestimmungsgesetz; MitbestG), the Supervisory Board of DB AG consists of 20 members, of whom ten members are shareholders' representatives and ten members are employee representatives. Some of the shareholders' representatives are seconded to the Supervisory Board and some are elected at the Annual General Meeting. The employees' representatives on the Supervisory Board are elected in line with the requirements of the Co-Determination Act.

The Chairman of the Supervisory Board of DB AG is Michael Odenwald as of April 17, 2018, following the resignation of the previous Chairman, Prof. Dr. Dr. Utz-Hellmuth Felcht as of the end of March 31, 2018. The personal or business **relations of individual members of the Supervisory Board of DB AG** 🗋**236** are given in the Notes to the consolidated financial statements.

Supervisory Board members must immediately disclose any conflicts of interest with the Supervisory Board and must also provide the Supervisory Board with information about any such conflicts. In the reporting period, no such incidents arose.

Transactions of fundamental importance and other Management Board decisions with a major impact on the business operations and on the assets, financial or income situation of DB Group require the authorization of the Supervisory Board. The Management Board reports to the DB Supervisory Board on the development of business and the position of DB Group at least once every quarter. The Management Board also reports to the Supervisory Board regularly on all measures implemented within DB Group that are intended to ensure compliance with laws and corporate regulations. In addition, the tasks of the Supervisory Board include the auditing and approval of DB AG's annual financial statements and the auditing of DB AG's management report, the consolidated financial statements, and the DB Group management report. The Supervisory Board also monitors the accounting process, the effectiveness of the internal control system, the risk management system and the internal audit system, as well as the process of auditing the annual financial statements.

In addition, the Chairman of the Supervisory Board is in regular contact with the Management Board and particularly the Chief Executive Officer to discuss company strategy, business development and risk management. The Chairman of the Supervisory Board receives regular reports from the Chief Executive Officer on all events that are of key importance for assessing the company's situation and development, as well as for its management.

There were no consultancy agreements or other comparable service agreements or contracts for services between the members of the Supervisory Board and DB AG in the year under review.

Supervisory Board committees

In order to enable it to carry out its monitoring activities to the best of its abilities, the Supervisory Board of DB AG has made use of the option of setting up further committees in addition to the Mediation Committee, which has to be set up in accordance with the Co-Determination Act, and has set up an Executive Committee, an Audit and Compliance Committee and a Personnel Committee. An overview of the **committee members** 🗋**249** can be found in the Notes to the consolidated financial statements. Details of the **work performed by the individual committees** 🗋**33 f.** in the year under review are included in the report of the Supervisory Board. 🚀**Details of the functions of the individual committees** can be found on our Web site.

GRI 405-1

Share of women on the Management Board and Supervisory Board

Five women currently serve on the Supervisory Board of DB AG. A target of a 30% share of women on the Supervisory Board of DB AG was set, with a deadline of June 30, 2022.

One woman currently serves on the Management Board of DB AG. A target of a 30% share of women on the Management Board of DB AG was set, with a deadline of June 30, 2022.

At the other management levels of DB AG, the following targets have been set (deadline December 31, 2020): at the first management level below the Management Board a 25.5% share of women, and at the second management level below the Management Board a 28.6% share of women.

Transparency

All important information regarding the consolidated and annual financial statements, the interim report, the financial calendar and information on security transactions subject to a reporting obligation can be found on our **Web site.** In addition, we provide regular information on current developments within the framework of our investor relations activities and corporate communication.

Risk management

Good corporate management also encompasses a responsible approach to the risks and opportunities arising in connection with business operations. The early identification and limitation of business risks is therefore of paramount importance to the Management Board and the Supervisory Board.

The Management Board is responsible for ensuring adequate risk management and monitoring it within the company, and for continuously improving both. The Accounting Law Modernization Act (Bilanzrechtsmodernisierungsgesetz; BilMoG) precisely defines the responsibilities of the Supervisory Board with regard to monitoring theaccounting process and ensuring the effectiveness of the internal control system, the risk management system and the internal audit system. For the Supervisory Board to be able to discharge this responsibility, it must be provided with suitable information based on which it can form an opinion on the adequacy and effectiveness of the systems. Regular reports are made to the Audit and Compliance Committee concerning the adequacy and effectiveness of the internal control system. In addition, the Management Board reports to the Audit and Compliance Committee regarding risks of major importance to the Group companies and the handling of these risks by the Management Board. It also controls whether the early warning system for risks meets the requirements of section 91 (2) of the Stock Corporation Act (Aktiengesetz; AktG).

Compliance

Compliance is an integral component of the corporate and leadership culture in DB Group. To us, compliance means ensuring our business activities comply with the relevant laws and regulations that apply to them.

Our compliance activities focus on preventing and consistently combating corruption and other corporate crime. Mandatory compliance policies serve to protect DB Group, our employees and our executives. Increasing awareness among our employees and executives remains of great importance, because only risk-aware employees can recognize risks and successfully avoid or, at least, minimize them.

The compliance work of DB Group includes the early detection of compliance risks as well as the introduction of relevant countermeasures. This work includes conducting compliance programs, constant communication and process improvements.

Additional information on the subject of **compliance** can be found in the **Notes to sustainability 253 f.** and on our Web site.

Accounting and auditing

On March 21, 2018, the Annual General Meeting of DB AG appointed PwC, Berlin, as auditor for the 2018 financial year. The Audit and Compliance Committee prepared the proposals of the Supervisory Board regarding the election of the auditor and, following the election of the auditor by the Annual General Meeting, defined the key audit aspects in conjunction with the auditor. Once again this year it was agreed with the auditor that the Chairman of the Audit and Compliance Committee will be notified immediately of any possible reasons for exclusion or prejudice that emerge in the course of the audit. It was also agreed that the Chairman of the committee will be notified immediately by the auditor of any separate findings and any irregularities in the statement of compliance.

Efficiency audit of the Supervisory Board

The Supervisory Board regularly monitors the efficiency of its activities. An efficiency audit is carried out every two years. The efficiency audit was last carried out in 2017.

Compensation report

The compensation report outlines the compensation system and lists the individual compensation of the members of the Management Board and the Supervisory Board.

The compensation system of the Management Board

The compensation system for the Management Board of DB AG aims to provide appropriate compensation to the Management Board members in accordance with their duties and areas of responsibility, while at the same time directly taking into account the performance of each Management Board member and the success of the company.

The appropriate level of compensation is reviewed regularly using a comparison process. This review examines the level of Management Board compensation both in comparison to the external market (horizontal appropriateness) and in comparison to other levels of compensation within the company (vertical appropriateness). If the review shows a need to adjust the compensation system or the level of compensation, the Personnel Committee of the Supervisory Board submits its proposals in this regard to the Supervisory Board for approval. The appropriateness of Management Board compensation was last reviewed in 2016.

Compensation components

The total compensation for Management Board members consists of a fixed salary, a performance-linked annual director's fee and a long-term incentive plan based on multi-year figures. Total compensation also includes benefit commitments, other commitments and ancillary benefits.

The fixed salary is cash compensation linked to the financial year. It is based on the scope of responsibility and the experience of each Management Board member. The individually defined fixed income is paid out in 12 equal installments.

The annual performance-linked director's fee is calculated using a factor linked to the achievement of business targets (director's fee factor) and the achievement of individual targets (performance factor). There is a multiplicative link between the director's fee factor and the performance factor. The director's fee factor depends on the level of success in attaining the business targets set out by corporate planning. The parameters for this relationship are in equal parts operational success (operating income after interest) and return on capital employed (ROCE).

The performance factor reflects success in meeting personal targets. The target fee corresponds to the annual director's fee paid to the Management Board member in a "normal financial year" for fully meeting performance targets (meeting targets). If the Group results do not meet planned objectives, the director's fee factor can, in extreme cases, be reduced to zero, regardless of personal performance. This means that the annual director's fee can be zero. If planned objectives are sufficiently exceeded and the maximum performance factor is also achieved, the annual director's fee can amount to 2.6 times the target director's fee.

The business and personal targets of the Management Board members are decided by the Supervisory Board each year based on recommendations from the Personnel Committee, and are then agreed in writing with the Management Board members.

Together with the corporate planning adopted by the Supervisory Board, the personal targets form the basis for assessing the annual director's fee. This means that all of the key parameters for total compensation are established at the beginning of the financial year.

At the end of each financial year, the director's fee and the personal performance factor are calculated for each Management Board member based on Group results. Target income is attained if both business goals and individual targets have been met in full. The final decision on this matter is made by the Supervisory Board and is prepared by the Personnel Committee.

The methodology for calculating the long-term incentive plan for the Management Board has been changed since the 2017 tranche. The basis for assessing the long-term element of compensation is now a customary return on capital, based on equity value. Aligning the long-term incentive to the equity value rewards sustainable increases in the value of the company. After the end of each planning period, the increase in value achieved in comparison to the company's original planning and the payment factor are calculated. The term of each plan is four years. The payment amount for the long-term incentive plan has an upper limit and can vary between 0% and 250%. Claims from the long-term incentive plan are inheritable.

The Management Board members are entitled to an appropriate severance package if their contract is terminated before the contractually stipulated termination date, provided that the Management Board member was not personally responsible for the termination through his or her actions. The severance package is based on the remaining term of the contract, the agreed target salary and, where applicable, the pension benefits already owed by DB AG for the remainder of the contract.

In accordance with the recommendations of the PCGK, a severance payment cap is included in all contracts of DB AG Management Board members. This cap means that payments made to a Management Board member due to premature termination of Management Board duties without good cause as defined by section 626 of the Civil Code (Bürgerliches Gesetzbuch; BGB) cannot exceed the value of two years' salary, including variable compensation components, and must not provide compensation for more than the remaining term of the employment agreement.

Management Board members do not receive any additional compensation for mandates exercised in control bodies of Group companies or affiliated companies.

Group-wide compensation system for executives

The compensation system for executives aims primarily to closely link compensation to the sustainable success of the company in the sense of the business success of the integrated rail system and of the Group as well as the alignment of all divisions toward this objective.

The annual director's fee for executives and employees not subject to wage agreements in the integrated rail system are structured as profit shares. Personal goals are then agreed with executives as part of a regular process. The achievement of the goals is regularly included in the assessment when making decisions on increases to the fixed salary.

If the executives are members of bodies of DB AG subsidiaries, the respective subsidiary's Supervisory Board is responsible for discussing the personal goals if possible until the end of a financial year. Where applicable, the respective decision-making will take place after the DB AG Supervisory Board meeting in which the mid-term planning and the targets for the Group's Management Board are adopted. This chronological sequence of the handling of personal goals in the Supervisory Boards of the subsidiaries is due to the Group structure of DB AG.

In some cases, given the regulatory requirements, DB Netz AG is subject to separate regulatory requirements which take even greater account of the business success of DB Netz AG.

Pension entitlements

The Supervisory Board of DB AG has set a general retirement age of 65 for Management Board members. After leaving the company, Management Board members are entitled to pension payments. At the latest upon reaching the age of 65, a Management Board member is entitled to a lifelong pension if the term of employment ends due to permanent invalidity, or if the contract is terminated before the agreed termination date or is not extended, where the Board member was not responsible for the termination, or if the Management Board member refuses to continue the contract under the same or more beneficial conditions.

The system governing benefit commitments to Management Board members was amended in 2017. Members appointed to the Management Board for the first time in 2017 and thereafter receive a defined benefit commitment under which a capital stock is saved up for the Board member for the duration of their employment and paid out when they reach retirement age. An annual amount derived as a specific percentage of fixed salary is paid into the defined contribution plan.

Company pension commitments for Management Board members already in office are based on a percentage of the basic salary depending on the length of time that the Management Board member has been with the company. Pension commitments include lifelong retirement and surviving dependent benefits. There is no lump-sum payment option.

In addition to Management Board member contracts entered into before January 1, 2009, a reinsurance policy was concluded to cover company pension benefits.

Contractual ancillary benefits

The contractual ancillary benefits for members of the Management Board include a company car with driver for business and personal use, a personal BahnCard 100 First free travel card and standard insurance coverage. A housing allowance is provided for second homes where these are required for business purposes. Where these monetary benefits cannot be granted on a tax-free basis, they are taxed as non-monetary benefits for which the Management Board members are fully responsible. Management Board members, like any other member of the Group's executive staff, can choose to take part in the company's deferred compensation program.

The members of the Management Board are covered by liability insurance against financial losses incurred due to DB AG's business operations (D&O insurance). In the year under review, this insurance was designed as a Group insurance policy with the deductible provided for under law; it provides coverage for financial losses that may occur during the performance of Management Board activities. The insurance coverage of the existing D&O insurance policy is valid for a period of five years after the termination of activities as a member of the Management Board.

Compensation for the 2018 financial year

The director's fee for the previous financial year is due at the end of the month in which the company's Annual General Meeting takes place.

The members of the DB AG Management Board will receive the following compensation for their work during the year under review:

Total compensation of the Management Board (€ thousand)	Fixed compensation	Compensation in connection with the early termination of service	Variable compensation			Other[3]	Total[4]
			Short-term[1]	Long-term (payment in 2018)	Long-term[2]		
Incumbent members of the Management Board of DB AG as of Dec 31, 2018							
Dr. Richard Lutz	900	–	892	–	107	17	**1,809**
Ronald Pofalla	650	–	560	–	185	31	**1,241**
Berthold Huber	650	–	560	–	185	28	**1,238**
Martin Seiler	400		394		225	28	**822**
Alexander Doll	300	–	256	–	206	22	**579**
Prof. Dr. Sabina Jeschke	400	–	394	–	142	16	**810**
Total	**3,300**	**–**	**3,055**	**–**	**1,049**	**143**	**6,498**

Individual figures are rounded and therefore may not add up.

[1] Subject to the decision of the Supervisory Board.

[2] Long-term variable compensation refers to additions to and releases of provisions for long-term incentives (LTI).

[3] Monetary benefits accruing from travel discounts, usage of company cars, and insurance and housing allowances.

[4] Total without long-term variable compensation.

In the year under review, no members of the Management Board of DB AG received benefits or promises of benefits from a third party with regard to their activities as a member of the Management Board.

Pension benefits for the Management Board for the 2018 financial year

During the year under review, an amount totaling € 1,222 thousand was added to the pension provisions.

Additions to pension provisions (€ thousand)	2018
INCUMBENT MEMBERS OF THE MANAGEMENT BOARD OF DB AG AS OF DEC 31, 2018	
Dr. Richard Lutz	236
Ronald Pofalla	0
Berthold Huber	471
Martin Seiler	202
Alexander Doll	136
Prof. Dr. Sabina Jeschke	177
Total	**1,222**

Pension provisions for former members of the Management Board 236 are shown in total in the Notes to the consolidated financial statements.

Compensation of the Supervisory Board for the 2018 financial year

Compensation of the Supervisory Board of DB AG was most recently regulated by the Annual General Meeting resolution of September 21, 2010. In addition to being reimbursed for their cash outlays and the value-added tax due on their compensation and cash outlays, the Supervisory Board members each receive fixed annual compensation of € 20,000, plus performance-linked annual compensation. The performance-based compensation is calculated based on the relationship between operating profit (EBIT) as disclosed in the consolidated financial statements for the financial year compared to the previous year's figures, and the attaining of specific operational performance figures. Performance-based compensation is limited to a maximum of € 13,000. The Chairman of the Supervisory Board receives twice this amount, while his deputy receives one and a half times the above figure. This compensation is increased by a quarter for every position held on a committee by the individual Supervisory Board member. This compensation increases by 100% for the Chairman of the Executive Committee and the Chairman of the Audit and Compliance Committee, and by 50% for the Chairman of the Personnel Committee. This does not include membership or chairmanship of the committee that is formed under the terms of section 27 (3) MitbestG.

In addition, the members of the Supervisory Board of DB AG receive an attendance fee of € 250 for each meeting of the Supervisory Board and its committees at which they are present. The members of the Supervisory Board also have the choice between a personal BahnCard 100 First and five free train tickets.

The members of the Supervisory Board are covered by liability insurance against financial losses incurred due to DB AG's business operations (D&O insurance). This insurance is designed as a Group insurance policy with no deductible and provides coverage for financial losses that may occur during the performance of Supervisory Board activities. There is also a Group accident insurance policy in place for members of the Supervisory Board. The relevant company pays the premiums for these policies.

Supervisory Board members who have only been members for part of the respective financial year receive a twelfth of the total compensation for each month or part of a month of their membership. This rule also applies to the increase in compensation for the Chairman of the Supervisory Board and his or her deputy and to the increase in compensation for membership and chairmanship of a Supervisory Board committee.

Compensation is paid after the conclusion of the Annual General Meeting that votes to ratify the Supervisory Board's activities in the previous financial year.

Taxes due on compensation received, including the personal BahnCard 100 First and the five free train tickets, are the individual responsibility of each Supervisory Board member.

Supervisory Board members currently hold no shares in the company, nor do they hold options entitling them to purchase shares in the company.

Subject to the approval of the activities of the Supervisory Board by the Annual General Meeting on March 27, 2019, the members of the Supervisory Board of DB AG will receive the following compensation for their work during the year under review:

	Annual compensation 2018				
Total compensation of the Supervisory Board (€ thousand)	**Fixed compensation**	**Variable compensation**	**Attendance fee**	**Ancillary fee**	**Total**
INCUMBENT MEMBERS OF THE SUPERVISORY BOARD OF DB AG AS OF DEC 31, 2018 [1]					
Michael Odenwald	61.7	18.5	3.8	0.9	**84.8**
Alexander Kirchner	40.0	12.0	3.5	7.2	**62.7**
Guido Beermann	26.3	7.9	2.8	–	**36.9**
Jürgen Beuttler	20.0	6.0	2.0	–	**28.0**
Dr. Ingrid Hengster	20.0	6.0	1.8	–	**27.8**
Jörg Hensel	25.0	7.5	3.0	0.9	**36.4**
Dr. Levin Holle	20.0	6.0	3.0	–	**29.0**
Klaus-Dieter Hommel	20.0	6.0	1.3	7.2	**34.5**
Prof. Dr. Susanne Knorre	20.0	6.0	2.0	7.2	**35.2**
Jürgen Knörzer	6.7	2.0	0.8	–	**9.4**
Dr. Jürgen Krumnow	40.0	12.0	3.0	0.9	**55.9**
Kirsten Lühmann	20.0	6.0	2.0	0.9	**28.9**
Heike Moll	20.0	6.0	1.8	7.2	**35.0**
Stefan Müller	3.3	1.0	0.5	–	**4.8**
Eckhardt Rehberg	6.7	2.0	0.8	–	**9.4**
Mario Reiß	20.0	6.0	1.8	7.2	**35.0**
Regina Rusch-Ziemba	25.0	7.5	2.5	7.2	**42.2**
Jens Schwarz	30.0	9.0	3.5	7.2	**49.7**
Veit Sobek	20.0	6.0	2.0	7.2	**35.2**
Oliver Wittke [2]	10.0	3.0	–	–	**13.0**
MEMBERS WHO LEFT THE SUPERVISORY BOARD OF DB AG DURING THE YEAR UNDER REVIEW [1]					
Uwe Beckmeyer	6.7	2.0	0.8	–	**9.4**
Prof. Dr. Dr. Utz-Hellmuth Felcht	17.5	5.3	1.0	–	**23.8**
Dr. Michael Frenzel	11.7	3.5	0.8	–	**15.9**
Dr. Jürgen Großmann	11.7	3.5	1.0	–	**16.1**
Ludwig Koller	11.7	3.5	0.5	–	**15.7**
Compensation for further Supervisory Board mandates in DB subsidiaries					**90.3**
Total					**865.0**

Individual figures are rounded and therefore may not add up.

[1] Some Supervisory Board members state that their compensation is to be donated to the Hans Böckler Foundation in line with the directive of the German Trade Union Confederation (Gewerkschaftsbund).

[2] Parliamentary Secretary of State Wittke did not accept the compensation for his activities as member of the Supervisory Board.

There are no pension obligations for members of the Supervisory Board.

The members of the Supervisory Board did not receive any compensation in the year under review for any personally provided services.

Sustainability management

Materiality through focusing

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We are working on issues that are material to us and our stakeholders. The ↗**2016 Stakeholder Survey** allowed us to identify key sustainability topics and to continuously pursue them further in the year under review. The impacts of the topics both within and outside DB Group are analyzed.

The central ambitions of our stakeholders are focused on ensuring DB Group is fit for the future and securing its performance capabilities, as well as addressing topics relating to security and the environment. Thus, the measures implemented as part of the **Group programs 🗋70 ff.** on the one hand and the **competence center Digitalization 🗋78** and the **change management division 🗋85** on the other hand included the material topics of **digitalization 🗋77 ff., innovation 🗋77 ff.** and **performance capability 🗋85 f.** Our Group programs and the **Agenda for a Better Railway 🗋66 ff.** also take up these material topics. The material topic **security 🗋257** was addressed through increased activities in the areas of employee security and cybersecurity. The fact that the fourth employee survey took place in the year under review underlines the importance that we place on **employee satisfaction 🗋87.**

We respond to the issue of climate protection, which is classified as a material topic, in our **climate targets 🗋90.**

DB Group's target system 🗋67 forms the basis for the selection of the key figures relevant to management. Further topics are reported based on an internal assessment of their significance. This includes the topics of **social commitments 🗋47 f.** and **supply chains 🗋258,** which are given as high a priority as climate protection in our sustainability portfolio. Furthermore, the topics of **air quality control 🗋264** and **nature conservation 🗋264 f.** were reported on.

Material sustainability topics 2018	**Key figures (relevant to management)**	**Allocated UN Sustainable Development Goals**	**Management approach**	**Measures**
Product quality ▶ Customer satisfaction ▶ Punctuality ▶ High-performance infrastructure ▶ Customer and transport information ▶ Interlinked mobility	▶ Customer satisfaction index (🗋75) ▶ Punctuality (🗋76) ▶ Facilities quality (🗋160) ▶ Supply reliability (🗋163)	SDG 9, SDG 11	🗋74	🗋68, 70 ff., 76 f., 77 ff., 108 f., 116 f., 121 f., 123, 128, 143, 148 ff., 155, 158 f., 257
Digitalization and innovation	–	SDG 9, SDG 11	🗋77 f.	🗋69 f., 70 ff., 79 ff., 86, 117, 122, 128, 137, 142 f., 147, 155, 159, 163, 165
Profitability ▶ Profitability ▶ Financial stability	▶ ROCE (🗋104) ▶ Redemption coverage (🗋106)	SDG 8	🗋103 f.	🗋94 ff.
Employee satisfaction	▶ Employee satisfaction index (🗋87) ▶ Follow-up workshops implementation rate (🗋87)	SDG 8	🗋83	🗋85 ff., 87, 116, 120, 127, 136 f., 142, 154, 158, 162, 257, 259, 260 ff.
Employer attractiveness	▶ Rank in Germany (🗋83)	SDG 8	🗋82 f.	🗋83 ff., 85 ff., 260 ff.
Climate protection	▶ Specific greenhouse gas emissions compared to 2006 (🗋90) ▶ Share of renewable energies in the DB traction current mix (🗋90)	SDG 12, SDG 13	🗋89	🗋90 f., 116, 118, 121, 122, 127, 128, 137, 142, 143, 154, 158, 162 f.
Noise reduction	▶ Noise remediated tracks (🗋92) ▶ Quiet freight cars in operation at DB Cargo in Germany (🗋92)	SDG 3, SDG 11	🗋89	🗋92 ff., 137, 155, 263
Security	–	SDG 3, SDG 9	🗋257	🗋257
Performance capability	–	SDG 8, SDG 9	🗋83	🗋75, 85 f., 108 f., 142

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Our commitment to the UN Sustainable Development Goals

The 17 Sustainable Development Goals (SDGs) were adopted in September 2015. The 17 SDGs cover environmental, social and economic objectives of sustainable development. As such, the United Nations has agreed on a World Future Treaty that defines a common Agenda 2030. DB Group is expressly committed to the ten principles of the **United Nations Global Compact (UNGC) 🗋269.** For this reason, we also feel committed to the objectives of the Agenda 2030 and the SDGs.

Achieving the ambitious objectives for 2030 will require the commitment and cooperation of all stakeholders. We have reinforced the dialog with our stakeholders regarding the SDGs and will continue down this path. The Federal Government's national sustainability strategy forms an important basis for this discussion, having been agreed at the beginning of 2017 on the basis of the SDGs and amongst those updated in June 2018 during the 19th legislative term of the German Parliament.

In 2016 we prioritized six SDGs in which our products, offers and sustainability management could make the greatest impact:

UN SUSTAINABLE DEVELOPMENT GOALS

In the year under review, various communication measures were implemented to promote DB Group's engagement with the SDGs. For example, photography exhibitions such as the Canon Young People program were displayed in stations. Long-distance transport timetables were printed with individual SDGs in order to promote passenger awareness that making their journey by railway and taking advantage of other mobility offers such as CleverShuttle actively contribute to climate protection and smart mobility.

An SDG photo competition on the theme of "We are creating sustainable cities" was held for our employees, in order to inform them of the 17 goals for sustainable development.

Sustainability organization

The Chief Sustainability Officer is responsible for the issue of sustainability. The CEO, Dr. Richard Lutz, holds this office. Responsibility for the content of the sustainability theme falls to the specialist departments and business units. The sustainability management and future research department, which is incorporated into the corporate strategy division, is responsible for coordination and further development of this theme. One of its areas of focus in this respect is to strengthen governance.

Sustainability is an important element of our strategy and forms the basis of our entrepreneurial trade. The range of issues dealt with by sustainability management covers all dimensions of sustainability. In terms of the interactions between economic, ecological, social and, increasingly, digital elements, we will actively continue to embed sustainability as an integral part of DB Group's business processes as much as possible. Topics such as digital responsibility, sustainable cash investments, technical innovations for sustainability in supply chains, and employee development may be held up as exemplary sustainability management practice that is both proactive and opportunity-based.

Sustainability ratings

Outside perspectives give us an important indication of where we stand and where we can improve. Our ambition is to rank very highly in the key sustainability ratings.

Sustainability ratings	**2018**	2017	2016	Scale
ISS-oekom – Corporate Rating	B–	B–	B–	A+ to D–
MSCI ESG Research	A	AA	AA	AAA to CCC
CDP – Climate Scoring	A	A	A–	A to F
EcoVadis	Gold (67)	Gold	Gold	Gold (62 to 100) Silver (46 to 61) Bronze (37 to 45)

- ▶ In its Corporate Rating 2018, the rating agency **ISS-oekom** assessed DB Group's sustainability activities. DB Group has achieved a "B–" as in previous years, and with this rating has reached top position in the field of transport and logistics. This is reflected in the "Prime" status, which is awarded to companies that are leaders in their industries.
- ▶ DB Group has been assessed since 2013 in the ESG Rating from **MSCI ESG Research**. In 2018, it received a rating "A" in the "Road & Rail Transport" field, this rating placing it at the forefront of the field.

- Again, the international rating organization **CDP** awarded DB Group the best rating of “A” in its Climate Scoring 2018 and ranked us the most environmentally friendly railway company in Europe. This rating places DB Group in the very top group, numbering 137 companies worldwide.
- **EcoVadis** again awarded DB Group Gold status. The areas of environment and working conditions and sustainable purchasing received particularly positive assessments.

Membership of sustainability networks

GRI 102-12 102-13

- Our commitment to **the UNGC 269** is underscored by the annual presentation of our progress along the ten principles of the Global Compact (Communication on Progress). In addition, we are committed to the German Global Compact Network (Deutsches Global Compact Netzwerk; DGCN), the German multi-stakeholder forum to implement and promote the principles of the UNGC, as well as the **SDGs 44.** DB Group is a member of the Steering Committee of the DGCN.
- As a signatory of the **German Sustainability Code (Deutscher Nachhaltigkeitskodex; DNK),** we also provide a clear signal in Germany for the transparent presentation of our sustainability performance.
- DB Group is an active member of **econsense,** the Forum for Sustainable Development of German Business. Together with some 35 German companies and organizations with global operations, we are committed to initiating and developing solutions for sustainable economic activity. We are particularly committed to the issues of strategic direction, SDGs and digitalization.
- In addition, DB Group has been a member of **The Conference Board** since the year under review and plays an active role in the issue of sustainability. Founded in 1916, The Conference Board is an independent global economic association working in the public interest. It aims to help managements to conquer the largest challenges for companies and better serve society.
- As part of the fight against corruption, DB Group is a corporate member of **Transparency International.** Our anti-corruption efforts involve the regular exchange of experience regarding systems and procedures for the fight against corruption.
- DB Group is a founding member of the **Railsponsible** sector initiative. This initiative aims to create transparency regarding social, environmental and socioeconomic effects along the entire supply chain and to support suppliers in improving their sustainability practices. Other significant European companies in the field are members of the initiative.

Social acceptance resulting from open stakeholder dialog

Clear guidelines for stakeholder dialog

GRI 102-42 102-43 102-40

The acceptance of stakeholders is an essential prerequisite of our sustainable business success. For this reason, we are committed to holding collaborative dialog with stakeholders as partners and working with all **stakeholder 46** groups in an atmosphere of mutual trust. Our **stakeholder charter** provides the foundation and guidelines for all dialog activities. It serves as the basis for an open discussion of our stakeholders’ expectations and for fostering cooperation, so that we can learn from each other and develop viable solutions.

Regular dialog with policymakers and the public

Being one of the largest mobility and logistics services providers, DB Group attracts a lot of public and political attention in Germany. We have an important role in advancing the railway system in Germany and Europe. We are therefore sought after as a dialog partner in public discussions, and also actively engage in dialog with the entire sector. We establish our own transport policy positions at the national and international level in dialog with political and administrative institutions as well as parties, associations and relevant scientific areas. DB Group seeks to use logical arguments to contribute to a constructive debate process. The following memberships have particular relevance for political dialog at a national and international level:

- Pro-Rail Alliance (Allianz pro Schiene; ApS)
- Mobility and Transport Services Association (Arbeitgeber- und Wirtschaftsverband Mobilität und Verkehr; Agv MoVe)
- Comité international des transports ferroviaires (CIT)
- Community of European Railway and Infrastructure Companies (CER)
- German Transport Forum (Deutsches Verkehrsforum; DVF)
- Union Internationale des Chemins de Fer (UIC)
- Association of German Transport Companies (Verband Deutscher Verkehrsunternehmen; VDV)

The principles of the stakeholder charter also apply to dialog with policymakers. In addition, we have set strict internal standards for participation in political processes, which are summarized as “Group Principles Ethics Code of Conduct” and which are binding Group-wide.

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Stakeholders	**Key topics in 2018**	**Key dialog formats**
Passengers	▶ Schedule alterations and improvements ▶ Punctuality ▶ Digitalization (WiFi/route agent) ▶ Journey comfort/customer service/improvements to passenger information ▶ Integration of local fare calculation into the DB Navigator ▶ Vehicle modernization/Idea Train ▶ New vehicles (S-Bahn (metro) in Munich and Berlin)	▶ Passenger advisory board ▶ Online dialog platforms/social networks ▶ Customer dialog (telephone)/customer enquiries ▶ Dialog forum with BahnCard 100 customers/top customer events ▶ Own dialog events and customer events ▶ Trade fairs and product conferences (Innotrans 2018) ▶ Train or bus labs ▶ Labs (d.lab, DB mindbox)
Business customers	▶ Punctuality and reliability ▶ Digitalization ▶ Customer dialog ▶ Innovative freight cars ▶ Green logistics ▶ Implementation of Railway of the Future @ DB Cargo	▶ Direct exchange with customers, including trade fairs and discussions ▶ Own dialog and customer events ▶ Customer workshops ▶ Annual customer satisfaction survey at DB Schenker and DB Cargo ▶ Surveys, e.g. monthly satisfaction check
Policymakers/regulators	▶ Infrastructure development and financing ▶ Digitalization ▶ Germany in sync (Deutschland-Takt) ▶ Intermodal competition ▶ Future of financing public transport ▶ Regulatory frameworks ▶ Climate protection in transport	▶ Parliamentary evenings ▶ Association activities ▶ Participation in discussion rounds and expert presentations ▶ Participating in dialogs arranged by the BMVI ▶ Our own events, such as competition symposiums or fireside evenings
Employees	▶ Collective bargaining negotiations ▶ Employee satisfaction ▶ Talent acquisition ▶ Demographic preparedness/generation management ▶ Digitalization ▶ Knowledge management	▶ Targeted group employer branding campaigns ▶ Generational contracts as a sponsorship model ▶ DB Planet (exchange platform) ▶ DB Lernwelt (central learning platform) ▶ Employee-specific conferences and network formats ▶ Worldwide employee survey
Investors	▶ Competitive situation/regulatory environment ▶ Indebtedness ▶ Development of factor costs ▶ Profitability	▶ Roadshows ▶ One-on-ones ▶ Direct contacts ▶ Investor relations Web site
Suppliers	▶ Quality/qualification ▶ Innovation/digitalization ▶ Antitrust law ▶ Ombudspersons ▶ Supplier management ▶ Cooperation in mutual trust ▶ Meeting deadlines ▶ Reviews of business partners ▶ Sustainability in the supply chain	▶ Innotrans (including supplier rating, Supplier Innovation Award) ▶ Direct supplier development meetings ▶ Innovation workshops ▶ Roundtables and specialist presentations on compliance-dialog with business partners ▶ Railsponsible industry network ▶ Dialogs on competition ▶ Innovation partnerships ▶ Dialogs regarding supplier sustainability assessments ▶ Supplier days in the product areas
Associations/specialist public	▶ Infrastructure development and financing ▶ Energy policy framework ▶ Noise remediation ▶ Compliance/anti-corruption ▶ Climate protection in transport	▶ Annual conference of the Association of German Transport Companies (VDV) ▶ Environmental Forum workshop ▶ High-level talks and exchanges on special topics with passenger, environmental and industry associations and the public transport authorities ▶ Member of the Administrative Board of the German Compliance Institute (Deutsches Institut für Compliance e. V.; DICO) ▶ Corporative member of Transparency International Deutschland e. V.
Media	▶ Railway of the Future ▶ Employer attractiveness ▶ Digitalization projects ▶ Upgrade of digital services ▶ Quality in the existing network ▶ New climate targets, species protection and noise remediation activities	▶ Press Web site ▶ Press trips and dates ▶ Background discussions ▶ Interviews ▶ Social media (Facebook, Twitter)

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Passenger Advisory Board makes a valuable contribution

Since its founding, the Passenger Advisory Board has made valuable contributions from its 30 meetings and numerous workshops and surveys, and it has also successfully initiated measures. The Passenger Advisory Board, which is comprised of 30 private customers of DB Group, convenes for ordinary meetings twice a year, and it provides support and advice on numerous projects in all areas related to customers. In the year under review, the Passenger Advisory

Board continued to be involved from an early stage in issues surrounding the strategic direction of various projects. The key aim of this collaboration was to improve passenger information during widespread distributions and to optimize the catering offer on board trains.

Main activities

Sixth DB Sustainability Day

“Sustainable Cities Require Smart Products” was the leading theme of the **sixth DB Sustainability Day** green **no. 113** on March 1, 2018 in Berlin. Throughout one entire day, the Group Management Board spoke with 190 invited representatives of various stakeholder groups about ideas and expectations for better quality of life in cities and a contribution to a society that is fit for the future. Among the guests of the event were Olaf Scholz (former First Mayor of the Free and Hanseatic City of Hamburg), Clare Jones (Chief Customer Officer of what3words) as well as representatives of the cities of Copenhagen, London and Darmstadt.

Hosting of the 22nd Environmental Forum

Every year, DB Group invites representatives of environmental associations and representatives from industry, science and politics to the public dialog. Already in its 22nd year, the Environmental Forum took place on June 13–14, 2018 in Berlin with participants from WWF, Environmental Action Germany (Deutsche Umwelthilfe) and Nature and Biodiversity Conservation Association (Naturschutzbund Deutschland e.V.; NABU) as well as the environmental policy representatives of the parliamentary factions. In podium discussions and workshops, representatives of DB Group and of the economy discussed the transition away from fossil fuels. Prof. Dr. Sabina Jeschke gave an overview of the digitalization of the tracks. Prof. Dr. Ernst Ulrich von Weizsäcker, Co-President of the Club of Rome, spoke on the subject of environmental policy challenges in the transport sector.

Summit meeting with environmental associations

Since 2000, DB Group management has been meeting with the management of environmental associations to examine current environmental topics. In the year under review, representatives from Greenpeace, WWF, Deutscher Umwelthilfe, NABU, BUND (Friends of the Earth Germany) and VCD (Transport Club Germany) came together in Berlin in October 2018. Together with the Chairman of the DB Management Board, Dr. Richard Lutz, and member of the DB Management Board, Prof. Dr. Sabina Jeschke, the heads of the associations discussed, amongst other issues, the challenges of climate protection and adapting to climate change using predictable vegetation control.

Responsibility and social commitments

GRI 102-16 ↓

DB AG created **Deutsche Bahn Foundation gGmbH** in order to bring its charitable commitments and the **DB Museum 48** together under one roof and to fulfill its social responsibility even more effectively. Deutsche Bahn Foundation seeks to co-create an equitable society, and improve social cohesion. It combines railway history with signaling future directions. For this reason, it operates the DB Museum, is committed to integrating those on the edges of society, and supports voluntary work. The mission statement “Ensuring a connection. Creating links. Setting the course.” summarizes its task.

Language as the key to integration

GRI 102-12 ↓

Deutsche Bahn Foundation, together with the **Reading Foundation (Stiftung Lesen),** is heavily involved in reading and language support. One expression of this shared commitment is the nationwide reading aloud day and the annual reading aloud study. The reading aloud kits, filled with reading materials specifically chosen for the target groups, have been presented to more than 8,500 institutions in recent years. Deutsche Bahn Foundation publishes three **reading aloud stories for children** online every week for free.

Strengthening volunteering

In the year under review, Deutsche Bahn Foundation for the third time supported DB employees who donated their free time to charitable organizations. We were able to increase the promotional volume of the employee program, which is re-tendered annually, to € 115,000. These funds go directly to concrete projects that benefit charitable organizations. An independent jury determines the amount to be donated. About 500 projects have been supported since the beginning of the program.

To recognize and reward societal engagement, Deutsche Bahn Foundation was for the first time one of the main supporters of the German Engagement Prize (Deutscher Engagementpreis), along with the Federal Ministry for Families, Seniors, Women and Youth, and the German Television Lottery.

Humanitarian aid

GRI 102-12 ↓

Deutsche Bahn Foundation works closely with the Railway Station Missions (Bahnhofsmissionen) and their supporting institutions, which provide support to over 100 stations in Germany, and in doing so engages with the area around the stations. Together with the Conference for Church Railway Station Mission (Konferenz für Kirchliche Bahnhofsmission), Deutsche Bahn Foundation carries out an annual tender on a specific theme, which allows Railway Station

Missions across the country to apply for funds for needs-based projects and actions to benefit the guests of the Railway Station Missions. In 2018, it supported lower-threshold training programs on the subject of Learning for Life, which allowed long-standing guests of the Railway Station Missions to develop new perspectives on life.

In 2018, Deutsche Bahn Foundation's video interpreting pilot project and the Conference for Church Railway Station Mission made it possible for assistance to be given to non-German-speaking guests in a total of 60 languages at six locations, with the aim of improving the quality of advice they received.

Deutsche Bahn Foundation also supported an ambulatory clinic near the Berlin Central Station, where people without health insurance could receive medical assistance at any time of the year and free of charge. Beyond that, Deutsche Bahn Foundation offered structured discussions to those with mental and psychological issues through "Courage Providers at the Station" at the Berlin Central Station. The Courage Providers gave help, and where necessary connected them to the social and psychiatric health system in Berlin.

Promoting mental health

GRI 102-12 ↓

Deutsche Bahn Foundation, together with the **German Depression Aid Foundation (Stiftung Deutsche Depressionshilfe)** has been involved since 2014 in working to destigmatize depression as a mental illness in society. As part of this, it supports the German Federation against Depression (Deutsches Bündnis gegen Depression) which operates in more than 80 cities and regions. In the year under review, the construction in Leipzig of the country's first depression research center that is treatment-based and independent of the pharmaceutical industry was successfully agreed. The Germany Depression Barometer (Deutschland-Barometer Depression) study from the Foundation German Depression Aid (Deutsche Stiftung Depressionshilfe) and Deutsche Bahn Foundation in the year under review investigated the key topic of relationships, which resonated particularly strongly in the media.

Learning through engagement

GRI 102-12 ↓

Training posts remain unfilled because many high school students are not aware of what jobs are available and which would suit them. Deutsche Bahn Foundation and the Learning through Engagement Foundation (Stiftung Lernen durch Engagement) developed the "Appointed heroes – learning through engagement for career opportunities" ("Berufene Helden – Lernen durch Engagement für Chancen im Beruf") project to intervene in this area. Trained teachers assist their high school students in planning and implementing a project based on their own social environment that encourages career orientation and/or skills needed for training. The students organize and reflect on their projects, acquiring specific training competences and skills, thereby laying the foundation for their future professional lives.

DB Museum – living history

The **DB Museum** has three sites. The permanent exhibition at the Nuremberg Museum of the history of the railway in Germany was completed in June 2018 with the opening of the "Germany of the two Railways" ("Im Deutschland der zwei Bahnen") section. Successful temporary exhibitions such as the "TEE meets Vindobona" ("TEE trifft Vindobona") and "Classified Railway" ("Geheimsache Bahn") and an education and events program supplemented the offer. Here, the museum's educational program has been completely revised and expanded. Surprising offers such as Open Locomotive Days (Tage der offenen Loks), escape rooms, theatrical performances or kids' rallies allowed it to reach new target groups.

With a total of more than 600 locomotives and cars across Germany, the DB Museum possesses one of the most important vehicle collections in the world. Most of the locomotives and trains from the German Federal Railway (Koblenz) and the East German National Railway (Halle) on display are freely accessible. Both branches of the museum receive significant support from former employees as part of the BSW&EWH Foundation Family (Stiftungsfamilie BSW&EWH).

In the year under review, the DB Museum successfully increased its visitor number by 2% to over 218,000 visitors. The sites at Koblenz (+11%) and Halle (+39%) were able to achieve particularly significant growth, whilst the Nuremberg Museum experienced a slight drop as a result of construction work (−2.5%).

! HELP FOR HOMELESS CHILDREN

In 2018, Deutsche Bahn Foundation unveiled the traveling exhibition "decoupled" ("entkoppelt") at the Berlin Central Station. Twenty large-format photographs and texts draw attention to the issue of youth homelessness. Every year in Germany, up to 2,500 young people end up on the streets, or experience hidden homelessness as so-called sofa-hoppers. Together with the Off Road Kids Foundation, Deutsche Bahn Foundation helps to prevent runaways and sofa-hoppers from having to live on the streets. Beginning in 2018, through the online platform and the first virtual Streetwork-Station in Germany, at-risk youths can access qualified contact and advice points all over Germany for the first time. Here, young people can discuss problems with street advisors and get help anonymously.

Group management report

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- International provider of mobility and logistics solutions
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- DB Long-Distance shows positive development
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Fundamentals

DB Group

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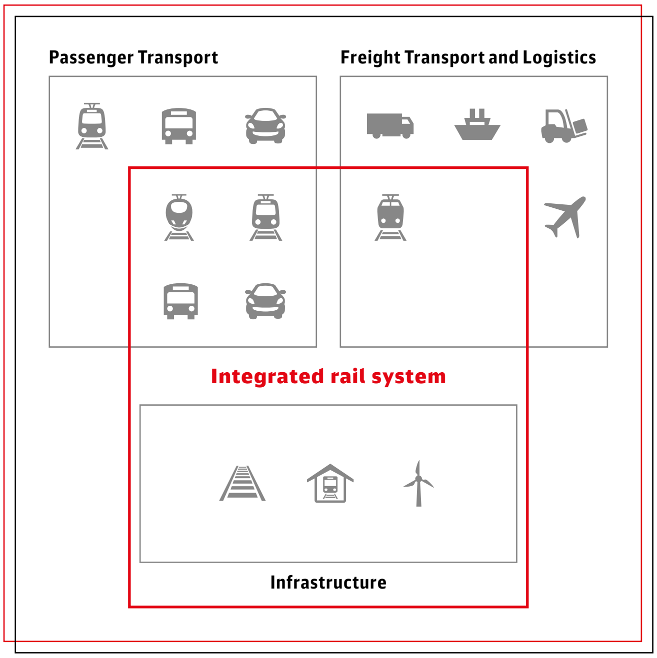
Deutsche Bahn Group (DB Group) is an international provider of mobility and logistics services operating globally in more than 130 countries. Its headquarters are in Berlin. DB Group has more than 318,000 employees, with almost 40% employed outside Germany. We design and operate the transport networks of the future. By integrating transport and rail infrastructure, as well as through the economically and environmentally intelligent linking of all modes of transport, we move both people and goods.

BASIC UNDERSTANDING OF DB GROUP



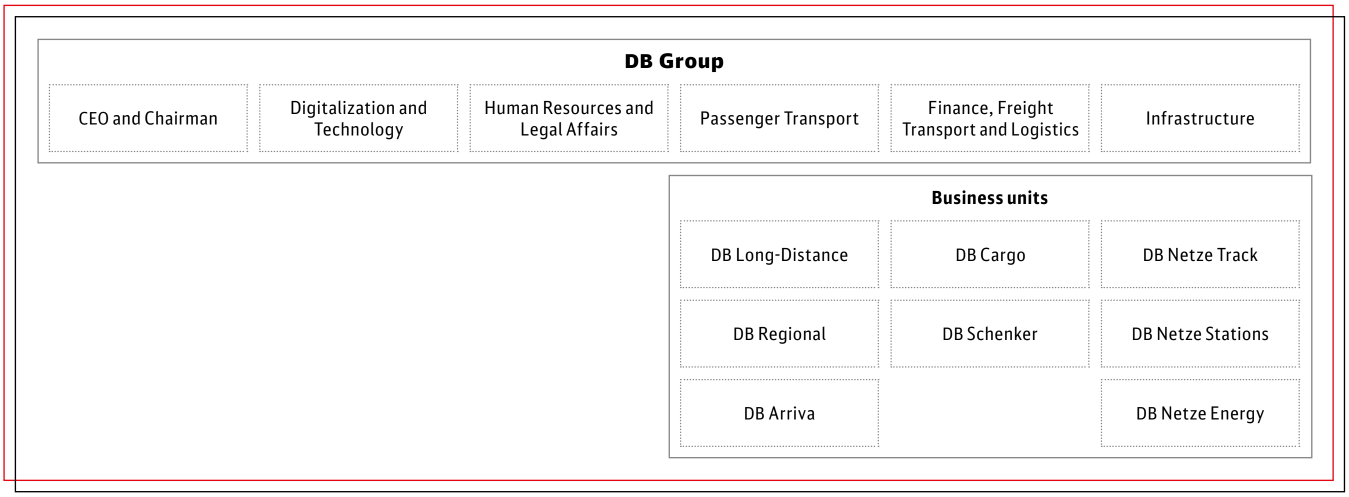
In passenger transport, we transport about 12.8 million people each day on our trains and buses throughout Europe. In freight transport and logistics, our networks transport over 255 million t of goods per year by rail, and over 106 million shipments by road. Our global networks move more than 1.3 million t of air freight and nearly 2.2 million TEU of ocean freight. At about 33,000 km, our rail network in Germany is Europe's longest. We are also one of Germany's largest energy providers.

The main components of our integrated rail system are our passenger transport activities in Germany, our rail freight transport activities, the operating service units and the rail infrastructure companies (RIC).

Deutsche Bahn AG (DB AG) is the parent company of DB Group. It has been a stock corporation under German law since it was founded in 1994 and accordingly has a dual management and control structure comprising a Management Board and a Supervisory Board. It is wholly owned by the Federal Republic of Germany (Federal Government).

Within DB Group, DB AG manages all the business units in its function as an operating management holding company and supports the business units via various central group functions (including legal, corporate development, Group controlling and finance and treasury) and **administrative service units 🗋53.** In addition, operating service units, as legally independent DB AG subsidiaries, primarily provide services for intra-Group customers. These include DB Systel GmbH, DB Sicherheit GmbH, DB Services GmbH and DB Kommunikationstechnik GmbH. The DB Group RIC are legally independent companies with separate balance sheets and statements of income, and thus fulfill all unbundling requirements under European and national law. There is also a functional unbundling, which guarantees the independence of decisions by DB Netz AG on infrastructure access and charges. Reliability and stability form the basis of a high quality of the infrastructure. The essential cornerstones for profitable business are sustainable financing of the existing infrastructure and its expansion as required. The **Performance and Financing Agreement (Leistungs- und Finanzierungsvereinbarung; LuFV) 🗋234f.** contributes significantly to ensuring the maintenance of the existing network.

DB GROUP ORGANIZATION CHART



As of January 1, 2019

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Corporate Governance report

The **Corporate Governance report** 🗋**36 ff.** is part of this Group management report.

GRI 102-10 ↓

Changes in the composition of the Supervisory Board and the Management Board

The **changes in the composition of the Supervisory Board and the Management Board** 🗋**35** are presented in the Supervisory Board report.

Service and financial relationships in DB Group

Within DB Group, because of strong operational interconnections and dependencies, there are service and financial relationships between the management holding company DB AG and the individual business units, as well as between business units.

These can be organized into four groups:

- Operational business relationships between two companies, which may arise through the use of infrastructure, such as when DB Regio AG uses the rail network of DB Netz AG, for which it pays train-path usage fees.
- Business relationships with the Group management: DB AG is responsible for providing services for the operating companies such as central purchasing, which organizes and controls the procurement process for trains.
- Group financing: DB AG performs and consolidates the financing function in DB Group. In this context, DB AG obtains funds on the capital market through its financing subsidiary **Deutsche Bahn Finance GmbH (DB Finance)** 🗋**102** and transfers these funds as loans to the Group companies.
- Domination and profit and loss transfer agreements: In Germany, domination and profit and loss transfer agreements are used for the formation of a consolidated tax group that allows companies to offset tax losses against profits. In DB Group, the company ultimately subject to tax in Germany is DB AG.

The arm's length principle serves as the fundamental characteristic of business relationships. This means that compensation is always based on market prices. In DB Group this applies to charges for operational business relationships, service units and Group financing. Intra-Group customers pay the same fees for utilizing train-paths as non-Group customers. The prices of intra-Group services are reviewed regularly on the basis of market analyses to ensure that they are in line with the market. The terms of financing transactions are based on prevailing market conditions in the financial and capital markets.

Group functions 🗋**53** perform controlling and monitoring functions. These services are generally not charged. By contrast, the services of the **service units** 🗋**52 f.** are generally charged to the intra-Group recipients of the service, in relation to the service provided.

The reasons and motivation for aligning the costs of business relationships in DB Group with market conditions are as follows:

- A value-based corporate management approach can only be successful if it is embedded at all levels in DB Group. This, in turn, can only be achieved through business relationships at fair market conditions. Success and failure must be transparent in order to facilitate economic control.

- The RIC are legally required to provide their services without discrimination. The Federal Network Agency (Bundesnetzagentur; BNetzA) assesses whether prices are in line with the market. Prices are transparent for everyone.
- Alignment of business relationships with market conditions is also both necessary and stipulated for tax reasons and from the perspective of minority shareholders.

The effects of domination and profit and loss transfer agreements within DB Group on profits and payments are not qualified as business relationships, but are a consequence of DB Group's status as a domestic contract group and the associated rights and obligations of all the incorporated domestic companies.

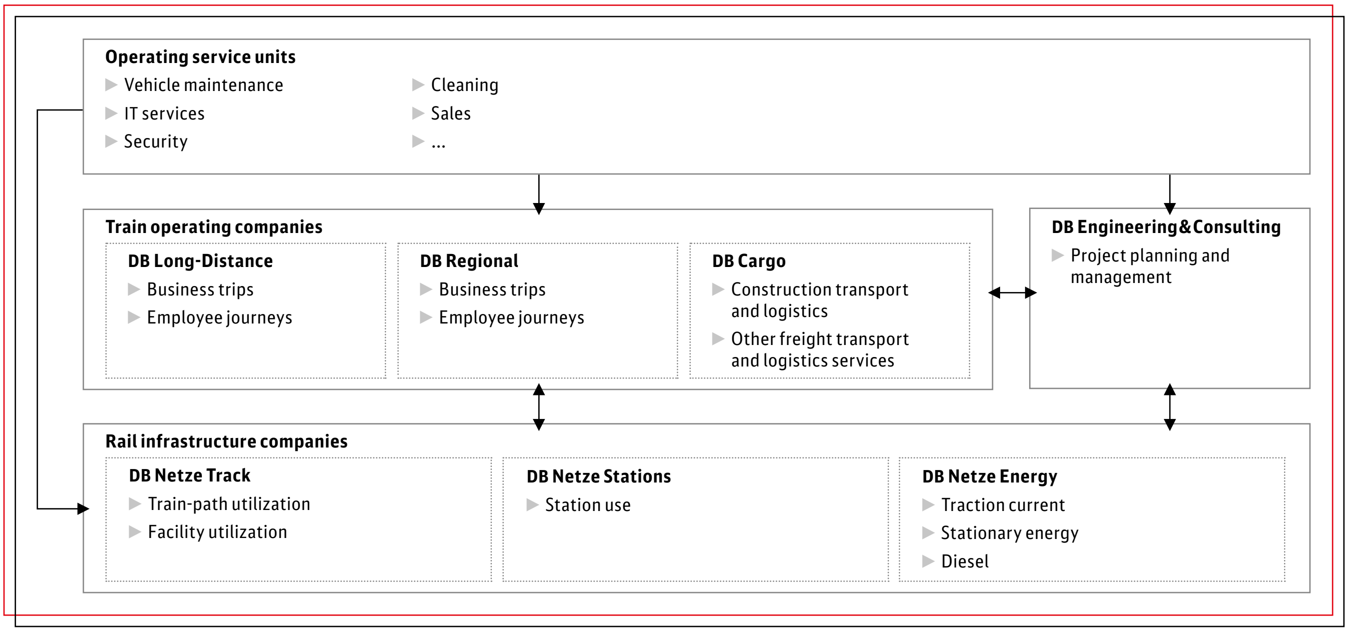
Operational business relationships

The most extensive operational business relationships result from the use of the track infrastructure and the procurement of energy. As for non-Group customers, fees for the use of infrastructure are based on the published pricing systems (train-path pricing system, facility pricing system and station pricing system). The procurement of energy includes the purchase of traction energy (diesel fuel and traction current) as well as electricity for stationary facilities (such as switch heaters and train preheating systems).

The main effects of the intra-Group settlement of business relationships between the various DB Group business units for services rendered in infrastructure utilization are illustrated in the table below:

Intra-Group business relationships from infrastructure utilization in 2018 (€ million)	DB Long-Distance	DB Regional	DB Arriva	DB Cargo	DB Schenker	DB Netze Track	DB Netze Stations	DB Netze Energy	Subsidiaries Other
Train-path utilization	-984	-2,312	-1	-382	–	+3,675	–	–	+4
Use of local infrastructure	-31	-53	–	-138	–	+225	-0	-2	-1
Station use	-101	-592	-0	–	–	+6	+686	–	+1
Energy charges	-344	-631	+2	-271	-0	-135	-73	+1,493	-41

SIGNIFICANT OPERATIONAL BUSINESS RELATIONSHIPS (INTEGRATED RAIL SYSTEM)

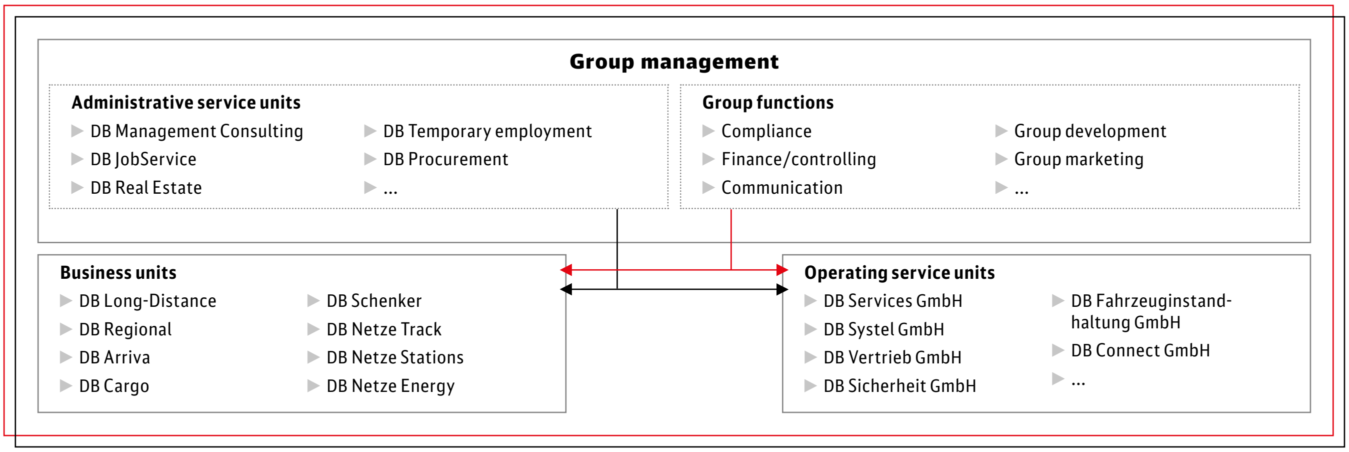


← Significant intra-Group relationships.

Business relationships with Group management

DB Group incorporates various Group and service functions that, with a few regulatory exceptions, perform functions for the entire DB Group. The costs of Group functions are not passed on to the business units (no Group charges). Expenses for administrative service units are only passed on if these result from direct service relationships with the business units or expenses that are directly attributable to a specific service. This applies in particular to expenses on the use of real estate, central purchasing and technology services and for centrally consolidated insurance expenses.

BUSINESS RELATIONSHIPS WITH GROUP MANAGEMENT



← Group functions, not directly attributable and not charged.

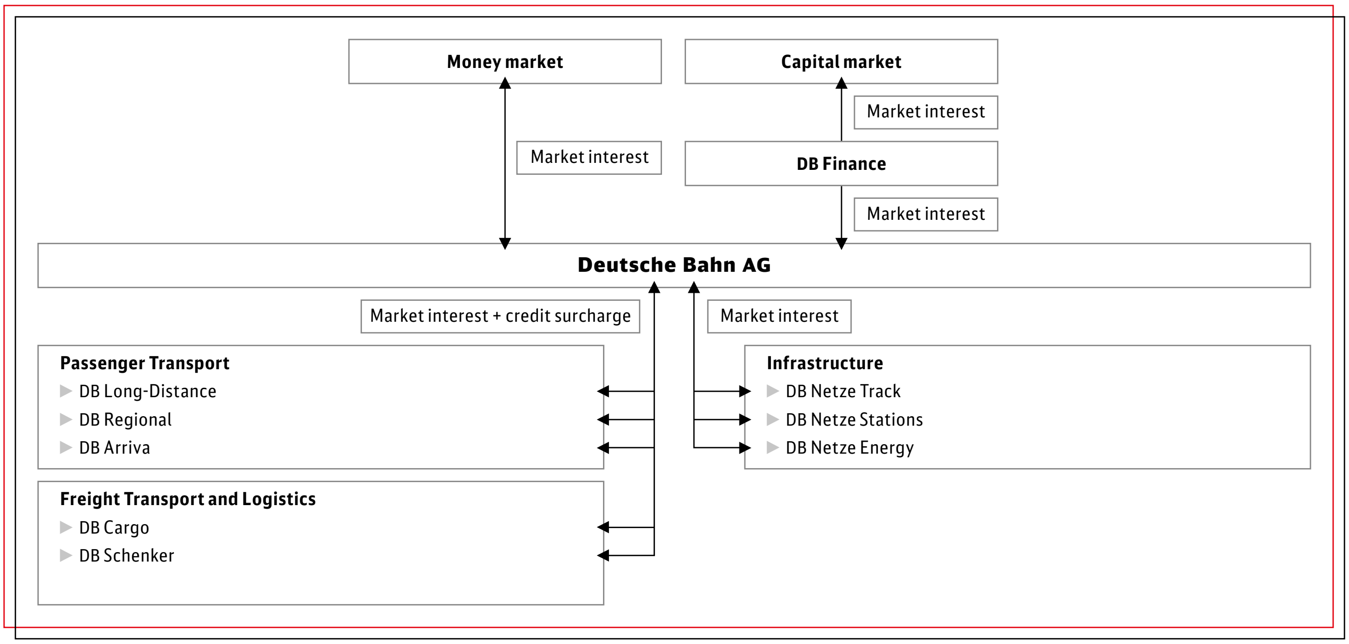
← Service units, attributable and charged in case of direct business relationships.

The Group job market performs an important central function. DB JobService GmbH employs staff whose jobs in German companies of DB Group have been lost, with the aim of finding another intra-Group job for them. It therefore plays a key role in the functioning of the intra-Group labor market. DB Zeitarbeit GmbH provides companies in DB Group with temporary employees.

Group financing

Group Treasury at DB AG is responsible for DB Group **financing 🗋 101 ff.** This ensures that all Group companies are able to borrow and invest funds at optimal terms and conditions. Before obtaining funds from external sources, we first conduct intra-Group financing transactions. When borrowing external funds, DB AG takes out short-term loans in its own name, whereas long-term capital is generally obtained through the Group's financing company, DB Finance. The funds are passed on to the Group companies as short-term credit lines, which can be utilized as part of cash pooling on internal current accounts and/or through fixed short-term credit, or in the form of long-term loans. This concept enables us to pool risks and resources for the entire Group. Further advantages arise from the consolidation of our know-how, realized synergy effects and minimized refinancing costs.

GROUP FINANCING



The Group Treasury operates as an in-house bank, although it provides a service function rather than acting as a profit center. The Group companies have business relationships with the Treasury (foreign exchange transactions, cash pooling, cash investments and taking up of loans). The conditions are agreed at arm's length at market rates. This means that the agreed interest rates are in line with those quoted by the banks if they were not intended to yield a profit. Market rates also mean that credit margins are adjusted in line with creditworthiness: the credit margin for the infrastructure companies is largely in line with the credit margins of DB AG in the financial and capital market. The credit margins for non-infrastructure companies are higher and are based on an internal metric-based credit rating and the credit margins quoted on the capital market.

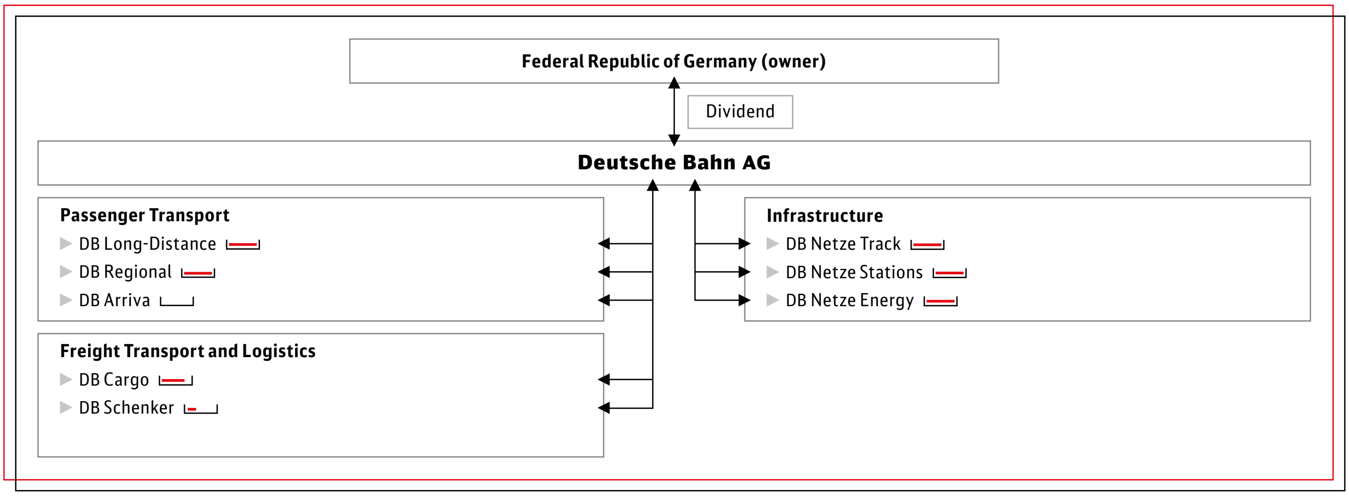
Consolidation of the Group finance function in DB AG gives us a uniform market presence in the financial and capital markets, and allows us to achieve economies of scale and cost benefits. In addition, central Group financing enables us to adequately monitor financial transactions and achieve comprehensive risk management.

Domination and profit and loss transfer agreements

Profit transfers and losses offset do not constitute business relationships. On the contrary, the profit and loss transfer agreement stipulates that the amount of profit distributed or the sum required to offset losses is not reset every year but is calculated automatically. The flow of capital is based on the shareholder's right to profits or obligation to compensate any losses. Notwithstanding this, DB Group ensures that Group companies have sufficient equity despite the obligation to offset potential losses generated by individual companies within the Group.

Investors are only willing to provide capital if amortization and returns are ensured. A purely debt-based financing model is not commercially viable, as it is associated with high risks. Profits are essential for maintaining DB Group's capital expenditure capacity. Profits generated are either retained or distributed to the Federal Government as the sole shareholder. The share of profit retained in DB Group increases the capital expenditure and borrowing capacity.

DOMINATION AND PROFIT AND LOSS TRANSFER AGREEMENTS



← Profit transfer/capital measure.

▬ Tax group in Germany; integration into DB AG profit and loss transfer agreement with the automatic transfer of profits respectively compensation for losses.

▭ Partial tax group in Germany.

⎵ No tax group in Germany.

Cash flows between DB AG and DB infrastructure companies (€ million)	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	**2018**	**Total**
FROM PROFIT AND LOSS TRANSFER AGREEMENT																				
DB Netz AG	+790	+181	+548	+324	+183	+260	+212	-146	-338	-768	+44	-307	-197	-66	-217	-81	-280	-390	-509	**-757**
DB Station&Service AG	+70	-0	+251	-37	-55	-69	-52	-90	-190	-150	-141	-155	-160	-169	-188	-203	-176	-186	-190	**-1,890**
DB Energie GmbH	-34	-2	-29	-43	-47	-44	-111	-106	-18	-91	-38	+38	-62	+37	-39	-51	-35	-59	-12	**-746**
FROM CAPITAL INCREASES BY DB AG																				
DB Netz AG	-	-	-	-	-	+600	-	-	-	-	+620	-	-	+5	-	-	-	+1,000	-	**+2,225**
DB Station&Service AG	-	-	-	-	-	-	-	+286	-	+28	+111	+14	-	-	-	-	-	-	-	**+439**

(+) Inflow of capital to subsidiary.

(-) Outflow of capital to DB AG.

GRI 102-16

Non-financial Group statement

The CSR Directive Implementation Act (CSR-Richtlinien-Umsetzungsgesetz; CSR-RUG) implementing EU Directive 2014/95/EU (CSR Directive on disclosure of non-financial and diversity information by certain large companies and groups) came into force on April 19, 2017. This must contain information on their business model, on environmental, employee and social affairs, on respect for human rights and on combating corruption. Although DB Group does not fall within the scope of the CSR-RUG, in the previous year we decided to comply with its content voluntarily.

Under our integrated report approach, DB Group already reports fully on all **material sustainability topics 🗋 43.** In order to meet the reporting obligations of CSR-RUG, we have also supplemented the information on legally defined materiality thresholds.

The contents of the non-financial Group declaration in accordance with sections 315b and 315c Commercial Code (Handelsgesetzbuch; HGB) can be found in the relevant chapters of the Group Management Report and were produced in accordance with the **International GRI Standards (core option) 🗋 268 f.,** and taking into account the reporting requirements of the **UNGC 🗋 269.** The information is clearly displayed in the following table.

Content of non-financial Group statement according to section 289c (2) HGB	**DB topics**	**Reference**
Business model	▶ DB Group (🗋 56 f.)	–
Environmental matters	▶ Greenhouse gas emissions (🗋 90) ▶ Renewable energies (🗋 90 f.) ▶ Protecting biological diversity (🗋 264 f.) ▶ Air quality control (🗋 264) ▶ Water consumption (🗋 265)	–
Employee matters	▶ Gender equality (🗋 86 f.) ▶ Working conditions (🗋 260 f.) ▶ Respecting the rights of trade unions (🗋 85) ▶ Safety in the workplace (🗋 257, 🗋 261) ▶ Health protection (🗋 261 f.)	–
Social matters	▶ Dialogue at local and regional level (🗋 45 f.) ▶ Protection/development measures for local communities (🗋 45 f.)	–
Respect for human rights	▶ Preventing human rights violations (🗋 255 f.)	We also report on the subject of respect for human rights in addition to the material topics identified in the stakeholder survey.
Combating corruption and bribery	▶ Instruments for combating corruption and bribery (🗋 254 f.)	We also report on the subject of combating corruption and bribery in addition to the material topics identified in the stakeholder survey.

GRI
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Business model with a clear customer focus

DB Group offers attractive, customer-focused and environmentally friendly mobility, transport and logistics solutions and networks from a single source. We selectively use the possibilities of **digital technologies 🗋77 ff.** to improve our operational and administrative processes, to continually further develop offers for the customer, to integrate new services, and to simplify the customer interface. Our customers are individuals, business customers and contracting organizations in local and regional transport.

The **integrated railway system 🗋50** is at the heart of our business activities. In addition, we are gradually expanding our business portfolio in order to meet our customers' needs more effectively and respond to new market demands.

- Our passenger transport business activities are broadly diversified. They comprise not only bus and rail transport, but also intelligent linkage with other modes of transport such as the car and bicycle. We offer long distance rail passenger transport within Germany and into neighboring countries. Furthermore, we have regional and local transport operations throughout Europe that enable us to benefit from increasing market potential in the bus and rail transport markets.

DB GROUP BUSINESS MODEL

Resources/inputs

- **Employees**
- **Vehicles**
- **Networks and infrastructure**
- **Additional production factors**

▼

Customer segments
- Retail customers
- Business customers
- Contracting organizations

Value proposition
- DB Group offers attractive, customer-focused and environmentally friendly mobility, transport and logistics solutions and networks from a single source.

Customer access and retention
- Direct customer access
- Digital offers
- Customer loyalty programs

Key activities
- **Operating services based on all modes of transport**
- **Looking after customers**
- **Fleet management**
- **Operating and optimizing regional and global networks**
- **Managing interfaces**
- **Delivering additional services close to our core business**

▼

Services/outputs [1]
- **Quantities/volumes**
- **Volume sold**
- **Volume produced**

▼

Outcomes [2]
- **EBIT** 🗋97 ff.
- **Customer satisfaction** 🗋75
- **Punctuality** 🗋76 f.
- **Employee satisfaction** 🗋87
- **Attractiveness as an employer** 🗋83 f.
- **Greenhouse gas emissions** 🗋90
- **Noise** 🗋92 f.

---

[1] Key products and services.

[2] Internal and external consequences and results from business activities and outputs along the entire value-added chain.

- Our business activities in the freight transport and logistics market were moved to an international platform very early on. DB Cargo and DB Schenker operate first and foremost in the business-to-business segment. We offer our customers industry-specific solutions in rail freight, in land transport, in global air and ocean freight as well as in global contract logistics. Covering all relevant modes of transport allows us to offer complex combined logistics services and to make use of synergies in our networks for the benefit of our customers.

As an operator of networks and provider of services in passenger transport, freight transport and logistics, as well as track infrastructure, our economic success is influenced by the general **economic environment 95** and the specific development of the various **relevant markets 58 ff.:**

- Demand for passenger transport is driven first and foremost by the growth of urban areas, the size of the population, the number of people in employment, and real disposable incomes. The competitive situation relative to the car is markedly influenced by the trend in fuel prices.
- Our freight transport and logistics operations depend largely on economic developments. Due to our global networks we monitor the development not only of global gross domestic product (GDP) and world trade, but also of economic growth in the regions, countries, and trade relations in which we have a high market share or in which high growth rates in the exchange of goods can be expected. Customary early-warning indicators of the business climate and of the expectations of purchasing managers are an integral part of our monitoring system.

The market environment of DB Cargo is particularly influenced by the manufacturing industry's production output and the development of the iron, coal and steel, and chemical industries. Furthermore, the cross-border movement of goods within Europe is growing in importance.

- The services of the Infrastructure business units cover important elements of their customers' value-added chains. In this respect, the development of demand is a factor that is largely determined by upstream passenger and freight transport markets. The area of marketing in DB Netze Stations is also important. Consumer trends in the general public are an important factor here, much as they are in general retail in Germany.

The development of the economic and early-warning indicators, as presented above, influences how we manage our market activities and resources. **Opportunities and risks 168 ff.** can therefore be recognized early on, and as a result short-term management activities and long-term positioning can be focused accordingly. At the same time we work systematically on optimizing our operating value drivers.

Operating regional and global transport networks often necessitates a high level of capital employed, long investment cycles and distinctive fixed-cost structures. In this respect, achieving optimal capacity utilization of our networks and systematically developing, integrating, and cost-effectively operating these networks with the efficient use of resources are important to DB Group's economic development. Ensuring and improving service quality for our customers is at the center of our activities. By expanding what we offer our customers, particularly digital services and customer loyalty programs, we intend to gain additional customers in order to realize increasing volumes and economies of scale.

We generally use operating performance data to measure capacity utilization in our networks and our relative shares of the transport markets. In order to determine a relative return, we calculate ratios comparing this performance data with the revenues generated (specific revenues).

With its comprehensive portfolio, DB Group has an effective business model. This allows DB Group to offer services from one single source and means that it operates successfully in all segments of the transport market with its national and international services.

In most of our business units, incoming orders are not a relevant performance indicator, and the majority of the Group's revenues are generated independently of long-term contracts.

DB Regional and DB Arriva are an exception to this rule, together accounting for about one-third of Group revenues. In these business units, the order book in the form of long-term transport contracts entered into with the public transport authorities of Germany's Federal states and franchisers in other European countries constitutes a key performance metric for business development. There are also long-term contractual relationships with customers in DB Schenker's contract logistics line of business, which generates about 6% of Group revenues.

There are five key success factors in the development of DB Group, which are a central component of DB Group's business model:

- Entrepreneurial approach to business: In the course of the German rail reform DB Group has established itself as a commercial enterprise. Particularly worth mentioning in this context are the establishment of a modern and efficient organization and a value-based corporate management approach.
- Integrated Group: As a system integrator in Germany, DB Group optimizes the integrated rail system. In doing so, it serves as an important driving force for technological innovation. The integrated Group structure enables us to achieve positive synergies and align our infrastructure to support efficiency, market orientation and profitability.
- Cross-modal transport solutions: We offer our customers door-to-door mobility and logistics solutions from a single source. We use digital technologies to intelligently link various modes of transport in an economical and environmentally friendly way. In addition, we offer complementary products and services in the freight transport and logistics market.
- International direction: Due to our focus on Germany and Europe in passenger transport as well as our European and global orientation in the areas of freight transport and logistics activities, DB Group has an excellent position in the relevant markets. As a result, we are responding to the increasing demand for cross-border solutions. At the same time, we are best positioned to take advantage of growth opportunities.
- Digitalization: Digitalization and new technologies are changing the face of our core business. We are harnessing digitalization technologies and methods to offer attractive products to our customers. This means, on the one hand, that we are incorporating new transport offers into our product portfolio, such as **on-demand mobility 🗋 79,** and establishing new platforms for our customer interfaces. On the other hand, we support our internal processes using such technologies as artificial intelligence. In order to tap into growth potential and provide a modern offer for our customers, we are establishing an **innovation ecosystem 🗋 69 f.,** consisting of in-house developments, affiliated companies and partnerships.

Development in relevant markets

GRI 102-6 ↓

DB Group provides national and international services. We operate globally and have leading market positions around the world:

Market positions in passenger transport (2017)

No. 2 in European long-distance rail passenger transport
(based on revenues)

1. Société Nationale des Chemins de fer Français (SNCF)
2. **DB Group**
3. Ferrovie dello Stato (FS)
4. Swiss Federal Railways (SBB)
5. Red Nacional de los Ferrocarriles Españoles (RENFE)

No. 1 in European regional rail passenger transport
(based on revenues)

1. **DB Group**
2. SNCF
3. Nederlandse Spoorwegen (NS)
4. FS
5. Go Ahead

No. 4 in European public road passenger transport
(based on revenues)

1. Régie autonome des transports Parisiens (RATP)
2. Transdev
3. SNCF
4. **DB Group**
5. Transport for London

Information for competitors based on business/research reports and internal calculations.

Market positions in freight transport and logistics (2017)

No. 1 in European rail freight transport
(based on tkm)

1. **DB Cargo**
2. Fret SNCF
3. Rail Cargo Group
4. PKP Cargo
5. Mercitalia Rail

No. 1 in European land transport
(based on revenues)

1. **DB Schenker**
2. Dachser
3. DHL
4. DSV
5. Kuehne + Nagel

No. 3 in worldwide air freight
(based on t)

1. DHL
2. Kuehne + Nagel
3. **DB Schenker**
4. Panalpina
5. Expeditors

No. 4 in worldwide ocean freight
(based on TEUs)

1. Kuehne + Nagel
2. DHL
3. Sinotrans
4. **DB Schenker**
5. Panalpina

No. 5 in worldwide contract logistics
(based on revenues)

1. DHL
2. XPO Logistics
3. Kuehne + Nagel
4. CEVA Logistics
5. **DB Schenker**

Information for competitors based on business/research reports and internal calculations.

Passenger transport

In passenger transport our target is to maintain our strong market position in the rail and bus transport market in Germany over the long term, while benefiting from market opportunities in Europe.

Throughout Europe, regional and local transport contracts are being increasingly put out to tender. Through DB Arriva we have operations in the bus and/or rail transport business in 14 European countries. This constitutes a good position for further growth. The liberalization of the European passenger transport markets is still, however, progressing at different speeds across Europe.

Outside Europe a new market for rail operation and maintenance projects is developing, for which international operators are increasingly being sought. This is the task of **DB International Operations 🗋72.**

Germany's passenger transport market shows stable development

Passenger transport market in Germany (% based on volume sold)	Growth rate		Market share	
	2018	2017	**2018**	2017
Motorized individual transport	+0.0	-1.5[1]	84.0	84.3
Rail passenger transport	+3.0	+1.4	8.9	8.5
DB Group	+3.5	+2.6	7.7	7.3
Non-Group railways	+0.5	+5.4	1.2	1.2
Public road passenger transport	+0.0	+2.0	6.3	6.3
DB Group	-3.4	-7.7	0.6	0.6
Air transport (domestic)	-1.0	+0.9	0.9	0.9
Total market	**+0.2**	**+1.3**	**100.0**	**100.0**

Figures for 2017 and 2018 are based on information and estimates available as of February 2019. Market shares for each mode of transport have been rounded.

[1] Reduction due to a methodological adaptation of the German Institute for Economic Research.

The **passenger transport market in Germany 🗋112** showed stable development in 2018:

- Motorized individual transport remains slightly below the level of the previous year.
- Rail passenger transport posted marked growth.
- Public road passenger transport stagnated.
- Air transport decreased slightly.

This was largely due to developments in the prevailing socio-economic conditions, which – though less dynamic – were still positive, as well as to special factors:

- Employment figures and disposable income showed solid growth, but at the same time the cost of fuel rose strongly and inflation increased slightly.
- The price level of flights decreased slightly while rail and long-distance bus prices showed a moderate increase, with car journeys becoming noticeably more expensive.
- Adverse weather caused heavy infrastructure damage and significant transport restrictions.

Marked increases in bus and rail travel in Europe

European passenger transport market (% based on volume sold)	Growth rate	
	2018	2017
Rail passenger transport	+2.0	+4.0
DB Group	+1.9	+4.6

Figures for 2017 and 2018 are based on information and estimates available as of February 2019. Growth rates for each mode of transport have been rounded up or down to the nearest half percentage point.

The **European passenger transport 🗋112 ff.** environment showed positive developments in 2018:

- European rail passenger transport grew significantly by about 2.0%.
- Long-distance bus transport in Europe showed moderate growth, driven largely by the expanded offer of FlixBus.

Employment and real disposable incomes rose moderately in many European states, while annual average fuel prices increased considerably.

Steps toward market liberalization often stimulated European bus and rail transport:

- The French Senate decreed a **rail reform 🗋64,** which includes progressively opening the national passenger transport market to competition. DB Arriva signed a strategic partnership with the French regions on the development of passenger rail transport.
- The Finnish Ministry of Transport and the state-owned railway VR Group signed an agreement on opening the national rail market. In the first stage, vehicle and property companies were hived off and placed under the direct control of the Ministry of Transport.
- Norway awarded its first tendered transport contract in October 2018 to the British company Go Ahead, thus opening the railway market to competition.

Freight transport and logistics

With DB Cargo and DB Schenker, we are positioned in the freight transport and logistics market as one of the world's leading logistics services providers. The demand for international freight transport services is rising further owing to the ongoing shift toward cross-border production structures and flows of goods and the continuing trend for the outsourcing of logistics services. We aim to make use of this opportunity to maintain and/or expand our excellent market positions. DB Cargo is Europe's leading rail freight service operator, with a presence in all major markets. We use our own European production network for this. In this network, national and cross-border transport is conducted in a customer-oriented and environmentally friendly manner. DB Cargo is focused on the automotive, building materials, industrial and consumer goods, chemicals, iron, coal and steel, and combined transport industries.

DB Schenker supports industry and trade through global and integrated logistics, which involves land transport, worldwide air and ocean freight, contract logistics and supply chain management. DB Schenker occupies excellent positions in the automotive, technology, consumer goods, trade fair forwarding, special transport and services for major sporting events.

German road freight transport: still posting above-average growth

German freight transport market (% based on volume sold)	Growth rate		Market share	
	2018	2017	**2018**	2017
Rail freight transport	~ +1.7	+ 0.8	18.7	18.6
DB Group	~ -5.0	-1.6	9.1	9.7
Non-Group railways	~ +9.0	+3.6	9.6	8.9
Road freight transport	~ +3.2	~ +2.4	72.0	70.7
Inland waterways	~ -12.0	+2.2	6.9	8.0
Long-distance pipelines	~ -5.5	-2.8	2.4	2.6
Total market	**~ +1.5**	**~ +2.0**	**-**	**-**

Figures for 2017 and 2018 are based on information and estimates available as of February 2019. The market share for each mode of transport has been rounded.

On the basis of initial, still preliminary assessments, the positive **development of demand in the German freight transport market 133** continued with a further increase in performance in its sixth year. In this regard, it is also important to take into account the statistical corrections performed in the specified period for road and rail freight transport due to the volume sold of trucks in Germany registered abroad having been previously underestimated, as well as due to the expansion of the reporting scope of the Federal Statistical Office of Germany for freight railways active in Germany. These adjustments have led to a deviation from the previous representations.

Above all, the sustained positive economic effects of robust domestic demand and further improvements in international trade increased the need for transport, which put growing pressure on available resources and therefore on the development of costs. The recent, significant rise in fuel costs also contributed to this.

- Nevertheless, truck transport once again showed above-average development, including as a result of strong stimulation from expanding construction output.
- In rail freight transport, there was continued growth due to the extended reporting scope. Alongside stimulation from the strong overall economic development, the railways also profited from a positive baseline effect following several weeks of closure of the Rhine Valley section at Rastatt in the previous year. Dampening effects resulted from factors such as the continued decline in coal transport as a result of the energy transition, as well as portfolio adjustments by the energy producers, problems in the automotive industry, weak steel production, strikes in France and weather-related constraints.
- The extremely low water levels had a crucial impact on development on the German waterways. In the late summer months performance fell by 40% at times, which led to a two-digit shortfall in full-year performance compared to the previous year.

International markets with growth in demand

	Growth rate	
International freight transport and logistics markets (%)	**2018**	2017
European rail freight transport (based on tkm)	~ +2.0	+2.7
European land transport (based on revenues)	+3.9	+ 4.8
Air freight (based on t)	+3.5	+10.0
Ocean freight (based on TEUs)	+ 4.6	+ 4.7
Contract logistics (based on revenues)	+ 4.4	+ 4.2

Figures for 2017 and 2018 are based on information and estimates available as of February 2019.

The positive developments of the **international transport and logistics markets 134** continued, albeit at a slightly weaker level.

Infrastructure

In Germany, we have assumed dual responsibility for rail transport as a result of our integrated Group structure: we are both the operator and primary user of the track infrastructure. The resulting greater focus on customers and efficiency in our infrastructure benefits all train operating companies (TOC) without discrimination. In addition to the Group's internal code of conduct, competitive neutrality of our track infrastructure is ensured by means of regulation that is considered strict by international standards.

Increasing demand for track infrastructure

DB track infrastructure in Germany: selected key figures	2018	2017	Change absolute	Change %
Infrastructure customers	440	431	+9	+2.1
DB Group	18	17	+1	+5.9
Non-Group	422	414	+8	+1.9
Train-path demand (million train-path km)	1,085	1,073	+12	+1.1
DB Group	736.2	741.7	-5.5	-0.7
Non-Group railways	349.2	331.3	+17.9	+5.4
Share of non-Group railways (%)	32.2	30.9	–	–
Station stops (million)	154.1	153.2	+0.9	+0.6
DB Group	117.1	117.1	–	–
Non-Group railways	37.0	36.1	+0.9	+2.5

Train-path demand showed a further positive development in total for 2018. In line with the trend shown for many years, non-Group railways gained a further market share, while demand for intra-Group railways declined.

Legal and political topics

Legal issues

Proceedings regarding additional financing contributions for Stuttgart 21

At the end of 2016, in order to avoid risks under the statute of limitations, we initiated proceedings in the Stuttgart Administrative Court against our project partners seeking additional financing contributions on the basis of what is known as the negotiation clause. The project partners gave a comprehensive response to the lawsuit in Spring 2018. The court granted DB Group the opportunity to state its position by the end of February 2019 in response to the statement of defense. A verbal negotiation regarding the lawsuit is not anticipated until the second half of 2019 at the earliest. This is also due to the fact that the project partner will be given the option to provide a written response to the statement of defense before the verbal negotiations.

Civil proceedings on infrastructure usage fees

According to a ruling by the Federal Supreme Court (Bundesgerichtshof; BGH) in 2011, fees for the use of rail infrastructure could be reviewed by the civil courts for fairness under legislation prevailing before the entry into force of the Railway Regulation Act (Eisenbahnregulierungsgesetz; ERegG), according to the standard set out in section 315 of the Civil Code (Bürgerliches Gesetzbuch; BGB), even if BNetzA did not object to the fees and they were effective according to regulatory law. In 2016, the ERegG created legal certainty by introducing approval of train-path and station-use charges by BNetzA and legally excluding a parallel review of approved charges by the civil courts on the basis of proceedings under section 315 BGB.

However, a number of legal disputes between DB Netz AG, DB Station & Service AG, and TOC or public transport authorities or Federal states continue to be based on the previous legal situation.

Additional information can be found in the 2017 Integrated Report 54 and Events after the balance sheet date 174.

Lawsuit by the Federal state of Saxony-Anhalt

The Federal state of Saxony-Anhalt filed a lawsuit against DB Netz AG, DB Regio AG and DB AG claiming compensation for damages under antitrust law due to allegedly illegal train-path pricing by DB Netz AG through the levying of regional factors between 2005 and 2011. The lawsuit was extended to include the assertion of corresponding claims against DB Regio AG for 2003 and 2004. DB Group opposed this lawsuit in every respect. For its part, DB Regio AG is suing the Federal state of Saxony-Anhalt for reimbursement of outstanding transport contract-related receivables relating to increased infrastructure utilization costs between 2008 and 2014. The Federal state has offset its alleged claims for compensation under antitrust law for 2003 and 2004 against the receivables owing to DB Regio AG. The ruling of the ECJ on the non-applicability of section 315 BGB has improved our prospects of success in both cases. By the ruling of November 8, 2018, the Frankfurt State Court (Landgericht Frankfurt am Main) entirely rejected the claim of the Federal state of Saxony-Anhalt. The ruling is not yet legally binding. It remains to be seen as to when a decision will be made regarding the proceedings initiated by DB Regio AG.

Political environment

We regularly report on the development of competition on the rail in our brochure **Competition Report.**

Federal Government makes strong commitment to rail transport

In the coalition agreement of February 7, 2018, the Union parties Christian Democratic Union (CDU) and Christian Social Union (CSU) as well as the Social Democratic Party of Germany (SPD) have committed to strengthening the railway in Germany and to an integrated DB Group. The coalition agreement includes numerous topics that are important to the entire industry. The political target is to double passenger numbers by 2030 and to bring more freight transport to the rails. Focus topics for the sector from a DB Group perspective include:

- Continued capital expenditure increase providing the funds needed, in particular, for the existing network (LuFV III) as well as for expansion and new construction measures, implementation of a Planning Acceleration Act (Planungsbeschleunigungsgesetz), and application of **building information modeling (BIM) 147;**
- Implementation of the **master plan for rail freight transport 63,** in particular with train-path price support, **realization of the 740 m network 150,** and establishment of a Federal program Future of Rail Freight Transport for innovations;
- First steps into **Digital Rail for Germany 71,** including the accelerated expansion of European command and control technology **ETCS green no. 145** and digital interlockings;
- Further work on a synchronized timetable for all of Germany (Deutschlandtakt) including a target schedule and appropriate infrastructure measures;
- Strengthening of the rail mode of transport within the context of climate and environmental protection, including appropriate measures in the planned Climate Protection Law (Klimaschutzgesetz), a program for electrification and alternative drives, as well as continued commitment to **noise reduction green no. 25.**

Regulatory and transport policy topics

National platform future of mobility launched

The national platform set up by the Federal Government, future of mobility (Zukunft der Mobilität), began its work with the constitutive meeting of the steering committee on September 26, 2018. The aim of the cross-modal platform is to develop recommendations for action. The work of the platform is subdivided into six working groups: Climate protection in transport; Sustainable mobility: alternative drives and fuels; Digitalization, automated driving and new mobility concepts; Securing the mobility and production site, battery cell production, raw materials and recycling, training and qualifications; Integrated energy (especially linking traffic and energy networks); Standardization, normalization, certification and approval. DB Group is represented in the steering committee and in the working groups Climate protection in transport and Digitalization.

Rail Future Alliance starts its work

On June 5, 2018, Federal Minister of Transport Andreas Scheuer announced the launch of the Rail Future Alliance (rail pact), which will swiftly address the targets and measures of the Federal Government with regard to rail policy. The Future Alliance, under the management of the parliamentary Secretary of State Enak Ferlemann, began its work on October 9, 2018. The contents of the Future Alliance were developed and discussed within five thematic working groups: introduce a synchronized timetable for all of Germany (Deutschlandtakt), build capacity, strengthen the competitiveness of rail, reduce noise emissions, and digitalization, automation, and innovations. DB Group participates in all the working groups and in the steering committee.

Master plan for rail freight transport is being implemented further

The implementation of the master plan for rail freight transport will continue as per the procedure thus far in order to supplement the work of the Rail Future Alliance. The rail freight transport round table held another meeting with the key representatives of the BMVI and from the sector on September 25, 2018. The implementation and associated monitoring required for all ten areas of action with the 66 measures should be continued with the highest priority. The immediate measure of train-path price support began in 2018. The associated funding directive was published following EU approval in December 2018 and apply retroactively from June 2018 for a period of five years. In 2018, funding of € 175 million was available, while in 2019, € 350 million is earmarked in the Federal budget. Immediate measures to be taken also include the Federal program Future of Rail Freight Transport, which seeks to strengthen innovation in the sector. There are plans for concrete financial backing and the development of a funding guideline.

Guideline on promoting the energy efficiency of electric rail transport

With the funding guideline that entered into force on August 9, 2018, the BVMI supports the TOCs if they improve the efficiency of their electric volume sold. The funding is combined with an annually achieved percentage improvement of energy efficiency in traction current usage. In 2018 and 2019, the initial limit for claiming the funding is subject to achieving a 1.75% specific annual energy-efficiency improvement, while in 2020, 2021 and 2022 the requirement is for a 2% annual efficiency improvement. A special bonus is granted if a threshold of 3% is achieved. In addition, evidence must be given of expenses for measures applied to improve energy efficiency. The grant amount is a maximum of 50% of the expenses for the measures applied to improve energy efficiency in the relevant accounting year. Each year, a grant amount of € 100 million is available. The program runs until the end of 2023.

Law to accelerate planning and approval processes

After publication in the Federal Gazette, the Law to Accelerate Planning and Approval Procedures in the Transport Sector (Gesetz zur Beschleunigung von Planungs- und Genehmigungsverfahren im Verkehrsbereich) entered into force on December 7, 2018. This law will streamline the planning and approval procedures for the expansion and new construction of transport infrastructure. From December 6, 2020, the Federal Railway Authority (Eisenbahn-Bundesamt; EBA), as well as being responsible for plan approval procedures, will also be responsible for upstream hearing procedures. During rail projects, traffic development forecasts will only be updated during the course of the approval procedure if a significant increase in traffic and noise can be expected or if the emission limit value is exceeded for the first time. In addition, in certain cases preparatory measures or partial measures can be initiated even prior to the plan approval decision being issued. In this case, the measures must be reversible and in the public interest. Furthermore, among other stipulations, the law stipulates that all plan approval documentation must be published online.

BNetzA defines tender awarding conditions for 5G frequencies

At the end of November 2018, the President's Chamber of BNetzA determined that tendering and auction proceedings be conducted for the awarding of the 5G frequency contract planned for early 2019. The supply conditions it contains will be used to predefine the minimum requirements for mobile communications network operators, including for the coverage of transport routes. For rail, the decision is that "highly frequented lines" with over 2,000 passengers per day will be provided with coverage of 100 Mbit/s per licensee by 2022, and all remaining railway lines will be provided with coverage of 50 Mbit/s per licensee by 2024. This comprises about two-thirds of the total network. It is expected that the newly determined conditions will result in an improved mobile communications supply situation for rail passengers. The mobile communications network operators are criticizing the conditions under which the tender was awarded and have submitted an appeal against the decision. However, there are no legal barriers to performing an auction because the appeal does not have any suspensive effect. BNetzA has not yet indicated a concrete auction date.

Substantial parts of Mobility Package I renegotiated

Substantial parts of Mobility Package I must be renegotiated after the European Parliament's rejection in July 2018 of the recommendations made by the responsible traffic committee on work and social conditions as well as market access to the European road transport business. The main contentious point continues to be the conditions under which the regulations of individual states on employment conditions in international road freight traffic should apply (deployment), what number of loading and unloading operations outside of the home state is permitted within what time frame (cabotage), and how driving and rest periods should be arranged in the future. A majority of members of parliament spoke in favor of aligning the employment conditions in Europe, although the position of Central and Eastern European states is opposed to that of the Western EU countries. This mindset is also reflected in the Council of the European Union. Nevertheless, the representatives of the member states communicated a common position in December 2018. A common position is still outstanding in the European Parliament. As a result, it remains to be seen whether an agreement can be reached between the Council and the Parliament before the new elections of the European Parliament at the end of May 2019.

Long-term strategy for reducing greenhouse gas emissions

In November 2018, the European Commission presented its new strategy for reducing greenhouse gas emissions in the period 2030 to 2050. In doing so, it presented a strategic vision for a modern, competitive and climate-neutral economy for Europe and gave an indication of how Europe should move toward climate neutrality by 2050. According to the Commission, common measures must be developed in seven strategic areas, including mobility, energy efficiency, and the use of renewable energies. In the transport sector, a cross-modal, integrated approach is to phase out the use of fossil fuels by 2050. The Commission calls on the other EU institutions to review this vision and to support it with appropriate measures.

Proposals for a multi-year EU financial framework

On May 2, 2018, the Commission proposed a budget amounting to € 1,279 billion for the new EU budget (MFF) for the years 2021 to 2027. The funds of the Connecting Europe Facility (CEF) are to be increased to € 42.3 billion for investments in trans-European transport, digital and energy networks, of which approximately € 31 billion are earmarked for investments in transport networks. In the current financial framework, the budget for transport networks is about € 24 billion. Top-ups come from a separate budget of € 6.5 billion for transport networks with a dual civil and military use. In 2018, the European Parliament argued in favor of additional resources of € 7 billion for the transport network. The Council of the European Union has not yet taken a position on the matter. Since the discussion on the CEF budget is embedded in the negotiations on the financial framework of the EU, no result is expected before the second half of 2019.

French rail reform resolved

The main topics of the rail reform in France as enacted in June 2018 are the gradual opening of the national rail passenger transport market to competition (market opening in regional rail passenger transport between December 2019 and December 2023, with longer periods for the Paris metropolitan area, in long-distance transport operated on a purely commercial basis as of 2020), the reorganization of the SNCF into a stock corporation permanently owned by the government, the removal of public servant status for new employees at the SNCF as of the start of 2020, the assignment of the passenger stations segment to the rail infrastructure operator SNCF Réseau and the order arranging an employee transfer in the event of an operator change in regional rail passenger transport. Alongside this, the government is planning to relieve SNCF group of debts to the tune of € 35 billion. Widespread strikes occurred in France from April to July 2018 in connection with the rail reform.

Targets and strategy

Trend efforts include change in the environment

We monitor changes in our environment and use them to develop strategies, new business models and innovative products and services. We also identify future requirements based upon specific visions that consolidate assumptions about future developments that are directly relevant to DB Group.

In the year under review, we expanded our Network of the Future – which is made up of market, strategy, personnel, sales and technology experts – and continued to promote cooperation within this network. We have carried out a systematic trend analysis and assessment in the fields of markets, society, technology and politics, and amalgamated them to produce a consistent and comprehensive view of the future. This analysis focuses on how future developments will impact on DB Group's business operations or on our markets and the urgency of these effects. The individual topics are highly interconnected and constantly changing.

In the year under review, our trend monitoring focused upon four themes. In all these areas, it is particularly important that we take the correct approach now to ensure that our business is fit for the future.

Digitalization and automation

New digital technologies and intelligent, learning IT systems are enabling the full digitalization of many sectors. This process is being facilitated, in particular, by the automation of a number of work stages. However, tasks that call for intelligence and creativity cannot be automated. In these fields, human beings are increasingly being assisted by new systems based upon artificial intelligence such as self-driving cars or digital assistants, that can learn independently and respond to unforeseen situations.

In railway operations, too, digitalization and automation are opening up promising opportunities for development. **Digital interlockings** 🗋 **81** and the European Train Control System (ETCS), as well as the associated digital applications for rail operations, are allowing us to alleviate the quality problems caused by outdated systems and impending personnel shortages, reduce operating costs and expand network capacity in the long term.

On-demand offerings

Digitalization is changing people's expectations regarding consumption. Products and services need to be available immediately and at any time, that is on demand. Increasingly, this is resulting in same-day or even same-hour deliveries, which tend to be supplied as smaller, more frequent shipments. This calls for new logistical concepts and delivery methods such as drones, delivery robots or cargo bikes.

In individual mobility, too, there is a clear trend towards offerings that are available in real time. In the foreseeable future, we will start seeing autonomous vehicles that adapt dynamically and efficiently to passenger demand rather than buses with fixed routes and timetables. Public passenger transport will thus be extended to include individual public transport.

Against this backdrop, DB Group is positioning itself both as a platform provider and an operator, firstly enabling third parties – that is public transport authorities and transport companies – to offer on-demand transport in their own name and gradually integrate autonomous driving on the road into public transport, and secondly operating our own on-demand mobility services that serve as a feeder for rail passenger transport.

Smart and sustainable cities

Because people generally like urban living and because both job opportunities and services tend to be better in towns and cities, it is predicted that the proportion of people living in urban environments will rise to almost 85% by 2050. At the same time, mobility requirements for both people and goods are growing, posing challenges for cities and conurbations.

Cities are responding to these changes firstly by imposing regulations such as bans on diesel vehicles and, secondly, by promoting innovative solutions that aim to promote efficiency, technological progress and social and ecological improvements in urban life. They often do this in collaboration with partners from industry. We support cities especially with our product development organization Smart Cities. We are working on topics such as coworking spaces in stations and a comprehensive data analysis platform to optimize urban products and services and identify new business potential.

Digital platforms

Digital platforms are becomingly increasing commonplace and they are revolutionizing spheres of life and business such as logistics, purchasing and communication. Such platforms offer participants a digital network structure that makes it easy to exchange information and services, meaning that their benefits and attractiveness increase with the number of users.

Conventional business models are increasingly being driven out by Internet platforms such as Amazon, Zalando or Booking.com, and social networks such as Facebook and Instagram have spawned completely new needs and markets. The companies behind these platforms systematically collect and exploit user data so that they can offer services or products faster, more cheaply and with greater flexibility and choice. In the logistics sector, in particular, networking via digital platforms allows customers and suppliers to find each other more quickly, thereby optimizing the provision of transport services.

We, too, are active in the platform business and are developing digital platforms such as **Box2Rail** (for the easy and transparent booking of rail transport) so that we can offer our customers and business partners new options relating to our product portfolio.

Getting DB Group ready for the future

GRI 102-10 102-48

Our DB2020+ strategy puts a strategic framework in place for DB Group. Regular reviews of the DB2020 target system have led to the following changes in the year under review:

- **Economic:** we have adjusted our ROCE targets to reflect persistently low interest rates.
- **Environmental:** As a result of capacity constraints in maintenance at DB Cargo, we have slightly extended the process of the conversion of freight cars to whisper brakes.

In 2019, we will finish developing our future strategic orientation up to 2030. This is based on the Agenda for a Better Railway set in the year under review to improve service quality and on our new **ecosystem management system 69 f.** to improve DB Group's **innovative strength and digitalization 77 ff.**

Agenda for a Better Railway

In the **integrated rail system 50** our Railway of the Future program represented a commitment to eliminate the key annoyances for our customers and significantly improve the quality of our services, in particular in terms of punctuality, passenger information and the cleanliness of stations. Our survey of the situation in the year under review showed that we have been unable to achieve the desired progress in key areas. Since 2015, we have made improvements in areas that matter to customers – such as malfunctions, track-change information and on-schedule departures – but we still fell short of our targets, particularly in terms of quality and punctuality. Our successes were also eclipsed by capacity problems in infrastructure, vehicles and personnel. In the year under review, we therefore developed our Agenda for a Better Railway so that we could continue working on the subjects from Railway of the Future and augment them at key points. The focus will remain on the integrated rail system, and we will concentrate our activities on topics that are critical for success, ensuring that the measures in question are implemented. To help us achieve these objectives, we are strengthening line organizations and overall process responsibility.

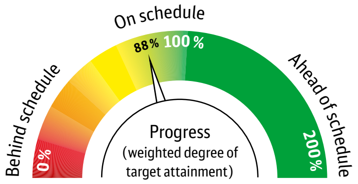
OUR ASPIRATION

We drive progress and shape the future.

Sustainable business success and social acceptance.

OUR STRATEGY

DB2020+ Implementation status for 2018: 😐



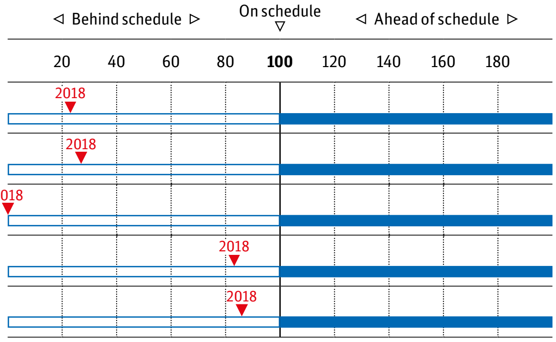
OUR TARGETS

2018 ▼ **Progress.** Are we progressing as planned? (Difference between control and 100 % shows delay/lead as a proportion of the actual deviation from target value)

As a profitable quality leader we offer our customers first-class mobility and logistics solutions, that is excellent quality at affordable costs.

Economic

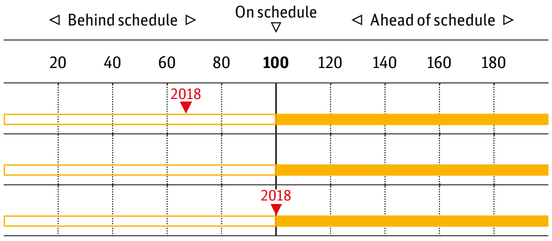
Profitable quality leader	Starting value DB2020	2017	**2018**	Target DB2020+	Prog-ress
Customer satisfaction - Passengers (SI)	-	75.8	75.1	~79	☹
Customer satisfaction - freight transport and logistics (SI)	-	70.5	65.5	≥73	☹
Product quality - punctuality DB Group (rail) in Germany (%)	94.4	93.9	93.4	≥95	☹
Reasonable rate of return - ROCE (%)	8.3	6.1	5.8	≥7.0	😐
Financial stability - redemption coverage (%)	22.2	18.7	17.6	≥25	😐



As a top employer, we attract and retain qualified employees who are enthusiastic about working for us and our customers.

Social

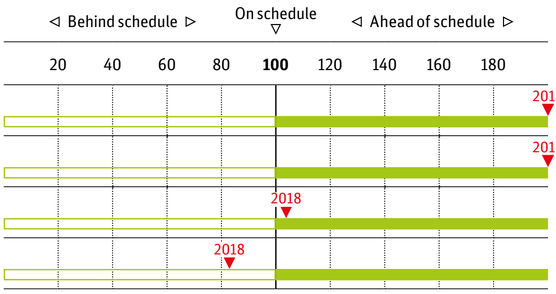
Top employer	Starting value DB2020	2017	**2018**	Target DB2020+	Prog-ress
Employee satisfaction (SI)	3.6	-	3.7	4.0	☹
Follow-up workshop implementation rate (%)	-	97.1	-	-	
Employer attractiveness (rank in Germany)	26	13	13	≤10	☺



As an eco-pioneer, we set benchmarks with our products for the efficient use of available resources.

Environmental

Eco-pioneer	Starting value DB2020	2017	**2018**	Target DB2020+	Prog-ress
Climate protection - specific greenhouse gas emissions compared to 2006 (%)	-12.0	-29.5	-33.2	-30	☺
Climate protection - share of renewable energies in the DB traction current mix (%)	24.0	44.0	57.2	45	☺
Noise reduction - quiet freight cars in Germany as of Dec 31	7,349	39,604	50,409	63,000	☺
Noise reduction - track kilometers noise remediated in total as of Dec 31 (km)	1,200	1,701	1,758	2,000	😐



OUR AREAS OF ACTION

Culture of quality
Operational excellence
and customer focus

Digital expertise
Innovative solutions in our
core and new businesses

Performance capability
Shared responsibility
and strong performance

The Agenda for a Better Railway is made up of three subject areas:

- In terms of infrastructure, constantly increasing traffic volumes must be operated on a network that is heavily overloaded in many areas, whilst maintaining operational quality. To achieve this we firstly need to continue and intensify the capital expenditure initiative regarding the maintenance, new construction and expansion of the rail network. Secondly, more intelligent construction site management and the organizational realignment of DB Netze Track will help to achieve higher levels of punctuality and quality. The **Digital Rail for Germany** **71** project will also be an essential factor in the future success of the system as a whole. By investing heavily in new trains, we are putting in place the conditions for growth and better service, and by improving maintenance we will increase the availability of our fleet. We are thus further expanding our workshop capacities by taking advantage of the opportunities offered by digitalization, for example the possibility of detecting vehicle damage at an early stage. We will also meet the resulting staffing requirements.
- To meet our growth targets we are increasing the attractiveness of our product portfolio, placing special emphasis on increasing basic quality. Our main aim is to improve customer experience. In terms of passenger transport, we have set ourselves the target of expanding our mobility portfolio to create a seamless, door-to-door digital customer experience. The main focus of our efforts is on enhancing our customers' travel experience, gradually increasing punctuality, getting more reliable information to our customers throughout the travel chain and offering travel-related services. In freight transport, our main concern is continuously improving the quality of transport and building upon the advantages of the rail system. We are responding to changing customer requirements with products from a comprehensive logistics solution provider.
- To improve performance, we align our process design, control logic and management model with interlinked production in the integrated railway system, focusing on greater customer orientation during service provision. Because performance depends on a large number of business units, we create continuous processes with clearly defined responsibilities and manage these processes based upon key indicators that matter to our customers, giving our management team the resources they need to effect this transformation.

In 2019, we are following a five-point plan to implement the Agenda for a Better Railway:

- Better punctuality: We want to reduce delays caused by bottlenecks in **vehicle availability** **116 f.** We are therefore systematically expanding our long-distance transport fleet and modernizing existing vehicles. We also want to make progress by improving our maintenance. In addition, better management of our construction sites is of decisive importance for punctuality. The construction management center is a great help, too.
- Capital expenditures: In 2019 we, together with the Federal Government, aim to increase capital expenditures in the rail network to new levels, thereby increasing the capacity of infrastructure and vehicles alike. We are also investing in digitalization and plan to hire about 22,000 staff. The existing **PlanStart team** **76 f.** will be doubled. And, in the so-called **plan corridors** **76 f.,** we want to keep the congestion effects of problematic sections on the system as a whole to a minimum.
- Information: An increased number of digital services allow us to offer reliable information and greater convenience. We want to significantly reduce irritations. We are expanding **WiFi** **79** on IC trains, in local public transport and at our stations.
- Expansion of services: Since the timetable change in mid-December 2018, we have expanded our long-distance services by 4%. The S-Bahn (metros) in Munich and Hamburg are further modernizing their fleets to cope with the growing number of passengers. We will also be procuring new vehicles for regional transport.
- Climate protection: This year will see us increase our lead as the most environmentally friendly means of transport, with the **share of renewable energies in the DB traction current mix** **90 f.** set to increase further in 2019. To help fight climate change in Germany we will increase the volume of freight we carry by rail.

New ecosystem management for greater innovative capacity

Digitalization and new technologies are changing our core business. Due to much shorter innovative cycles, new markets are arising much more quickly than before and innovative pressure is rising. Tapping into growth potential and ensuring that DB Group remains innovative and competitive in the long term calls for an ecosystem approach.

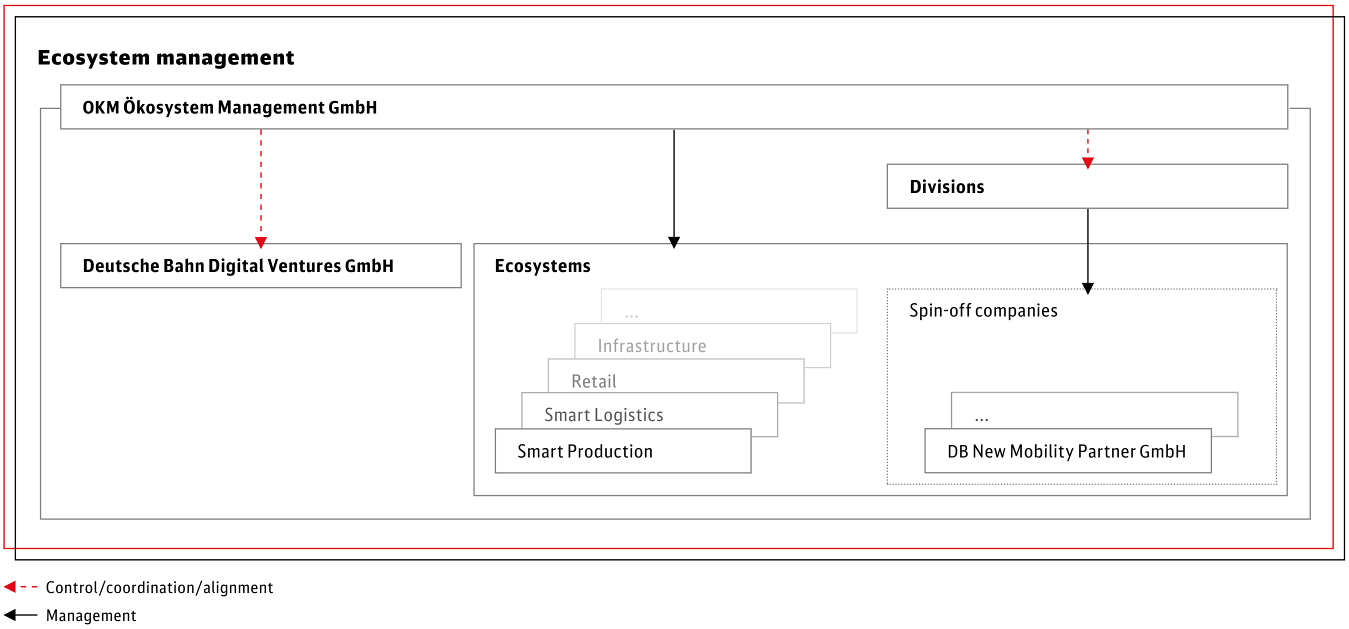
A central managing and controlling ecosystem holding company is being established to permit effective ecosystem management in DB Group. The primary objectives of ecosystem management are to enhance DB Group's core business over the long term, develop new business models and enrich our classic core business by innovation. Ecosystems that relate to specific subject areas but are organizationally separate from our core business will be set up within this holding company. An ecosystem comprises a portfolio of:

- in-house and joint developments,
- investments by the acquisition of shares in external companies (majority and minority interests including venture capital financing), and
- strategic partnerships with and without an equity stake.

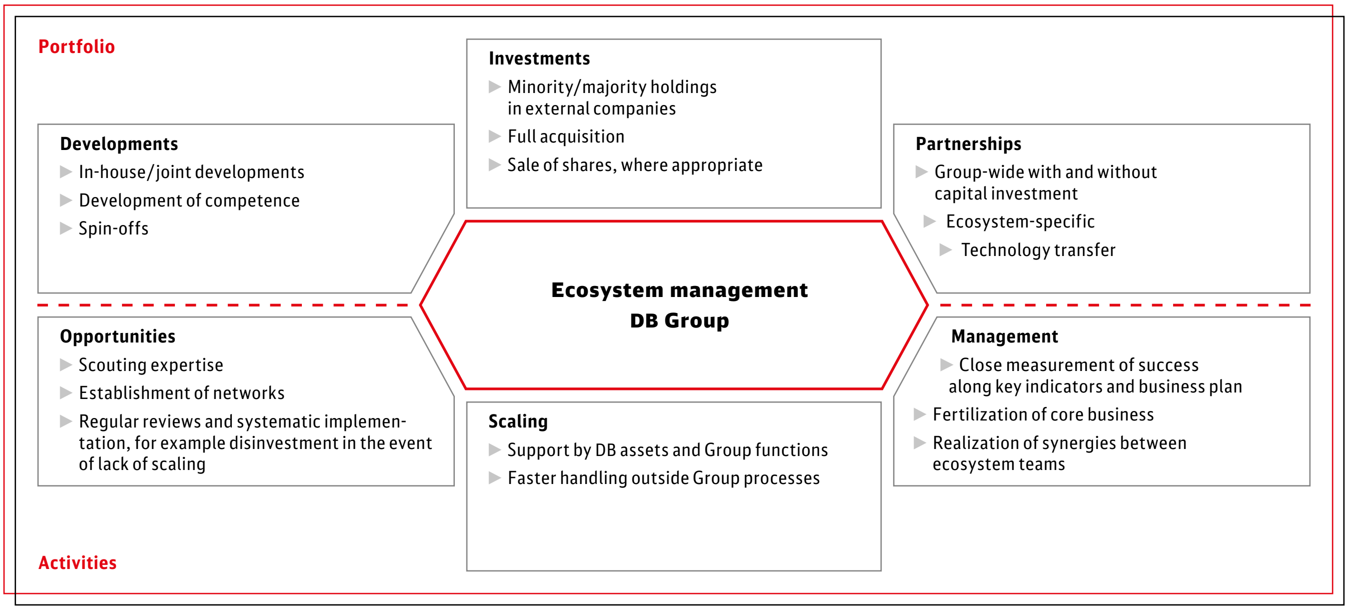
Each ecosystem interacts with the core business, allowing portfolio companies to benefit from access to customers, network and other DB resources. This gives rise to knowledge transfer, rapid scaling, and access to new technologies and markets, creating opportunities and increasing innovative power. The value of each investment is increased by active management. We define relevant ecosystems in the context of current dynamics in the marketplace, as well as our strategic orientation. In 2019, we will launch the New Mobility and Smart Production ecosystems.

- New Mobility: To retain our position as the largest mobility service provider in Germany and one of the leading providers in Europe, we are establishing DB New Mobility Partner GmbH, which is organizationally assigned to the Passenger Transport division, for this ecosystem. The company's main job is to continuously formulate DB Group's strategic approach in the New Mobility market segment and to implement this strategy by building a portfolio of new mobility businesses. This will allow us to combine existing business with new types of mobility, thereby becoming an integrated service provider for our end customers and partners such as transport associations and cities. The portfolio includes companies we have founded, such as **ioki 🗋79** and **Mobimeo 🗋71,** as well as investments in **GoKid 🗋70, Ridecell 🗋70** and **verimi 🗋79.**

ECOSYSTEM HOLDING COMPANY ORGANIZATIONAL CHART



OVERVIEW OF THE ECOSYSTEM MANAGEMENT BY THE ECOSYSTEM HOLDING COMPANY



- Smart Production: We want this ecosystem to focus on Group-wide digitalization and increase the flexibility of operating processes in our core markets of mobility, infrastructure and logistics. The digitalization of production processes and the linking of vehicles or track infrastructure will allow us to increase the efficiency of value creation in operational processes by cost savings, capacity increases and quality improvements.

An ecosystem can be hived off as an independent management company, transferred to an existing business unit or kept in the ecosystem holding company in the long term. If the first option is taken, the ecosystem holding company remains responsible for the execution of all investment types and close coordination continues.

DB Digital Ventures with five new investments

Deutsche Bahn Digital Ventures GmbH (DB Digital Ventures) is part of our ecosystem management system and invests in data-driven business models to take advantage of the opportunities of digitalization. Its purpose is to intensify cooperative arrangements relating to start-ups and to simplify equity investments in other companies. In addition, DB employees are able to turn their own business ideas into reality under ideal conditions as founders of their own start-ups. In the year under review, the portfolio grew by a further five to ten investments:

- **GoKid** is a platform for carpooling and lift sharing to get children to school or leisure activities.
- **Ridecell** provides an intelligent software platform for the operation of car sharing, carpooling and autonomous fleet management.
- **Trillium** develops cybersecurity software to protect networked vehicles against hacker attacks.
- **Coord** provides a cloud-based platform for a wide range of mobility data and offers developers of mobility companies access to this data.
- **Kepler** is a satellite communications company that is building a satellite network to permit standardized real-time connectivity for any Internet of Things (IoT) device.

Group programs continued

Our Group programs are devoted to subjects that address relevant **trends 65 f.** and drive the development of DB Group. As part of the **further development of our strategy 66,** we will continue to focus our **2019 program portfolio 175** and address the main issues of the integrated rail system. We are streamlining our committees and directing attention towards the **Agenda for a Better Railway 66 ff.,** again with the objective of increasing the functionality of the integrated rail system and thereby guaranteeing the best possible customer experience.

Digital Rail for Germany

The aim of the **Digital Rail for Germany** green. **no. 145** project is to significantly increase the reliability – and in particular the punctuality – of rail transport. Our vision is digitalized rail transport with an integrated system of capacity management and operational implementation. Traffic control based on artificial intelligence techniques for coordinating train operations, real-time determination of train positions, high-performance data exchange between train and infrastructure, and sensor-based detection of obstacles lay a firm foundation for making this vision a reality. The technologies required for the implementation of the target image were identified in the year under review and their degree of maturity was assessed. Work has begun to develop functional and technical specifications. In order to ensure that Europe-wide standards are created, we work closely with other railways. The feasibility studies for pilot projects (and, in particular, Hamburg S-Bahn (metro)) emphasize the advantages of technological change on the rail. A cooperative agreement between the City of Hamburg, Siemens and DB Group has been signed for the **Digital S-Bahn (metro) Hamburg pilot project 81**. A system architecture has already been developed in collaboration with industrial partner Siemens and the specification phase has begun. The start of the accelerated rollout of ETCS in combination with the digital interlocking was introduced at InnoTrans in the year under review. Investment projects on this scale can only be implemented by working with partners from industry and commerce, customers and owners. In 2019, we will therefore be aiming to develop and implement a suitable partnering concept, as well as further expanding our organization.

ioki

In the **ioki** project our focus is on developing modern, flexible and digital mobility solutions. **ioki 79** is a full-service provider for types of road-based digital mobility that make traffic more sustainable and efficient. These are sustainable, economically viable and socially equitable solutions that safeguard our mobility in the long term whilst protecting the environment and ultimately improving quality of life. ioki is developing an open environment for on-demand mobility that is closely integrated into local public transport and permits seamless mobility. ioki offers all system modules such as platform and app, driver-based and autonomous vehicle concepts or mobility analytics from a single source, allowing third parties, cities or local public transport authorities to operate on-demand public transport mobility offerings under their own name. The company is piloting on-demand mobility, autonomous driving and mobility analytics to make them commercially viable for customers and partners.

Mobimeo

Mobility platforms are increasingly gaining ground against existing providers with customer-centric, digital offerings. The analog customer interfaces that have been in use up to now will become less important than digital ones in the future. In response to these changes, we are continuing to pursue the goal of adjusting and developing our digitalization activities at the customer interface in passenger transport in order to make them fit for the future. Within the Mobimeo project, we have forged ahead with the creation of a team of industry and digital experts. In the year under review, our focus was on product development, the expansion of the platform and the first minimum viable product (MVP) launches. Testing has begun on the first multimodality and live navigation (Companion) products. This included a test involving the public transport association Berliner Verkehrsbetriebe (BVG) in September 2018, in which volunteers using the app tested an initial range of Companion products for two weeks with the aim of validating the customer benefits, user experience and the technical functionality of product features. The implementation of live navigation in the BVG travel info app is planned for the second quarter of 2019. A public beta version was launched in Stuttgart in November 2018 and the market launch of new apps for the S-Bahn (metro) Berlin and Stuttgart is planned for the second quarter of 2019.

Smart cities

Our aim is to build upon existing infrastructures to offer solutions for the intelligent and environmentally friendly networking of mobility and logistics, with the railway station forming the basis for our product portfolio. A Memorandum of Understanding with the City of Hamburg places the focus on Harburg and Dammtor stations. We are responding to the growing challenges in the world of work by integrating coworking spaces into railway stations. Railway stations offer an idea platform for creating a stationary link to new mobility solutions. In cooperation with ioki feeder stations in the service area, for example Hamburg Elbgaustraße station, will become **on-demand service** green. **no. 142** stops. In the year under review, a successful e-scooter pilot was conducted amongst DB employees in Frankfurt am Main to test the service as a supplementary mobility module. We are also working on setting up a data platform to identify locations for the services and to optimize operations in the long term.

TecEX

Our aim with the Group program TecEX (Technical Excellence) is to make it possible to implement technology projects more quickly. TecEX functions as a competence platform for developments across multiple business units, from the scaling of joint solutions across business units to the use of bundling to get around resource bottlenecks. TecEX is pursuing three approaches with 13 projects for the further development of railway production and the implementation of the technology strategy:

- The development and implementation of ideas to achieve short- and medium-term improvements in returns and quality.
- Strategic projects and rollout preparation to improve quality and productivity in the medium to long term.
- Projects to head off risks to rail operations by the design and development of pilots. In the year under review, for example, the existing FASSI system was integrated into dynamic “green functions” of **train control** green. **no. 118** in the DB Regional Networked Driving Assistance System project to generate recommendations for energy-saving driving based upon the current operating situation. In the CBM Infrastructure (condition-based maintenance) project, 3,400 **switch heaters** green. **no. 91** were connected to the central DIANA **diagnostics platform** **155.**

Using expertise internationally

DB International Operations

DB International Operations GmbH (DB International Operations) acquires, starts up and is responsible for rail operations and maintenance projects outside Europe. In the year under review, the focus of market development was on the core markets of North America, Asia and the Near and Middle East.

- The California High-Speed consulting project, in which DB International Operations will also set up operations as an Early Train Operator for the first phase, has got off to a successful start.
- In the Etihad Rail DB Operations joint operation, DB International Operations acquired a 49% stake from DB Cargo UK within the Group as of January 1, 2018. Etihad Rail DB Operations is responsible for the operation and maintenance of the national rail network in the United Arab Emirates. In the year under review, the contracts were extended, securing the collaboration for a further eight years.

Customer and quality

OUR ASPIRATION

As a profitable quality leader, we offer our customers first-class mobility and logistics solutions – that means excellent quality at affordable costs.

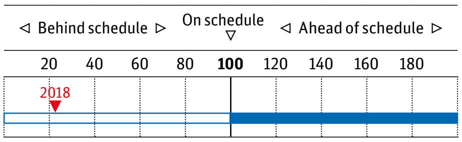
OUR TARGETS

Where do we stand in 2018 on the path to achieving our targets for 2020? (%)

2018 ▼ **Progress.** Are we progressing as planned? (Difference between control and 100 % shows delay/lead as a proportion of the actual deviation from target value)

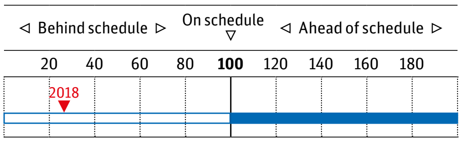
Customer satisfaction – passengers (SI)

Base 2012	2017	2018	DB2020+ target
–	75.8	75.1	~79



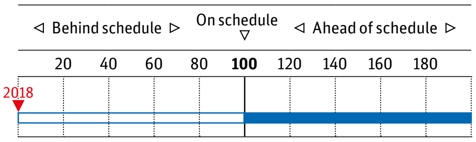
Customer satisfaction – freight transport and logistics (SI)

Base 2012	2017	2018	DB2020+ target
–	70.5	65.5	≥73



Product quality – punctuality – DB Group rail in Germany (%)

Base 2012	2017	2018	DB2020+ target
94.4	93.9	93.4	≥95



OUR AREAS OF ACTION

Punctuality
Improvements in both passenger and freight transport.

Modernization of the vehicle fleet
Improvement in vehicle availability and increase in passenger comfort.

Infrastructure availability
Preventive maintenance and eliminating bottlenecks through targeted expansion.

Passenger information
Timely and comprehensive communication.

Reliability
Securing travel chains and ensuring transport quality.

Customer orientation
Customer-oriented products and services.

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The customer is at the center of our actions

We are working on issues that are material to us and our **stakeholders 46**. You can find an overview of our **material sustainability themes 43** in the chapter "To our stakeholders."

There are a number of levers that increase product quality, but for us, improving punctuality is the most important starting point. Other important levers include the use of modern vehicles, reliable and comprehensive customer and transport information, the quality and reliability of services offered, as well as reasonable travel and transport times. That is why we continually invest in our fleet and infrastructure and optimize cooperation with our suppliers and sector partners. We place a strong emphasis on tapping into the opportunities of digitalization. The majority of our initiatives for increasing product quality and improving customer satisfaction are linked with our **Agenda for a Better Railway 66 ff.** and the **Operational Excellence (OPEX) program 75.**

We place customers at the center of our actions. **Customer satisfaction 75** is therefore the most crucial indicator of our service quality. It provides us with the insights we need to determine concrete measures for improvement. In addition to the various aspects of product quality, the continuous optimization of the price-performance ratio and **product innovations 77 ff.**, especially in the context of digitalization, are the main levers for increasing customer satisfaction. We work extremely hard to provide a high-quality basic service and focus on optimizing product and service quality. We offer our customers comprehensive services for their information needs. Our goal is to provide our mobility and logistics solutions at a reasonable price-performance ratio in order to meet the expectations of our customers. The focus is on measures that increase the quality of our services and the efficiency of our processes. In order to assess the success of our measures from the customer's perspective, we use direct indicators such as revenue and the number of customers. In addition to this we use the results of regular surveys to measure our success and find potential areas for improvement.

Some particularly important indicators of customer satisfaction include passenger satisfaction levels for passenger transport and infrastructure (stations) and the satisfaction levels of freight transport and logistics customers. We measure success based on the targets achieved along the development path defined in our strategy **DB2020+ 67.**

Punctuality 76 f. is a central component of our performance promise. Internal punctuality controls are based on lost units (number of delayed trains). To measure punctuality, we compare the target arrival time to the actual time for every train run. A stop is considered on time if the scheduled arrival time is exceeded by less than six minutes in passenger transport or less than 16 minutes in freight transport. We summarize the arrival of trains on schedule or up to a defined maximum delay using a degree of punctuality. The figures are recorded daily and made available online to the executives and employees involved in punctuality management. In addition, punctuality data, together with the associated indicators, are prepared regularly and used by the Group Management Board to determine what currently needs to be acted upon and where decisions are required. Punctuality is the key indicator of product quality and is a determining factor in calculating the variable remuneration amount for executives of the **integrated rail system 50.**

The performance capability and capacity of the infrastructure also has a significant influence on quality and punctuality. Capital expenditures for maintaining a high-performance infrastructure form the subject matter of the **LuFV II 234 f.** Alongside maintaining the existing infrastructure, optimizing available capacity during construction work, increasing capacity and the digitalization of infrastructure are also very important for the performance capability of the infrastructure and thus for infrastructure users. Together with the Federal Government, we are working on a range of comprehensive measures.

Interlinked mobility is the combination of different modes of transport in order to individualize the design of the mobility and transport chain; this is made possible by the digital information service for travel and transport planning. For us, interlinked mobility is crucial in order to offer our customers individualized and tailored solutions. Digitalization offers new opportunities to provide innovative services. Existing combined services, such as our door-to-door mobility portfolio for passenger transport **(Flinkster green. no. 7** and **Call a Bike green. no. 14)** are being steadily developed to future mobility platforms, such as autonomous driving, on-demand transport services and platforms for customers to use these services in future. We are developing new approaches, including as part of our **New Mobility 69** ecosystem. Within logistics, we are driving forward new forms of mobility, including through our **truck platooning project 80.**

OPEX program becomes Excellence System

The start of 2017 saw the launch of the OPEX program with the overarching themes maintenance, jointly coordinated construction and skills development. OPEX supports the goal of sustainably changing the performance culture at DB Group. Through OPEX, we are advancing the transformation that has already begun – for quality that persuades and performance that delights our customers.

In the OPEX maintenance sub-program, the transformation at about 72 locations has begun in four phases. It involves initiating and implementing sustainable process improvements using a standardized procedure. In order to achieve this employees will be trained in OPEX/lean skills and in how to apply and further develop this new working method. Additional areas of focus include implementing a consistent performance dialogue and continual improvement aiming to reduce wastefulness. As part of OPEX, a portfolio of key figures was developed to cover all business units and is communicated on a daily basis in the Digital Situation Room.

Aligned with DB Group's focus on operational excellence, in the sub-program skills development the OPEX portfolio was developed. The OPEX portfolio offers the framework for developing the relevant OPEX capability and skills across business units. The qualifications offered enable employees and executives to successfully carry out the transformation, acquire the skills they need and potentially expand existing knowledge. In this way, the portfolio provides the basis for working differently. Since April 2018, the OPEX Portfolio 2.0 has been available to all executives and employees in DB Lernwelt (DB online platform for learning). It means that employees can benefit from the appropriate learning offers at any time, wherever they are. The OPEX Fitness Check was also developed as part of the skills development sub-program. It is part of DB Lernwelt and supports users by way of an anonymous survey that helps them choose the appropriate content from the qualifications offered.

In 2019, an additional 25 maintenance locations will begin the OPEX transformation as part of phases five and six. The locations involved in phases one to four will continue to be appraised by way of regular maturity assessments to determine the progress of the program and will also receive ongoing implementation support.

We wanted to harness the experiences and successes of OPEX for other topics, so we further developed the OPEX approach: from early May until December 2018, an OPEX team with members from throughout the Group worked on the DB Excellence System, a production system for DB Group. The DB Excellence System is based on experience and best practices from all business units, the market and the OPEX phases to date. The DB Excellence System continued the proven approaches and supplemented them by further standardized principles. Among other things, the digitalization module was added. Our mission is to provide flawless, cost-effective vehicles, infrastructures and services through outstanding processes.

The DB Excellence System consists of a holistic, standardized approach to optimizing and transforming processes and/or organizations. It also incorporates principles and standards on pursuing excellence as a goal, on using excellence as a basis for assessment and on employing the methods for excellence to pave our way.

Customer satisfaction showing weaker development

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Customer satisfaction (SI)	**2018**	2017	2016
Passengers	75.1	75.8	76.0
DB Long-Distance	77	77	77
DB Regional (rail)	66	68	69
DB Regional (bus)	74	74	75
DB Arriva (bus and rail, Great Britain)	79	80	81
DB Netze Stations (passengers/visitors)	68	69	69
DB Sales	82	82	81
DB Connect (car-sharing)	79	78	76
DB Connect (Call a Bike)	79	79	77
Freight transport and logistics [1]	65.5	70.5	-
DB Cargo [1]	60	67	-
DB Schenker [1]	71	74	-

[1] Survey annually since 2017.

Regular measurement of customer satisfaction is very important to us. The data is gathered in each case by independent market research institutes. It is based on nearly 160,000 interviews with end customers and business customers.

In the year under review, overall customer satisfaction declined. While the development for passengers remained relatively stable, at **DB Cargo 🗋137** and **DB Schenker 🗋144** it declined noticeably. **DB Long-Distance 🗋118, DB Regional Bus 🗋123** and DB Sales maintained the same level, while at **DB Regional Rail 🗋123,** in particular at the S-Bahn (metro) systems and **DB Netze Stations 🗋160,** it deteriorated.

The development of customer satisfaction is therefore below our forecasts as seen in the **2017 Integrated Report 🗋162.**

Focus on punctuality

Mostly weak development

Punctuality (%)	2018	2017	2016
DB Group (rail) in Germany	93.4	93.9	94.3
DB rail passenger transport in Germany	93.5	94.1	94.4
DB Long-Distance	74.9	78.5	78.9
DB Regional	94.0	94.4	94.8
DB Cargo (Germany)	72.9	73.4	76.2
DB Arriva (rail: Great Britain, Denmark, Sweden, the Netherlands and Poland)	89.8	92.3	91.0
DB Regional (bus)	91.0	90.5	90.6
DB Cargo (Europe)	72.8	72.7	75.6

The punctuality of our rail products in Germany showed an unsatisfactory development in the year under review. Both passenger and freight transport saw punctuality fall significantly below the values of the previous year.

Punctuality suffered from a higher utilization of the infrastructure. Further growth in rail transport combined with the expansion of the construction program and the associated reduction in network capacity had negative impacts on the development of punctuality. In contrast, it was possible to further reduce construction-related delays (delays that can be clearly linked to a construction site). The increasing traffic volume caused bottlenecks in both the infrastructure and with regard to staff and vehicle availability.

On the operational side, a large number of incidents in command and control technology and an increase in vehicle faults and incidents related to the provision of vehicles had a negative impact on punctuality.

In addition, in the year under review the number of external disruptions increased again slightly compared to the already very high levels of the previous year. One of the causes was the long heat wave during the summer. The excessively dry conditions, combined with high temperatures, resulted in two major embankment fires, one in Kassel in July 2018 and the other in Siegburg in August 2018. There was an additional strain due to weather-related restrictions, including due to the severe winter weather in February and March 2018 and the Friederike, Burglind and Fabienne storms, which caused major road undercutting and extensive line closures due to fallen trees.

Other external factors that negatively influenced punctuality development in the year under review included a fire on an ICE train on the high-speed Cologne—Rhine/Main line in October 2018, which caused line closures lasting several weeks and required comprehensive diversions and the Railway and Transport Workers Union (Eisenbahn- und Verkehrsgewerkschaft; EVG) strike in December 2018.

The development of punctuality is therefore on weak level within the range of our adapted **forecast from the Integrated Interim Report for January – June 2018 🗋 51.**

Comprehensive improvement measures are underway

In order to achieve a trend reversal in punctuality development, three lines of action were pursued in the year under review:

- Consistently continue measures from Railway of the Future.
- Set up a punctuality management center to create short-term stability.
- Implement the Group project on capacity management to develop countermeasures for the negative punctuality effects of increasing levels of traffic and construction.

Development in the year under review led to a comprehensive review of punctuality and measures. This review demonstrated that the planned improvements were being realized more slowly than anticipated, in particular due to the additional capacity required. Consequently, the **plan values for 2019 🗋 178** and the subsequent years were withdrawn and the decision was made to intensify the measures of the **Agenda for a Better Railway 🗋 66 ff.**

Expanding and further developing PlanStart

In the year under review, the PlanStart team at DB Long-Distance focused on transferring the improvements reached in on-schedule departures at the hub stations to the journey on the line and on increasing adherence to stop times during mid-journey stops.

At DB Cargo, PlanStart teams were deployed at seven further train formation yards in the year under review to increase departure punctuality.

In addition, the year under review saw a plan corridor set up on the Cologne—Dortmund line as a pilot project whereby interdisciplinary teams work even more intensively to control punctuality. The model follows the successful PlanStart approach. By intensifying joint train control (between DB Netze Track and TOCs) as well as measures to support the mission to achieve zero errors in the corridor (such as through preventive replacement of large switch parts and mobile maintenance at turning points), we hope to see significant increases in punctuality in the corridor. The pilot corridor proved very successful in the year under review and further corridors will therefore be introduced in 2019.

Punctuality Management Center

In response to the decrease in punctuality, we created the Punctuality Management Center in March 2018, which is managed by the Infrastructure Board division and develops and realizes measures for the short- and long-term improvement of punctuality on an operating level across all business units. The measures of the Punctuality Management Center, which also incorporates non-Group TOCs, include activities to optimize schedules in order to stabilize punctuality, improve adherence to stop times, increase the availability of command and control technology and stabilize S-Bahn (metro) traffic.

Punctuality Competence Center at DB Regional

The Punctuality Competence Center at DB Regional has intensified its work with regional punctuality managers and with the Punctuality Management Center, which works across business units. For example, DB Regional is deploying train boarding guides at the central stations in Munich and Frankfurt am Main. After the positive impact these employees had working in the S-Bahn (metro), further boarding guides will be deployed for regional transport in Frankfurt am Main.

Quality program for S-Bahn (metro) traffic

With a view to increasing punctuality and availability, comprehensive measures were taken for all S-Bahn (metro) systems. These include extending and renovating the infrastructure, as well as improving information provided by passenger controllers or by new display technology and renovating the appearance of stations.

As a result, the program improved the punctuality of the Berlin and Rhine-Main S-Bahn (metro) systems compared to the previous year.

Implementing the action plan for vegetation

The year under review began with the implementation of the vegetation action plan, which sought to reduce the negative impacts of increasingly extreme weather on rail operations.

In addition to continuing proven measures such as preventatively cutting back trees and bushes alongside tracks, the plan also includes thinning out vegetation. This can significantly stabilize the tree population along the tracks even beyond the trimming zone of six meters. As part of the reforestation measure, trees that have a stable height and suitable growth patterns will be planted, as will bushes and copses. Up to 150 inspectors will join the existing workforce of over 1,000 forestry workers in order to inspect the vegetation. About € 125 million was earmarked for vegetation management in the year under review. The experience gained in the year under review resulted in further development of the concept. In the next five years, we are planning to spend about € 660 million on the care and management of the plant population.

Project capacity management

The Group capacity management project was launched in order to provide a more realistic evaluation of the medium-term effects of increasing traffic volumes and the high levels of construction on punctuality and to develop countermeasures accordingly. The initial result in the year under review was the development of a new method to extrapolate punctuality targets based on the consideration of all capacity effects. This method was already used to set targets for 2019. Capacity measures encompassing all business units were derived from the knowledge gained as a result. However, many of these measures will only take effect from 2020. This is because, among other reasons, construction-based infrastructure measures take time.

In 2019, the results obtained from the year under review will be extended to include TOCs in the form of an improved punctuality simulation.

Driving innovative solutions

Digitalization and innovation as focal areas of action

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We intend to harness the potential of digitalization and play a decisive role in shaping tomorrow's mobility and logistics. Digital technologies not only make it possible to further develop our existing business, but also pave the way for new business models. Our goal is to provide our customers with the best possible, digitally supported experiences and processes. Digitalization and innovation are therefore among our focal areas of action, which we are driving forward across all business units. In doing so, we are aligning with the digitalization strategy, which defines our strategic direction and frames our activities in the three key areas of core business digitalization, new digital business and digital transformation. The Digitalization Competence Center is responsible for operationalizing the digitalization strategy. This committee regularly brings together digitalization decision makers from different business units and Group functions to propel digitalization within DB Group **(🚀DB Digital).**

In the year under review, we implemented digital initiatives, achieved adaptable structures and supported the digital transformation.

- Digitalization of core business: A decisive customer benefit could be achieved, for example, through **comfort check-in 117**. With **MyRailPortal 137** by DB Cargo, the customer interface was digitalized further. We are working with partners in the railway sector to automate and digitalize our infrastructure and production as part of the **Digital Rail for Germany 71** program.

! DIGITAL BASE

At the end of 2018, DB Group gained a new location for its digital business in Berlin with DB Digital Base. The site has 360 available workspaces on nine floors. Digital Base is an event venue, network and platform for exchange. It aims to create synergies between different digital projects and to promote a lively exchange of knowledge. With this in mind, the space is open plan so that all internal and external partners can work together to implement digital transformation projects and experience new working methods.

- New digital business: It is very important to us to build up new digital business models in our target markets. Particularly noteworthy examples include **Mobimeo 71** and **ioki 79.** In the year under review, DB Group was also involved with **verimi 79.** DB Schenker, together with MAN, piloted the **platooning 80** project and in the process achieved important milestones in autonomous driving.
- Digital transformation: For us, this term means achieving the necessary conditions in DB Group. The central focus areas are building a data-driven innovation ecosystem and most importantly bringing in executives and employees and giving them the skills they need. Our Digital Basecamp event series reached about 1,200 executives, conveying digital expertise and promoting networking in DB Group. The launch of **DB Lernwelt 85** in April 2018 has provided Group-wide online and offline learning content. The DataOps program is establishing binding principles that will optimize data preparation, generation and use in DB Group on a technical and operational level.

We have further professionalized our cooperation with start-ups.

- In particular, we have achieved this through **beyond1435,** our open innovation platform launched in the previous year to promote mobility innovations. We are working with our partners Siemens, Swiss Federal Railways (Schweizerische Bundesbahnen; SBB) and Bombardier with the aim of identifying new technologies and evaluating them for our own business development. We intend to develop and scale disruptive business models together with the start-ups and with the help of the innovation platform.
- **DB mindbox** is a co-working space and a central location where DB employees can exchange knowledge and cooperate with start-ups. The central funding program, **DB Startup-Xpress,** identifies promising start-ups and tests their ideas together with DB Group's business units. The start-ups should be able to implement their digital solutions quickly in cooperation with the business units. Since 2015, well over 1,000 start-ups from around 30 countries have applied for the DB mindbox program. With more than 30 start-ups, we are now working on concrete improvements to the integrated rail system.

! BEST INNOVATION LABS

For the second time, business magazine Capital presented a number of its awards for 2018 to German digital laboratories in three categories. In fact, DB Group was represented several times: Skydeck, amspire and d.lab are in the top 24 in the Best Innovation Labs category, DB mindbox achieved third place in the Best Accelerators category and the Intrapreneurship program made it on to the leaderboard in the Best Company Builder category.

- At **DB Digital Ventures 70** we have been able to realize five further investments.
- We are responding to developments within digitalization and new technologies, as well as to the changing markets, with the **ecosystem approach 69 f.** we defined in late 2018. We will be founding a central ecosystem holding company to enable effective ecosystem management in DB Group alongside DB Digital Ventures.

New product and service concepts

New partnership for standardized log-in solution

DB Group is a new shareholder of **verimi.** The cross-industry identity and data platform combines a convenient, central log-in (single sign-on), top security and privacy standards under European law and the ability for users to determine how their own personal data is used. DB Group is currently establishing the IT requirements for a standardized log-in to DB services. The solution is scheduled for integration in 2019.

New digital services in local transport

DB Regional is working with numerous contracting organizations to progressively install WiFi technology on board trains. In addition, an information portal has been developed that offers news, entertainment, current trip information and tourist information. In addition to numerous pilot projects, such as in S-Bahn (metro) Munich, we have already equipped a few local transport networks with WiFi; these are, among others, Elbe-Saale-Bahn, Expresskreuz Bremen, Main-Neckar-Ried-Express, RE-Netz Südwest (SÜWEX), S-Bahn (metro) systems in Rhine-Main, Stuttgart and central Germany, and various networks in Schleswig-Holstein and Baden-Württemberg. We are in negotiations with additional public transport authorities. Currently, Hamburg's S-Bahn (metro) stations are equipped with WiFi.

Further development of the Idea Train

DB Regional has developed a new and unique travel experience in regional transport with the Idea Train, which combines new product and service concepts for regional transport with visionary technological applications. In order to become the industry's innovation leader, DB Regional wants to help shape the development of vehicle interiors itself.

During the year under review new components were installed or redesigned. Unique themed worlds are set to become a reality. The Free State of Bavaria and DB Group signed a corresponding declaration at Innotrans 2018 in Berlin. With the redesign of a double-deck car for Südostbayernbahn, we will create nine themed worlds by 2020.

DB Group has decided to work with Siemens Mobility on the Idea Train. The train will be opened as a development environment for partners from the vehicle industry to test components and prototypes. Siemens Mobility is the first system manufacturer to join the cooperative effort. The aim is to persuade more regional transport contracting organizations and public transport authorities to think about innovative, customer-oriented ideas when submitting future tenders.

ioki expands its offers

With **ioki**, we are bringing on-demand mobility and autonomous driving into public transport. We have expanded our offer:

- ioki is working with public transport provider BVG on autonomous driving projects. As part of a pilot project, a self-driving **minibus** **no. 41** made journeys around the EUREF Campus in Berlin between April and December 2018. The test operation tested autonomous driving linked with an on-demand service for the first time using a new developed app. The plan for 2019 is to extend the test operation to public roads.
- The first driver-based on-demand service followed in May 2018 as part of the local pub-lic transport with integration into the existing fares in the town of Wittlich in Rhineland-Palatinate. The Wittlich Shuttle supplements existing transport infrastructures and brings customers to their destination on flexible and varying routes depending on the travel destination. The service can be conveniently booked using an app. Holders of season tickets or single tickets pay a convenience surcharge of € 1.90 for the new service.

! IOKI HAMBURG – AN ON-DEMAND SHUTTLE SERVICE

In the Hamburg districts of Lurup and Osdorf, transport company Hamburg-Holstein GmbH (VHH) operates in cooperation with ioki an on-demand bus service – ioki Hamburg. Since July 2018, electrically powered vehicles made by British manufacturer LEVC have been providing on-demand journeys. The service can be booked around the clock using the ioki Hamburg app. The ioki Hamburg Shuttle is licensed as a scheduled bus service. The vehicles each have six seats and boast easy wheelchair and baby stroller access. Further ioki stops have been set up at distances of no more than 200 m apart to optimize area coverage.

- As part of DB Group's Smart City Partnership with the City of Hamburg, ioki has been operating the driver-based on-demand shuttle service **ioki Hamburg** **no. 142** since July 2018, which is connected to Hamburg's public passenger transport services.
- In the first year, 20,000 passengers had already traveled with the autonomous **minibus** **no. 41** in Bad Birnbach.

Cooperation work to develop self-driving trucks

DB Schenker, in cooperation with MAN and Fresenius University, is carrying out a platooning project which is funded by the BMVI. In the year under review, preparatory activities were also carried out for piloting autonomous truck runs on terminal premises. MAN provided DB Schenker with the test vehicles for the truck platooning project in February 2018. Regular test runs of the networked trucks began in June 2018 on the 145-km section of road between Munich and Nuremberg. The trucks were tested without loads until early August 2018. Since September 2018, the platoons have been on the move, carrying out up to three runs per day, doing everyday logistics work, carrying general cargo such as machine parts, beverages and paper.

! PLATOONING

Platooning is a road traffic vehicle system whereby at least two trucks drive one behind the other on the highway in close proximity using technical driving assistance and control systems. All the vehicles driving in the platoon are connected to each other by an electronic drawbar via car-to-car communication. The lead vehicle determines the speed and direction. In the process, the electronic coupling of the vehicles in the platoon ensures road safety. A crucial goal of platooning is to save fuel for the entire platoon by driving in the slipstream of the lead vehicle.

T-Pod becomes the first autonomous electric truck

In November 2018, DB Schenker and Einride launched the first commercially used, fully electric, autonomous truck on DB Schenker property in Jönköping, Sweden – the T-Pod. The T-Pod by Einride has dispensed with the driver's cab. Instead, it is monitored remotely and can be controlled even from distances of several hundred kilometers away. Since it has no driver's cab, there was the scope for a much more efficient design. At the same time it offers higher load capacity, greater flexibility, lower production and operating costs, as well as optimized energy consumption. The T-Pod operates entirely on batteries.

Tests are underway on an automated vehicle used for swap body transports

DB Schenker is the first logistics provider worldwide to test the use of an automated "Wiesel" (weasel) at its Nuremberg branch office. This vehicle, produced by KAMAG, is designed for transporting swap bodies on logistics yards and can move these autonomously. Swap bodies are containers mounted on trucks that can be set down on fold-out legs for loading and unloading.

Utilizing blockchain technology

Blockchain is considered to be one of the most disruptive technologies ever. DB Group is testing various applications – from logistics supply chains and the clearing of internal services via smart contracts, as well as the distribution of proceeds in regional transport, to digital identity – that of trains but also of passengers. The DB Systel blockchain team pushes the blockchain and distributed ledger technology implementation forward.

Digitalization in rail operations

Rail system should be digitalized

According to the results of a study commissioned by the BMVI, Germany's rail network should be digitalized. This could achieve a capacity gain of up to 20% in passenger and freight transport. This would also lay the foundations for coping with Germany's growing traffic volumes. With the **Digital Rail for Germany 🗋71** program, the entire rail industry seeks to advance the wide-scale introduction of new command and control technology and digital interlockings throughout the approximately 33,000 km rail network.

The feasibility study for digitalizing the railway as presented in September 2018 came to the conclusion that it makes sense to equip the German rail network with the latest generation of European command and control technology **ETCS** green **no. 145,** while at the same time introducing digital interlocking technology, and that this work should begin shortly.

Its effects will create positive benefits for the wider economy:

- Increasing reliability: New technology and systems for quality and punctuality.
- Increasing capacity on the rails: Accommodating growth in transport and the potential to shift traffic off the roads.
- Increasing energy efficiency and reducing greenhouse gas emissions: Energy-saving control and shifting to the rails.
- Reduced maintenance and operating costs.
- Ensuring strength in the face of demographic change: Dealing with reduced operating staff numbers due to ageing and staff turnover.
- Borderless rail transport: European system interoperability.

The Federal Government will now review and evaluate the proposals. Digitalization will play a crucial role in the future viability of the railway.

Digitalized operation of the Hamburg S-Bahn (metro)

In 2021, a highly automated S-Bahn (metro) service will be launched in Hamburg for the first time. In this connection, a cooperation agreement on the Hamburg digital S-Bahn (metro) has been signed by First Mayor of Hamburg Dr. Peter Tschentscher, Siemens Management Board member Dr. Roland Busch and DB Infrastructure Management Board member Ronald Pofalla. Hamburg is therefore a pioneer of digitalized operation in a German rail network. The agreement includes plans to prepare the 23-km section on S-Bahn (metro) line 21 between the Berliner Tor and Bergedorf/Aumühle stations for highly automated driving while in parallel equipping four vehicles with the necessary technology. The three partners have agreed to share the costs of about € 60 million. In October 2021, when Hamburg hosts the ITS (Intelligent Transport System) World Congress, digitally controlled vehicles will be in operation.

First digital interlocking begins operation

Europe's first digital interlocking commenced operation in January in Annaberg-Buchholz on the Ore Mountain Railway (Erzgebirgsbahn). This pre-series project heralds a revolution in command and control technology that forms part of the **Digital Rail for Germany 🗋71** project. The digital interlocking marks the start of the further development and nationwide implementation of a new and innovative generation of interlockings. The technology can be used to operate both main lines with tight schedules and major hub stations and for simpler applications in rural areas. Plans for further reference projects were driven forward during the year under review. Construction work also began on the second digital interlocking in Warnemünde, which is set to become operational in September 2019.

App-based train-path booking system in development

From 2019, TOCs will be able to book train paths at the click of a mouse, just like in an online shop. The Click & Ride app is what makes it possible. Simply enter your desired time, line and train, check the offers, make your choice and book. Thanks to automatic scheduling, it only takes a maximum of three minutes from request to offer, instead of several hours as before. This means lower costs for all involved and better utilization of rail network capacity. In 2019, a limited version of Click & Ride is set to be introduced for rail freight transport for the first time.

In the process, Click & Ride will become the first productive element of the neXt Digital Capacity Increase (neXt Digitale Kapazitätssteigerung) program, supported by the Federal Government with total funding of € 75 million.

Wayside status check

Wayside monitoring means rolling stock can be put through its paces almost while it is passing by. An example of how it works could include microphones on the track recording the sounds of passing trains and comparing them with a previous "acoustic fingerprint" recording. If the result deviates from the normal value, we will take active maintenance measures. And that's long before any damage even appears on the train or rail. The advantages are fewer delays for passengers and optimized predictive maintenance.

Wayside monitoring is already in use at multiple locations such as in Hesse and North Rhine-Westphalia. The system can be used by any TOC. In the year under review, further pilot projects were launched, such as a video gate at Nuremberg and a monitoring system for current collectors.

Digitalization in station management

Glowing fiber-optic cables point the way

Finding your way around stations is becoming easier with glowing fiber-optic cables in the flooring; we have been testing this together with the start-up SIUT at Stuttgart-Bad Cannstatt station since February 2018. During a pilot run we tested the first dynamic guidance system using glowing fiber-optic cables. Thanks to the illuminated symbols in the station platform concrete, S-Bahn (metro) customers will also be able to see where the train stops, how long it is, and, for the pilot trains, how full it is and the positions of the doors, even before the train arrives at the station. We plan to improve passenger information and punctuality using this optimized train dispatch service.

Testing cleaning robots

New developments, such as in the area of robotics, help us to improve our service even more. DB mindbox asked providers to present specific station cleaning solutions during a challenge at Berlin's central station. The most compelling model was the cleaning robot CR700 from Adlatus Robotics. From May 2018, CR700 has been supporting our cleaning teams at various stations in Germany for a period of two years.

Social

OUR ASPIRATION

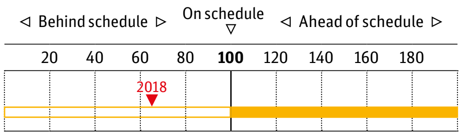
As a top employer we attract and retain qualified employees who are enthusiastic about working for us and our customers.

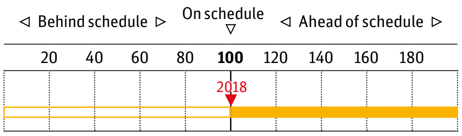
OUR TARGETS

Where do we stand in 2018 on the path to achieving our targets for 2020? (%)

2018 ▼ **Progress.** Are we progressing as planned? (Difference between control and 100 % shows delay/lead as a proportion of the actual deviation from target value)

	Base 2012	2017	2018	DB2020+ target
Employee satisfaction (SI)	3.6	–	3.7	4.0
Employer attractiveness (rank in Germany)	26	13	13	≤10





OUR AREAS OF ACTION

Talent acquisition
We will hire about 20,000 employees per year and increase the operational excellence of our recruiting process over the coming years.

Development of staff and executives
We are aligning the entire product and process landscape of personnel and management development with the Group strategy and customer benefits.

Change management
Professional change management provides a solid foundation for transformation of DB Group.

Working conditions
We are creating modern, forward-looking employment conditions – for DB Group and for our staff.

GRI 103 ↓

Working to become a top employer

We are working on the issues that are material to us and our **stakeholders** 🗋**46.** You can find an overview of our **material sustainability themes** 🗋**43** in the chapter "To our stakeholders."

We are working hard to increase our attractiveness as an employer. A visible and persuasive presence in the labor market is decisive for success in the competition for specialists and executives. All important aspects of recruitment are centrally managed within DB Group to guarantee a holistic approach to talent acquisition that forms the basis for a strong competitive position in an increasingly difficult applicant market.

This approach includes: our employer branding campaign, effective employer branding, up-to-date professional recruiting, innovative social media activities and a candidate experience oriented toward the target group. To remain attractive as an employer, we offer our employees a wide range of tasks and activities with a high level of responsibility, attractive employment conditions and a corporate culture that is perceived as being based on partnership and fit for the future. Our indicator for employer attractiveness is calculated on the basis of the employer rankings published by trendence.

Committed and motivated employees mean satisfied customers and thus sustainable business success. We therefore are consistently working to increase the performance capability of DB Group based upon a high level of process orientation and implementation strength. Alongside customer focus and performance capability, our corporate culture also encourages interdepartmental collaboration and the willingness to accept responsibility. In autumn 2018 we conducted the fourth Group-wide employee survey, which provided a comprehensive picture of employee satisfaction and helped us develop specific measures for change and improvement. Our indicator for **employee satisfaction 🗋87** is calculated on the basis of the employee survey, which is carried out every two years. In the years in which no survey is conducted, the key indicator Follow-up workshop implementation rate is used. The survey itself and the follow-up process are the responsibility of a central project team, which works closely with the business units to develop the measures and takes charge of preparation, follow-up and implementation. The project team has close links to both the Association for Consumer Research (Gesellschaft für Konsumforschung; GfK), which collects the data, and to those responsible for operational implementation in the business units.

The only way to meet the ambitious targets in our three key fields of activity – culture of quality, digital expertise and performance capability – is by far-reaching change, the transformation of our thinking and cooperation between all those involved. We will only achieve this essential transformation by working together to systematically align our actions with the “seven imperatives”: customer focus, process orientation, responsibility, performance culture, cooperation, implementation discipline and priorities. These provide orientation for employees and executives in the face of im-pending changes.

Levers have been identified to increase the structural and organizational performance capability within DB Group. The transformation is focused around customer-oriented process excellence, with the underlying standards, methods and sequences being consistently defined by the new **DB excellence system 🗋75.** In addition, the prerequisites for process excellence are put in place by highly developed performance management, professional change management and competence building for executives and employees alike.

Talent acquisition that works

Employer attractiveness remains high

Employer attractiveness (rank in Germany)	**2018**	2017	Change absolute	Change %	2016
DB Group	13	13	-	-	16
High school students	15	15	-	-	26
Students/graduates	17	20	+3	-	24
Skilled workers	12	13	+1	-	12
Academically experienced professionals	16	10	-6	-	9

In the year under review, we were able to maintain our appeal as an employer at a high level, meaning that DB Group is still well on the way towards becoming a top employer. This is in line with our **forecast from the 2017 Integrated Report 🗋163.**

In April 2017, we launched our new employer branding campaign. With our new campaign slogan “Welcome, you are one of us.” we issue an invitation to all potential applicants, who, similar to us, work on themselves and their goals and want to improve DB Group.

When recruiting new employees, we are increasingly addressing new target groups and using innovative formats, such as open candidate castings at passenger stations.

In May 2018, we moved our application management system to completely new software. Submitting an application is now much quicker, easier and more transparent, and candidates can also apply by smartphone and track the progress of their application online at any time.

In autumn 2018 we scrapped the covering letter, starting with trainees. The application letter is one of the greatest hurdles for applicants and provides little meaningful information: a résumé and personal interview are much more helpful when determining applicants’ skills and motivation. This step is based on the findings of the successful DB application marathon in November 2017, where the informal application process was particularly well received.

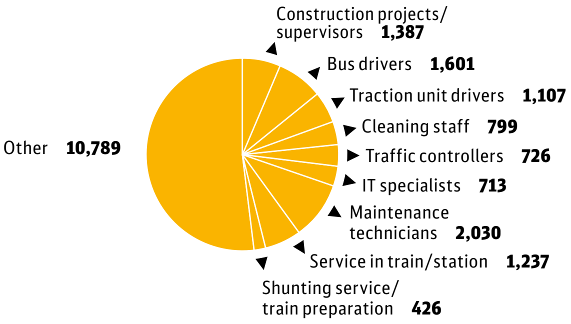
In the year under review, DB Group once again received multiple awards for its talent acquisition strategy. For example, its innovative Sourcing Automation was selected for the HR Excellence Award and declared "Innovation of the Year" by the Federal Association for Employer Branding (Bundesverband für Employer Branding, Personalmarketing und Recruiting; QUEB). Sourcing Automation analyzes data from all tenders in real time to optimize marketing measures, thus allowing the budget to be used more efficiently and effectively.

GRI 401-1 ↓

New hires at record levels

In the year under review, recruitment in Germany at DB Group reached its highest level ever (20,815 employees without young professionals). There are several reasons behind our employment campaign: firstly, DB Group is growing, with roles involving new IT skills expanding particularly quickly. Secondly, about half of the workforce in Germany is set to retire over the next ten years, meaning that their jobs will have to be filled.

External new hires (excluding young professionals)
as of Dec 31, 2018 (NP)



In total, DB Group hired almost 25,000 new employees in Germany in the year under review, including more than 4,000 young professionals (trainees and dual degree students). Demand is particularly high for occupational groups such as train drivers, traffic controllers, electronics technicians, engineers, command and control technology technicians, service personnel, track construction engineers and IT experts.

Demographic preparedness as of Dec 31 (%)	**2018**	2017	2016
Percentage of staffing needs covered in Germany	96.1	97.1	97.3

Germany (companies with about 79% of domestic employees).

The percentage of staffing needs covered has fallen slightly.

Personnel development is changing

GRI 401-1 404-2 ↓

Securing new talent

Young professionals as of Dec 31 (NP)	**2018**	2017	2016
Vocational trainees [1]	9,923	9,540	9,530
Dual degree students [1]	949	900	941
Graduate trainees [2]	157	109	114
Interns [2]	534	537	503
"Chance plus" participants	250	250	250
DB Group	**11,813**	**11,336**	**11,338**

[1] Germany; includes all class years of vocational training (usually three class years for both vocational trainees and dual degree students).

[2] Germany (companies with about 98% of domestic employees).

DB Group is one of Germany's largest training providers and over 94% of trainees receive a job offer at the end of their vocational training. In the year under review, we once again supported the BDA Employer Award for Education (Arbeitgeberpreis für Bildung). This annual award, the focus of which changes every year, acknowledges educational institutions that help to improve the German education system by their successful educational work and serve as role models for other institutions. In the year under review, the scheme recognized projects in which cooperation between traditional educational institutions and partners – from parent initiatives to other educational institutions and from committed private individuals to companies – led to innovation and educational success.

About 3,800 trainees and 360 dual-program students joined DB Group in the year under review. Most of the young people were employed in the following roles: track/rail vehicle maintenance (about 1,300), traffic controller (about 560), train driver (about 490) and electronic technician for industrial systems (about 480). Since the year under review we have also been training IT specialists. In addition to trainees in their first year of training in classic railway occupations (such as traffic controllers and train drivers), those in industrial and technical occupations (such as electronics and mechatronics technicians) have also been given a tablet at the start of training since the year under review, with about 2,500 devices having been issued in total.

We also offer a Group-wide program for socio-educational support during training. This is designed to increase motivation and performance and to provide individual support for low-performing trainees if required. It also aims to prevent people from breaking off their training. About 700 trainees are currently able to access this support.

GRI 404-2 ↓

Employee retention and development

Strategic succession planning for central executive and expert functions is an important part of personnel development. Faster filling (or refilling) of vacancies based upon advance planning will improve performance and increase the quality and diversity of appointments. It will also help employees and management orient themselves in their professional development. In August 2018, the pilot for the new succession planning was launched. This covered about 100 roles in two business units. Based on experience, a further rollout is planned for 2019.

! DB LERNWELT

The online learning platform DB Lernwelt allows employees and managers to continue their training using computers. The platform provides over 200 courses developed by experts that can be accessed wherever and whenever is convenient, with the range being expanded on a regular basis. As part of the Training the future (Wir bilden Zukunft) project, DB Lernwelt helps users develop their expertise in the areas of digitalization, operational excellence and performance.

Following its introduction for top and senior management, the new career system for executives was extended to middle management in the year under review. The career system offers clear orientation to executives as they expand their experience and encourages regular movement between management roles.

GRI 102-41 102-43 ↓

Further improvements in employment conditions

On January 1, 2018, the second phase of the collective wage increase from the 2016/2017 collective bargaining agreement process came into effect. Employees had previously been able to decide for themselves how they wanted to take this second stage under a new type of elective model: as a pay increase of 2.62%, as a reduction in working hours of one hour per week or as six days' additional vacation. A total of 58% of employees chose additional vacation, 40% chose the pay increase and 2% chose the reduction in working hours.

Forward-looking collective bargaining

The collective wage agreements from the 2016/2017 collective bargaining process with the EVG and the Train Drivers' Union (Gewerkschaft Deutscher Lokomotivführer; GDL) expired on September 30, 2018. Negotiations on the 2018 collective bargaining process began in October 2018, covering about 160,000 DB employees in Germany.

On December 14, 2018 DB Group reached a collective bargaining agreement with the EVG: this comprised two-stage wage increases of 3.5% on July 1, 2019 and 2.6% on July 1, 2020. In addition, a one-off payment of € 1,000 will be made for the periode October 2018 until June 2019. On January 1, 2021 employees will once again be given the option of more leisure time or vacation instead of the second stage of the increase. The package as a whole also includes significant improvements for young professionals and new innovative options. For example, in the future DB employees will be able to choose to convert overtime hours into company pension contributions.

The collective wage agreements apply with retroactive effect from October 1, 2018 to February 28, 2021 and therefore have a term of 29 months.

On January 4, 2019 a **collective wage agreement was also reached with the GDL 🗋174.**

GRI 404-2 ↓

DB Group is transforming

On April 1, 2018, DB Group was one of the first large groups in Germany to create a new change management division, which reports directly to the member of the Management Board responsible for HR, in order to provide a solid foundation for the DB Group transformation within the organization. DB Group is undergoing a fundamental transformation process: the new division will support the fundamental change of our business processes to increase performance capability (OPEX) and drive both the digitalization of DB Group and transformation within the Group by hiring about 20,000 new employees per year over the coming years. The division will define requirements in areas such as staff planning, onboarding, further qualification and working conditions, and set guidelines and provide tools for professional change management on-site. If the transformation is to succeed, we will need executives and employees who strive for operational excellence and work enthusiastically to advance the digitalization of DB Group. Empowerment and the development of competence are therefore essential factors for success in terms of the effectiveness of process excellence, performance and change management.

GRI 404-3 ↓

Expansion of performance management

We are working hard to improve performance management in DB Group sustainably. To further increase effectiveness, we are linking performance management more closely and rigorously to concrete responsibility at the individual level. A solution for this has been developed within the My Performance Management project that makes goals more action-oriented, puts the focus squarely upon feedback and ensures that performance is always on the agenda. This creates an alternative to the current dialogue between employees and management and to the management planning process. This approach has been piloted in five different business entities, where it has been well received. The pilot of the new performance management system with about 2,500 employees was successful and the system will therefore be gradually rolled out in the integrated rail system over the coming years.

Shaping digitalization

GRI 102-41 ↓ In March 2018, we concluded a digital agreement with the Group Works Council: the new framework Group Works Council Agreement (Rahmen-Konzernbetriebsvereinbarung; R-KBV) set down guidelines for rapid changes in today's work environment due to digitalization. The R-KBV "Shaping progress and our future together" aims to give our employees guidance and security.

! VIRTUAL REALITY

In the year under review, we used our virtual reality (VR) application EVE (Engaging Virtual Education) – which we developed in-house – to enhance the qualifications of about 1,000 on-board service staff. VR glasses allow them to familiarize themselves with new functions of the ICE4 without actually being on board. The Munich-based start-up VISCOPIC has developed a virtual training course with realistic switch holograms in DB StartupXpress that was used to help about 400 employees learn to rectify faults in switches more quickly and easily in the year under review. DB Schenker uses the 3D technology to train logistics personnel. A VR version is planned.

Digital devices for all DB employees

To enhance digital skills, all DB employees in Germany are to be issued with smartphones or **tablets** green. **no. 102.** This program will be rolled out by the end of 2019. This will mean that employees who previously could not be contacted electronically when at work will have electronic access to work orders and will be able to document processes electronically.

The Railway of the Future tour

GRI 404-2 ↓ The Railway of the Future tour 2018 used interactive stations and discussions with experts to highlight areas DB Group is working on to meet the challenges posed by digitalization, operational excellence and performance capability. Between April 26 and July 26, 2018, about 17,500 employees (and their families) visited the exhibition in a total of 16 towns and cities.

New corporate wear

At the end of March 2018 we presented the first prototypes of the new corporate wear for customer-facing employees, which was developed with designer Guido Maria Kretschmer. From August 2018, about 250 employees participated in wearability tests. The new collection comprises about 80 individual items. For the color, we chose the new shade of burgundy, whilst the DB logo and cap remain in the familiar red. Significant improvements in functionality, appearance and comfort affect employee satisfaction and identification with DB Group.

Agility and self-organization

Since the middle of the decade, a dynamic, bottom-up process has been underway in DB Group, with staff adopting agile methods or organizing themselves more autonomously. We expect more than 5% of employees in Germany to be working in agile structures or teams by the end of 2020, half of these due to large transformation projects and the other half due to teams of up to 100 employees trying out agility, self-organization and distributed management. The shift to agility and self-organization does not follow a generic model. It should always start from a strategic challenge or a problem that has been identified, for which suitable answers are sought from the agile method set. In the year under review, a virtual and cross-functional team stepped up its work to promote agile and self-organized structures and remove obstacles to their establishment.

Promoting diversity

We believe that diversity is about more than just gender, generation, ethnic origin, religion, sexual orientation and physical or mental abilities. It's also a question of different personalities, life plans, skills and professional experience. In particular, we are committed to increasing the proportion of women in the workforce and encouraging intergenerational cooperation.

In April 2018, about 500 female DB executives met at the second DB Female Managers Lounge on the subject "More women at the top – how we can help promote change." This initiative aims to promote networking and increase the visibility of female executives.

The new Generational Contracts project is aiding the transfer of technical knowledge and professional skills between DB employees, with about 500 generational contracts having been concluded by the end of 2018.

As a member of the Diversity Charter, we use the 6th German Diversity Day 2018 to raise awareness of the subject amongst DB employees.

GRI 405-1

Share of women as of Dec 31 (%)	**2018**	2017	2016
DB Group	24.5	23.7	23.6
In Germany	23.2	23.0	23.0

The proportion of women rose slightly.

GRI 102-8

Employee satisfaction stable

Employee satisfaction	**2018**	2017	2016
Employee satisfaction (SI)	3.7	–	3.7
Follow-up workshop implementation rate (%)	–	97.1	–

The employee satisfaction survey is conducted every two years. If no survey has been conducted, the key figure Follow-up workshop implementation rate is used.

The fourth Group-wide employee survey was conducted between September 26 and October 26, 2018. This is an essential part of DB's corporate culture, which relies heavily on personal participation, empowerment and employee responsibility. Over 330,000 employees in 76 countries were invited to participate, with more than 200,000 taking up the offer. The participation rate was 60.0% (2016: 60.7%). The employee survey was once again conducted and evaluated by the independent external service provider GfK and showed that employee satisfaction has remained stable. Positive trends can be seen in emotional attachment, with 62% of employees (2016: 60%) feeling strongly attached to the company and their job. There were also improvements in areas such as enjoyment of work at 69% (2016: 68%), integration at 64% (2016: 50%) and error culture at 60% (2016: 50%). Critical feedback was received on Group-wide cooperation and strategic issues, and perception of own motivation remained unchanged at 49%. Based on the results, there are four areas for action:

- Strategy: Employees and managers are slightly more optimistic about the future, but the value lies significantly below that for satisfaction in the working environment. The desire for a clearer strategic focus is evident.
- Railway of the Future: Although half of all employees are aware of the content and goals of Railway of the Future, belief that the project can be successfully implemented is receding. There is a need for visible improvements across the board.
- Company-wide dialog: Many employees expect more guidance from their management. The survey shows that satisfaction increases when dialogue and communication are perceived as open and honest.
- Group-wide cooperation: Improving Group-wide cooperation is a key task. 40% believe this works well with other divisions. A key theme was structure of work sequences and the excessive number of interfaces in the Group.

The trend for employee satisfaction thus lies slightly below our **forecast from the 2017 Integrated Report 🗋163.**

At the end of January 2019, all executives received their individual results reports. Team workshops and follow-up activities begin in March 2019.

Increase in the number of employees

GRI 401-1

Employees as of Dec 31 (FTE)	**2018**	2017	Change absolute	Change %	2016
DB Long-Distance	16,548	15,993	+ 555	+ 3.5	16,326
DB Regional	35,881	35,651	+ 230	+ 0.6	36,008
DB Arriva	53,056	54,650	- 1,594	- 2.9	54,150
DB Cargo	28,842	28,257	+ 585	+ 2.1	29,671
DB Schenker	75,817	71,888	+ 3,929	+ 5.5	68,388
DB Netze Track	46,969	45,375	+ 1,594	+ 3.5	43,974
DB Netze Stations	5,804	5,463	+ 341	+ 6.2	5,093
DB Netze Energy	1,734	1,721	+ 13	+ 0.8	1,736
Other	53,877	51,937	+ 1,940	+ 3.7	51,022
DB Group	**318,528**	**310,935**	**+ 7,593**	**+ 2.4**	**306,368**
± Changes in the scope of consolidation	-1,338	- 95	-1.243	–	–
DB Group – comparable	**317,190**	**310,840**	**+ 6,350**	**–**	**–**

To guarantee better comparability, the number of employees is converted into full-time employees. Figures for part-time employees are measured in accordance with their share of the regular annual working time.

The number of employees rose slightly, particularly in the contract logistics division at DB Schenker and in the maintenance and construction projects divisions at DB Netze Track. The number of employees at DB Long-Distance and DB Cargo also increased.

GRI 102-8

Employees by regions as of Dec 31 (FTE)	**2018**	2017	Change absolute	Change %	2016
Germany	196,334	189,423	+ 6,911	+ 3.6	187,395
Europe (excluding Germany)	92,336	93,655	- 1,319	- 1.4	92,694
Asia/Pacific	16,751	15,971	+ 780	+ 4.9	15,016
North America	9,736	8,921	+ 815	+ 9.1	8,556
Rest of world	3,371	2,965	+ 406	+ 13.7	2,707
DB Group	**318,528**	**310,935**	**+ 7,593**	**+ 2.4**	**306,368**

Employee loyalty (years)	**2018**	2017	2016
Average length of service	18	19	20
Average age	45	46	46

Germany (companies with about 98% of domestic employees).

Environmental

OUR ASPIRATION

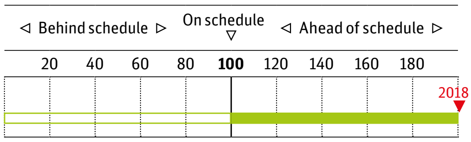
We want to be a pioneer in environmental protection.

OUR TARGETS

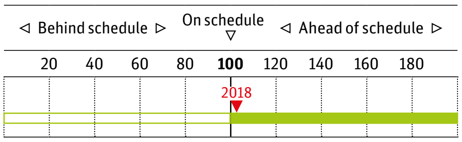
Where do we stand in 2018 on the path to achieving our targets for 2020? (%)

2018 ▼ **Progress.** Are we progressing as planned? (Difference between control and 100 % shows delay/lead as a proportion of the actual deviation from target value)

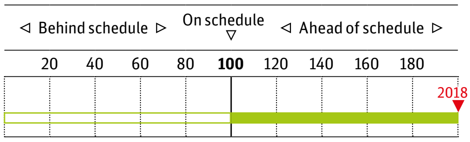
Climate protection – specific greenhouse gas emissions compared to 2006 (%)	Base 2012	2017	**2018**	DB2020+ target
	-12.0	-29.5	-33.2	-30



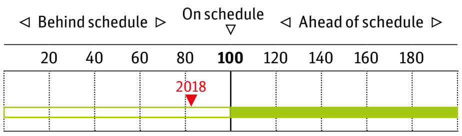
Noise reduction – quiet freight cars in Germany as of Dec 31	Base 2012	2017	**2018**	DB2020+ target
	7,349	39,604	50,409	63,000



Climate protection – share of renewable energies in the DB traction current mix (%)	Base 2012	2017	**2018**	DB2020+ target
	24.0	44.0	57.2	45



Noise reduction – total noise remediated track as of Dec 31 (km)	Base 2012	2017	**2018**	DB2020+ target
	1,200	1,701	1,758	2,000



OUR AREAS OF ACTION

Expansion of green services
We offer our customers climate-friendly travel and freight transport with 100 % eco-power.

Use of renewable energies
We are continuously increasing the proportion of eco-power in the DB traction current mix for climate-friendly rail transport.

Reduction of greenhouse gas emissions
We are reducing our global greenhouse gas emissions to protect the climate.

Noise remediation
We protect local residents from noise using fixed sound barriers on-site to help achieve quiet freight traffic.

Recycling
We keep our recycling rate high to conserve resources.

Refitting with whisper brakes
We are halving the rolling noise of freight cars by using V brake shoes for a quieter environment.

GRI 103 ↓

Our aspiration for climate, noise and nature conservation

We are working on the issues that are material to us and our **stakeholders 46.** You can find an overview of our **material sustainability themes 43** in the section entitled "To our stakeholders."

Environmental and climate protection are among our strategic goals and are a matter of course to us as a sustainable mobility and transport service provider. By 2050, all our transport services will be climate-neutral, thereby reducing our specific emissions to zero.

Our new climate target of halving our specific greenhouse gas emissions by 2030 represents an important milestone on the way to this goal. To achieve this, we are increasing the proportion of renewable energies in the DB traction current mix in Germany to 80% by 2030. We are therefore increasingly operating our transport services using electricity from renewable sources. One significant measure that we have put in place in the year under review is the supply of DB Long-Distance in Germany entirely with **renewable energies no. 1.** This means that since January 2018, all passengers in DB Long-Distance electric trains on all routes have been traveling CO_2-free.

! THIS IS GREEN.

The slogan **This is green** describes how DB Group sees itself in terms of environmental protection: not only do we want to play our own part, we also want to help our customers protect the environment by providing green solutions and products in all areas. This is why we are pursuing ambitious targets in the fields of climate, noise and nature conservation. In 2018, we increased the number of green measures that form part of our daily activities to about 150. DB Group is thus living up to its responsibility for a successful transport transition in Germany.

This is green. deutschebahn.com/green
Climate protection.
Nature conservation.
Deutsche Bahn.

In addition, we are continuously increasing the proportion of more energy-efficient means of production, for example as part of the modernization of our vehicle fleet.

We will continue to use attractive offers to expand the market share of rail transport in the passenger and freight sectors and provide incentives to get more traffic onto the rails. The Berlin–Munich high-speed line, which was put into service in December 2017, and our quiet digital freight cars, which allow freight to be tracked in real time, are two examples of this approach.

The shift of transport services to the rails not only affects the emissions of our own logistics, it is essential to helping Germany achieve its national climate targets in the transport sector. To monitor our progress, we have defined energy efficiency targets in each business unit, which are measured at regular intervals. We do not use any further climate compensation instruments to achieve our climate target.

Our climate-protection indicators are **specific greenhouse gas emissions compared to 2006 90** and the **proportion of renewable energies in the DB traction current mix 90 f.**

Another important topic for us is noise reduction. We want to relieve residents noticeably of rail transport noise. This is crucial if we are to increase acceptance of the shift from road to rail. Our goal is therefore to halve rail noise by 2020. To achieve this, we are implementing a two-pillar strategy for noise reduction based around infrastructure and freight cars. We are building **noise barriers no. 25** along our track infrastructure and fitting apartments with passive **sound insulation no. 101.** We are also reducing the noise of our freight car fleet by retrofitting freight cars with **quiet brake shoes no. 5** and by purchasing new quiet cars. These measures are being carried out by the business units DB Netze Track and DB Cargo.

! OUR CONTRIBUTION TO THE CLIMATE PROTECTION PLAN 2050

With the Climate Protection Plan 2050, the Federal Government is aiming to reduce greenhouse gas emissions in the transport sector by up to 42 % by 2030 compared to 1990, as a first step. We have aligned our new climate target to this aspiration and aim to reduce absolute greenhouse gas emissions by about 11 million t CO_2e by 2030. This will increase the climate protection gains of shifting transport to environmentally friendly rail. In contrast to passenger cars and aircraft, a DB long-distance train running on 100 % eco-power emits virtually no greenhouse gases. And, in the freight sector, DB rail freight transport produces only one-quarter of the greenhouse gas emissions of trucks.

We measure our progress based on the indicators of **track kilometers noise remediated in total 92** and **quiet freight cars in Germany 92.**

We can make a significant contribution to nature conservation by the **efficient use of resources 93.** We have therefore set ourselves the target of maintaining a recycling rate of over 95%. Thanks to comprehensive recycling we are achieving a particularly high rate for construction wastes. We also aim to increase the recycling rate for our other wastes, in particular municipal waste, in the coming years. In addition, we are redesigning our own production equipment to extend its life cycle, using recycled materials and continuously optimizing our material cycles.

Progress in climate protection

GRI 305-5 ↓

Climate target: to halve greenhouse gas emissions by 2030

Since the year under review, we have been referring to our new climate target. By the year 2030, we will cut specific emissions of greenhouse gases (i.e. emissions based on volume sold) by more than half worldwide compared to 2006. If the right policy decisions are made, up to 11 million t CO₂e can be saved in Germany's transport sector as a whole by the year 2030 by switching traffic to the rails. At the same time, DB Schenker, as an international logistics provider, has set itself the goal of achieving climate-neutral growth, aiming to reduce specific greenhouse gas emissions by at least 40% compared to 2006.

! **ACCOUNTING FOR ALL GREENHOUSE GASES**

Our climate target, ecological footprint and specific greenhouse gas emissions are calculated in accordance with the Greenhouse Gas Protocol. In addition to CO_2, we also take into account all other climate-impacting gases, such as methane and nitrous oxide (laughing gas). These gases are quoted in CO_2 equivalents (CO_2e), which means their climate impact is converted into CO_2. Depending on the energy source (e.g. electricity), emission values may be about 10% higher than those of pure CO_2 emissions. We use energy consumption and the associated emission factors, plus performance data, to determine whether we have achieved our climate protection targets.

To achieve overall climate neutrality by 2050 we are gradually increasing the proportion of renewable energies in the DB traction current mix to 80% by 2030.

The greenhouse gas emissions of our global logistics transport services outside Germany will remain constant over the coming decade despite further increases in transport volumes. To achieve this, our carriers are increasing the efficiency of their transport services and working on more sustainable transport solutions.

GRI 305-5 ↓

Further reduction in specific greenhouse gas emissions

Specific greenhouse gas emissions in comparison with 2006 (%)

In accordance with our new climate target, in the year under review we are for the first time showing not only the reduction of specific greenhouse gas emissions by carriers but also those of stationary facilities. We have further reduced our specific greenhouse gas emissions compared with 2006 in line with our targets. The trend lies above our **forecast from the 2017 Integrated Report 🗋163.** With reference to 1990, the basis of our first climate protection program, we have achieved a reduction of 69% for our rail transport in Germany.

GRI 305-4

Specific CO_2e emissions from journeys and transports of DB Group by mode of transport	**2018**	2017	Change absolute	Change %	2016 [1]
Regional rail passenger transport (g/pkm)	53.1	57.3	-4.2	-7.3	59.6
thereof in Germany	51.3	56.8	-5.5	-9.7	58.4
Long-distance rail passenger transport (g/pkm)	1.3	13.0	-11.7	-90.0	13.2
Bus transport (g/pkm)	77.3	79.6	-2.3	-2.9	80.7
thereof in Germany	88.8	89.2	-0.4	-0.4	91.4
Rail freight transport (g/tkm)	20.1	20.6	-0.5	-2.4	20.8
Road freight transport (g/tkm)	85.8	92.3	-6.5	-7.0	97.4
Air freight (g/tkm)	721.8	725.4	-3.6	-0.5	757.1
Ocean freight (g/tkm)	6.7	6.8	-0.1	-1.5	6.9

Well-to-wheel (WTW); scope 1–3; without pre- and onward carriage; rail transport companies are calculated with their own energy mix and/or European country mixes.

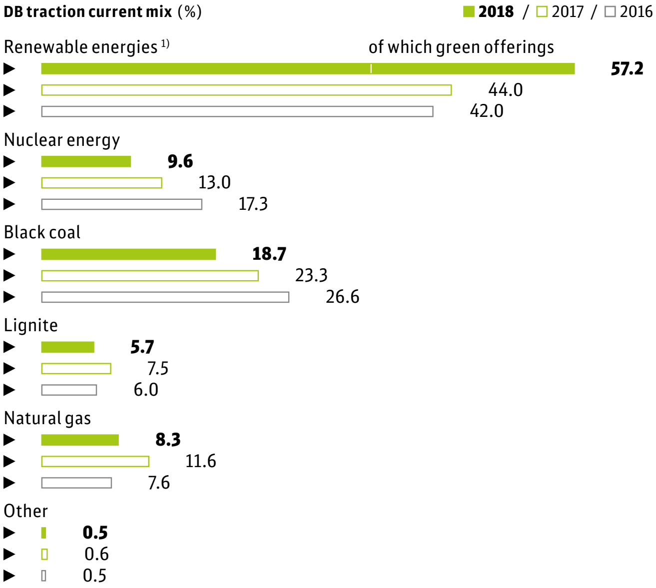
[1] Figures adjusted.

Particularly significant reductions were seen in regional and long-distance rail passenger transport. This was due in particular to the use of **100% eco-power** green. **no. 1** in long-distance transport services and the deployment of modern vehicles.

GRI 305-4 ↓

High share of renewable energies

DB traction current mix (%)



Data for 2018 relate exclusively to DB Group companies and are based on findings and estimates available as of February 2019. 2016 including traction current purchased by non-Group train operating companies.

[1] Including additionally procured electricity for all green offerings of DB Group with 100% eco-power (e.g. S-Bahn (metro) Hamburg or DBeco plus) and taking into account a forecast based upon the Renewable Energy Sources Act subsidy.

Since January 1, 2018, all passengers on our long-distance trains throughout Germany have been traveling by **100% eco-power** green. **no. 1.** Since the beginning of the year under review, S-Bahn (metro) Berlin has also been operating CO_2-free, thereby contributing to the high proportion of eco-power in the DB traction current mix. S-Bahn (metro) Hamburg has been operating completely CO_2-free since 2010.

In rail freight transport, DBeco plus offers our customers CO_2-free transport services based on **100% eco-power** green. **no. 1.**

The trend lies significantly above our **forecast in the 2017 Integrated Report 🗋163.**

GRI

302-3
302-4
302-5
↓

Energy efficiency increased

Specific primary energy consumption by DB Group journeys and transports	**2018**	2017	Change absolute	 %	2016
Regional rail passenger transport (MJ/pkm)	0.85	0.90	- 0.05	- 5.6	0.97
thereof in Germany	0.84	0.91	- 0.07	-7.7	0.98
Long-distance rail passenger transport (MJ/pkm)	0.25	0.36	- 0.11	- 30.6	0.39
Bus transport (MJ/pkm)	1.14	1.18	- 0.04	- 3.4	1.19
thereof in Germany	1.26	1.26	-	-	1.30
Rail freight transport (MJ/tkm)	0.33	0.34	- 0.01	- 2.9	0.35
Road freight transport (MJ/tkm)	1.21	1.31	- 0.10	-7.6	1.38
Air freight (MJ/tkm)	9.77	9.82	- 0.05	- 0.5	10.25
Ocean freight (MJ/tkm)	0.09	0.09	-	-	0.09

Well-to-wheel (WTW); scope 1-3; without pre- and onward carriage.

We have increased energy efficiency across the board, with specific primary energy consumption continuing to fall across all transport services. By reporting primary energy as a reference level, we are also taking into account the processes required for providing the energy, such as extraction, processing and the transport of fuels or the generation of electricity.

GRI

302-1
↓

Brake energy recovery increases energy efficiency

Brake energy recovery [1] (GWh)	**2018**	2017	2016
Regional rail passenger transport	834	794	800
Share of total electricity procurement (%)	21	20	19
Long-distance rail passenger transport	331	303	304
Share of total electricity procurement (%)	12	11	11
Rail freight transport	184	148	153
Share of total electricity procurement [2],[3] (%)	9	7	7
Total	**1,349**	**1,245**	**1,257**

[1] Germany, tank-to-wheel (TTW).

[2] Since 2018 including RBH Logistics.

[3] Previous years' figure adjusted.

Modern rolling stock can convert a proportion of its kinetic energy into electrical energy during braking, allowing this to be **fed back into the traction current grid** green. **no. 19.** In the year under review, the recovery rate increased to 15% (previous year: 14%). The fleet vehicles that are able to "recycle" electricity is currently growing, thanks in part to the delivery of further ICE 4 in the year under review.

GRI

302-4
↓

Stationary energy requirements reduced in stations, facilities and buildings

The about 5,400 stations and our maintenance facilities and buildings in Germany, as well as over 2,000 sites worldwide operated by DB Schenker, account for about 7% of DB Group's total energy requirements. To identify potential savings and measure energy consumption over the long term, energy audits were carried out in about 700 subsidiaries in previous years in order to implement the EU Energy Efficiency Directive. DB Regio AG, S-Bahn Berlin GmbH, S-Bahn Hamburg GmbH, DB Fernverkehr AG, DB Station & Service AG and DB Energie GmbH have been operating an **energy management system** green. **no. 78** in accordance with ISO 50001 since 2016. This was partly responsible for the further fall in stationary power consumption compared to the previous year.

At DB Netze Stations, we managed to lower absolute primary energy consumption by 20.5% in comparison to 2010 by the end of 2018. The goal of reducing absolute primary energy consumption by 20% by 2020 was thus achieved two years earlier than planned. This was thanks to measures such as the conversion of showcases, orientation systems and platform lighting to **LED technology** green. **no. 50,** the energy-focused renovation of railway station buildings by means of façade/roof insulation or modern windows, and the improvement of old heating systems by replacing burners, boilers and circulation pumps. Preference was also given to the use of photovoltaic, **solar** green. **no. 30** or **geothermal** green. **no. 91** systems for new buildings and conversions. Examples are the **green stations** green. **no. 6** in Horrem and Lutherstadt Wittenberg. In addition, the electricity requirements of the 15 largest railway stations will be covered by renewable energies from 2019.

Expansion of solar installations on DB buildings

We have provided space for photovoltaic installations on DB premises since 1997. We, or external investors, have installed **solar systems** green. **no. 30** amounting to a total area of about 290,000 m² on the roofs of workshops and warehouses worldwide and at railway stations. They feed about 20 megawatt hours into the electricity grids annually.

Noise reduction measures

We aim to halve rail transport noise by 2020 compared with the year 2000 by building fixed **sound barriers** green. **no. 101** along the line and using **whisper brakes** green. **no. 5** on freight cars.

Noise remediation and prevention continues

Noise remediation and prevention in Germany as of Dec 31	**2018**	2017	2016
NOISE REMEDIATION (EXISTING NETWORK)			
Sound barriers completed [1] (km)	44.6	19.9	35.7
Homes with passive measures	2,248	1,634	1,495
Track kilometers noise remediated in total [1] (km)	1,758	1,701	1,598
NOISE PREVENTION (NEW CONSTRUCTION AND EXPANSION LINES)			
Sound barriers completed [1] (km)	82.9	32.2	24.4

[1] Previous years' figures adjusted.

Since 1999, we have been reducing noise pollution for residents living near railway lines by the "Voluntary noise remediation program for existing rail lines of the Federal Government" and by statutory noise remediation measures. By the end of 2020, we aim to perform noise remediation on a total of 2,000 kilometers of track using fixed **noise abatement measures** green. **no. 25.** In the year under review, about € 98 million from the Federal budget was used for active and passive noise abatement measures under the noise remediation program. Other noise protection projects are also being financed using funds from the program.

In the year under review, we tightened up the definition of the key indicator track kilometers noise remediated in total, removed parts of the noise remediation and added some sections of the route for which acoustic reports during implementation established a need for additional noise remediation measures. The previous year's figures have been adjusted accordingly. We have revised the key indicator on the progress of the construction of sound barriers. We have changed the name of the key indicator from "sound barriers erected" to "sound barriers completed" to distinguish it from the old indicator. It was therefore not possible to fully achieve the **forecast in the 2017 Integrated Report 🗋163** for the total noise remediated track.

The abolition of the rail bonus and a further reduction of the threshold values of the Federal Government's voluntary noise remediation program to 57 dB at night in residential areas have laid the groundwork to provide residents with even better protection against rail noise. As a result, the Federal Government's voluntary **noise remediation program** green. **no. 101** has been fundamentally revised. The number of routes covered by the revised noise remediation program has increased significantly as a result of the reduced thresholds. The sections of track that have already been remediated based have been taken into consideration as well due to the reduced threshold. The new overall concept was published by the BMVI on January 31, 2019.

More quiet freight cars on the rails

Freight cars in operation equipped with V brake shoes of DB Cargo in Germany as of Dec 31	**2018**	2017	2016
New freight cars	8,470	8,323	8,302
Freight cars refitted with whisper brakes	41,939	31,281	24,094
Quiet freight cars	**50,409**	**39,604**	**32,396**

The number of new and existing freight cars with the noise reducing composite technology has increased further. In the year under review, about 11,000 cars in the active freight fleet were equipped with **whisper brakes** green. **no. 5.** About 80% of DB Cargo Germany's active fleet are thus running on quiet brake shoes. This is in line with our **forecast in the 2017 Integrated Report 🗋163.**

Progress on the innovative freight car project

As part of a tender, in 2016 the BMVI awarded a contract for a research project entitled **Construction and testing of innovative freight cars** on the migration to noise reducing and energy-efficient technologies in freight cars to the working group made up of DB Cargo AG and VTG AG. As part of this project, the working group designed a demonstrator train made up of a total of 12 **innovative freight cars** green. **no. 54** and eight reference vehicles. Three further existing freight cars were also fitted with automatic couplings. The innovative freight cars will be optimized and further developed in terms of noise and weight reduction on the basis of existing car types. In addition, innovative components such as rubber-sprung bogies, low-noise wheel sets, wheel noise absorbers, noise aprons, electropneumatic brakes and other innovations are being tested and evaluated according to criteria such as noise reduction, energy efficiency and economy. Regular measurements are carried out during field tests. The project is scheduled to end on April 30, 2019.

Innovative noise remediation

To expand our portfolio of noise remediation measures, we, together with BMVI, have launched the new and application-oriented noise control trials initiative (Initiative Lärmschutzerprobung neu und anwendungsorientiert; I-LENA) as part of the **Future Capital Expenditure Program (Zukunftsinvestitionsprogramm; ZIP) 🗋147.** Under this program, about 30 innovative products for **noise protection green. no. 43** will be tested on the infrastructure under real-world conditions over the next two years. These include new types of sound barriers and innovative technologies to reduce rolling noise at the source through improved rail grinding and rail damping. **I-LENA green. no. 54** also focuses on sound insulation technologies for particular "hotspots" where there is loud squeaking in curves, construction noise or annoying rumbling when crossing railway bridges. In the year under review, this began with six measures on two test lines. Technologies to reduce cornering squeals, rail dampers and shieldings as well as a miniature noise barrier, are currently being tested.

Noise protection for particularly affected Middle Rhine Valley area

In the year under review, there were two meetings of the Advisory Board for a Quieter Middle Rhine Valley, in which there were in-depth discussions between DB Group and those affected. An on-site visit was also made to further improve noise protection for residents in the Middle Rhine Valley. Some 70 noise protection measures, such as special noise dampers or shielding systems on the rails, noise protection walls and palings, will further reduce rail transport noise in the vicinity of the Upper Middle Rhine Valley World Heritage site between Koblenz/Lahnstein and Bingen/Rüdesheim. A total of about € 139 million will be invested in additional noise reduction projects on both sides of the Rhine in the coming years.

Recycling rate at a high level

The construction and maintenance of the rail infrastructure involves the use of a variety of resources. These include building materials such as concrete, steel, gravel and sand. Waste materials are also produced that must be disposed of. We are transforming our approach to waste management from an optimized disposal management system into a modern resource management system. Our goal is to maintain our recycling rate at a high level of at least 95%, despite an increase in the intensity of construction activity. While we are already achieving a high rate for construction waste, this will be increased further, particularly in the area of municipal waste. In addition, we will make increasing use of recycled materials and extend the life of our production equipment, such as **vehicles green. no. 87.** This will help to increase the use of secondary raw materials and also conserve natural resources, since the production of recycled materials is better for the environment than extracting primary raw materials.

GRI 306-2

Volume of waste according to type of disposal	**2018**	2017	2016
Total waste (thousand t)	12,807	12,642	12,921
Recycling rate (%)	98.0	98.0	98.6[2]
Share of thermal recovery (%)	0.9	0.9	1.4
Share of disposal (%)	1.2	1.1	1.4
Share of hazardous waste [1] (%)	3.7	3.3	5.1

[1] Pursuant to the List of Waste Ordinance, for example waste oil.

[2] Figure adjusted.

By the use of specific measures such as selective dismantling and a contractual commitment to sorting and recycling facilities, we will maintain the share of recyclable waste at a high level and further reduce the proportion of waste that is destined for disposal or incineration. For example, we are currently working on the implementation of a strategy for disposing of mixed municipal waste with the aim of maximizing recycling of the materials it contains.

Volume of waste according to type (thousand t)	**2018**	2017	2016
Total waste	12,807	12,642	12,921
thereof construction waste	12,367	12,121	12,400
thereof scrap metal	318	378	375
thereof electronic scrap	1.5	6.1	4.3
thereof municipal waste	58.1	60.2	70.1
thereof paper	19.1	23.1	25.3
thereof waste oil	2.0	4.0	6.6
thereof other [1]	41.5	49.6	40.1

[1] For example paint, varnish, sludge and other maintenance-related waste.

The introduction of a uniform waste management system served to further standardize data collection and reporting on waste data. In the year under review, about 165,000 tons more waste was generated. Two business areas have a significant influence on changes in the volume of our most important type of waste, construction waste. Both in the Stuttgart—Ulm project (+ 0.7 million t) and at DB Netz AG – 0.4 million t), construction waste changed slightly compared to the previous year.

Although the recycling rate for construction waste fell slightly by 0.2 percentage points, it remained high at 98.4%. All other waste volumes declined significantly in the year under review.

Business development

OUR ASPIRATION

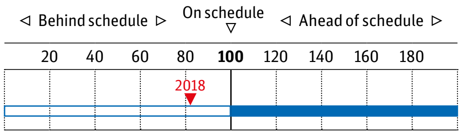
As a profitable quality leader 👍, we offer our customers first-class mobility and logistics solutions – that means excellent quality at affordable costs.

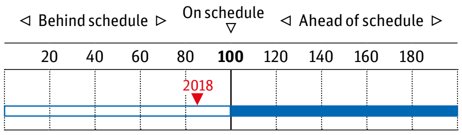
OUR TARGETS

Where do we stand in 2018 on the path to achieving our targets for 2020? (%)

2018 ▼ **Progress.** Are we progressing as planned? (Difference between control and 100 % shows delay/lead as a proportion of the actual deviation from target value)

	Base 2012	2017	2018	DB2020+ target
Reasonable rate of return – ROCE (%)	8.3	6.1	5.8	≥ 7.0
Financial stability – redemption coverage (%)	22.2	18.7	17.6	≥ 25





OUR AREAS OF ACTION

International growth
Among other successes, DB Schenker remains on track for growth with its ambition of being the sector number one.

Service and quality
For example, improvements to the integrated rail system through the Agenda for a Better Railway.

Cost management
Strict cost management in all business units and in corporate management.

Efficiency improvements
For example, improvements resulting from the OPEX program in terms of availability and maintenance expenses.

Restructuring
At DB Cargo in Great Britain and France and elsewhere.

Capacity expansion
Extensive capital expenditures in track infrastructure and our vehicle fleet.

Differentiated environment for global and European transport markets

Economic environment weakened

Development of important macroeconomic indicators compared to the previous year (%)	**2018**	2017	2016
GLOBAL TRADE (IN REAL TERMS)			
Trade in goods	+4.3	+5.9	+2.2
GDP			
Global	+3.0	+3.0	+2.4
USA	+2.9	+2.2	+1.6
China	+6.6	+6.8	+6.7
Japan	+0.8	+1.9	+0.6
Europe	+2.0	+2.8	+2.0
Eurozone	+1.8	+2.5	+1.9
Germany	+1.5	+2.5	+2.2

The data for 2016 to 2018, adjusted for price and calendar effects, is based on information and estimates available as of February 2019.

Source: Oxford Economics

Diverging developments in economic growth

2018 was characterized by diverging developments in the world's most significant economic regions. Economic growth in Europe overall slowed slightly, showing sometimes large differences between individual countries. Also in Asia, the economic cycle is drawing to a close with growth rates that are dropping, even if for the most part still relatively high by comparison. In contrast, economic growth in North America – particularly in the USA – continued to grow. The upswing was driven above all by private consumption with nearly full employment and rising salaries. Company investments also contributed greatly. The latter was also boosted by the tax cuts implemented.

It is the stated goal of the American government to reduce the USA's large trade deficit. Changes to customs and other regulations are being used to achieve this, along with pressuring companies to produce a larger share of their added value within the USA. This policy restricts spillover effects of the positive economic development in the USA from benefiting other countries and world trade. At the same time, the American Federal Reserve raised interest rates further in order to curtail inflation and avoid excess demand. As a result, there was appreciation pressure on the dollar, which is particularly problematic for many developing and emerging countries, as they have large debts in dollars. In addition, essential import goods that, like crude oil, are traded in dollars, became more expensive. By comparison, a stronger dollar has comparatively smaller effects on Europe. It is true that prices, particularly of crude oil and therefore fuel, for example, have increased, leading to a rise in inflation. However, American products becoming more expensive on world markets and therefore comparatively less competitive, also leads to a growth trend in the form of increasing export demand for European products.

Political uncertainties have caused nervousness in the energy market

The central hedging policy of DB Group aims to minimize energy price fluctuations. Our activities are therefore not exposed to the full impact of changes in market prices, at least not in the short term.

Changing trends in the oil market

			Change	
Brent crude (USD/bbl)	**2018**	2017	absolute	%
Average price	71.7	54.7	+17.0	+31.1
Highest price	86.7	67.1	+19.6	+29.2
Lowest price	49.9	44.4	+5.5	+12.4
Year-end price	53.8	66.9	-13.1	-19.6

Source: Thomson Reuters

- In the first half of the year, output dropped further than the reductions set by the OPEC+ Group (OPEC countries, Russia and others), primarily as a result of the unforeseen disruptions in Venezuela. This led to a supply shortage on the oil market. Faced with rising prices, the OPEC+ Group decided to increase output volumes again.
- In the second half of the year, the possible impacts of the US sanctions on Iran came more and more clearly into focus. Although oil production in the USA reached new peaks, further increases were delayed by a lack of transport capacity. At the same time, the positive economic development led to robust demand, especially from Asia. The concerns regarding supply constraints resulting from this led to the oil market growing significantly from the middle of August 2018. At the beginning of October 2018, the price of Brent reached an annual high.
- In November 2018, the USA became the world's largest oil-producing country. The resulting excess supply following softening of sanctions and new concerns regarding global economic development led to a prolonged downward trend in the oil market, causing the price of Brent to drop at the end of the year. Not even the decision by the OPEC+ Group to reduce output from 2019 was able to stabilize the market.

- Speculative investors may also have driven the price development. Bets on price increases were withdrawn, causing the price to fall even further.

Electricity prices are developing in parallel with the coal and CO_2 market

			Change	
Electricity market	**2018**	2017	absolute	%
BASE LOAD POWER (FOLLOWING YEAR) (€/MWH)				
Average price	44.1	32.4	+11.7	+36.1
Highest price	56.9	38.4	+18.5	+48.2
Lowest price	32.6	28.0	+4.6	+16.4
Year-end price	51.4	37.2	+14.2	+38.2
EMISSIONS CERTIFICATES (€/T CO_2)				
Average price	16.0	5.8	+10.2	-
Highest price	25.8	8.3	+17.5	-
Lowest price	7.6	4.3	+3.3	+76.7
Year-end price	25.0	8.2	+16.8	-

Source: Thomson Reuters

- The German electricity spot market is becoming increasingly weather-dependent. The fluctuation in production from renewable energies caused significant price fluctuations due to limited predictability. High temperatures and water shortages led to a further price increase in summer. High primary energy prices also acted to drive prices.
- There was a dip in price of the coal market until the end of the first quarter as a result of temporary import restrictions in China. Supply difficulties and persistently high demand in Asia drove prices up again quickly. Amongst other reasons, high natural gas prices from September 2018 led to price increases on the northwestern European coal market to over USD 100/t.
- The entry into force of the market stability reserve from 2019, which withdrew nearly a quarter of surplus certificates from the CO_2 market, caused a supply shortage. As soon as August 2018, the auction volume was reduced. In addition, there was speculation on the market as a result of discussions of a minimum price. Overall, the average price was significantly above the level of the previous year.

Income situation not satisfactory

GRI 201-1 ↓

- Revenue increase as a result of performance gains, amongst other reasons.
- Rising factor costs for energy and personnel.
- Extensive measures to improve quality and further digitalization.
- Negative effects from operational restrictions at the high level of the previous year.
- Operating income development slightly declined.

No major restrictions in comparability with the previous year

Trends in expenses and income in the year under review were not significantly influenced by **changes in the scope of consolidation 189.**

Revenues further increased

GRI 102-7 ↓

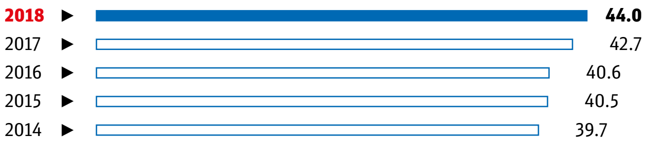
			Change	
Revenues (€ million)	**2018**	2017	absolute	%
Revenues	44,065	42,693	+1,372	+3.2
± Special items	-41	11	-52	-
Revenues adjusted	**44,024**	**42,704**	**+1,320**	**+3.1**
± Changes in the scope of consolidation	-45	-1	-44	-
± Exchange rate changes	507	-	+507	-
Revenues comparable	**44,486**	**42,703**	**+1,783**	**+4.2**

Revenues developed positively. The growth occurred broadly across the business units and was largely driven by performance gains.

On a comparable basis (adjusted for special items as well as scope of consolidation and exchange rate changes), revenues even increased slightly more:

- The special items in the year under review resulted from the elimination of revenue discounts connected to ongoing procedures in infrastructure (previous year: from revenue discounts for previous years).
- The effects of changes in the scope of consolidation mainly relate to DB Arriva (€ +32 million) and DB Cargo (€ +12 million).
- The effects of exchange rate changes were mainly attributable to DB Schenker (€ −455 million) and DB Arriva (€ −46 million).

Revenues adjusted (€ billion)



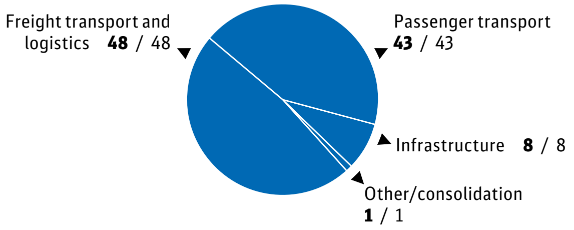
Mainly positive development of the business units

External revenues by business units (€ million)	2018	2017	Change absolute	Change %
DB Long-Distance	4,528	4,193	+ 335	+ 8.0
DB Regional	8,862	8,629	+ 233	+ 2.7
DB Arriva	5,433	5,338	+ 95	+ 1.8
DB Cargo	4,177	4,209	- 32	- 0.8
DB Schenker	16,973	16,345	+ 628	+ 3.8
DB Netze Track	1,559	1,522	+ 37	+ 2.4
DB Netze Stations	569	540	+ 29	+ 5.4
DB Netze Energy	1,350	1,301	+ 49	+ 3.8
Other	573	627	- 54	- 8.6
DB Group adjusted	**44,024**	**42,704**	**+ 1,320**	**+ 3.1**

Revenue **development of the business units 112 ff.** was, with the exception of DB Cargo and the Other division, positive. DB Schenker, DB Long-Distance and DB Regional showed the largest share of growth.

Revenue structure unchanged

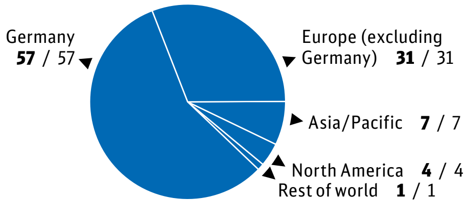
External revenue structure by divisions (%) **2018** / 2017



External revenue structure (%)	2018	2017
DB Long-Distance	10.3	9.8
DB Regional	20.1	20.2
DB Arriva	12.3	12.5
DB Cargo	9.5	9.9
DB Schenker	38.6	38.3
DB Netze Track	3.5	3.6
DB Netze Stations	1.3	1.3
DB Netze Energy	3.1	3.0
Other	1.3	1.4
DB Group	**100**	**100**

There were no significant changes to the revenue structure at business unit level.

External revenues by regions (%) **2018** / 2017



External revenues by regions (€ million)	2018	2017	Change absolute	Change %
Germany	24,929	24,093	+ 836	+ 3.5
Europe (excluding Germany)	13,593	13,318	+ 275	+ 2.1
Asia/Pacific	3,035	2,935	+ 100	+ 3.4
North America	1,905	1,801	+ 104	+ 5.8
Rest of world	562	557	+ 5	+ 0.9
DB Group adjusted	**44,024**	**42,704**	**+ 1,320**	**+ 3.1**

Overall, regional revenue development was positive:

- In Germany, revenue rose noticeably. This was particularly as a result of growth at DB Long-Distance, DB Regional and in infrastructure. However, a small decrease in revenues at DB Cargo had a dampening effect, primarily as a result of strains on transport quality and resource shortages.
- Revenue development in Europe (excluding Germany) was also positive. Positive effects of volume growth at DB Arriva and DB Schenker were weakened by restrictions caused by strikes in France and Great Britain, reductions in coal transport at DB Cargo and negative exchange rate effects from developments in the British pound.
- Revenues increased in the Asia/Pacific and North America regions as a result of business development at DB Schenker. In contrast, exchange rate effects had a significant dampening effect.

Income development under pressure

Transition to the adjusted statement of income

- Special issues are eliminated in the adjusted statement of income. The transition to the adjusted statement is a two-step process. Firstly, standard reclassifications are carried out, then the figures are adjusted for individual special items.
- The reclassifications essentially relate to two issues.
  - The first issue is the reclassification of net interest income components not related to net financial debt and pension provisions: predominantly the

compounding and discounting effects of non-current provisions (excluding pension obligations) and non-current liabilities (excluding financial debt). The non-operational character of these components can also be seen in the fact that their influence on net interest income very much depends on the interest rates as of the balance sheet date.

- The second significant reclassification relates to the amortization of intangible assets capitalized in the course of purchase price allocation (PPA) of acquisitions conducted during the assessment of long-term customer contracts. Existing transport contracts are an essential component of the purchase price valuation, in passenger transport in particular. In order to safeguard the operating assessment and to prevent these contracts from being treated differently from other contracts, these depreciation components are eliminated from the operating profit. The sum reclassified in the year under review relates almost entirely to the acquisition of Arriva.

		Reclassifications			**Adjustment of special items**					
Transition to the adjusted statement of income (€ million)	**2018**	**IFRS compounding/ discounting**	**Net investment income**	**PPA amortization**	**Provision for impending losses**	**Restructuring**	**Civil proceedings infrastructure utilization fees**	**Provision relating to superstructure**	**Other**	**2018 adjusted**
Revenues	44,065	–	–	–	–	–	- 41	–	- 0	44,024
Inventory changes and other internally produced and capitalized assets	3,091	–	–	–	–	–	–	–	–	3,091
Other operating income	2,998	–	–	–	–	- 45	- 10	- 24	- 57	2,862
Cost of materials	- 22,258	–	–	–	–	3	–	–	1	- 22,254
Personnel expenses	- 17,301	–	–	–	–	141	–	–	11	- 17,149
Other operating expenses	- 6,088	–	–	–	204	20	1	–	28	- 5,835
EBITDA/EBITDA adjusted	4,507	–	–	–	204	119	- 50	- 24	- 17	4,739
Depreciation	- 2,688	–	–	59	–	1	–	–	0	- 2,628
Operating profit (EBIT) | EBIT adjusted	**1,819**	**–**	**–**	**59**	**204**	**120**	**- 50**	**- 24**	**- 17**	**2,111**
Net interest income | Net operating interest	- 645	27	–	–	–	–	0	–	0	- 618
Operating income after interest	**1,174**	**27**	**–**	**59**	**204**	**120**	**- 50**	**- 24**	**- 17**	**1,493**
Result from investments accounted for using the equity method | Net investment income	12	–	- 0	–	–	–	–	–	–	12
Other financial result	- 14	- 27	0	–	–	–	–	–	–	- 41
PPA amortization customer contracts	–	–	–	- 59	–	–	–	–	–	- 59
Extraordinary result	–	–	–	–	- 204	- 120	50	24	17	- 233
Profit before taxes on income	**1,172**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**1,172**

			Change			
Excerpt from adjusted statement of income (€ million)	**2018 adjusted**	2017 adjusted	absolute	thereof due to changes in the scope of consolidation	thereof due to exchange rate effects	%
Revenues	44,024	42,704	+ 1,320	+ 44	- 507	+ 3.1
⊕ Inventory changes and other internally produced and capitalized assets	3,091	2,900	+ 191	+ 0	- 0	+ 6.6
⊕ Other operating income	2,862	2,802	+ 60	+ 2	- 7	+ 2.1
⊖ Cost of materials	- 22,254	- 21,441	- 813	- 15	+ 317	+ 3.8
⊖ Personnel expenses	- 17,149	- 16,363	- 786	- 16	+ 104	+ 4.8
⊖ Other operating expenses	- 5,835	- 5,672	- 163	- 10	+ 71	+ 2.9
EBITDA adjusted	4,739	4,930	- 191	+ 5	- 22	- 3.9
⊖ Depreciation	- 2,628	- 2,778	+ 150	- 3	+ 6	- 5.4
EBIT adjusted	**2,111**	**2,152**	**- 41**	**+ 2**	**- 16**	**- 1.9**
⊕ Net operating interest	- 618	- 682	+ 64	+ 1	- 1	- 9.4
Operating income after interest	**1,493**	**1,470**	**+ 23**	**+ 3**	**- 17**	**+ 1.6**
⊕ Net investment income	12	14	- 2	+ 0	- 0	- 14.3
⊕ Other financial result	- 41	- 49	+ 8	+ 0	+ 3	- 16.3
⊖ PPA amortization customer contracts	- 59	- 73	+ 14	–	+ 0	- 19.2
⊕ Extraordinary result	- 233	- 394	+ 161	–	+ 2	- 40.9
Profit before taxes on income	**1,172**	**968**	**+ 204**	**+ 3**	**- 12**	**+ 21.1**

- Adjustments for special items involve issues which are extraordinary based on the reasons for them and/or the amounts involved and which would have a significant negative effect on operating performance over time. Book profits and losses from transactions with subsidiaries/financial assets are adjusted regardless of their amounts. Individual items are adjusted if they are extraordinary in character, can be accounted for and assessed precisely and are significant in volume.

Operating profit figures declined

The following presentation describes the changes in the key items on the statement of income, adjusted for special items. The effects of the changes in the scope of consolidation and exchange rate effects are presented in the above table and are not explained further in the following section.

Exchange rate effects in the year under review reduced both income and expenses overall. Effects resulting from changes to the scope of consolidation were not significant.

The economic development was modest overall. Adjusted EBIT developed slightly more weakly compared to the previous year. The burdens from increases in factor costs (particularly in Germany), additional expenses for quality-improvement measures and for digitalization and restrictions to production stability (particularly at DB Cargo) could not be balanced out by the positive effects on the revenue side.

- **Revenue development 🗋96 f.** was positive.
- Other operating income rose primarily because of the effects of **train-path price support in rail freight transport 🗋63** (opposite effect in revenues) and higher income from the release of provisions. The non-recurrence of the one-off effects of the previous year, such as the **reimbursement of the nuclear fuel tax (2017 Integrated Report 🗋145)** and compensation received for damages had a counteracting effect.
- Cost of materials increased. This was due to higher purchased transport services at DB Schenker as a result of volume gains and increased freight rates. In addition, higher energy costs and maintenance expenses hindered development.
- Personnel expenses also increased significantly. In addition to tariff effects, especially in Germany, the higher number of employees also had an impact.
- Other operational expenses increased. This was impacted by factors including higher rental expenses and expense burdens for additional quality and digitalization measures.
- The decrease in depreciation resulted particularly from the reassessment of the economic useful life of fixed assets at DB Netze Track and DB Regional vehicles. Higher depreciation on vehicles as a result of capital expenditures had a partially compensating effect.

The operating income after interest increased as a result of a significantly improved net operating interest. Effects from lower interest rates on refinancing primarily had an effect here.

Net investment income decreased. This was primarily impacted by the elimination of income from **Etihad Rail 🗋72**, which since the year under review has been proportionately consolidated as a joint operation. Improvements to income including from Barraquiero and Arriva London Overground at DB Arriva had a compensating effect.

The development of the other financial result was mainly caused by effects from hedging transactions.

The **extraordinary charges 🗋100** were significantly lower than in the previous year. This led to a noticeable increase in profit before taxes on income.

Significant drop in net profit for the year

Excerpt from statement of income (€ million)	2018	2017	Change absolute	Change %
Profit before taxes on income	1,172	968	+204	+21.1
Taxes on income	-630	-203	-427	-
Actual taxes on income	-192	-180	-12	+6.7
Deferred tax expenses	-438	-23	-415	-
Net profit for the year	**542**	**765**	**-223**	**-29.2**
DB AG shareholders	528	745	-217	-29.1
Other shareholders (non-controlling interests)	14	20	-6	-30.0
Earnings per share (€)				
Undiluted	1.23	1.73	-0.50	-28.9
Diluted	1.23	1.73	-0.50	-28.9

The marked improvement in the profit before taxes on income was more than compensated by the development of the income tax position. This was impacted by the sharply declined development of DB AG's deferred tax position, mainly because of lower expected results. It was also affected by the risks of higher foreign taxes on income and increases in anticipated taxable losses that are not expected to be available for offsetting. The net profit for the year (profit after taxes on income) therefore fell sharply.

Earnings per share developed accordingly.

Generally weak development of the business units

EBIT adjusted by business units (€ million)	**2018**	2017	Change absolute	 %
DB Long-Distance	417	381	+ 36	+ 9.4
DB Regional	492	508	- 16	- 3.1
DB Arriva	300	301	- 1	- 0.3
DB Cargo	- 190	- 90	- 100	+ 111
DB Schenker	503	477	+ 26	+ 5.5
DB Netze Track	840	687	+ 153	+ 22.3
DB Netze Stations	221	233	- 12	- 5.2
DB Netze Energy	21	72	- 51	- 70.8
Other/consolidation	- 493	- 417	- 76	+ 18.2
DB Group	**2,111**	**2,152**	**- 41**	**- 1.9**

The development of **adjusted profit figures varied between the business units 112 ff.** but overall was unsatisfactory. The business units in the **integrated rail system 50** declined overall, driven by increases in factor costs and expense burdens from additional quality measures. In addition, there were operational difficulties at DB Cargo. The Other division also saw a noticeable decline particularly as a result of higher personnel expenses. On the other hand, the profit development of DB Netze Track and DB Long-Distance was positive. DB Arriva, in spite of hindrances from operational restrictions amongst others, remained on the level of the previous year. The operating profit from DB Schenker was significantly better than in the previous year.

Extraordinary charges significantly declined

Extraordinary result (€ million)	**2018**	**thereof affecting EBIT**	2017	thereof affecting EBIT
DB Long-Distance	5	5	-	-
DB Regional	- 0	- 0	21	21
DB Arriva	- 204	- 204	5	5
DB Cargo	- 13	- 13	- 5	- 5
DB Schenker	- 7	- 7	- 105	- 105
DB Netze Track	67	67	- 10	- 7
DB Netze Stations	7	7	- 10	- 10
DB Netze Energy	-	-	- 15	- 15
Other/consolidation	- 86	- 86	- 275	- 275
DB Group	**- 233**	**- 233**	**- 394**	**- 391**

The extraordinary result improved significantly and was comprised in the year under review from the following special items inter alia:

- Expenses from the establishment of a provision for impending losses (DB Arriva).
- Effects arising from restructuring measures (DB Long-Distance, DB Arriva, DB Cargo and Other division).
- Effects of civil proceedings in connection with infrastructure fees (DB Netze Track and DB Netze Stations).
- Effects of alterations to provisions relating to the superstructure (DB Netze Track).
- Income from exiting company participations (DB Arriva, DB Cargo, DB Schenker and Other division).

The extraordinary result in the previous year was composed inter alia of the following special items:

- Expenses relating to restructuring measures at DB Regional, DB Cargo, DB Schenker and the Other division.
- Effects of impairments relating to the superstructure (decommissioning overhead line systems on disused routes) at DB Netze Track.
- Expenses relating to the increase in the provision for legacy remediation (Other division) and income from the recovery in value and reductions in provisions for real estate owing to an altered portfolio strategy (DB Netze Track).

Development largely in line with forecast of income situation

Outlook for 2018 financial year	2017	**2018 (March 2018 forecast)**	**2018 (July 2018 forecast)**	**2018**
Revenues (€ billion)	42.7	~ 44	~ 43.7	44.0
Revenues comparable (€ billion)	42.7	-	~ 44.2	44.5
EBIT adjusted (€ billion)	2.15	≥ 2.2	~ 2.1	2.1
ROCE (%)	6.1	~ 6.0	~ 5.6	5.8
Redemption coverage (%)	18.7	≥ 18.5	~ 18.0	17.6

Overall, the development of the income situation in the year under review was in line with our adjusted expectations from July 2018. As a result of the declined development in the first half-year of 2018, we had withdrawn our expectations for the operating profit. Accordingly, the expectations regarding ROCE and redemption coverage were also adjusted.

Revenues (€ million)	2017	2018 (March 2018 forecast)	2018 (July 2018 forecast)	2018
DB Long-Distance	4,347	↗	↗	4,682
DB Regional	8,734	↗	↗	8,968
DB Arriva	5,345	↗	↗	5,441
DB Cargo	4,528	↗	↗	4,460
DB Schenker	16,430	↗	↗	17,050
DB Netze Track	5,364	↗	↗	5,511
DB Netze Stations	1,265	↗	↗	1,314
DB Netze Energy	2,794	→	↘	2,850

↗ Above previous year's figure
→ At previous year's level
↘ Below previous year's figure

At the business unit level, revenue development in the year under review was largely in line with our forecast of July 2018.

- At DB Cargo performance was weaker than expected. Here the negative effects from operational problems and resource shortages made themselves known.
- DB Netze Energy exceeded revenue expectations as a result of price and performance factors. Business development with non-Group customers was better than planned.

EBIT adjusted (€ million)	2017	2018 (March 2018 forecast)	2018 (July 2018 forecast)	2018
DB Long-Distance	381	↗	↗	417
DB Regional	508	↗	→	492
DB Arriva	301	→	→	300
DB Cargo	- 90	↗	→	- 190
DB Schenker	477	↗	↗	503
DB Netze Track	687	↗	↗	840
DB Netze Stations	233	↘	↘	221
DB Netze Energy	72	↘	↘	21

↗ Above previous year's figure
→ At previous year's level
↘ Below previous year's figure

The actual EBIT development for the individual business units during the year under review was largely in line with our forecasts of July 2018.

- At DB Regional performance was rather weaker than expected. Charges particularly arising from additional quality-improvement measures could not be fully compensated.
- DB Cargo performed significantly more weakly than expected owing inter alia to the negative effects of operational problems and resource shortages.

Stable financial position

- Seven bond transactions in total (total volume about € 2.9 billion).
- Ratings stable.

Slight rise in the interest level

Yield on ten-year German bunds (%)	2018	2017	Change (percentage points)
Average yield	+ 0.46	+ 0.38	+ 0.08
Highest yield	+ 0.76	+ 0.64	+ 0.12
Lowest yield	+ 0.23	+ 0.15	+ 0.08
Year-end yield	+ 0.25	+ 0.24	+ 0.01

Source: Thomson Reuters

In the year under review, the yield from the ten-year German Federal bonds (bunds) increased slightly. Decisions by central banks and political developments, such as the challenges of forming a government in Italy or ongoing differences in international trading policy, had a substantial impact on the bond market. The yield gap between American and German government bonds significantly expanded over the course of the year. At 2.7 percentage points, the interest rate gap reached a 30-year high. The context of this development is the differing directions of the European Central Bank (ECB) and the US Federal Reserve (Fed), the latter of which raised its base interest rate several times over the course of the year up to 2.5%. The ECB's ongoing bond-purchase program, which had been running since March 2015, ended in December 2018 as scheduled.

Financial management stable

As of Dec 31 (€ billion)	Volume 2018	thereof utilized	Volume 2017	thereof utilized
European debt issuance program	25.0	20.1	25.0	19.3
Australian debt issuance program (AUD 5 billion)	3.1	0.7	3.4	0.5
Multi-currency commercial paper program	2.0	-	2.0	-
Guaranteed unutilized credit facilities	2.0	-	2.0	-

In addition to aiming for a sustained rise in enterprise value, DB Group's financial management focuses on maintaining a capital structure that will ensure excellent credit ratings. The key indicators used for this purpose, redemption coverage and net debt/EBITDA are detailed in the **value management 103 f.** section.

DB AG contains DB Group's Treasury center. This ensures that all Group companies are able to borrow and invest funds at optimal terms and conditions. Before obtaining funds from external sources, we first conduct intra-Group financing transactions. When borrowing external funds, DB AG takes out short-term loans in its own name, whereas long-term capital is generally obtained through the Group's financing company, DB Finance.

The funds are passed on to the Group companies as short-term credit lines, which can be utilized as part of cash pooling on internal current accounts and/or through fixed short-term credit or in the form of long-term loans. Advantages from this concept arise from the consolidation of our know-how, realized synergy effects and minimized refinancing costs.

- A European debt issuance program (EDIP) for long-term debt financing is available. Under the EDIP, five bonds were issued in the year under review (total volume: about € 2.7 billion). Conversely, bonds with a total volume of € 1.9 billion were repaid. The utilization rate of the EDIP in this context increased slightly to 80% as of December 31, 2018 (as of December 31, 2017: 77%).
- We also have an Australian debt issuance program (Kangaroo Program). Under this program, one bond was issued and one bond from the previous year was increased (total volume: AUD 356 million (about € 0.2 billion)). The utilization rate of the Kangaroo Program increased as a result to 22% as of December 31, 2018 (as of December 31, 2017: 15%).
- In terms of short-term external financing, a multi-currency commercial paper program remains available.
- As of December 31, 2018 we also had guaranteed unutilized credit facilities with a remaining term of between 1.0 and 2.0 years and another guaranteed unutilized credit facility of more than € 0.1 billion (as of December 31, 2017: € 0.1 billion).
- In addition, we were able to rely on credit lines of € 2.5 billion for the operating business (as of December 31, 2017: € 2.2 billion). These credit lines, which are made available to our subsidiaries around the world, include provisions for financing working capital as well as sureties for payment.

No major finance lease transactions were concluded in the year under review. The finance lease volumes rose primarily as a result of taking on existing finance lease contracts for buses (€ 51 million) following the acquisition of **VT-Arriva 🗋129,** an early contract extension (€ 41 million) and a reclassification of two rental properties as part of extending a contract (€ 38 million), to € 562 million (as of December 31, 2017: € 501 million). In contrast, financing volumes decreased as scheduled through repayment.

In order to finance regional rail passenger transport vehicles, we entered into a sale and leaseback agreement for 20 new multiple units from Alstom for the Ulm diesel network. The lease contract begins on December 13, 2020 and has a calculated duration up to December 10, 2044. DB Regional is the lessee for the first transport contract period of at least 12 years with a nominal leasing volume of € 59 million. The public transport authorities are the Bayerische Eisenbahngesellschaft mbH (BEG) and the Baden-Württemberg regional government. The financing is secured through a reuse guarantee by the BEG and an assignment of receivables from the public transport authorities in the absence of fulfillment, with defense or objection waived.

Seven bond transactions carried out

ISIN	Issuer	Currency	Volume (million)	Volume (€ million)	Coupon (%)	Maturity	Term (years)
XS1752475720	DB Finance	EUR	1,000	1,000	1.000	Dec 2027	9.9
XS1772374770	DB Finance	EUR	750	750	1.625	Aug 2033	15.5
AU3CB0248250 1)	DB Finance	AUD	150	95	4.050	Oct 2032	14.6
AU3CB0253623	DB Finance	AUD	206	133	3.494	Jun 2028	10.0
CH0423233557	DB Finance	CHF	400	346	0.500	Jul 2028	10.0
XS1885608817	DB Finance	EUR	500	500	1.375	Mar 2031	12.5
XS1910864492	DB Finance	EUR	125	125	1.850	Nov 2043	25.0

1) Increase of an existing bond.

Through the DB Group financing company, DB Finance, we issued six new bonds and increased an existing bond in the year under review. The equivalent value of the transactions was about € 2.9 billion. The funds were raised to refinance liabilities falling due and for ongoing general Group financing. All proceeds of bonds not issued in euros were converted into euros. In addition to European investors, almost a fifth of demand was from Asian investors.

Ratings stable

Ratings DB AG	First issued	Last publication	Current ratings		
			Short-term	Long-term	Outlook
S&P Global Ratings	May 16, 2000	August 21, 2018	A-1+	AA-	Stable
Moody's	May 16, 2000	October 2, 2018	P-1	Aa1	Stable

The creditworthiness of DB Group is constantly monitored and assessed by the rating agencies S & P Global Ratings (S & P) and Moody's. Credit ratings provide an independent, up-to-date assessment of a company's creditworthiness. When determining ratings for DB AG, the ownership structure means that the rating agencies take into account not only the quantitative and qualitative analysis of DB Group but also an assessment of the relationship with our owner, the Federal Government, and the potential support that DB AG could receive from it. This means that the ratings given to the Federal Government are also significant for the ratings given to DB AG.

Both agencies published updates to their assessments of DB AG during the year under review, leaving the ratings and outlook unchanged.

Additional information on the subject of ↗**ratings** and the rating agencies' full analyses of DB AG are available on our Investor Relations Web site.

Value management figures under pressure

- ROCE target adjusted.
- Development of operating profit worsens ROCE and redemption coverage.
- Indebtedness drives development of net debt/EBITDA.

Value management targets (%)	DB Group	Passenger transport	Freight transport and logistics	Infrastructure	Integrated rail system
ROCE	≥ 7.0	≥ 9.0	≥ 11.0	6.0	≥ 6.5
Redemption coverage [1]	≥ 25	≥ 50	≥ 50	≥ 20	≥ 20
Net debt/EBITDA (multiple)	≤ 3.0	≤ 1.5	≤ 1.5	≤ 4.0	≤ 3.5

[1] Target values being revised in the context of implementing IFRS 16.

At DB Group, profitability is a material requirement for financing capital expenditures in our core business, further developing our businesses and seizing opportunities for future growth. **Entrepreneurial leadership 🗋58** is indispensable for improving profitability.

In the context of our value management we intend to maintain, increase and guarantee DB Group's enterprise value over the long-term so that we can finance capital expenditures on our core business. The financial leadership and management of DB Group – and therefore also the monitoring of the success of our targets for profitable growth – is performed on the basis of a value management system based on key figures. The results are an important factor for our strategic approach, our capital expenditure decisions and employee and management remuneration.

Profitability as an overarching target in value management ensures a long-term reasonable rate of return over several economic cycles. On the basis of market values, we calculate the annual **cost of capital 🗋104 f.** as a weighted average from risk-adequate market returns on equity and debt capital. The actual yield, the **return on capital employed (ROCE) 🗋104,** is calculated as the ratio of operating income before interest and taxes (EBIT adjusted) to capital employed. The ROCE target is set higher than the cost of capital. The long-term objective is to achieve an ROCE whose multi-year average reaches the target value, ensuring that costs of capital are covered. This ROCE target corresponds to the minimum required rate of return (MRR). The different business characteristics result in different target values for our activities in passenger transport, in logistics and in rail freight transport as well as in infrastructure. The cost of capital and thus the expected returns from the infrastructure business units are lower than in passenger transport, logistics and rail freight transport owing to our projection of continuing low profit volatility. The target value for the integrated rail system was derived from the value-weighted return expectations of all business units in DB Group with the exception of DB Arriva and DB Schenker. The operating business is always controlled before taxes and the reporting of key figures is accordingly based mainly on pre-tax figures.

Financial stability is an essential component for sustainable economic activity. For DB Group as an asset-intensive company, it is essential that we have access to the capital market at all times under favorable conditions. A major objective is therefore to achieve adequate key debt ratios. Our key indicator for managing indebtedness is **redemption coverage 🗋106.**

Target values for key debt ratios are derived from key rating figures and annual benchmarking with comparable companies with an excellent credit rating.

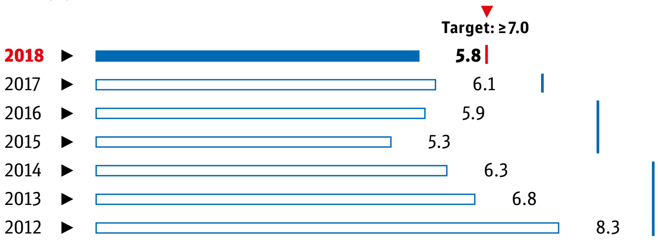
Gearing is by now only of secondary importance for the value management of DB Group and will therefore no longer be reported.

ROCE weaker

ROCE	2018	2017	Change absolute	Change %
EBIT adjusted (€ million)	2,111	2,152	- 41	- 1.9
/ Capital employed as of Dec 31 (€ million)	36,657	35,093	+ 1,564	+ 4.5
ROCE (%)	**5.8**	**6.1**	**-**	**-**

ROCE worsened by 0.3 percentage points as a result of the slight decrease of adjusted EBIT coupled with a simultaneous growth of capital employed.

ROCE (%)



Rise in capital employed

Capital employed as of Dec 31 (€ million)	2018	2017	Change absolute	Change %
BASED ON ASSETS				
Property, plant and equipment	40,757	39,608	+ 1,149	+ 2.9
+ Intangible assets/goodwill	3,730	3,599	+ 131	+ 3.6
+ Inventories	1,369	1,151	+ 218	+ 18.9
+ Trade receivables	4,962	4,571	+ 391	+ 8.6
+ Receivables and other assets	2,250	1,922	+ 328	+ 17.1
− Receivables from financing	- 174	- 131	- 43	+ 32.8
+ Income tax receivables	62	52	+ 10	+ 19.2
+ Assets held for sale	26	0	+ 26	-
− Trade liabilities	- 5,491	- 5,157	- 334	+ 6.5
− Miscellaneous and other liabilities	- 3,918	- 3,632	- 286	+ 7.9
− Income tax liabilities	- 195	- 150	- 45	+ 30.0
− Other provisions	- 5,068	- 5,117	+ 49	- 1.0
− Deferred items	- 1,648	- 1,623	- 25	+ 1.5
− Assets held for sale	- 5	-	- 5	-
Capital employed	**36,657**	**35,093**	**+ 1,564**	**+ 4.5**

Capital employed equates to the assets deemed necessary for business and subject to the cost of capital, as derived from the balance sheet. The increase in capital employed resulted inter alia from an increase in the account balance of property, plant and equipment, for reasons including vehicle procurement and decrease of other provisions.

Cost of capital down

The cost of capital is updated annually to take account of changes in market parameters.

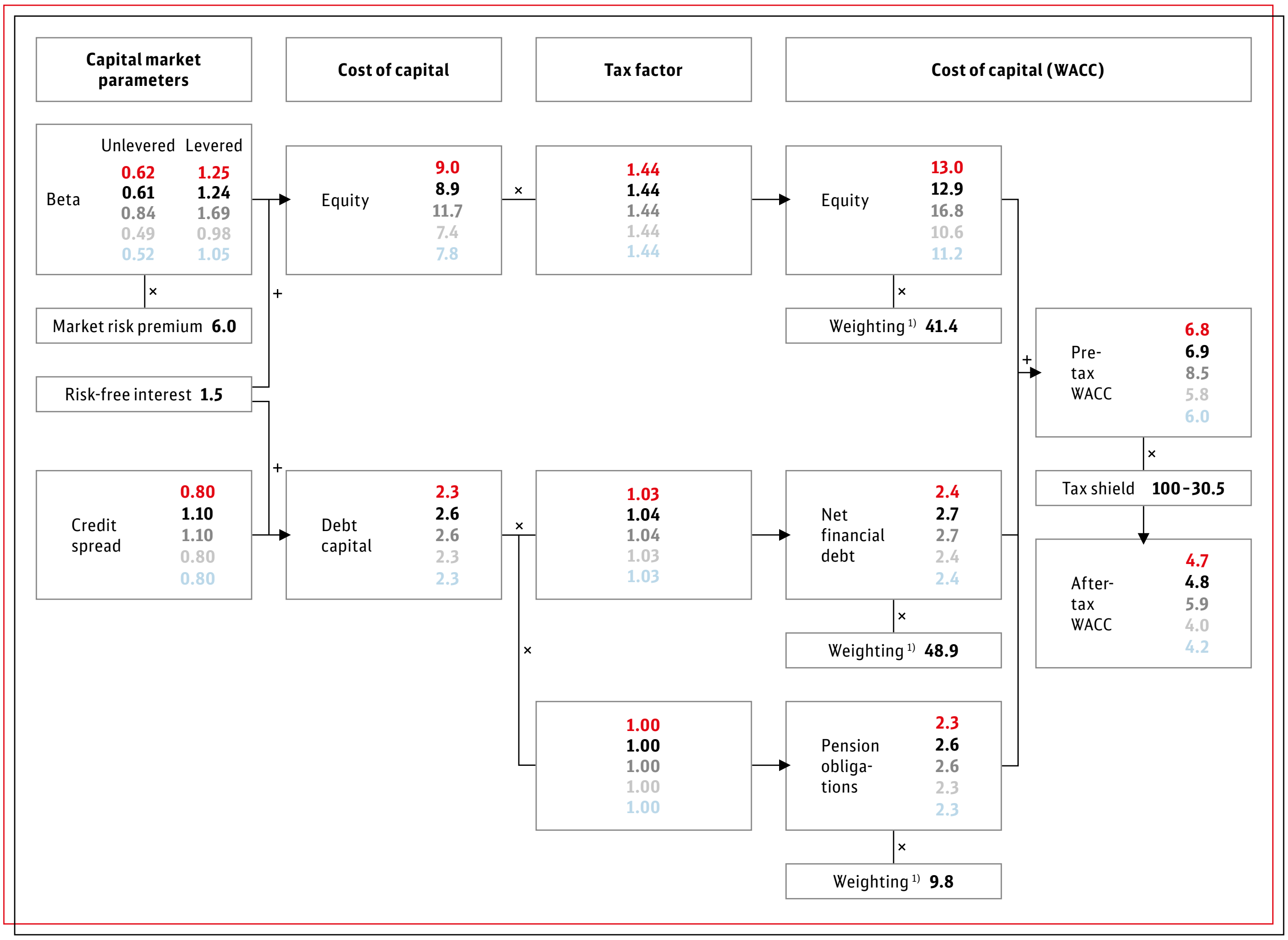
Cost of capital before taxes as of Dec 31 (%)	2018	2017
DB Group	6.8	7.0
Passenger transport	6.9	7.3
Freight transport and logistics	8.5	8.6
Infrastructure	5.8	6.0
Integrated rail system	6.0	6.6

Cost of capital after taxes as of Dec 31 (%)	2018	2017
DB Group	4.7	4.8
Passenger transport	4.8	5.1
Freight transport and logistics	5.9	6.0
Infrastructure	4.0	4.2
Integrated rail system	4.2	4.6

We calculate DB Group's cost of capital as a weighted average interest rate of equity, net financial debt and pension obligations.

When determining the company-independent capital market parameters, market risk premium and risk-free interest rate, short-term fluctuations in debt and equity market returns are smoothed out in line with the long-term focus of our value management concept. The parameters are determined on the basis of the yields on long-term German bunds as well as the long-term average returns of the German DAX 30 equity index. The parameters used are also validated on the basis of up-to-date recommendations of recognized valuation experts. The company-dependent capital market parameters, beta and credit spread, measure the risk of our debt and equity financing in comparison with alternative forms of investment. Beta reflects the risk of equity capital relative to the risks of the equity markets. The determination is based on comparable international companies at business unit level. The credit spread corresponds to DB Group's current issue costs relative to bonds with an imputed term of ten years. The credit spread for transport and logistics is determined in line with market conditions, using current capital market data.

DETERMINING COST OF CAPITAL



■ DB Group ■ Passenger transport ■ Freight transport and logistics ■ Infrastructure ■ Integrated rail system

[1] Impact of capital structure is reflected only in the tax shield; because DB Group is a consolidated tax group the capital structure of DB Group is used.

Individual figures are rounded and therefore may not add up.

As of December 31, 2018 (%).

Tax factors are calculated using a taxation rate of 30.5%. The tax factor for net financial debt reflects the trade tax applied to fixed debt interest to be credited. The taxes remaining after this are fully allocated to cost of equity. The weighting of forms of financing is based on market values. Net financial debt and pension obligations are valued at their carrying amounts. Equity weighting is based on recognized business valuation methods.

The weighting of forms of financing for passenger transport, rail freight transport, logistics, infrastructure and the integrated rail system corresponds to that of DB Group as the tax shield resulting from the tax-deductible status of debt interest arises, as a rule, from the fact that DB Group is a consolidated tax group.

ROCE still lower than the cost of capital

Yield spread (%)	**2019**	2018	2017	2016	2015
ROCE	–	5.8	6.1	5.9	5.3
Pre-tax WACC [1]	6.8	7.0	7.3	7.7	8.4
Spread (percentage points)	**–**	**-1.2**	**-1.2**	**-1.8**	**-3.1**

[1] Each value taken at the beginning of the year.

In the year under review, the negative difference between ROCE and costs of capital remained on the level of the previous year. The shortfall is mainly due to the lack of profitability of the RIC and of DB Cargo.

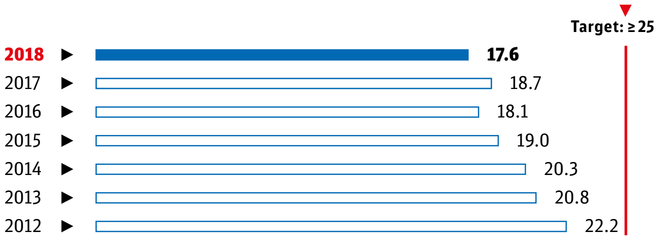
Key debt ratios worsened

Redemption coverage lower

Redemption coverage (€ million)	2018	2017	Change absolute	Change %
EBITDA adjusted	4,739	4,930	-191	-3.9
⊕ Net operating interest	-618	-682	+64	-9.4
⊕ Depreciable portion of lease rates	1,114	1,079	+35	+3.2
⊕ Actual taxes on income	-192	-180	-12	+6.7
Operating cash flow after taxes	**5,043**	**5,147**	**-104**	**-2.0**
Net financial debt as of Dec 31	19,549	18,623	+926	+5.0
⊕ Present value of operating leases as of Dec 31	4,245	4,934	-689	-14.0
Adjusted net financial debt as of Dec 31	**23,794**	**23,557**	**+237**	**+1.0**
⊕ Pension obligations as of Dec 31	4,823	3,940	+883	+22.4
⊘ **Adjusted net debt as of Dec 31**	**28,617**	**27,497**	**+1,120**	**+4.1**
Redemption coverage (%)	**17.6**	**18.7**	**-**	**-**

Redemption coverage as of December 31, 2018 has decreased. Adjusted net debt has increased as a result of an increase in net financial debts and the pension obligations. At the same time, the adjusted operating cash flow after taxes decreased due to the profit development.

Redemption coverage (%)



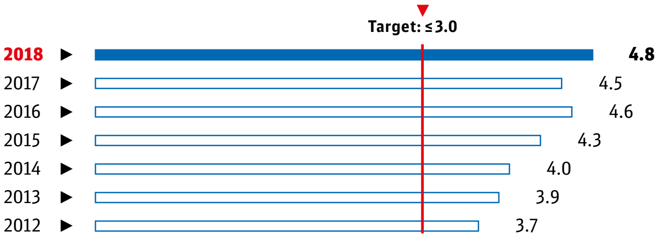
Deterioration in net debt/EBITDA

Net debt/EBITDA (€ million)	2018	2017	Change absolute	Change %
Net financial debt as of Dec 31	19,549	18,623	+926	+5.0
⊕ Present value of operating leases as of Dec 31	4,245	4,934	-689	-14.0
Adjusted net financial debt as of Dec 31	**23,794**	**23,557**	**+237**	**+1.0**
⊕ Pension obligations as of Dec 31	4,823	3,940	+883	+22.4
Adjusted net debt as of Dec 31	**28,617**	**27,497**	**+1,120**	**+4.1**
EBITDA	4,739	4,930	-191	-3.9
⊕ Lease rate	1,257	1,236	+21	+1.7
⊘ EBITDA (IFRS 16) [1]	5,996	6,166	-170	-2.8
Net debt/EBITDA (multiple)	**4.8**	**4.5**	**-**	**-**

[1] Adjusted for proportional leasing expense of the present value of the operating leases.

From the year under review, the key indicator net debt/EBITDA began taking into account the effects of **IFRS 16 189**, which is obligatory from the 2019 financial year. In addition, the key indicator impacts more strongly on the grading of the rating agencies, as it now includes pension obligations. The key indicator net debt/EBITDA worsened in the year under review as a result of the increase of net financial debts and the pension obligations coupled with a simultaneous decrease in adjusted EBITDA.

Net debt/EBITDA (multiple)



Cash and cash equivalents slightly increased

Summary statement of cash flows (€ million)	2018	2017	Change absolute	Change %
Cash flow from operating activities	3,371	2,329	+1,042	+44.7
Cash flow from investing activities	-3,668	-3,569	-99	+2.8
Cash flow from financing activities	449	239	+210	+87.9
Net change in cash and cash equivalents	147	-1,053	+1,200	-
Cash and cash equivalents as of Dec 31	3,544	3,397	+147	+4.3

- A key reason for the significant increase in cash flow from operating activities was the positive working capital effects (primarily higher inventories, particularly in maintenance, as required for performance) and the non-recurrence of the one-off effect of the payment connected with the **Disposal Fund Act (2017 Integrated Report 145)** in the previous year. This was also supported by the effects of the positive development of profit before taxes, depreciation and interest (€ +99 million).
- Cash outflow from capital expenditure activities continued to increase at a high level. This was essentially the result of higher payments for net capital expenditures (€ +233 million), in connection with ICE 4 and IC 2 trains, inter alia. The cash outflow for repayment of investment grants decreased on the other hand (€ −24 million).

An increased cash inflow from sale of real estate and the non-recurrence of the cash outflow for the purchase of the **Autotrans Group (2017 Integrated Report 115)** in the previous year had a compensating effect.

- Cash flow from financing activities increased markedly. The development was primarily driven by the higher net cash inflow from issuing and redemption of **bonds 102** (€ +808 million). The issuing activity was as such much higher than in the previous year.

  At the same time, the net cash inflow from the taking on and redemption of borrowings (€ +240 million) increased, particularly as a result of declined redemption payments.

  In addition, there was a positive effect from the reduction of the dividend payment to a lower cash outflow (€ −150 million). These effects were widely compensated by the non-recurrence of cash inflow from the capital increase carried out in the previous year (€ −1,000 million).
- As of December 31, 2018, DB Group held a slightly higher account balance of cash and cash equivalents in comparison to the end of the previous year.

Asset situation stable

- Rise in net financial debt partly due to capital expenditures.
- Capital expenditures in infrastructure particularly drive the increase in capital expenditures.
- Equity ratio decreased.

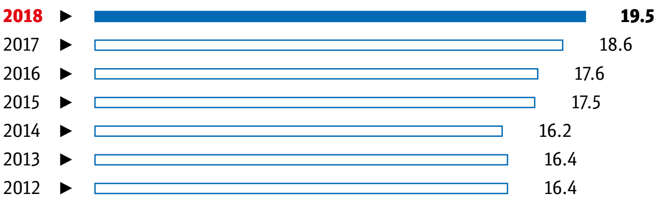
Net financial debt increased

			Change	
Net financial debt as of Dec 31 (€ million)	**2018**	2017	absolute	%
Interest-free loans	851	1,014	- 163	- 16.1
Finance lease liabilities	562	501	+ 61	+ 12.2
Other financial debt	21,831	20,561	+ 1,270	+ 6.2
thereof bonds	20,712	19,616	+ 1,096	+ 5.6
Financial debt	**23,244**	**22,076**	**+ 1,168**	**+ 5.3**
⊖ Cash and cash equivalents and receivables from financing	- 3,718	- 3,528	- 190	+ 5.4
⊖ Effects from currency hedges	23	75	- 52	- 69.3
Net financial debt	**19,549**	**18,623**	**+ 926**	**+ 5.0**

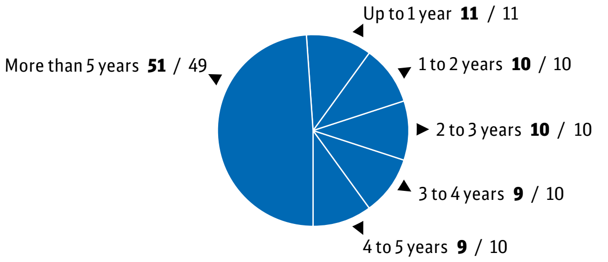
Net financial debt rose significantly as of December 31, 2018. This resulted mainly from higher capital requirements for capital expenditures and working capital.

- Financial debt increased noticeably:
  - Interest-free loans were reduced by redemptions.
  - **Finance lease liabilities 217** increased as a result of acquisitions and as a consequence of changes in two rental properties. The impact was dampened by consistent redemption, amongst others factors.
  - The key factor was that the euro value of the outstanding **bonds 215** increased significantly because of the new issues. Exchange rate effects did not play a significant role in development as a result of hedging transactions.
- The effects of currency hedges, which are based on the hedged exchange rate at the time of issue, increased debt (as of December 31, 2017: increased debt) but were, however, not significant. Since our foreign currency-denominated bonds are, with very few exceptions, hedged against currency fluctuations by corresponding derivatives, exchange rate effects are offset by the corresponding opposite position of the hedge.
- Cash and cash equivalents increased slightly and to an extent balanced out the increase in financial debt.

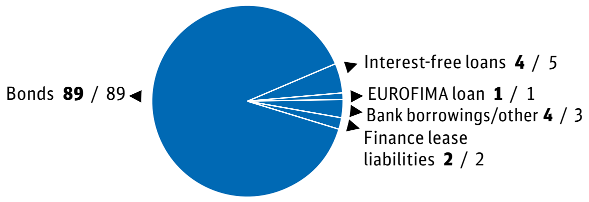
Net financial debt as of Dec 31 (€ billion)



Maturity structure of financial debt as of Dec 31 (%) **2018** / 2017



Composition of financial debt as of Dec 31 (%) **2018** / 2017



The maturity structure and composition of financial debt were largely unchanged as of December 31, 2018.

GRI 203-1

Capital expenditures increased significantly

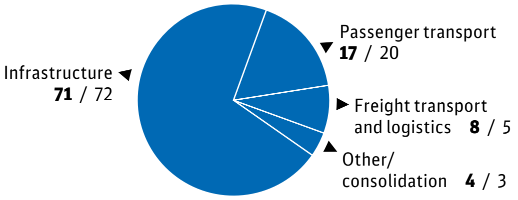
Capital expenditures (€ million)	**2018**	2017	Change absolute	 %
Gross capital expenditures	11,205	10,464	+741	+7.1
⊖ Investment grants	7,209	6,724	+485	+7.2
Net capital expenditures	**3,996**	**3,740**	**+256**	**+6.8**

The increase in gross capital expenditures was mainly due to expenditures on track infrastructure and vehicles. In addition, extensions to rental agreements, which are valued as finance leases, had the effect of increasing capital expenditures.

Investment grants also increased significantly. They are unchanged at about 64% of gross capital expenditures (previous year: 64%).

The increase in net capital expenditures was largely driven by DB Cargo (primarily procurement of locomotives and freight cars and capitalization of self-generated software) and the Other division (primarily extensions to rental agreements). At DB Long-Distance, capital expenditures increased slightly at a high level because of further additions of ICE 4 and IC 2 trains. By contrast, net capital expenditures at DB Regional and DB Netze Track in particular decreased.

Gross capital expenditures by divisions (%) **2018** / 2017



Our capital expenditure activities focused especially on measures to improve performance and efficiency in the area of track infrastructure and the rejuvenation of our vehicle fleet. The structure of gross capital expenditures shifted primarily because of larger capital expenditures in locomotives at DB Cargo, slightly in favor of the area of Freight Transport and Logistics.

Capital expenditure priorities unchanged in Germany

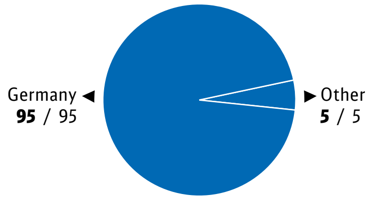
Gross capital expenditures by regions (€ million)	**2018**	2017	Change absolute	 %
Germany	10,682	9,906	+776	+7.8
Europe (excluding Germany)	506	546	-40	-7.3
Asia/Pacific	79	61	+18	+29.5
North America	16	9	+7	+77.8
Rest of world	5	5	–	–
Consolidation	-83	-63	-20	+31.7
DB Group	**11,205**	**10,464**	**+741**	**+7.1**

Net capital expenditures by regions (€ million)	**2018**	2017	Change absolute	 %
Germany	3,487	3,184	+303	+9.5
Europe (excluding Germany)	492	544	-52	-9.6
Asia/Pacific	79	61	+18	+29.5
North America	16	9	+7	+77.8
Rest of world	5	5	–	–
Consolidation	-83	-63	-20	+31.7
DB Group	**3,996**	**3,740**	**+256**	**+6.8**

In the regional breakdown of gross capital expenditures, the focus remained on Germany. Here the increase can be explained particularly by procurement of freight cars at DB Cargo (€ +259 million) and infrastructure measures at DB Netze Track and DB Netze Stations.

In Europe (excluding Germany) capital expenditures decreased. Here, lower capital expenditures at DB Arriva in Great Britain and Denmark in particular had an impact. In contrast, capital expenditures by DB Arriva in the Netherlands increased, amongst others. In the Asia/Pacific region, DB Schenker increased its capital expenditures in logistical facilities in the United Arab Emirates.

Gross capital expenditures by regions in % **2018** / 2017



Investment grants primarily for infrastructure

Of the investment grants received by DB Group in the year under review (€ 7,209 million), almost all of them (€ 7,178 million) related to infrastructure. The most important financing sources for infrastructure capital expenditures are grants, mostly from the Federal Government, the Federal states and local authorities.

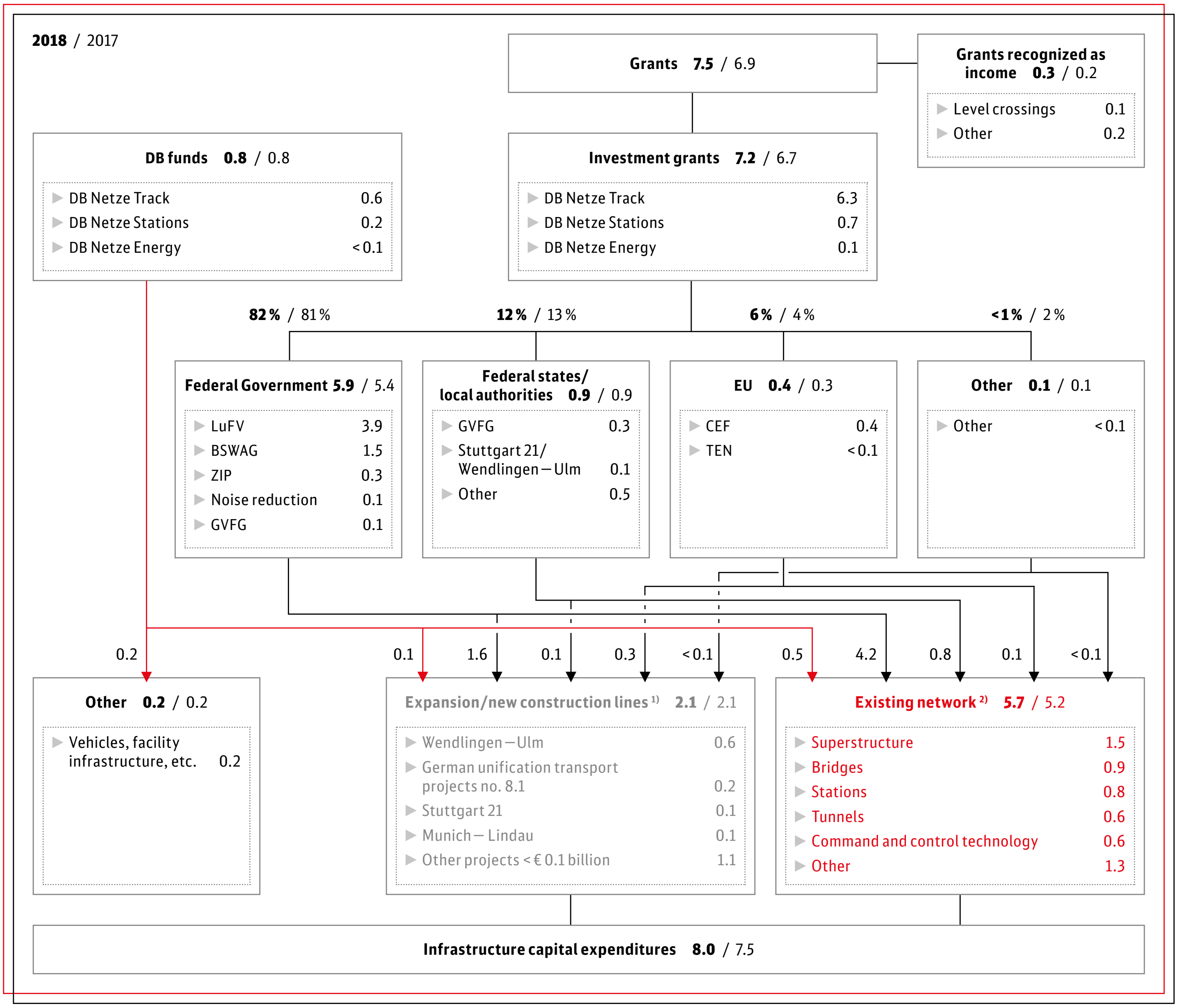
Most of these are based on the **LuFV 🗋234f.** and the Federal Rail Infrastructure Extension Act (Bundesschienenwegeausbaugesetz; BSWAG). Further investment grants were provided as a result of the Municipal Transport Financing Act (Gemeindeverkehrsfinanzierungsgesetz; GVFG), the **noise remediation program of the Federal Government 🗋92** and as part of the **ZIP 🗋147.** The European Union allocates grants (Trans-European Networks; TEN and Connecting Europe Facility; CEF) for infrastructure capital expenditures on TEN.

In addition to investment grants, DB Group also receives (significantly lower) grants recognized as income, mainly also in respect of infrastructure.

On the balance sheet, investment grants are directly deducted from **the cost of purchase and cost of production 🗋202** of the assets to which they relate. The recognition of all grants is such that the responsible Federal agencies can conduct comprehensive checks to ensure that they are spent in accordance with their purpose and the law.

A transparent description of the various **forms of grants** is available online.

INFRASTRUCTURE GRANTS AND CAPITAL EXPENDITURES (€ BILLION)



Individual figures are rounded and therefore may not add up.

[1] Includes projects of the requirement plan.

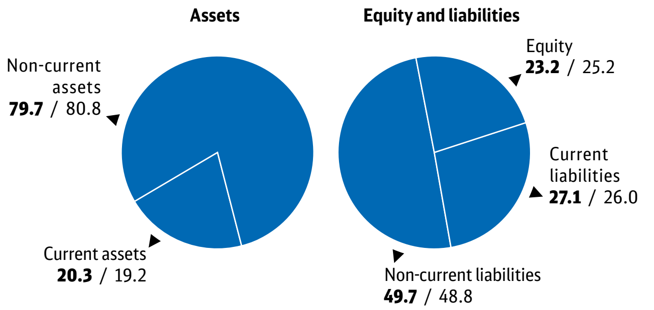
[2] New and expansion projects may also include replacement capital expenditures within the framework of existing network measures.

GRI 102-7

Equity ratio decreased

Balance sheet as of Dec 31 (€ million)	**2018**	2017	Change absolute	%
Total assets	58,527	56,436	+2,091	+3.7
ASSETS				
Non-current assets	46,646	45,625	+1,021	+2.2
Current assets	11,881	10,811	+1,070	+9.9
EQUITY AND LIABILITIES				
Equity	13,592	14,238	-646	-4.5
Non-current liabilities	29,104	27,510	+1,594	+5.8
Current liabilities	15,831	14,688	+1,143	+7.8

Balance sheet structure as of Dec 31 (%) **2018** / 2017



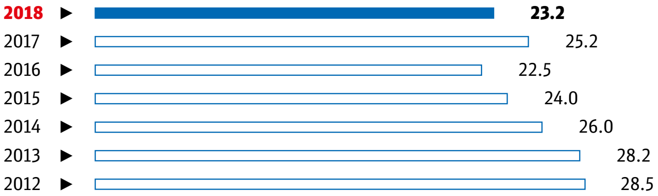
There were no material changes to IFRS regulations for DB Group's consolidation and accounting principles that would result in any changes to the consolidated financial statements. The exercise of balance sheet voting rights is explained in the Notes to the consolidated financial statements.

The balance sheet total rose slightly.

- Non-current assets increased. Here, property, plant and equipment was particularly important (€ +1,149 million). The main factor here was vehicle acquisitions at DB Long-Distance and DB Cargo, supported by the increase in intangible assets (€ +131 million) as a result of capitalization of self-generated software and higher other non-current claims and assets (€ +78 million), including for service concessions, inter alia. In contrast, active deferred taxes particularly decreased (€ −384 million), primarily as a result of lower expected taxable income of DB AG.
- Current assets increased significantly. The key factors were the increase in trade receivables (€ +391 million) and the increase in other current receivables and assets (€ +250 million), mostly due to balance-sheet-date-related factors. In addition, inventories (€ +218 million) increased, primarily for maintenance, as did cash and cash equivalents (€ +147 million).

Structurally, on the asset side there was a slight shift in favor of current assets.

Equity ratio as of Dec 31 (%)



On the equity and liabilities side, equity decreased significantly. The key factors included the reduction, related to interest amongst other factors, in the changes recognized in the reserves in connection with the revaluation of pensions (€ −778 million) and the dividend payment to the Federal Government (€ −450 million). There was an opposite effect primarily from the net profit for the year generated (€ +542 million).

The decrease in equity coupled with an increased balance sheet total led to a reduction in the equity ratio.

- Non-current debt capital increased significantly, owing principally to:
  - higher non-current **financial debt** 🗋**107** (€ +910 million),
  - an increase in pension obligations (€ +883 million), mainly as a result of a declined interest rate for revaluation, and
  - the decrease of other non-current provisions (€ −128 million) as a result of liabilities that will now become due in the short-term had an opposite effect.
- Current liabilities also increased. This was primarily the result of the following:
  - higher trade liabilities (€ +334 million) because of balance-sheet-date-related and other factors at DB Schenker,
  - increased other current liabilities (€ +261 million), primarily as a result of higher obligations from collectively agreed wages,
  - higher current financial debt (€ +258 million) primarily as a result of an increase in bank borrowings and bonds falling due in the short term, and
  - increased current deferred items (€ +183 million).

Within the structure of the equity and liabilities side, the ratio of non-current and current liabilities to the balance sheet total slightly increased accordingly.

Off-balance-sheet financial instruments and unrecognized assets

In addition to the assets shown in the consolidated balance sheet, DB Group also uses off-balance-sheet financial instruments and assets that cannot be recognized in the balance sheet.

Most of the off-balance-sheet financial instruments are leased or rented items (operating leases) for which a present value is determined (as of December 31, 2018: € 4,245 million; as of December 31, 2017: € 4,934 million). The decrease was operationally driven by the expiry of existing contracts, primarily at DB Arriva. There was also a significant impact from the implementation in anticipation of changes in accordance with **IFRS 16 189.** In accordance with this, contracts whose usage period begins in the future will no longer be included in the calculation of operating leases present value, in order to ensure that purchasing and leasing transactions are presented equally in the balance sheet.

In addition, we used factoring to sell smaller volumes of receivables (as of December 31, 2018: € 686 million; as of December 31, 2017: € 500 million).

With regard to the company pension scheme for employees, the obligations under each retirement scheme are, to some extent, covered and netted by plan assets which are capable of being netted. As of December 31, 2018, total obligations amounted to € 10,635 million (as of December 31, 2017: € 10,538 million) and the fair value of plan assets was € 4,766 million (as of December 31, 2017: € 5,298 million). The balancing process leads to a reduction in the balance sheet total. The net obligation recognized on the balance sheet was € 4,823 million (as of December 31, 2017: € 3,940 million). No substantial endowments were made in the year under review that would have had a significant impact on the financial position.

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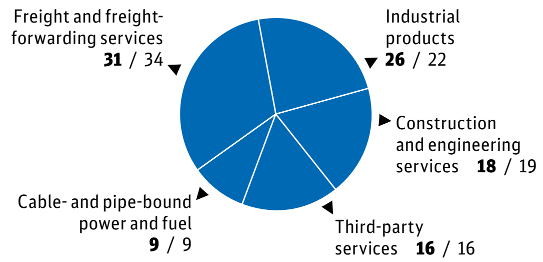
GRI 102-9

Purchasing volume increased

The purchasing volume corresponds to the contractual obligations to suppliers that DB Group has entered into. On subsequent realization these become capital expenditures or expenses (mainly cost of materials and other operating expenses). The total purchasing volume was € 34.7 billion (previous year: € 30.3 billion).

- Freight and freight-forwarding services were € 10.8 billion, nearly in line with that of the previous year (previous year: € 10.4 billion).
- Industrial products increased significantly to € 9.2 billion (previous year: € 6.7 billion). Here, the further procurement of ICE 4 trains, locomotives and freight cars had a significant impact, along with an increased requirement for replacement parts.
- Construction and engineering services also rose significantly to € 6.4 billion (previous year: € 5.6 billion). In addition to price effects, the development was driven above all through the first service being awarded for the major project's second main line in Munich (2. Stammstrecke München) along with the conclusion of German unification transport projects no. 8 (VDE 8).
- Third-party services increased to € 5.4 billion (previous year: € 4.8 billion). As a result of the digitalization initiatives, the requirements for IT services, amongst others, increased.
- Cable- and pipe-bound power and fuel rose slightly to € 3.1 billion (previous year: € 2.8 billion).

Purchasing volume structure (%) **2018** / 2017



The share of local purchasing volume in Germany was about € 16.3 billion.

(€ million)	**2018**	2017	2016
Purchasing volume [1]	18,358	15,920	17,820
Share of local purchasing volume (%)	92	90	93

[1] Not including DB Schenker, DB Arriva and foreign companies of DB Cargo.

Slight deviations from the projected financial position and asset situation

Outlook for 2018 financial year (€ billion)	2017	**2018 (March 2018 forecast)**	**2018 (July 2018 forecast)**	**2018**
Gross capital expenditures	10.5	>12	~12	11.2
Net capital expenditures	3.7	>4.5	~4.5	4.0
Maturities	2.1	2.2	2.2	2.2
Bond issues	2.0	≤3.0	3	2.9
Cash and cash equivalents as of Dec 31	3.4	~3	~3	3.5
Net financial debt as of Dec 31	18.6	≤20	≤20	19.5

Capital expenditures were slightly lower than forecasted. In particular, vehicle capital expenditures at DB Regional and DB Long-Distance were not as high as expected, resulting in rather lower net capital expenditures than forecast.

With respect to DB Group's financial position, actual developments in the year under review corresponded with our forecast for maturities and bond issues.

The account balance of cash and cash equivalents at year-end 2018 developed slightly better than expected as a result of lower than expected capital expenditures.

Net financial debt developed slightly better than expected.

Development of business units

Passenger transport

Development in the **German and European passenger transport market 🗎59** was differentiated in 2018.

German market with stable development

- Based on our own estimations, volume sold in motorized private transport remained slightly below the previous year's level:
  - Positive effects from a stable labor market and greater levels of disposable income were not sufficient to offset the negative development caused by the sharp rise in fuel prices.
  - Market share fell slightly.
- Volume sold in rail passenger transport rose significantly once more:
  - Regional and long-distance rail passenger transport benefited from favorable income and employment situations as well as the sharp rise in fuel prices. The demand was also driven by restrictions in air transport.
  - DB Group recorded a strong increase in volume sold, especially for DB Long-Distance, as a result of the new high-speed line Berlin—Munich and measures to promote services. DB Regional maintained the same level of volume sold as the previous year.
  - Non-Group railways only increased their volume sold slightly. In long-distance transport, demand rose moderately after FlixTrain took over the sale of Locomore services and Czech train operator Leo Express took over operations.
  - The market share of rail passenger transport rose slightly.
- The volume sold in public road passenger transport stagnated:
  - The number of passengers using long-distance bus transport rose moderately once again despite a slight increase in fares. FlixBus remains the market leader with a market share of 90%.
  - Local bus transport only benefited slightly from increasing population and employment figures and only expanded its service offering moderately.
  - DB Group public road passenger transport contracted slightly due to a decline in demand for rural bus transport and loss of tenders in Northern Germany.
  - The market share of public road passenger transport remained stable.
- Volume sold in air transport fell slightly:
  - Following the insolvency of Air Berlin during the previous year, it was not possible for the Lufthansa Group or easyJet to take over all of the available slots at German airports.
  - The market share remained unchanged.

Rail passenger transport and long-distance buses with significant growth in Europe

- European rail passenger transport grew considerably by about 2.0% in 2018. In addition to the major European railway countries, many smaller railways also increased their volume sold:
  - In the Czech Republic, this was a result of continued supply and service improvements by the Czech state-owned railway CD and private providers RegioJet and Leo Express (+7.6%).
  - In France, this was a result of recovering demand for the French state-owned railway SNCF thanks to the launch of new high-speed lines (+4.7%).
  - In Italy, this was a result of increased punctuality and customer satisfaction in regional and long-distance transport services provided by the Italian state-owned railway FS (+2.6%).
  - In Spain, this was a result of the large-scale low-cost service EVA on high-speed lines and improvements to the quality of the Spanish state-owned railway RENFE (+2.4%).
  - Estonia, Finland and Lithuania recorded strong growth with some areas reaching double digits.

OVERVIEW OF BUSINESS UNITS

	Total revenues		Change		External revenues		Change	
Revenues adjusted (€ million)	**2018**	2017	absolute	%	**2018**	2017	absolute	%
DB Long-Distance	4,682	4,347	+ 335	+ 7.7	4,528	4,193	+ 335	+ 8.0
DB Regional	8,968	8,734	+ 234	+ 2.7	8,862	8,629	+ 233	+ 2.7
DB Arriva	5,441	5,345	+ 96	+ 1.8	5,433	5,338	+ 95	+ 1.8
DB Cargo	4,460	4,528	- 68	- 1.5	4,177	4,209	- 32	- 0.8
DB Schenker	17,050	16,430	+ 620	+ 3.8	16,973	16,345	+ 628	+ 3.8
DB Netze Track	5,511	5,364	+ 147	+ 2.7	1,559	1,522	+ 37	+ 2.4
DB Netze Stations	1,314	1,265	+ 49	+ 3.9	569	540	+ 29	+ 5.4
DB Netze Energy	2,850	2,794	+ 56	+ 2.0	1,350	1,301	+ 49	+ 3.8
Other	4,990	4,854	+ 136	+ 2.8	573	627	- 54	- 8.6
Consolidation	- 11,242	- 10,957	- 285	+ 2.6	–	–	–	–
DB Group	**44,024**	**42,704**	**+ 1,320**	**+ 3.1**	**44,024**	**42,704**	**+ 1,320**	**+ 3.1**

	EBITDA adjusted		Change		EBIT adjusted		Change	
Operating profit figures (€ million)	**2018**	2017	absolute	%	**2018**	2017	absolute	%
DB Long-Distance	675	611	+ 64	+ 10.5	417	381	+ 36	+ 9.4
DB Regional	1,126	1,156	- 30	- 2.6	492	508	- 16	- 3.1
DB Arriva	575	569	+ 6	+ 1.1	300	301	- 1	- 0.3
DB Cargo	54	130	- 76	- 58.5	- 190	- 90	- 100	+ 111
DB Schenker	703	676	+ 27	+ 4.0	503	477	+ 26	+ 5.5
DB Netze Track	1,446	1,484	- 38	- 2.6	840	687	+ 153	+ 22.3
DB Netze Stations	362	372	- 10	- 2.7	221	233	- 12	- 5.2
DB Netze Energy	87	141	- 54	- 38.3	21	72	- 51	- 70.8
Other/consolidation	- 289	- 209	- 80	+ 38.3	- 493	- 417	- 76	+ 18.2
DB Group	**4,739**	**4,930**	**- 191**	**- 3.9**	**2,111**	**2,152**	**- 41**	**- 1.9**
Margin (%)	10.8	11.5	–	–	4.8	5.0	–	–

	Gross capital expenditures		Change		Net capital expenditures		Change	
Capital expenditures (€ million)	**2018**	2017	absolute	%	**2018**	2017	absolute	%
DB Long-Distance	1,081	1,060	+ 21	+ 2.0	1,081	1,060	+ 21	+ 2.0
DB Regional	539	674	- 135	- 20.0	526	628	- 102	- 16.2
DB Arriva	326	374	- 48	- 12.8	312	372	- 60	- 16.1
DB Cargo	587	328	+ 259	+ 79.0	586	324	+ 262	+ 80.9
DB Schenker	273	246	+ 27	+ 11.0	273	246	+ 27	+ 11.0
DB Netze Track	6,901	6,601	+ 300	+ 4.5	564	660	- 96	- 14.5
DB Netze Stations	883	709	+ 174	+ 24.5	164	103	+ 61	+ 59.2
DB Netze Energy	187	177	+ 10	+ 5.6	65	53	+ 12	+ 22.6
Other/consolidation	428	295	+ 133	+ 45.1	425	294	+ 131	+ 44.6
DB Group	**11,205**	**10,464**	**+ 741**	**+ 7.1**	**3,996**	**3,740**	**+ 256**	**+ 6.8**
thereof investment grants	7,209	6,724	+ 485	+ 7.2	–	–	–	–

- European long-distance bus transport grew moderately in 2018:
  - The market leader FlixBus continued to drive development and increased its passenger numbers by about 50% on average in 28 countries. The most dynamic development was achieved in Luxembourg, Norway, Sweden, Poland and Portugal. Demand also grew considerably in Belgium, the Czech Republic, Croatia, Hungary and Spain.
  - In response to the dominant position held by FlixBus, European long-distance bus operators (British National Express, French OUIBUS, Italian Marino Bus and Spanish ALSA) formed an alliance.

Order book in passenger transport declined

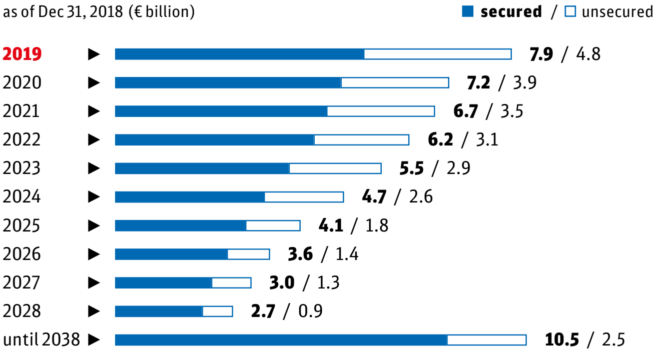
Revenues that are directly connected with transport contracts or concessions are either independent of (secured revenues, primarily concession fees) or dependent on (unsecured revenues, primarily revenues from fares) the number of passengers.

Order book in passenger transport as of Dec 31 (€ billion)	**2018**	2017	Change absolute	 %
DB Regional [1]	70.9	72.2	-1.3	-1.8
secured [1]	52.7	50.2	+2.5	+5.0
unsecured [1]	18.2	22.0	-3.8	-17.3
DB Arriva	20.1	22.7	-2.6	-11.5
secured	9.5	10.2	-0.7	-6.9
unsecured	10.6	12.5	-1.9	-15.2
Total [1]	**91.0**	**94.9**	**-3.9**	**-4.1**
secured [1]	62.2	60.4	+1.8	+3.0
unsecured [1]	28.8	34.5	-5.7	-16.5

[1] Previous year's figure adjusted.

The order book declined during the year under review. Additions of about € 9.7 billion from the transport contracts awarded were offset by disposals (primarily due to services performed) of about € 12.3 billion and changes in assumptions of about € −1.3 billion (primarily due to exchange rate effects).

The secured revenues at DB Regional increased due to changes in the recognition of revenues from fares in gross contracts and the shift from unsecured to secured revenues as a result.



Order book in passenger transport by years
as of Dec 31, 2018 (€ billion)

Number of BahnCard holders down slightly compared to previous year

Number of BahnCards as of Dec 31 (thousand)	**2018**	2017	Change absolute	 %	2016
Total	5,254	5,368	-114	-2.1	4,974

The number of BahnCard holders has fallen slightly. This was driven by a decline in the number of BahnCard 25 holders following the previous year's significant growth, which was the result of a promotional campaign for the 25th anniversary of **BahnCard** green **no. 2.** The number of BahnCard 50 and BahnCard 100 holders continued to increase.

DB Long-Distance business unit

Business model

DB Long-Distance offers customers comfortable and environmentally friendly travel within Germany and into neighboring countries. Regular scheduled daily services with the ICE/IC/EC fleet form the backbone of long-distance transport. Offerings are being supplemented by island services to Sylt and Wangerooge. Long-distance bus services (IC Bus) provide an extension to the rail transport offering for domestic and international travel.

The important key performance figures are volume sold, volume produced and the load factor. The five top key figures used for monitoring are passenger growth, operating income (EBIT), employee satisfaction, punctuality and customer satisfaction.

The cost side largely correlates with the volume produced, which is derived from the schedule. Personnel and facility resource management is determined on the basis of the annual train schedule to optimize the unit cost per train kilometer traveled. The key drivers are personnel, maintenance and infrastructure expenses, the latter being very fixed-cost intensive. Only a small portion of expenses vary with train capacity utilization.

DB LONG-DISTANCE BUSINESS MODEL

Resources/inputs

Employees
About 16,500

Vehicles
274 ICE,
243 locomotives,
1,481 passenger cars

Networks and infrastructure
11 provisioning depots
for IC/ICE

Additional production factors
143 million train-path kilometers,
2.7 million station stops,
2.4 billion kWh traction current,
11.5 million liters of diesel fuel

▼

Customer segments
- Private customers
- Business customers

Value proposition
- DB Long-Distance offers easy, relaxed, reliable and environmentally friendly travel.

Customer access and retention
- Travel centers, agencies, ticket machines, online, call center, onboard sales
- BahnCard, BahnComfort and BahnBonus programs, apps

Key activities

Providing train and bus services

Looking after customers

Providing and maintaining vehicles

Planning networks and services

▼ ▼

Services/outputs

Passengers
149 million (rail and bus)

Volume sold
43 billion pkm (rail) and
0.2 billion pkm (bus)

Outcomes

EBIT
€ 417 million

Customer satisfaction
SI of 77

Punctuality
74.9 %

Employee satisfaction
SI of 3.5

Final energy consumption
–29.3 % compared to 2006 (specific)

The most important sources of income for commercially operating long-distance transport are revenues from the sale of tickets and BahnCards. Our employees, a modern vehicle fleet and a high-quality infrastructure are key resources. This is why intra-Group infrastructure companies and service providers as well as the vehicle industry are important partners. Furthermore, the cooperation with railways in countries bordering Germany is very important for cross-border connections.

Markets and strategy

In the year under review, we consistently pursued activities as part of the Railway of the Future program. We further sharpened our focus in 2018 by deriving a top project portfolio based on three guiding principles: “Connecting people, overcoming distances,” “Best possible journey – together with passion and excellence” and “Arriving by the time of boarding.” Our goal is to support our vision for more green mobility in Germany, to make our business more resilient to intermodal competition and to clearly focus on passenger satisfaction.

Customer campaign 2.0 is the basis for our activities. Once the network has been expanded in line with the targets, nearly all cities with a population of over 100,000 will be linked to long-distance transport. We are also creating more fast and direct daily connections between major German cities by strengthening the ICE network. So we want to expand the service offering by about 25% by 2030 and increase the number of passengers to 200 million per year.

In the year under review, DB Long-Distance ordered more and longer ICE 4 trains, which increased the planned capital expenditures by € 700 million. Additional cars will be attached to the 50 trains that have already been ordered to make them 13 cars long and thereby increase the capacity to over 900 seats per train. An additional 18 trains will be ordered to expand the ICE 4 fleet to a total of 137 trains (with 7, 12 and 13 cars) by 2025 to form the backbone of the long-distance transport service offering. These measures enable us to create the conditions for greater reliability and a higher degree of traveling comfort.

- **Economic** dimension: DB Long-Distance is pursuing the target of offering its customers high-quality products and thereby achieving profitable growth. By 2020, we want our services to be recognized as the most reliable – both in terms of travel times and service. This is why we are implementing the **Agenda for a Better Railway 66 ff.** Our aim is to significantly and sustainably enhance quality. For example, quality dialogues were systematically introduced at our facilities, logistics processes were optimized using lean management techniques and capacity was increased by using the tracks more efficiently. These and other measures will help improve maintenance as well as operational quality and travel comfort as a result.

  If major disruptions occur, efficient incident management should ensure that information is provided promptly for our passengers and that the appropriate measures are initiated. We are also working on enhancing our digital solutions. Digital innovations make it even easier to use our services and prepare us for growing intramodal and intermodal competition. Free WiFi on ICE trains combined with the expanded ICE Portal further enhances the positive onboard travel experience and helps us to offer long-distance passengers the most relaxing mode of transport. Another example is our comfort check-in, which enables passengers to check into their own seat instead of having their tickets checked by a ticket inspector. We want to significantly enhance the personal experience of our guests on board and set new standards in line with our “Host of the future” guiding principle, as the above demonstrates.
- **Social** dimension: Together, our DB Long-Distance employees bear responsibility for an economically strong company that focuses on making sure that customers enjoy their travel experience. In order to keep our promises to our customers, we expect our employees to have a strong focus on customers and quality. One prerequisite for this is a solid cooperative spirit that can bring employees together and allow them to participate. This is why we are constantly working on improving our employee satisfaction, for example by including our employees in the planning of specific working conditions, which also increases our employer attractiveness. Increasing employee satisfaction is also being examined in depth as part of its own dedicated top project called modern work environments.
- **Environmental** dimension: DB Long-Distance has set a target of being considered by its customers as the most environmentally friendly provider by 2020. A central element of this target is transport with **100% eco-power green. no.1.** In the year under review, we increased the proportion of journeys using eco-power from about 75% to 100%. Although our electric rail transport services are practically CO_2-free as a result, we are still working on the energy efficiency of our services. New vehicles will support our efforts to achieve this target. ICE 4 consumes about 22% less energy per seat than a comparable ICE 1.

Development of our fleet

Vehicle availability under stress

Vehicle availability in the year under review was under significant stress, which was the result of both the huge increase in units being out of operation after incidents and the unusually long heat wave in summer 2018 that caused a significant rise in failures and partial malfunctions. The expansion of the ETCS operations with ICE 1 and ICE 3 trains on the Berlin—Munich high-speed line also experienced temporary technical shortcomings in the first few months following its launch in December 2017.

Compensating positive effects resulted from:

- capacity measures in facilities resulting from the **OPEX program 75,**
- additional technical stabilization of the fleet, such as the new wheel sets for ICE 3 and ICE T, and
- continuous renewal of the fleet with the intake of more ICE 4 and IC 2 trains.

The refitting of the ICE T fleet with new wheel sets will be completed in 2019 and was a prerequisite for the scheduled recommissioning of operations with the tilting body system (tilting technology) to Vienna in December 2017.

The operation of the IC 2 is largely stable and achieves the highest level of passenger satisfaction out of all long-distance transport fleets.

Vehicle projects continued

- The ICE 4 has been in regular operation since December 2017. The daily demand for ICE 4 trains rose from six to nine in June 2018 following the small timetable change. In addition to another increase in demand to 19 trains, operations also begun on the Cologne—Rhein/Main and Berlin—Munich lines from December 2018. Therefore the trains were prepared by the end of November and the train protection system ETCS was activated.

- The ICE 4 trains have been undergoing maintenance in Cologne as well as Hamburg and Munich since October 2018, and a contract for this was signed with Siemens for an initial nine-month period. Testing of a new wheel profile was successfully completed, thereby eliminating the vibrations that were previously detected and making it possible to achieve the mileage guaranteed in the contract.
- The **redesign** green. **no. 87** of ICE 3 continued. After 15 years of operation, 63 trains will be made fit for the future by 2021. Fifty trains will be equipped with ETCS and can then be used on new high-speed lines. The vehicles can be used for at least another 15 years after modernization.
- The refitting of ICE 1 units with ETCS was completed according to schedule and the reliability of trains fitted with ETCS was successfully improved on the high-speed line Berlin—Munich in particular.
- For the Nuremberg—Karlsruhe (route 61) and Stuttgart—Singen (route 87) lines, 13 out of 17 IC 2 trains from the second batch ordered were acquired. Three of these trains have been on trial runs with passengers on route 61 since December 2018.

Digitalization and innovation

Comfort check-in replaces ticket controls

Following a test phase, the comfort check-in service was launched in June 2018 across Germany in all ICE trains. This makes ticket checks obsolete as the customer checks in independently. The function is exclusively integrated into the DB Navigator app and can be used by all customers with a mobile or **online ticket** green. **no. 9.** Once the passengers have taken their seats, they simply check in by clicking on the app.

Environmental measures

In February 2018, the first carbon-neutral **ICE maintenance facility** green. **no. 48** was opened in Nippes, Cologne/Germany and officially commenced operation in June 2018. The facility is run completely carbon-neutral with heat from **geothermal sources** green. **no. 91** and electricity generated from **solar energy** green. **no. 30,** which saves 1,000 t CO_2 every year.

Other events

- The new concept for onboard catering launched on December 1, 2018 with the mission statement "Pure pleasure all along the line." Over 650 onboard restaurants and bistros will be provided with new menus, tableware and promotional materials as part of this new concept.
- With the **City Ticket** green. **no. 133,** we have made traveling even easier: since August 1, 2018 the journey to or from the passenger station using the underground, S-Bahn (metro), tram or bus has been included in the price of all flex and saver tickets (Flex- und Sparpreis-Tickets) available in 120 German towns and cities with a travel distance of over 100 km.

			Change		
DB Long-Distance	**2018**	2017	absolute	%	2016
Punctuality (rail) (%)	74.9	78.5	–	–	78.9
Rate of people making connections (long distance transport/long-distance transport) (%)	83.9	85.8	–	–	85.9
Customer satisfaction (SI)	77	77	–	–	77
Passengers (rail) (million)	147.9	142.2	+ 5.7	+ 4.0	139.0
Passengers (long-distance bus) (million)	0.7	0.7	–	–	0.8
Volume sold (rail) (million pkm)	42,827	40,548	+ 2,279	+ 5.6	39,516
Volume sold (long-distance bus) (million pkm)	194.6	176.6	+ 18.0	+ 10.2	224.1
Volume produced (million train-path km)	143.4	140.5	+ 2.9	+ 2.1	144.1
Load factor (%)	56.1	55.5	–	–	52.9
Total revenues (€ million)	4,682	4,347	+ 335	+ 7.7	4,159
External revenues (€ million)	4,528	4,193	+ 335	+ 8.0	4,012
EBITDA adjusted (€ million)	675	611	+ 64	+ 10.5	419
EBIT adjusted (€ million)	417	381	+ 36	+ 9.4	173
Gross capital expenditures (€ million)	1,081	1,060	+ 21	+ 2.0	416
Employees as of Dec 31 (FTE)	16,548	15,993	+ 555	+ 3.5	16,326
Employee satisfaction (SI)	3.5	–	–	–	3.5
Employee satisfaction – follow-up workshop implementation rate (%)	–	99.5	–	–	–
Share of women in Germany as of Dec 31 (%)	27.1	27.1	–	–	27.1
Specific final energy consumption compared to 2006 (based on pkm) (%)	– 29.3	– 26.7	–	–	– 22.9

Development in the year under review

- Positive effects from the market and competitive environment.
- Further expansion of free WiFi, including in second class.
- Very good acceptance of the new Berlin — Munich high-speed line.
- Further intake of new ICE 4 and IC 2 vehicles.
- Negative development of punctuality, while customer satisfaction was stable.

The **punctuality 🗋76** of long-distance transport fell considerably in the year under review due to the highly utilized infrastructure and more vehicle and infrastructure disruptions accompanied by a persistently high level of external disruptions. As a result of the decrease in punctuality, the rate of people successfully making long-distance transport connections also declined.

Customer satisfaction was at the same level as in the previous year. The positive developments resulting from the implementation of measures in six bundles (WiFi and cell phone reception, cleanliness of seats and restrooms, temperature, onboard railway staff, price perception and IC 1 modernization) were largely offset by the negative punctuality developments. To assess customer satisfaction, about 15,000 customers are asked each year in six waves about their satisfaction with their latest journey.

Performance development in rail transport was mainly positive.

- The number of passengers and volume sold increased. This development was driven primarily by the service offering expansion owing to the new Berlin—Munich high-speed line and the Gäu railway. Market-driven stimuli, measures to further enhance the product offering, the expansion of free WiFi, including in second class, and pricing measures were also positive. However, the weather-related restrictions, heavy construction activity within the network and route closures put a damper on development.
- The commissioning of new routes also resulted in an increase in volume produced.
- As the number of passengers increased, the load factor rose.

Supply adjustments to individual lines resulted in a positive performance development in bus services.

The economic development was encouraging. Adjusted EBIT and EBITDA improved as a result of the significant increase in revenues. Higher expenses and the omission of the effect from the nuclear fuel tax reimbursement in the previous year had a dampening effect.

- Revenues were significantly positive due to price and performance effects. Supportive effects also resulted from an improved competitive environment.
- The decline of other operating income (−23.4%) is mainly a result of the omission of the reimbursement of the nuclear fuel tax in the previous year and unusually high income from the sale of vehicles.

Expenses recorded significant additional burdens:

- The increase in the cost of materials (+5.6%) was mainly driven by higher infrastructure expenses and quality improvement measures.
- The higher personnel expenses (+3.4%) resulted mainly from collective bargaining agreement wage increases and an increase in the number of employees.
- Other operating expenses (+8.9%) also increased, which was mainly a result of increased expenses for travel support, passenger rights, quality-related measures and IT.
- The increase in depreciations (+12.2%) is mainly due to the new ICE 4 and IC 2 trains. High capital expenditures in facility infrastructure during the previous year also increased depreciation.

Capital expenditure activities continued to increase slightly, reaching a new level, and was characterized by vehicle acquisitions (ICE 4 and IC 2). This was offset by less capital expenditures in facility infrastructure due to projects completed in the previous year.

The number of employees as of December 31, 2018 increased as a result of the expansion of services.

Employee satisfaction was stable. The share of women also remained stable during the year under review.

The specific final energy consumption declined in the year under review. This improvement was driven by the new ICE 4 trains, which are much more energy efficient in operation than expected, and the good capacity utilization of our trains. At the same time, we also continued to increase the energy efficiency of journeys made by older series. Constant improvement to the energy-efficient driving style of our locomotive drivers was a decisive factor. Unfortunately these effects could not make their full impact due to the poor punctuality development as trains that run on time are especially energy-efficient. The newly introduced driving assistance system has also started to show results.

DB Regional business unit

Business model

DB Regional's core service is to bring millions of passengers in regional transport to their desired destination every day in a **punctual, safe, comfortable and environmentally friendly** green **no. 3** manner and in doing so, meet the requirements of the respective transport contract.

Our offerings cover both regional rail passenger transport with regional express, regional railway and S-Bahn (metro) lines as well as regional and urban bus transport services. We therefore offer passengers comprehensive mobility services in major cities and metropolitan areas, but also and especially in rural areas. Our regional organizational structure guarantees local transport services oriented towards the requirements of our local customers.

As a rule, DB Regional provides its regional rail passenger transport services within the framework of the Regionalization Act (Regionalisierungsgesetz) as a public service task and on behalf of the competent public transport authorities. The public transport authorities are either the Federal states or a state-owned company, or municipal special-purpose associations. The public transport authorities conclude long-term transport contracts and line permits with transport companies, mainly within the framework of competitively awarded tenders. These contracts determine the volume produced and contain detailed specifications on quality and fare pricing. With integrated transport concepts, high-quality mobility services and targeted capital expenditures on the vehicle fleet and digitalization, we aim to defend our leading market position and strengthen our role as a quality and innovation leader in the field of regional rail passenger transport.

Volume sold and volume produced are important key performance figures. Transport contracts typically refer to the volume produced. Concession fees, in addition to revenues from ticket sales, are the most important source of income. However, contracts where fare proceeds remain directly with the contracting organization, while the transport company is fully compensated by the public transport authority for the entire range of services (gross contracts), are also of increasing importance.

Predefined terms in transport contracts and route concessions, combined with the extensive production system, result in a cost structure with high fixed costs. The major drivers are personnel, maintenance, energy and infrastructure expenses. Only a small portion of expenses vary with train capacity utilization.

In the rail sector, integrated bids covering vehicle procurement, financing, fleet management, operation and maintenance were generally required by the public transport authorities in the past. Nowadays, fragmented tender models are becoming more common. In such models, partial services or even only the basic operation of vehicles are put out to tender. Other partial services remain the responsibility of the public transport authorities in these models (financing, for example) or the responsibility of the vehicle suppliers (maintenance, for example). On the basis of our performance capability at all stages of the value-added chain, DB Regional is in a position to tailor partial services as required and to operate successfully on the market as a subcontractor for competitors.

In the bus sector, integrated bids are still required from the contracting authority, and there is no indication of a change over the next few years.

Markets and strategy

The German regional rail passenger transport market will continue to grow slightly over the next few years and thus remains one of the most interesting markets in Europe. Increasing regionalization funds will create stability for the next few years. DB Regional intends to benefit from this positive market environment as the largest provider. In recent years, however, numerous competitors have established themselves on the market, which has led to a continuous decline in DB Regional's market share.

In the national bus market, competition in the regional bus market continues to increase, both as a result of tenders and of licensing auctions with purely commercial bids. In urban transport, bus services are often awarded to local municipal companies in in-house awards.

Innovative forms of mobility are increasingly being developed in the local transport market and result in changes to the market. In the future, car sharing, ride sharing and **on-demand concepts** 🗋**79** will become more established in the German transport market. DB Regional will flexibly respond to the changing mobility requirements of our customers and increasingly act as a provider of holistic mobility concepts in local transport.

▶ **Economic** 👍 dimension: We want to continuously improve quality, thus increasing customer satisfaction, and defend our market position without sacrificing profitability and increase our innovative strength. To this end, we have launched Regional Railway of the Future (Zukunft Bahn Regio). For us, quality leadership in the regional rail passenger transport sector means arriving

DB REGIONAL BUSINESS MODEL

Resources/inputs

Employees
About 35,900

Vehicles
871 locomotives, 4,077 multiple units, 11,211 rail cars, 3,043 passenger cars, 11,712 buses (including external)

Networks and infrastructure
54 workshops (rail) and 74 workshops (bus), 185 depots

Additional production factors
114 million station stops, 3.2 billion kWh traction current, 360 million liters of diesel fuel (bus including external and rail), 0.8 million kg natural gas (bus)

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Customer segment

- Private customers
- Business customers
- Contracting organizations

Value proposition

- DB Regional offers customer-oriented, punctual, reliable and environmentally friendly transport solutions.

Customer access/loyalty

- Local sales points, travel centers, agencies, ticket machines, online, call center, onboard sales
- Subscriptions, apps

Key activities

Providing train and bus services

Looking after customers

Providing and maintaining vehicles

Creating competitive offers

▼ ▼

Services/outputs

Passengers
2.5 billion (rail and bus)

Volume sold
42 billion pkm (rail) and 7 billion pkm (bus)

Volume produced
0.5 billion train kilometers and 0.5 billion bus kilometers

Outcomes

EBIT adjusted
€ 492 million

Customer satisfaction
SI of 66 (rail) and SI of 74 (bus)

Punctuality
94 % (rail) and 91 % (bus)

Hit rate
70 %

Employee satisfaction
SI of 3.5

Final energy consumption
-29.4 % (rail) and +6.0 % (bus) compared to 2006 (specific)

on time and without any issues. With this in mind, we continuously optimize our processes and quality awareness. We are completely redesigning our customer interface with digital products such as the DB route agent. Working together with the public transport authorities, we are introducing **WiFi in local transport** **79.** At the same time, competitive costs will continue to be an important criterion for success in future in a market that depends heavily on offer prices. We are systematically increasing our economies of scale along the entire value-added chain and optimizing our cross-divisional functions. We are generating growth in the maintenance market segment. In this area, we use our presence and experience to offer comprehensive maintenance services to third parties. We also want to attack networks of competitors in order to recover lost traffic. For this purpose, we have further professionalized our tender management, bundled relevant competencies in a Competence Center organization and worked intensively on our cost structures. Bus services still have to prove themselves in an environment that is becoming increasingly competitive. Cross-departmental improvement management ensures optimized processes and systems and brings together the implementation coordination at the headquarters. By centralizing fleet management, information and communications technology, we are realizing cost advantages while at the same time improving performance. We are also continuing to work on the streamlining and standardization of our cross-divisional functions. We are reorganizing our regional organizational structure in the bus sector and expanding our branches to generate competitive and cost advantages. The responsibility for revenues in the future will be at the regional level while the responsibility for costs will reside with the branches. In the future, the control center and maintenance will be established as separate areas under the regional production managers.

- **Social** dimension: Satisfied and motivated employees are essential for success in the market. One important key to this is to actively involve employees in the continuous improvement of DB Regional and to support them in the ongoing change processes. These efforts include conducting **employee surveys 87** and organizing follow-up workshops to derive actions together. We have launched a preboarding and onboarding program to make the first steps of the job easier for new employees. We have discussed and trained the operational managers in the most pertinent topics regarding employee management in practical workshops. We have initiated de-escalation training for our customer service employees in local transport and have started equipping them with defensive sprays.
- **Environmental** dimension: We will further develop our strengths as an environmentally friendly mode of transport, especially compared to car traffic. With this in mind, driver assistance systems for **energy-saving driving** green. **no. 8** are currently being rolled out. Diesel buses with the highest emission standard Euro VI are used within the scope of our continuous fleet renewal. By continuously replacing our fleet, we are working toward improving energy efficiency. We will also try other drive concepts as alternatives to conventional diesel together with interested public transport authorities. Hybrid, battery or hydrogen drives will play a role here. The aim is to reduce noise and emissions and conserve energy derived from fossil fuels, even on electrified branch lines.

Development of awarded transport contracts

Transport contracts awarded (rail) 2018	Term	Volume (million train km) p.a. [1]	total [1]
S-Bahn (metro) Berlin transitional contract Subnet north-south and Stadtbahn	12/2017-06/2027	25.9	205.0
2022 Taunus line	12/2021-12/2036	1.5	22.5
Munich S-Bahn (metro) (transitional agreement) [2]	12/2019-12/2020	20.7	20.7
Ulm diesel network	12/2020-12/2032 [3]	1.6	19.2
Extensions RE2 and RE42 (Haard axis)	12/2019-12/2029	1.8	18.3
Elster-Geiseltal network (two batches)	12/2019-12/2024/2032	0.8	7.0
Nuremberg S-Bahn (metro) (transitional agreement) [4]	12/2017-12/2018	6.9	6.9
ÜFEX [5]	12/2018-12/2022 [3]	1.7	6.6
RB line 83 Wittlich – Trier – Luxembourg – Dommeldange	12/2019-12/2024	0.5	2.4
Spessart-Pendel	12/2018-12/2021	1.1	3.3
Other (7 contracts)	1-8 years	2.5	5.0
Total [1]		**65.0**	**317.0**

[1] Differences due to rounding are possible.
[2] Public transport authorities have exercised the option to extend.
[3] Option for extension possible.
[4] Retroactively published in the Official Journal of the European Union.
[5] Newly awarded transport contract.

In the German regional rail passenger transport market, 29 tender procedures were concluded in the year under review (previous year: 24) and about 93 million train kilometers (train km) (previous year: 75 million train km) were awarded. Of the train kilometers newly awarded, about 85% had previously been operated by companies within DB Group.

DB Regional won 17 tenders (including published contract amendments) (previous year: 14 tenders), or 70% (previous year: 74%) of the train kilometers awarded.

Transport contracts awarded (bus) 2018	Term	Volume (million bus km) p.a. [1]	total [1]
Osnabrück Süd	02/2019-01/2029	3.9	38.7
VRN-Mosbach	01/2019-12/2028	2.6	25.9
VRN-Buchen	01/2019-12/2028	2.1	21.4
Detmold urban transport [2]	02/2019-02/2029	1.6	16.4
VGF-Freudenstadt ewA 2018	12/2018-12/2026	1.9	15.1
VVS-Ludwigsburg 06 – Marbach	08/2019-12/2027	1.8	14.9
KVV-Lußhardt	12/2018-12/2026	1.7	13.3
Holzminden district	08/2018-07/2020	2.3	4.7
Other (42 contracts)	1-10 years	19.7	156.0
Total [1]		**37.6**	**305.2**

[1] Differences due to rounding are possible.
[2] Newly awarded transport contract.

In the German bus segment, services were awarded in the year under review with a volume of 110 million commercial vehicle kilometers (bus kilometers) (previous year: 89 million bus kilometers) in 158 tenders (previous year: 171 procedures). Of the commercial vehicle kilometers newly awarded, 38% (previous year: 37%) were previously operated by DB Regional Bus.

In the year under review, we participated in 111 tenders (previous year: 106 tenders) with a volume of 81 million bus kilometers (previous year: 72 million bus kilometers). We won 46% of the tender procedures in which we participated (previous year: 27%).

Development of our fleet

Vehicle measures implemented

Measures to improve our vehicle fleet included: interior redesign, installation of passenger information and video recording systems and new paint.

- The modernization of 91 425 series electric multiple units was completed for the Rhine-Neckar S-Bahn (metro) tender and the RB 44 between Mainz and Mannheim.
- Since 2016, 41 out of a total of 111 vehicles of the 474 series have been refurbished for S-Bahn (metro) Hamburg.
- A total of 36 vehicles of the 420 series and 238 vehicles of the 423 series are to be refurbished for the S-Bahn (metro) Munich transition contract. Nine 420 series electric multiple units and 21 423 series electric multiple units were modernized in the year under review.
- Twenty-nine out of the 48 422 series electric multiple units that were due to be modernized were rebuilt to provide the vehicles for the Rhine-Ruhr S-Bahn (metro).
- Ten 642 series diesel multiple units and five 644 series diesel multiple units were rebuilt for the Ulm diesel network transitional contract. A further nine 650 series diesel multiple units will be modernized in 2019/2020.

New vehicle purchases

- Twelve 622 series diesel multiple units (LINT 54) and eight 623 series diesel multiple units (LINT 41) are being procured from Alstom for the Ulm diesel network contract that was awarded in 2016. These will be resold to the leasing company following acceptance and will be leased there for the duration of the transport contract in December 2020 when the transport contract begins.
- A further ten 490 series vehicles were reordered for the Hamburg S-Bahn (metro) network from an existing option.

Delays in vehicle deliveries

Vehicle availability improved during the year under review. However, there were still delays and restrictions relating to the delivery of new trains:

- Bombardier’s delayed delivery of the 2010 double-deck cars in December 2015 continued in the year under review with the addition of a further 78 vehicles (central and powered driving trailers). Consequently, all vehicles from the original orders were delivered and accepted before the end of July 2018. An additional train set is scheduled to be reordered in the first quarter of 2019.
- In December 2016, DB Regional had to rent a total of 15 locomotives and three diesel rail cars from Paribus for deployment as part of the transport contract for the Schleswig-Holstein West network. Of the 90 passenger cars to be rented as well, the last vehicles could only be made available at the end of July 2018 due to vehicle deficits. Due to outstanding points in the maintenance documentation, the vehicles have still not been made available. Existing vehicles from DB Regional and DB Long-Distance continue to be deployed until the points are clarified. The rental contract is expected be drawn up with Paribus early in 2019.
- Eight pre-production vehicles out of the 72 490 series vehicles for the Hamburg S-Bahn (metro) were delivered and provisionally accepted for testing under the contract. Since the vehicles do not meet all of the agreed requirements, DB Regional will gradually get more vehicles as part of a transfer of use from Bombardier in the first instance. Ten vehicles were deployed in December 2018 for the Hamburg S-Bahn (metro) transport contract that had commenced operations. Vehicles from the 490 series are scheduled to be accepted under the contract from mid-2019.
- The delivery of the Link diesel multiple units from PESA (632/633 series) began in the second half of 2018, which means an end to the delivery delays is in sight after the Sauerland network and the Dreieich railway have waited over two years and the Allgäu diesel network over one year. Until then, the comprehensive replacement concepts using existing vehicles for the Sauerland and Dreieich networks will remain in place. All twenty 632 series vehicles for the Sauerland network were delivered in the second half of 2018.
- The delivery of the vehicles ordered from Škoda for the Nuremberg—Ingolstadt—Munich Express is also delayed beyond the first quarter of 2019.

Digitalization and innovation

- A test vehicle for piloting the WiFi scheme on the Munich S-Bahn (metro) has been running since mid-April 2018. A 423 series vehicle was fitted with the appropriate technology for the pilot project. Passengers can connect their mobile device to the Internet for free with WiFi@DB.
- The DB Medibus first started being used as a mobile doctor's office in July 2018 by the Regional Association of SHI-Accredited Physicians (Hesse Kassenärztliche Vereinigung), covering two districts to help close the supply gap in healthcare provision and support doctors.
- Passengers can book tickets for 29 different transport associations using DB Navigator. With this offer, we reach over 65 million people – about 90% of the potential passengers on all transport networks in Germany.

Environmental measures

- Telematics systems were fitted in 850 diesel multiple units and locomotives which measure fuel consumption and give the driver recommendations on how to drive more efficiently. This **energy-efficient driving style** green. **no. 8** is expected to save about 12 million liters of diesel and 30,000 metric tons of CO_2 per year.

Legal issues

Agreement with PESA and Bombardier regarding claims arising from the delay in delivery

In December 2018, DB Regional agreed an out-of-court settlement with PESA regarding the delayed delivery of diesel railcars pertaining to the transport contracts for the Allgäu I, Dreieich and Sauerland diesel networks, thereby avoiding any costly legal disputes. An out-of-court settlement was also agreed with Bombardier regarding the delayed delivery of electric railcars for the Hamburg S-Bahn (metro) transport contract.

Other events

- Boarding guides are being used in S-Bahn (metro) systems to ensure that stopping times are on schedule. They support and speed up boarding and alighting by directly addressing passengers or through platform announcements. This was successfully trialed in the previous year at the central stations in Munich and Frankfurt am Main. The boarding guides are being gradually put into regular operation at selected stations. This concept was also piloted for the first time with regional transport at the Frankfurt am Main central station. We are currently looking at expanding this service.

			Change		
DB Regional	**2018**	2017	absolute	%	2016
Punctuality (rail) (%)	94.0	94.4	–	–	94.8
Punctuality (bus) (%)	91.0	90.5	–	–	90.6
Customer satisfaction (rail) (SI)	66	68	–	–	69
Customer satisfaction (bus) (SI)	74	74	–	–	75
Passengers (million)	2,521	2,562	- 41	- 1.6	2,512
thereof rail	1,940	1,930	+10	+ 0.5	1,879
Volume sold (million pkm)	48,615	48,911	- 296	- 0.6	48,399
thereof rail	41,878	41,876	+2	–	40,809
Volume produced (rail) (million train-path km)	460.1	459.3	+ 0.8	+ 0.2	459.3
Volume produced (bus) (million bus km)	518.6	532.0	-13.4	-2.5	586.5
Total revenues (€ million)	8,968	8,734	+ 234	+ 2.7	8,653
External revenues (€ million)	8,862	8,629	+ 233	+ 2.7	8,529
Rail concession fees (€ million)	5,472	3,879	+ 1,593	+ 41.1	3,849
EBITDA adjusted (€ million)	1,126	1,156	- 30	- 2.6	1,272
EBIT adjusted (€ million)	492	508	- 16	- 3.1	636
Gross capital expenditures (€ million)	539	674	- 135	- 20.0	693
Employees as of Dec 31 (FTE)	35,881	35,651	+ 230	+ 0.6	36,008
Employee satisfaction (SI)	3.5	–	–	–	3.5
Employee satisfaction – follow-up workshop implementation rate (%)	–	100	–	–	–
Share of women in Germany as of Dec 31 (%)	16.2	16.0	–	–	16.1
Specific final energy consumption (rail) compared to 2006 (based on pkm) (%)	- 29.4	- 28.5	–	–	- 26.3
Specific final energy consumption (bus) compared to 2006 (based on bus km) (%)	+ 6.0	+ 4.8	–	–	+ 5.8

Development in the year under review

- Performance gains in the rail line of business.
- Delays in vehicle deliveries still require replacement concepts.
- Performance losses in the bus line of business.

Punctuality in rail transport has mainly declined because of heavy utilization of the infrastructure as well as vehicle and infrastructure disruption.

Punctuality in bus services increased during the year under review with reasons including the increase in vehicle quality assurance activities and the introduction of central control centers across Germany for vehicle and personnel deployment.

Customer satisfaction on rail services declined, particularly on the Hamburg and Rhein-Main S-Bahn (metro) lines. Bus services maintained their satisfaction rating. To assess customer satisfaction, about 19,000 customers (rail) and 1,500 customers (bus) are asked each year about their satisfaction in two waves.

Performance development during the year under review was varied:

- Performance development in rail transport remained at the same level as the previous year. The positive development at the Berlin S-Bahn (metro) was offset by performance losses, among other factors.
- The bus sector was marked by a decline in performance development due to lost line bundles in particular.

The economic development of DB Regional is particularly affected by the development of the higher-revenue and higher-performance rail line of business (share of revenues: 89%). The adjusted EBIT was exclusively generated in the rail line of business. Development in the year under review was unsatisfactory overall. Despite a slight increase in revenues, the operating profit figures fell. Weak development in the bus line of business and the omission of the nuclear fuel tax reimbursement had negative effects on the operating profit.

- Revenues rose owing to an increase in the rail line of business due to pricing and performance factors. The performance-based decline in the development of the bus line of business countered this impact.
- Other operating income (−7.5%) decreased due to the omission of the nuclear fuel tax reimbursement in the previous year.

Expenses recorded an increase:

- The cost of materials (+2.3%) was driven in particular by increased energy, infrastructure and rail replacement transport expenses. This was offset by lower maintenance expenses.
- Personnel expenses (+4.2%) rose as a result of collective bargaining agreements, among other things.
- Other operating expenses (+7.4%) rose as a result of increased vehicle leases and higher related services.
- The rail line of business drove a decline in depreciation (−2.2%), among other factors, due to vehicles reaching the end of their useful life for accounting purposes.

Capital expenditures in both the bus and rail lines of business fell.

77% of employees are employed in the rail line of business, with 23% in the bus line of business. The number of employees increased slightly in both lines of business.

Employee satisfaction remained stable. The share of women remained at the same level as the previous year.

The specific traction energy consumption in rail transport continued to fall in the year under review, which was a result of increased efforts to save energy during journeys. There were still no consumption-reducing effects in diesel vehicles in the bus sector in the year under review due to delays in installing telematics systems – which promptly and accurately record fuel consumption – for technical reasons. The specific final energy consumption in the bus sector increased compared to 2006 due to changes in transport structures and different requirements for the bus fleets.

Rail line of business

- Performance development at the same level as the previous year.
- Personnel expenses increased as a result of collective bargaining agreements.
- Delays in vehicle deliveries still require replacement concepts.

			Change	
Rail line of business	**2018**	2017	absolute	%
Passengers (million)	1,984	1,977	+7	+0.4
thereof rail	1,940	1,930	+10	+0.5
Volume sold (million pkm)	42,542	42,588	-46	-0.1
thereof rail	41,878	41,876	+2	-
Volume produced (million train-path km)	460.1	459.3	+0.8	+0.2
Total revenues (€ million)	8,000	7,785	+215	+2.8
External revenues (€ million)	7,753	7,508	+245	+3.3
Rail concession fees (€ million)	5,471	3,879	+1,592	+41.0
EBITDA adjusted (€ million)	1,092	1,099	-7	-0.6
EBIT adjusted (€ million)	513	501	+12	+2.4
Gross capital expenditures (€ million)	473	596	-123	-20.6
Employees as of Dec 31 (FTE)	27,494	27,304	+190	+0.7

Performance development in the rail line of business was dampened by tender losses and the development of a railway company's bus services. Development at the Berlin S-Bahn (metro) had a positive effect, among other factors.

The economic development was modest overall. Increased infrastructure utilization and personnel expenses as well as the omission of the nuclear fuel tax reimbursement offset the increase in revenues, meaning that the operating profit figures declined slightly or remained stable.

- Revenue development was positive due to pricing and performance factors. The concession fees rose due to concession fee dynamics, among other things. As a result of changes to the offsetting of fare revenues in gross contracts, there were significant shifts between concession fees and revenues from fares, which had a neutral impact.
- Other operating income (−7.1%) decreased primarily because of the omission of the nuclear fuel tax reimbursement and lower reimbursements from vehicle retrofitting for the Berlin S-Bahn (metro). Increased income from reversals and utilization of provisions for pending losses had an offsetting effect in addition to other factors.
- Cost of materials (+1.9%) were particularly driven by increased energy expenses and higher expenses for infrastructure utilization owing to price and volume factors. This was offset by lower maintenance expenses.
- Personnel expenses (+5.0%) increased significantly as a result of collective bargaining agreements and the higher number of employees.
- Other operating expenses (+6.2%) rose as a result of higher levels of purchased services and higher rental expenses, especially for vehicles.
- Depreciations (−3.0%) decreased due to vehicles reaching the end of their useful life for accounting purposes and other financing models being used for new vehicles as supported by public transport authorities.

Capital expenditure activities also fell significantly due to other financing models for new vehicles as part of awarded tenders.

The number of employees increased slightly due to the **individual option to choose working hours 85,** which was agreed with the unions.

Bus line of business

- Shortcomings in operating performance capability.
- Delayed implementation of optimization measures.
- Intensification of the competitive environment.

			Change	
Bus line of business	**2018**	2017	absolute	%
Passengers (million)	537.1	584.2	- 47.1	- 8.1
Volume sold (million pkm)	6,073	6,323	- 250	- 4.0
Volume produced (million bus km)	492.4	503.7	- 11.3	- 2.2
Total revenues (€ million)	1,228	1,224	+ 4	+ 0.3
External revenues (€ million)	1,109	1,122	- 13	- 1.2
EBITDA adjusted (€ million)	34	57	- 23	- 40.4
EBIT adjusted (€ million)	- 21	7	- 28	-
Gross capital expenditures (€ million)	66	77	- 11	- 14.3
Employees as of Dec 31 (FTE)	8,387	8,347	+ 40	+ 0.5

The performance development in the bus sector was significantly negative due to tender-related performance losses.

The economic development was very weak. The slight increase in revenues was more than offset by expense increases, meaning that the operating profit figures fell significantly.

- The revenue development was burdened by the performance development. This was offset by intra-Group rail replacement transport, thereby slightly increasing revenue.
- Other operating income (+2.9%) increased due to increased utilization of provisions for pending losses, among other factors. This was offset by lower income from sales of busses.
- Cost of materials (+1.4%) was particularly driven by increased diesel prices and higher costs for contractor services. Maintenance expenses, which were lower due to performance, had a positive effect.
- Personnel expenses (+2.6%) increased as a result of collective bargaining agreements.
- Other operating expenses (+6.2%) increased due to additions to the provision for pending losses and a higher level of purchased services.
- The increase in depreciation (+10.0%) was a result of capital expenditures in the previous year.

Capital expenditure activities decreased due to performance losses, among other reasons.

The number of employees rose slightly as of December 31, 2018.

DB Arriva business unit

Business model

With buses, trains, trams, water buses, car- and bike-sharing systems, DB Arriva offers a wide range of transport solutions. The activities of DB Arriva are divided into three lines of business: UK Bus, UK Trains as well as Mainland Europe.

Volume sold and volume produced are important key performance figures. In addition to revenues from fares, subsidies are an important source of income. Revenues from fares are the only source of income for transport services operated on a purely commercial basis.

Predefined terms in transport contracts, concessions and route concessions, combined with the complex production system, result in a cost structure with high fixed costs. The major drivers are personnel, maintenance, energy and infrastructure expenses. Only a small portion of expenses vary with bus or train capacity utilization.

Throughout Europe, we work with local, regional and national authorities to bring new and improved services to our customers. Our regional presence allows us to quickly respond to changes, especially new regulatory requirements and changing customer expectations. We work closely with our customers to develop efficient, tailor-made, sustainable solutions.

DB ARRIVA BUSINESS MODEL

Resources/inputs

Employees
About 53,100

Vehicles
1,074 multiple units, 19 locomotives, 84 passenger cars, 17,049 buses (including external), 223 patient transport services

Networks and infrastructure
About 48,000 bus stops (Great Britain), 594 operated stations (Great Britain)

Additional production factors
563 million liters of fuel, 352 million kWh of electricity

▼

Customer segments

- Private customers
- Contracting organizations

Value proposition

- DB Arriva offers customer-oriented, efficient and affordable transport solutions.

Customer access and retention

- Local sales points, travel centers, agencies, ticket machines, online, call center, on-board sales
- Subscriptions, apps

Key activities

- **Providing train and bus services**
- **Looking after customers**
- **Providing and maintaining vehicles**
- **Operation and optimization of local networks**

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Services/outputs

Passengers
2 billion (bus and rail)

Transport performance
13.0 billion pkm (rail)

Volume produced
1.1 billion bus kilometers and
0.2 billion train kilometers

Outcomes

EBIT adjusted
€ 300 million

Customer satisfaction
SI of 79

Punctuality
89.8 % (rail)

Employee satisfaction
SI of 3.6

Greenhouse gas emissions
-12.3 % (rail) and -18.2 % (bus) compared to 2006 (specific)

Client bodies particularly appreciate the experience we have in operating various transport solutions and our commitment to providing high-quality, reliable, efficient and cost-effective services.

Markets and strategy

DB Arriva is our European growth platform in passenger transport, with operations in 14 countries:

Activities of DB Arriva by country	**Services offered**
Croatia	bus
Czech Republic	bus/rail
Denmark	bus/rail/water bus/car sharing
Great Britain	bus/rail/non-emergency patient transport
Hungary	bus
Italy	bus/rail/tram/water bus
Poland	bus/rail
Portugal	bus/rail/tram
Serbia	bus
Slovakia	bus/bike sharing
Slovenia	bus
Spain	bus
Sweden	bus/rail/tram
The Netherlands	bus/rail/water bus/bike sharing

The vision of DB Arriva is to become Europe's mobility partner of choice. This is underpinned by four strategy pillars; a strong foundation, delivering growth through tenders and M & A, the best employees and being the preferred choice for customers.

- **Economic** dimension: Sustained profitable growth is only possible if we provide high-quality services that our customers can afford and that they enjoy using. To achieve this, we are continuously investing in new vehicles, developing new mobility solutions to complement traditional passenger transport modes, and improving our passenger information systems. Profitable growth is the basis for guaranteeing a stable and sustainably successful business. We achieve this primarily by taking part in tenders for transport contracts and through acquisitions.
    - In the UK Bus business we aim to optimize existing business and expand the services offered to customers. For example, we expanded our on-demand minibus service – **ArrivaClick 128.** With a focus on making travel by bus more convenient for passengers, UK Bus made an investment to introduce **contactless payment 128** on its buses.
    - In the case of UK Trains, the Night Overground service operated by Arriva Rail London (ARL), on behalf of Transport for London (TfL), has been successfully helping to keep London moving 24/7. This project also saw ARL shortlisted for the Outstanding Teamwork Award at the National Rail Awards 2018.
    - In Mainland Europe, we are also growing through retained and **new transport contracts 128.**
- **Social** dimension: Engaged employees are an essential component of our success. Our attractiveness as an employer enables us to recruit and retain talented employees. As part of this commitment, we launched our new People Solution, which consists of Workday and Avature – two leading people management systems that will deliver greater simplicity, efficiency and visibility of our people processes across the DB Arriva businesses. The new People Solution went live in Great Britain during the year under review, and will be rolled out across Europe during 2019.
- **Environmental** dimension: The journey of DB Arriva to Destination Green is an integral part of our corporate culture. Central to this is reducing fuel consumption, improving air quality and reducing carbon emissions. As part of our Destination Green strategy, DB Arriva signed a **contract with SSE Business Energy 128** to switch supply of electricity of nearly all of its UK sites to **100% renewable energy 90 f.** sources.

General framework

Further liberalization of the transport market in Europe

- As part of the **rail reform 64** in France, all relevant legislation is in the process of being changed and some French regions have started to look at tendering public transport contracts. It is through the Regions that the advantages of market liberalization will be unlocked and DB Arriva signed a partnership agreement with the association of French regions (Régions de France), to support steps towards rail market opening. DB Arriva has prequalified to take part in tendering in the Provence-Alpes-Côte d'Azur region, and several other regions are now becoming very active in preparations for liberalisation.

- The Spanish railway market is currently going through a gradual liberalization under European directives. DB Arriva is taking very early steps to explore the feasibility of an international train service between Galicia in Spain and Porto in Portugal – two regions where DB Arriva already runs bus networks.
- The Ministry of Transport is making preparations to tender regional transport services in Slovenia, scheduled to be held in 2021. DB Arriva, as the largest operator in public transport in Slovenia is well positioned to respond to the upcoming tender.

Development of awarded transport contracts

			Volume (million bus km)	
Transport contracts awarded (bus) 2018		**Term**	**p. a.** [1]	**Total** [1]
Great Britain	London (13 routes)	5 years each	10.4	52.2
Sweden	Helsingborg City Traffic (Skånetrafiken) [2]	06/2019-06/2027	6.4	51.2
Sweden	E32 Ekerö	06/2019-06/2029	4.6	46.5
The Netherlands	Zuid Holland Noord [2]	12/2020-12/2022	20.5	41.0
Denmark	Movia A8 (8 parts) [2]	1.5-2 years	18.4	35.0
Denmark	Movia A17 (4 parts)	6-10 years	3.8	32.1
Italy	SIA extension [2]	02/2018-06/2019	17.3	26.0
Italy	SAF [2]	01/2019-12/2019	19.7	19.7
Denmark	Movia A3 (part 1 and 2) [2]	2 years each	8.1	16.8
Poland	City of Warsaw I	12/2018-12/2026	2.0	16.0
Italy	SAB [2]	01/2019-12/2019	14.0	14.0
Czech Republic	Teplice City (Ustecky Region - Northern Bohemia)	07/2018-12/2023	2.1	11.7
Denmark	Midtrafik (15; 20; 21; 28) [2]	1-4 years	3.7	11.0
Serbia	Kragujevac	07/2018-07/2021	2.8	8.3
Other [3]		0.5-10 years	8.0	11.8
Total [1]			**141.9**	**393.1**

[1] Differences due to rounding are possible.

[2] Extension of the existing contract.

[3] Including extensions of existing contracts.

			Volume (million train km)	
Transport contracts awarded (rail) 2018		**Term**	**p. a.** [1]	**Total** [1]
Denmark	Jutland	12/2020-12/2028	11.6	92.8
Czech Republic	Prag line S41	12/2018-12/2021	0.4	1.1
Total [1]			**12.0**	**93.9**

[1] Differences due to rounding are possible.

Digitalization and innovation

- Following the successful pilot project for the demand-responsive transport solution ArrivaClick in the English county of Kent, the new service is coming into regular operation in Liverpool. There should be 25 vehicles operating in the city in summer 2019. The innovative app-based minibus service combines the cost-efficiency of bus travel with the comfort of personalized transit.
- DB Arriva partnered with Ticketer in Great Britain to introduce contactless payments on its buses. The roll out of the Ticketer units, which also accept QR codes, mTickets, Apple Pay and Android Pay, to about 3,500 buses began in November 2018 and will be complete by summer 2019.

Environmental measures

Additional environmentally friendly buses

DB Arriva operates environmental friendly bus services in Great Britain, the Netherlands, Portugal, Slovenia and the Czech Republic using 101 **electric buses** green. **no. 63.**

- By the end of the year under review, a total of 79 electric buses were operated by DB Arriva in the Netherlands. By the end of 2019 this figure is expected to increase to 157.
  - All train and bus services in the Dutch province of Limburg will be electrified by DB Arriva by 2026 as part of the contract with the region. 24 new electric buses were brought into operation, bringing the total number of electric buses to over 40.
  - All public transport services in Maastricht will be completely electric by the end of 2019.
- DB Arriva won a ten-year contract to operate a fleet of water buses in Copenhagen. Services start in January 2020 and the new buses will be electric-powered.

Use of green electricity

In the year under review, DB Arriva signed a three-year contract with SSE Business Energy that will see almost all its UK bus and rail stations, maintenance facilities and office buildings powered by 100% renewable electricity. This makes DB Arriva the first major transport operator in Great Britain to switch its electricity supply to **100% eco-power** green. **no. 1.** DB Arriva will save about 27,000 tons of CO_2 annually by using electricity from renewable sources. The contract with SSE Business includes a smart energy management service, which means employees can monitor on-site energy consumption using an online energy checking tool, and can therefore put effective energy-saving measures in place.

Investments

- DB Arriva has acquired the remaining shares of the existing joint venture VT-ARRIVA Személyszállító és Szolgáltató Korlátolt Felelősségű Társaság (VT-Arriva) and now owns 100% of the shares. The acquisition enables Arriva to access the growth potential of the Hungarian market. VT-Arriva has been included in the 2018 financial statements since December 2018.

Other events

- Parts of the UK rail network experienced significant challenges following the introduction in May 2018 of the most extensive timetable changes for a generation. Major delays to electrification projects by Network Rail, the infrastructure provider, meant that Arriva Rail North (ARN) had to rewrite its entire new timetable and do so in 16 weeks rather than the normal 40 weeks. This caused delays to driver training, leading to major disruption on parts of the network at the start of the new timetable. ARN put in place an interim timetable on some routes to stabilize services and a full service was restored later in 2018. An independent inquiry from the Office of Rail and Road (ORR) concluded that regulators, government, Network Rail and operators all made mistakes which contributed to the issues. The inquiry found the root cause for the problems affecting ARN was significant delays to electrification projects, which were due to be completed in 2016 but are now expected to finish in 2019.
- In Hungary DB Arriva launched a direct airport shuttle bus service in 2017. Due to the success of the service and growing passenger demand, DB Arriva increased service capacity by 55% in the year under review.
- The UK Government announced an independent review of the UK rail industry, covering industry structures and the current franchising system. Alongside this, the Government announced the CrossCountry tender will not proceed. Services will continue to be operated by CrossCountry with options to be considered by the UK Government in due course.

Development in the year under review

- Challenging market and competitive environment across all lines of business.
- Significant operational challenges in UK Trains (Arriva Rail North) due to delays with the rail infrastructure program.
- Strikes in UK Trains (Arriva Rail North) and in the Netherlands, in addition to weather-related restrictions, had dampening effects.
- Acquisitions made positive contributions.

Punctuality in rail passenger transport (Great Britain, Denmark, Sweden, the Netherlands and Poland) fell significantly. The decline is mainly a result of the extremely severe weather in March 2018 ("Beast from the East") in Great Britain and Northern Europe paired with infrastructure disruptions and timetable change problems in Great Britain in May 2018.

Customer satisfaction in Great Britain reduced during the year primarily due to continuing disruption from May timetable changes and industrial action in UK Trains.

The development of performance figures was differentiated: the number of passengers increased slightly. Volume produced remained broadly at the previous year's level and Volume sold in rail transport declined.

- There were significantly negative impacts on rail transport due to several factors, including the cessation of Arriva Trains Wales by UK Trains, strikes and severe weather conditions.
- The main drivers in bus transport were acquisitions in the Mainland Europe line of business.

The economic development was stable overall. This was the result of a consistently difficult competitive environment, as well as lost revenues caused by strikes and severe weather conditions. The adjusted EBITDA improved slightly overall. However, increased depreciation owing to high capital expenditures in the previous year resulted in an adjusted EBIT slightly below the previous year's level.

- The UK Bus line of business generated 19% of DB Arriva's revenues, the UK Trains line of business generated 42%, and the Mainland Europe line of business generated 39%. The increase in revenues is mainly attributable to passenger revenue growth at UK Trains and the first-time full-year inclusion of Autotrans (since August 2017). In contrast, exchange rate effects (development of the British pound), strikes at UK Trains and the cessation of the Arriva Trains Wales franchise (mid-October 2018) had a dampening impact.
- Other operating income (−15.6%) declined because of switches to revenues without affecting profits.

			Change		
DB Arriva	**2018**	2017	absolute	%	2016
Punctuality (rail) (Great Britain, Denmark, Sweden, the Netherlands and Poland) (%)	89.8	92.3	-	-	91.0
Customer satisfaction bus and rail in Great Britain (SI)	79	80	-	-	81
Passengers bus and rail [1] (million)	1,998	1,976	+22	+1.1	1,761
Volume sold (rail) (million pkm)	12,999	13,334	-335	-2.5	11,230
Volume produced (bus) (million bus km)	1,074	1,075	-1	-0.1	1,028
Volume produced (rail) (million train-path km)	177.6	177.6	-	-	170.6
Total revenues (€ million)	5,441	5,345	+96	+1.8	5,093
External revenues (€ million)	5,433	5,338	+95	+1.8	5,085
EBITDA adjusted (€ million)	575	569	+6	+1.1	525
EBIT adjusted (€ million)	300	301	-1	-0.3	280
Gross capital expenditures (€ million)	326	374	-48	-12.8	359
Employees as of Dec 31 (FTE)	53,056	54,650	-1,594	-2.9	54,150
Employee satisfaction (SI)	3.6	-	-	-	3.7
Employee satisfaction – follow-up workshop implementation rate (%)	-	89.9	-	-	-
Specific greenhouse gas emissions (rail) compared to 2006 (based on rail car units) [1] (%)	-12.3	-12.8	-	-	-13.0
Specific greenhouse gas emissions (bus) compared to 2006 (based on bus km) (%)	-18.2	-17.2	-	-	-16.3

[1] Previous year's figure adjusted.

The development of expense items was influenced by acquisitions and additional headwinds as well as offsetting exchange rate effects:

- The slight increase in the cost of materials (+1.5%) was both driven by acquisitions and the increased expenses for replacement transports, infrastructure utilization, and maintenance at UK Trains. Exchange rate effects and the reimbursement of fuel duty in the Netherlands had an offsetting impact.
- Personnel expenses (+1.9%) rose due to acquisitions, an increased number of employees (on average) at UK Trains, and salary increases. This was partly compensated by an one-time effect regarding pensions as well as positive exchange rate effects.
- Other operating expenses (−1.7%) fell slightly due to exchange rate effects.
- Depreciation (+2.6%) was largely influenced by higher capital expenditures in the previous year.

The capital expenditure activity was at a lower level because of higher capital expenditures in the previous year for new transport contracts in London and quality improvement measures in the regions outside London at UK Bus. In contrast, capital expenditures rose in the Netherlands, Sweden and Italy.

DB Arriva employs 29% of its employees in the UK Bus line of business, 20% in the UK Trains line of business, and 49% in the Mainland Europe line of business. The number of employees fell because of the cessation of the Arriva Trains Wales franchise. The acquisition of VT-Arriva and recruitment at Arriva Rail North had an offsetting effect, among other factors.

Employee satisfaction is measured every two years. In the year under review, DB Arriva was focused on creating actions plans to as a result of the 2016 survey.

In bus transport, we were able to again reduce specific greenhouse gas emissions compared to 2006. In rail transport specific emissions worsened slightly due to changes in the fleet structure.

UK Bus line of business

- Challenging market and competitive environment with persistent cost pressure.
- Demand in the regional bus market generally down.
- Extensive countermeasures initiated.

			Change	
UK Bus line of business	**2018**	2017	absolute	%
Passengers [1] (million)	723.4	739.9	-16.5	-2.2
Volume produced (million bus km)	352.8	353.6	-0.8	-0.2
Total revenues (€ million)	1,062	1,064	-2	-0.2
External revenues (€ million)	1,060	1,063	-3	-0.3
EBITDA adjusted (€ million)	152	142	+10	+7.0
EBIT adjusted (€ million)	72	66	+6	+9.1
Gross capital expenditures (€ million)	44	149	-105	-70.5
Employees as of Dec 31 (FTE)	15,609	15,935	-326	-2.0

[1] Previous year's figure adjusted.

The number of passengers fell considerably because of industry-wide market development (including modal shifts, driving time extensions due to construction sites and traffic jams, and changes in mobility behaviour). In the development of operating performance, supply adjustments are reflected.

In a difficult market environment, the economic development weakened further, dampened by negative exchange rate effects. The adjusted EBITDA and EBIT largely improved as a result of one-off effects.

- The revenue development was at the previous year's level due to exchange rate effects. When adjusted for exchange rate effects, a slight increase was recorded, which was a result of several factors including improved performance in London.
- Other operating income (+19.7%) rose in particular because of income from property sales.

The development of expense items was supported by positive one-time effects:

- The decline in cost of materials (−2.0%) was driven by exchange rate effects and lower energy expenses.
- Personnel expenses (−1.3%) decreased slightly due to exchange rate effects and a one-off effect related to a pension liability management exercise. Salary increases, in contrast, had a negative effect.
- Other operating expenses (+6.7%) increased due to higher insurance costs.
- Depreciation (+5.3%) was higher due to substantial capital expenditures in the previous year.

Capital expenditures declined considerably. This was mainly because of contractual capital expenditures in the previous year associated with transport contracts awarded in London and measures to improve services in the regions outside of London.

The number of employees fell in London, in particular as a result of the closure of the Watford garage in September 2018.

UK Trains line of business

- Strikes had a dampening effect on business development.
- Significant operational challenges at Arriva Rail North.
- Arriva Trains Wales transport contract ended in October.
- More positive developments in remaining transport contracts.

			Change	
UK Trains line of business	**2018**	2017	absolute	%
Passengers (million)	370.9	387.6	-16.7	-4.3
Volume sold (million pkm)	10,729	11,091	-362	-3.3
Volume produced (million train-path km)	124.2	126.2	-2.0	-1.6
Total revenues (€ million)	2,312	2,223	+89	+4.0
External revenues (€ million)	2,261	2,184	+77	+3.5
EBITDA adjusted (€ million)	112	124	-12	-9.7
EBIT adjusted (€ million)	78	89	-11	-12.4
Gross capital expenditures (€ million)	61	65	-4	-6.2
Employees as of Dec 31 (FTE)	10,775	12,656	-1,881	-14.9

The performance development was affected by strikes, weather-related restrictions, and the cessation of transport contracts for Arriva Trains Wales (October 2018) and the Tyne and Wear Metro (March 2017). The delayed implementation of the North of England **rail infrastructure program and timetable changes** **129** also had negative effects.

The economic development was notably impacted, especially by developments at Arriva Rail North. The ensuing expenses, including the cost of materials, could not be offset. As a result, the development of operating profit was weaker.

- Revenue development was positive because of higher support payments and revenues from fares. In contrast, the cessation of the Arriva Trains Wales and Tyne and Wear Metro services as well as negative exchange rate effects had a weakening impact.
- Other operating income (+24.7%) rose in particular because of financial contributions for projects costs (however, this was offset by other operating expenses being higher).

The development of expense items was mainly driven by Arriva Rail North:

- The notable increase in the cost of materials (+9.4%) was primarily a result of higher expenses for rail replacement transport, infrastructure utilization and maintenance. Exchange rate effects reduced expenses in this area.
- Personnel expenses (+2.0%) rose because of an increased number of employees on average. Exchange rate effects, in contrast, reduced expenses.
- Other operating expenses (+4.1%) rose because of project costs (however, this was compensated by other operating income being higher) and increased franchise payments.
- Depreciation was at the previous year's level.

Gross capital expenditures decreased slightly due to timing of contractual capital expenditure requirements.

The number of employees fell because of the cessation of the Arriva Trains Wales franchise. This was partially offset by recruitment at Arriva Rail North.

Mainland Europe line of business

- Challenging market and competitive environment and strikes in the Netherlands had a dampening effect.
- Weather-related restrictions in the first quarter of 2018.
- Positive effects from acquisitions.

			Change	
Mainland Europe line of business	**2018**	2017	absolute	%
Passengers (bus) (million)	781.0	747.9	+33.1	+4.4
Passengers (rail) (million)	122.7	100.7	+22.0	+21.8
Volume sold (rail) 1) (million pkm)	2,270	2,243	+27	+1.2
Volume produced (bus) (million bus km)	721.2	721.9	-0.7	-0.1
Volume produced (rail) (million train-path km)	53.5	51.5	+2.0	+3.9
Total revenues (€ million)	2,210	2,158	+52	+2.4
External revenues (€ million)	2,112	2,083	+29	+1.4
EBITDA adjusted (€ million)	351	323	+28	+8.7
EBIT adjusted (€ million)	193	165	+28	+17.0
Gross capital expenditures (€ million)	204	148	+56	+37.8
Employees as of Dec 31 (FTE)	26,256	25,723	+533	+2.1

1) Previous year's figure adjusted.

The performance development in the Mainland Europe line of business was positive:

- The number of passengers, volume sold and volume produced increased in rail services (mainly due to the elimination of restrictions by construction work carried out in Sweden in the previous year). Strikes in the Netherlands, in contrast, had a dampening effect.
- The number of bus passengers generally rose because of the acquisition of Autotrans (August 2017) and VT-Arriva (December 2018). The volume produced was at the previous year's level.

The economic development was positive: this was due to a one-off effect in addition to the acquisitions. In contrast, weather-related restrictions in Sweden and strikes in the Netherlands had a dampening effect.

- Revenue development was especially positive due to acquisitions. Exchange rate effects, in contrast, had a dampening impact.
- Other operating income (+1.2%) was close to the previous year's level.

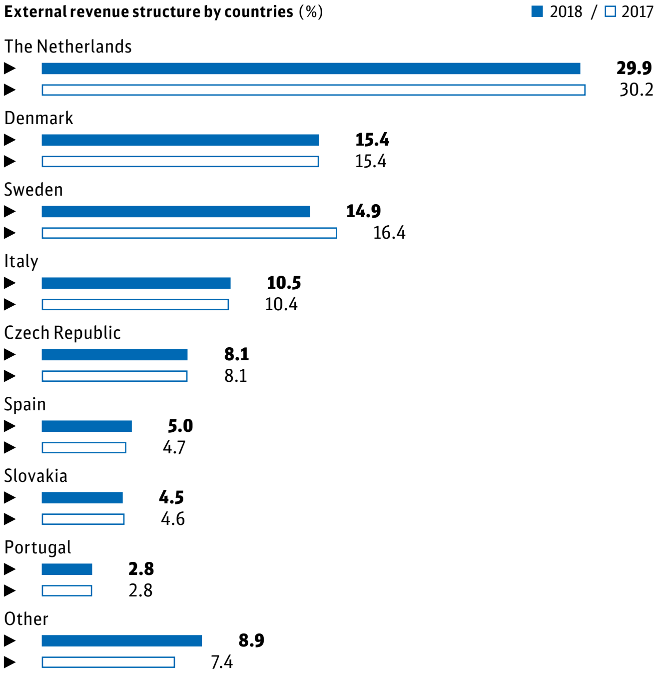
The development of expense items was mainly driven by the acquisitions and a positive one-time effect:

- The increase in the cost of materials (+5.6%) related to the acquisitions and shift from other operating expenses not affecting profits. Exchange rate effects and the refund of fuel duty in the Netherlands, particularly from previous years, had an offsetting positive effect.
- Personnel expenses (+0.9%) increased slightly, partly because of the acquisitions and skills shortages on the Central and Eastern European labor market. Exchange rate effects had an offsetting effect.
- The decrease in other operating expenses (−3.7%) was a result of shifts to cost of materials not affecting profits.
- Depreciation (+0.6%) was at the previous year's level.

Capital expenditures increased considerably due to preparations for the commissioning of the new Northern Line contract in December 2020, in the Netherlands. Capital expenditures also increased in Italy and Sweden.

The number of employees rose mainly because of the acquisition of VT-Arriva. The cessation of a transport contract in the Netherlands (December 2018) had an offsetting effect.

External revenue structure by countries (%)



The external revenue structure did not change significantly. The decline in Sweden was a result of the weather-related restrictions at the start of 2018.

Freight transport and logistics

Positive general framework

German freight transport market continues to grow

In 2018, the **German freight transport market** 🗋 **60** grew for the sixth consecutive year.

Rail continues to grow

In 2018 the Federal Statistical Office of Germany carried out a comprehensive, retroactive revision of the reporting scope for the rail freight transport statistics from 2016 onwards and in doing so performed a qualitative revision. The deviations that occurred up until that date, for example compared to the results of the market observation by the BNetzA and in the developments in train-path kilometers as reported by DB Netz AG, were largely clarified and now provide a much improved picture of actual development on the German rail freight transport market.

The volume sold of freight railways in Germany increased more strongly than in the previous year under a highly competitive environment while taking into account the expansion of the reporting scope. The market share for rail showed a slight positive development, supported by the heavy losses of inland waterway transport.

- Alongside positive economic stimulation overall, it was also supported by a baseline effect following several weeks of closure of the Rhine Valley section at Rastatt in the previous year and shifts due to restrictions in inland waterway transport.
- Dampening effects resulted from factors such as the continued decline in coal transport as a result of the energy transition, as well as portfolio adjustments by the energy producers, problems in the automotive industry due to new measurement procedures to determine exhaust gas emissions, weak steel production, strikes in France, restrictions due to storms and resource issues.
- The development of individual types of goods could not be quantified through the changes to the reporting scope as made by the Federal Statistical Office of Germany. A strong growth contribution is expected for combined transport. This was supported by non-Group railways, which, as in recent years, recorded an above-average performance increase overall.
- The DB Group share in the rail freight transport market declined further, bringing the share more or less on the same level with that of non-Group railways.

Road gains further market share

The development of road freight transport became even more dynamic. Its market position was further extended.

- According to toll statistics issued by the Federal Agency for Freight Transport (Bundesamt für Güterverkehr; BAG), vehicles registered abroad, particularly trucks from Poland, Lithuania, Romania, Slovenia and Bulgaria, showed above-average growth once again. The share of vehicles registered abroad in growing cross-border transport is currently estimated at over 90%. It also gained increasing importance in cabotage transports with double-digit growth rates.
- The truck market in 2018 was marked by increasing constraints on available resources. Alongside increasing staff costs, significant increases in diesel costs and the expansion of truck tolls to cover the entire long-distance highway system led to marked cost increases.
- The performance development was supported by sustained positive stimulation from the construction sector, dynamic domestic and international demand for consumer and industrial goods, and by shifts from other modes of transport due to weather- and quality-related restrictions.

Inland waterways

Inland waterway transport showed very negative development. The market share fell and reached a historical low.

- Following on from the heavy losses in the first quarter of 2017 due to low water levels, 2018 recorded a strong start to the year for waterway transport. In spite of this, the repeated restrictions resulting from several months of low water levels throughout the waterway network significantly halted development. In the last third of 2018 performance fell by over 40% at times.
- Cross-border traffic, which has a share of about 80% of overall performance, was affected with particular severity. The Rhine, by far the most important waterway for inland waterway transport, reached its lowest ever recorded water levels in October 2018, at about 30 cm at the Kaub gauge (Middle Rhine). Above-average drops were recorded in the coal and coke/mineral oil products division.

European rail freight transport market above previous year's level

Volume sold in European rail freight transport (EU 28, Switzerland and Norway) showed a slightly weaker increase in 2018 compared to the previous year. The performance increase was supported by strong global demand for capital goods and the revival of production in Europe and of European trade. Positive momentum was generated mainly from transport through the North Sea ports of Antwerp, Rotterdam and Hamburg. Combined transport made a strong growth contribution once again. There was also strain due to the sustained decline in development within coal and due to the major strikes in France.

Among the top railways in Europe, PKP Cargo was able to increase its volume sold most significantly compared to the previous year. In the European DB Cargo network, volume sold remained lower than in the previous year. The reason for this is the weak development in Western and Central Europe.

European land transport shows growth

- The European land transport market reported strong growth in 2018, with DB Schenker continuing to assert its position as market leader.
- Increasing volumes at increasing sale prices led to revenue growth despite changes in the shipping structure for lower shipment weights.
- The risks due to various cost drivers persist: changes in the shipping structure (weight decreases, more flexible transport requirements) led to cost increases, more rises in carrier costs and a further lack of drivers.

Air freight remains a growth market

- The international air freight market again showed solid growth in 2018. Although this development was considerably weaker than in the previous year, there was still clear growth. The first quarter of 2018 was still positively influenced by the extremely strong growth in 2017, after which point general development flattened out somewhat before finally becoming negative in the fourth quarter of 2018.
- The economic environment and the continued e-commerce trend also had a favorable impact.
- The markets in North Asia and Western Europe showed particularly good trends, with the main driver being automobile and chemical goods transport, while other industries also recorded positive growth. The strongest growth in terms of tonnage was on the trade route between Asia and Europe. This was also reflected in global rate development, which severely collapsed in the first quarter after the peak season in 2017, and subsequently demonstrated consistent recovery from the second to fourth quarters.
- DB Schenker recorded volume growth in air freight compared to the previous year.

Ocean freight grows compared to previous year

- The global growth of container ocean freight in 2018 was at the level of the previous year. Volume growth was recorded on all major routes. Intra-Asia recorded the highest volume growth at about 5.7%. The Asia—Europe trade route grew by about 3.5%.
- Despite increasing fuel prices in the first quarter of 2018, freight rates remained relatively constant throughout the year. Transpacific trade is an exception to this, with freight rates strongly rising in the second half of the year. This is largely due to the threat of a tariff war between the USA and China.
- DB Schenker increased its volume of ocean freight compared to the previous year.

Persisting momentum in contract logistics

- The global market for contract logistics continued to show above-average growth in 2018. The figures for Asia/Pacific, the Americas and Europe were above expectations. Thanks to a high volume of new business contracts in these regions, this trend will continue despite slight economic slowdown.
- The vertical markets of electronics and industrial/aerospace are considerable drivers of this development, while consumer/retail stagnated in 2018.

DB Cargo business unit

Business model

With about 4,200 customer sidings in Europe, DB Cargo provides its customers with access to one of the biggest rail networks in the world and is thus the number one in European rail freight transport. The dense, international network stretches along the huge European freight transport corridor. It provides rail transport throughout Europe in the segments block trains, single wagon and combined

DB CARGO BUSINESS MODEL

Resources/inputs

Employees
About 28,800

Vehicles
2,686 locomotives,
82,895 cars

Networks and infrastructure
Active in 17 European countries,
about 4,200 customer sidings,
10 marshaling yards and
22 maintenance facilities

Additional production factors
2.2 billion kWh traction current,
151 million liters diesel fuel

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Customer segments
- Business customers with a focus on automotive, construction materials, chemicals, industrial goods, intermodal, consumer goods and iron, coal and steel

Value proposition
- DB Cargo offers customer-oriented, reliable and efficient transport solutions across Europe.

Customer access and retention
- Segment sales with key account management
- Regional sales
- Telephone sales
- Customer service center

Key activities
- **Conducting transport by train**
- **Designing European transport solutions**
- **Preparing and maintaining vehicles**
- **Planning and operating networks**
- **Providing supplemental logistical services**

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Services/outputs

Freight carried
256 million t

Volume sold
88 billion tkm

Outcomes

EBIT adjusted
€ -190 million

Customer satisfaction
SI of 60

Punctuality
72.8 %

Employee satisfaction
SI of 3.5

Final energy consumption
-20.4 % compared to 2006 (specific)

transport. Individual industry solutions within the industrial, intermodal and logistics sectors complete the range of services offered. Mainly self-owned traction units and freight cars are used to provide services. The key industries served are the iron, coal and steel (montan), chemicals, automotive and construction materials, industrial goods and consumer goods, as well as intermodal transport. The customer structure is characterized by major customers. The premiere key performance indicator is volume sold measured in ton kilometers. The relevant capacity utilization figure is measured in tons per train. The cost structure is mainly influenced by volume produced in train kilometers. Major cost drivers are personnel, infrastructure and maintenance expenses.

The most important source of revenue is the transport of goods by rail. Key resources are customer relationships, a good level of logistical customer understanding, motivated and well-trained employees, along with the efficient use of rolling stock and a capacity-related high-quality infrastructure. The intra-Group infrastructure companies and service providers are important suppliers in this respect.

Markets and strategy

DB Cargo operates a close-knit international network and is active in 17 European countries. This unparalleled network is the foundation for building on DB Cargo's leading position in the European rail freight transport market and repositioning on the market as an international integrated railway logistics provider by 2030.

Rail freight transport in Germany and Europe will see considerable growth by 2030. On the one hand, the entire European freight transport market will see further gains thanks to stable global economic development and the rise in intra-European trade and, on the other hand, climate change will necessitate a shift from road to rail. There are further growth expectations as a result of an expanded customer base, particularly due to the stronger participation of rail freight transport in growing transport demand from the consumer and capital goods industry and combined transport. The digital and technological upgrades to operations play a crucial role in further performance growth in rail freight transport. Important levers include (partially) automated driving and shunting, digital operation and fleet control, as well as predictive maintenance based on intelligent rolling stock. The removal of operational barriers in the cross-border traffic growth area is a significant opportunity for rail freight transport.

Policy in Germany has created significant initiatives for modal shifts from the road to the rail. The **master plan for rail freight transport 🗋 63** and the Climate Protection Plan 2050 have improved the framework conditions for rail freight transport. Central thematic areas here include the increased performance capacity of the infrastructure, the digitalization and automation of rail freight transport and the promotion of multimodal traffic concepts. In addition, train-path price support was agreed to provide rail at a more attractive price compared to road in the short term.

DB Cargo's volume sold and revenues have been in decline for several years. This development is reflected in the operating profit. The improvement measures have not achieved the desired success thus far due to insufficient and inflexible production capacity. As a result, the restructuring of DB Cargo is in the focus of the new **Agenda for a Better Railway 🗋 66 ff.**

- **Economic** 👍 dimension: We are applying a consistent growth strategy so that we can continue in our mission as the leading European rail freight transport company and achieve a trend reversal in quality, revenues and profitability in 2019. Given the high fixed costs, the business can only be competitive and fit for the future if the resources we deploy are sufficiently productive. Revenue growth is based on increasing our own production capacity and making it more flexible, thereby improving transport quality on the rail. We are working to achieve the target by implementing three sets of measures in the near future:
  - "Smoothly through the network": We quickly and sustainably remove operational barriers in the production process. We also address resource bottlenecks by hiring more operating personnel and investing in rolling stock. We efficiently allocate resources through improved processes and IT, increasing reliability and staff and asset productivity through a performance pact with employees. We are driving the digital and technological renewal of operating and maintenance processes.
  - "Growing confidently with our customers": We are increasing revenues by consistently harnessing our advantages and the advantages of rail as a system in long-distance transport. This means taking a pioneering role in the growth segment of cross-border European transport and using our many years of experience and expertise in the rolling stock life cycle management segment to build on our work with rolling stock. In addition, we enable stronger revenue growth by further developing the established transport segments of single wagon, block train and combined transport, taking into account changed customer needs, and strengthening DB Cargo's market awareness as a solution-oriented rail logistics service provider and innovative road-to-rail transport provider.
  - "Efficiency and excellence as maxims": We stringently orient processes, management and leadership based on customer needs and we design our business processes to be as lean as possible so that we can improve our efficiency. We achieve process excellence by establishing process owners, applying lean principles and digitalizing core processes. We are working to improve corporate management by implementing performance management formats across the board and creating a greater focus on achieving goals for the company as a whole by looking toward the operational and production system units and corridors. Leadership excellence supports incentives for a stronger customer focus, for proactively taking responsibility and demonstrating important leadership qualities in the process. Overall, this will help us to achieve greater productivity, which will benefit our customers.

- **Social** dimension: Our goal is to be a top employer in Europe. To this end, we will use the employee survey, for example, as a feedback instrument for assessing the measures we have initiated. We see the core of our European HR work as being in digitalization, demography and diversity. We want to impart skills to, and develop, our executives and employees through targeted measures. To give a permanent lift to our employee satisfaction, we are refining our feedback tools and communication and dialog platforms. In this way, we ensure that we are working together on the further development of DB Cargo and we prepare for trends in the logistics market.
- **Environmental** dimension: We will reinforce rail freight transport as being an environmentally and climate-friendly means of transport and use this as a base from which to reduce greenhouse gases through transport shifts. We are developing sustainable transport solutions and modernizing our fleet for this purpose. We will equip our entire **active German fleet of freight cars with quiet brake shoes 92.** By 2020, we will have reduced our specific final energy consumption by 21% compared with 2006. We are pushing the use of hybrid technology, while the research project **Construction and testing of innovative freight cars 92** will test further developments in freight cars and innovative components for sustainable and environmentally friendly rail freight transport. We underscore our position as an eco-pioneer by providing eco-friendly offerings such as **DBEco plus no. 1** (CO_2-free rail transport) and **DBEco neutral no. 32** (CO_2-neutral transport). Furthermore, we are identifying potential energy savings through our programs Green Maintenance and Energy Management.

Digitalization and innovation

- The freight car fleet in Germany is to be fitted with the latest telematics and sensors by 2020. About 10,000 refitted freight cars are already on the way. To this end, we are investing an amount in the double-digit millions.
- The **innovative freight car 92** project has begun operational testing. The project is being implemented by DB Cargo in cooperation with VTG AG on behalf of the BMVI.
- Additional features have been added to myRailportal to make it easier to access rail freight transport. Order placement, empty car orders, shipment tracking and billing are automated and fully supported on the portal.

Environmental measures

- By **optimizing the engine characteristic maps no. 130** in engine control, DB Cargo is reducing fuel consumption and greenhouse gas emissions. The engine control system was optimized on just under 400 shunting locomotives. This saves 800,000 liters of fuel and 2.1 million kg of CO_2. This corresponds to about a 3% reduction in fuel needs. The saving was demonstrated during test runs.
- We are holding an **Energy-saving Olympics no. 8** for DB Cargo section train drivers. Over the course of 36 monthly events and six super-scale events, over 2,400 train drivers have already been honored for their outstanding performance.
- In 2019, DB Cargo equipped an additional 150 traction units with the LEADER driver assistance system. Since the end of 2018, about 500 vehicles have been operating with the system.

Development in the year under review

- Restrictions, especially in Germany, due to continuing strain on transport quality (resource problems).
- Strikes in France had adverse effects on development.
- Positive business development in Eastern Europe.

Rail freight transport punctuality was at the previous year's level. Improved punctuality, including in Great Britain and the Netherlands, compensated for a fall in punctuality in Germany caused by a heavily utilized infrastructure. At the same time, external interference once again had a negative effect on punctuality development in the year under review.

Customer satisfaction deteriorated significantly due to problems in reliability and punctuality. Since 2017 we have been surveying about 1,000 customers annually on customer satisfaction.

Performance development also noticeably declined. This was largely driven by Western Europe and Central Europe. The freight carried, volume sold and volume produced declined. By contrast, capacity utilization per train recorded slightly positive development.

			Change		
DB Cargo	**2018**	2017	absolute	%	2016
Punctuality (%)	72.8	72.7	–	–	75.6
Customer satisfaction (SI)	60	67	–	–	–
Freight carried (million t)	255.5	271.0	- 15.5	- 5.7	277.4
Volume sold (million tkm)	88,237	92,651	- 4,414	- 4.8	94,698
Volume produced (million train-path km)	165.8	175.6	- 9.8	- 5.6	179.1
Capacity utilization (t per train)	532.3	527.5	+ 4.8	+ 0.9	528.8
Total revenues (€ million)	4,460	4,528	- 68	- 1.5	4,560
External revenues (€ million)	4,177	4,209	- 32	- 0.8	4,230
EBITDA adjusted (€ million)	54	130	- 76	- 58.5	108
EBIT adjusted (€ million)	- 190	- 90	- 100	+ 111	- 81
EBIT margin (adjusted) (%)	- 4.3	- 2.0	–	–	- 1.8
Gross capital expenditures (€ million)	587	328	+ 259	+ 79.0	304
Employees as of Dec 31 (FTE)	28,842	28,257	+ 585	+ 2.1	29,671
Employee satisfaction (SI)	3.5	–	–	–	3.4
Employee satisfaction – follow-up workshop implementation rate (%)	–	96.5	–	–	–
Share of women in Germany as of Dec 31 (%)	11.3	10.6	–	–	11.2
Specific final energy consumption compared to 2006 (based on tkm) (%)	- 20.4	- 17.1	–	–	- 17.1
Quiet freight cars in Germany as of Dec 31	50,409	39,604	+10,805	+27.3	32,396

The economic development remained tense. The decline in income, combined with slightly increased expenses, led to considerable declines in operating profit figures.

- 83% of revenues were generated in Central Europe, 12% in Western Europe and 5% in Eastern Europe. Revenues fell slightly, which was largely due to resource bottlenecks and strikes in France. Exchange rate effects also had a noticeable negative impact. There were positive accounting-related effects on revenues as a result of switching from the freight settlement procedure with foreign railways to a service procurement model.
- Other operating income (+ 15.1%) increased in particular due to **train-path price support** 🗋 **63** (opposite effect in revenues) and locomotive sales in Romania. The omission of the effect of the reimbursement of the nuclear fuel tax in the previous year had a dampening effect.

Expenses recorded a slight increase driven by personnel expenses:

- The cost of materials (– 0.2%) was below the previous year's level, which was due to exchange rate and other effects. Lower train-path and energy expenses also had a moderating effect on the rise in purchased transport services.
- Personnel expenses (+ 2.2 %) increased as a result of collective bargaining agreements.
- Other operating expenses (+ 4.4%) increased, including due to higher expenses for vehicle rental and purchased IT services.
- Depreciation (+ 10.9%) increased, particularly due to capital expenditures and also as a result of IT project impairments.

Capital expenditure activities increased. Capital expenditures in Central Europe and Eastern Europe increased in particular as a result of higher capital expenditures in locomotives and freight cars. In contrast, capital expenditures fell in Western Europe.

A total of 66% of employees are employed in Central Europe, 15% in Western Europe and 14% in Eastern Europe. The number of employees in Central Europe and Western Europe increased. This was counteracted by a reduction in employees in Poland as a result of a decline in the sidings business and sand mining business.

Employee satisfaction improved as a result of positive developments in patterns of working hours and further development.

The share of women in Germany increased compared to the previous year.

The reduction of specific final energy consumption compared to 2006 has become more pronounced.

Central Europe region

- Strained transport quality due to resource bottlenecks.
- Shortcomings in production quality leads to performance losses.
- The initial effects of the rail freight transport campaign.

Central Europe region	2018	2017	Change absolute	Change %
Freight carried (million t)	235.9	246.2	- 10.3	- 4.2
Volume sold (million tkm)	71,343	74,780	- 3,437	- 4.6
Volume produced (million train-path km)	134.0	140.9	- 6.9	- 4.9
Total revenues (€ million)	4,852	4,836	+ 16	+ 0.3
External revenues (€ million)	3,451	3,431	+ 20	+ 0.6
EBITDA adjusted (€ million)	75	160	- 85	- 53.1
EBIT adjusted (€ million)	- 98	6	- 104	-
Gross capital expenditures (€ million)	521	270	+ 251	+ 93.0
Employees as of Dec 31 (FTE)	18,991	18,494	+ 497	+ 2.7

Performance development in Central Europe declined due to the effects of the strike in France and as a result of resource problems (staff and freight cars). By contrast, capacity utilization improved slightly.

The economic development was negative: the income increases were not sufficient to offset increased expenses and as a result operating profit figures fell significantly.

- Despite the decline in performance, there was slight revenue growth. This was as a result of the positive effects of switching from freight distribution to service procurement, among other factors.
- Other operating income (+23.1%) increased in particular due to **train-path price support 🗋 63** (opposite effect in revenues).
- The cost of materials (+3.2%) increased, mainly as a result of increases in purchased transport services. Lower expenses for energy as well as reduced expenses for train-path utilization due to price and quantity had a moderating effect.
- Personnel expenses (+2.8%) increased, despite a lower average number of employees, as a result of wage increases.
- The rise in other operating expenses (+7.2%) primarily resulted from higher levels of purchased IT services and damage compensation expenses.
- Depreciation (+11.7%) rose as a result of the impairment of IT projects and due to increased capital expenditures for locomotives and freight cars.

Gross capital expenditures increased significantly, in particular due to higher expenditures in locomotives and freight cars.

The number of employees increased particularly as a result of new hiring to meet the need for staffing in operational functional groups and due to employees being taken on as part of new business, including in Belgium and Italy.

Western Europe region

- Strikes in France put a strain on development.
- Portfolio adjustments in Great Britain.
- Restructuring measures in Great Britain and France move ahead.

Western Europe region	2018	2017	Change absolute	Change %
Freight carried (million t)	48.5	55.4	- 6.9	- 12.5
Volume sold (million tkm)	11,910	13,255	- 1,345	- 10.1
Volume produced (million train-path km)	23.6	26.8	- 3.2	- 11.9
Total revenues (€ million)	640	668	- 28	- 4.2
External revenues (€ million)	516	544	- 28	- 5.1
EBITDA adjusted (€ million)	48	41	+ 7	+ 17.1
EBIT adjusted (€ million)	- 9	- 12	+ 3	- 25.0
Gross capital expenditures (€ million)	47	48	- 1	- 2.1
Employees as of Dec 31 (FTE)	4,365	4,207	+ 158	+ 3.8

In Western Europe freight carried, volume sold and volume produced fell considerably. Negative development in Great Britain, including as a result of portfolio adjustments in the segments intermodal, biomass, coal and chemicals and within construction and defense, put additional strain on performance development.

The economic development was stronger than in the previous year: the fall in expenses was more than compensated for by reduced income, which meant that operating profit figures improved.

- Revenues declined for performance and exchange rate reasons, in particular due to negative developments in Great Britain.
- Other operating income (−11.8%) declined, especially in Great Britain due to the loss of income from an investment transaction in the previous year and lost income from locomotive and freight car sales. Compensations for damage from SNCF to Euro Cargo Rail (ECR) as a result of strikes in France had a moderating effect.
- Cost of materials (−8.0%) declined due to exchange rate effects and the reduced performance volume.
- Personnel expenses (−5.9%) fell as a result of restructuring measures. This was offset by new hiring of operational personnel in Great Britain at year-end.
- Depreciation increased as a result of IT project impairments.
- Other operating expenses (−6.5%) fell as a result of low rental expenses and the release of provisions in Great Britain. Exchange rate effects also had a negative impact.

Gross capital expenditures fell. This primarily resulted from the overhaul of locomotives in Great Britain and France.

The number of employees in operational roles and within machine-building and infrastructure increased, among other areas. The decline in locomotive drivers had a counteractive effect.

Eastern Europe region

- Performance development was largely positive.
- Adjustment to the transport portfolio in Poland.
- Increased personnel costs in Poland.

			Change	
Eastern Europe region	**2018**	2017	absolute	%
Freight carried (million t)	16.7	17.3	-0.6	-3.5
Volume sold (million tkm)	4,984	4,616	+368	+8.0
Volume produced (million train-path km)	8.1	8.0	+0.1	+1.3
Total revenues (€ million)	309	314	-5	-1.6
External revenues (€ million)	210	216	-6	-2.8
EBITDA adjusted (€ million)	25	21	+4	+19.0
EBIT adjusted (€ million)	11	8	+3	+37.5
Gross capital expenditures (€ million)	19	10	+9	+90.0
Employees as of Dec 31 (FTE)	3,914	4,076	-162	-4.0

Performance development in Eastern Europe based on volume sold and volume produced showed positive development. By contrast, the freight carried fell including as a result of the lower traffic volumes in the logistics and intermodal divisions in Poland.

The economic development was weakened: the adjusted EBITDA and EBIT profit figures improved, particularly as a result of income from the sale of locomotives.

- Revenues declined, largely due to exchange rate effects. This development was strengthened by a performance-related decline in the sand mining business in Poland and the loss of transport services in China. Price effects had a moderating influence.
- Other operating income (+14.3%) increased, including as a result of locomotive sales in Romania and damage compensation payments in Poland.
- Cost of materials (−8.7%) fell as a result of exchange rate effects, lower transport service purchases and lower maintenance expenses in Poland.
- Personnel expenses (+5.7%) rose due to wage increases, which were driven among other factors by a strained labor market and national minimum wage policy in Eastern Europe.
- Other operating expenses (+22.2%) increased. This was due to the costs of disposal incurred during locomotive sales in Romania, among other factors.
- Depreciation was at the previous year's level.

Capital expenditures increased sharply. This was largely due to capital expenditures on maintenance facilities and locomotive projects.

The number of employees declined, particularly due to optimization measures in Poland. This was offset by an increase in the number of employees in Southeastern Europe.

DB Schenker business unit

Business model

DB Schenker serves established markets and emerging national economies as an integrated transport and logistics services provider with a global network. In land transport, the dense network connects the most important economic regions in Europe. Services include time and cost-optimized services for general cargo, partial and full load transport along with door-to-door solutions across Europe. As one of the global leaders in air and ocean freight, DB Schenker offers the entire range of services in this segment. In contract logistics, the services offered cover all stages of the value-added chain from supplier to producer/trade, end customers and spare parts service. The core area of expertise is the planning and handling of complex global supply chains, including sustainable logistics concepts.

DB Schenker has a global customer base in a wide range of industries and a focus on industrial customers. The vertical market approach is aimed at developing industry-specific solutions. Major customers are provided with tailored solutions as global accounts.

In air and ocean freight, we act solely as a freight forwarder without our own aircraft and ships. In some segments of land transport, we use our own vehicles and containers. Transshipment terminals and warehouses are generally our own property or are leased over the longer term.

Motivated and well-trained employees are key resources for a service provider. Close customer relationships and industrial expertise are extremely important. Efficient IT is also essential for good product and service quality.

In addition to airlines and shipping companies in air and ocean freight, our major partners include land transport subcontractors for the supply of transport services.

Performance measurement depends on the line of business: for land transport, the key indicator is the number of shipments; for air freight, it is the tonnage billed; while in ocean freight, it is the freight volume, measured in TEU. There is no comparable volume measurement in the contract logistics segment. In this case, market comparisons are usually made on the basis of revenues. DB Schenker has a relatively low capital intensity and real net output ratio. About 70% of revenues in the transport business lines come from procured intermediate services. Therefore, optimizing these purchase relationships and balancing various influential success factors such as transport relations, volume, weight and mode of transport represents an important factor for success and a value driver. The same applies to managing fluctuations in freight rates and the specific surcharges to these freight rates. In particular, the effective and efficient use of personnel resources is a key

DB SCHENKER BUSINESS MODEL

Resources/inputs

Employees
About 75,800

Vehicles
About 31,000 vehicles regularly used (including externally without a spot market)

Networks and infrastructure
More than 2,100 locations in over 130 countries, including 430 locations in land transport and 800 global locations in air/ocean freight, 8.3 million m² in warehouse space in contract logistics worldwide

▼

Customer segments

- Business customers with a focus on automotive, chemicals, consumer, electronics, healthcare, industrials, retail and semiconductors/solar

Value proposition

- DB Schenker offers customer-oriented, reliable and eco-friendly integrated solutions in transport and warehousing worldwide.

Customer access and retention

- Branch offices with territorial distribution
- Key account management
- E-services

Key activities

Planning and operating global networks

Implementing/organizing transport and warehousing services

Purchasing cargo space

Providing supplemental logistical services

▼ ▼

Services/outputs

Land transport shipments
106 millions

Air freight volume (export)
1.3 million t

Ocean freight volume (export)
2.2 million TEU

Outcomes

EBIT adjusted
€ 503 million

Customer satisfaction
SI of 71

Employee satisfaction
SI of 3.8

Greenhouse gas emissions
- 61.2 % (ocean freight), - 9.3 % (air freight) and - 25.8 % (land transport) compared to 2006 (specific)

driver below gross profit. This is of particular importance in the contract logistics line of business. Here, know-how and experience relevant to the industry are an essential success factor in the optimal design of intra-company logistics processes. Effective IT support is also especially important.

The most important sources of revenues are transport and logistics services, including added value services such as the assembly of modules or assemblies in the automobile industry or putting together special sales packaging for the retail sector.

Markets and strategy

DB Schenker holds a leading market position in all market segments – European land transport, global air and ocean freight, as well as contract logistics. Our vision is to be the leading integrated supplier of transport and logistical services with a global reach. We want to strengthen and expand our leading market position. With its PRIMUS strategy, DB Schenker intends to significantly increase profitability and focus its portfolio even more on international growth markets.

A comprehensive transformation program was launched to drive change in the three core areas of growth, efficiency and culture.

The individual business lines of land transport, air and ocean freight and contract logistics are developing measures and putting them into practice. In addition, overarching issues are being managed centrally. Examples include comprehensive programs to increase efficiency, which involve implementing new management practices among other plans.

Digitalization is increasingly gaining in importance as a driver of disruption in the logistics industry. DB Schenker therefore has a dedicated digitalization unit. This unit's mission is to promote data-driven business models, online platforms and technical innovations worldwide.

- **Economic** dimension: The central challenge is to be able to respond more quickly to market demand. For this, we rely on processes distinguished by standardization as well as industrialization. By consistently adapting supply chains we meet customer expectations while deepening the customer relationship. The focus is also on the further expansion of integrated and innovative solutions for the entire logistics chain. Our objective is to grow profitably and increase the EBIT margin on a sustainable basis. We strive toward growing more strongly than the market in all segments and maintaining our leading market positions. In pursuing this goal, we are further enlarging and developing our global network. Particular focus is on the expansion and harmonization of our global IT landscape. We are also developing new digital products and services that improve both cooperation with our subcontractors and our ability to deliver on our promise of performance to customers.
- **Social** dimension: We aim to be the top employer in logistics. Satisfied employees are a prerequisite for satisfied customers. In order to achieve our targets, we are strengthening our corporate culture and expanding our individual and international career development programs. Moreover, we offer a modern, family-friendly and diverse working environment.
- **Environmental** dimension: We actively build upon our extensive know-how in green logistics. We use our Eco Operations to record, assess and increase the energy and material efficiency of our internal processes. With Eco Procurement, we focus on the purchase of CO_2-friendly services from our carriers and sub-providers. The tools we use in this effort include our preferred carrier portfolio, our carbon reduction agreements and our environmental partnerships with top carriers. Eco Transparency includes instruments that can be used to calculate the carbon footprint even more precisely. Through **Eco Consulting** green **no. 12,** we offer our customers consultation services through which they can improve their carbon footprint.

Development of the network

- Near Dubai airport, DB Schenker is building its **second logistics hub 143** in the region. This is DB Schenker's largest capital expenditure in the Middle East and Africa region to date. It will become DB Schenker's first location in the world to be powered 100% by solar energy.

Progress in implementation of PRIMUS

A large number of initiatives were implemented in the year under review that move DB Schenker forward on the way to becoming the sector's leader, its PRIMUS.

- Growth: The business development programs for all products were among the factors that contributed to an overall increase in revenues during the year under review of over € 1 billion. This included targeted regional specialization in key customers in the software industry, for instance.
- Efficiency: By further expanding the Global Business Service Center in Bucharest and Manila, DB Schenker consistently increased its efficiency in the year under review. Furthermore, there was major progress toward a more transparent and faster corporate management approach, including as a result of new standards in controlling global cost development.
- Culture: Following its launch in the previous year with 133 top executives, almost 6,000 employees were involved as catalysts in the program "The future is here" during the year under review. They are pushing for cultural transformation, which should help bring DB Schenker to the top position in the industry.

Digitalization and innovation

- DB Schenker and Cisco are working together to shape the digitalization transformation. A joint innovation lab was opened in Houston, Texas/USA for testing and marketing new technologies for logistics.
- Customers can use the eSchenker online portal to configure and order 3-D printing. For example, stainless steel medical devices, plastic robot grippers or customized packaging materials are currently being printed.
- DB Schenker's new online platform, connect 4 land, enables customers in Europe, including in Germany, Spain and France, to make immediate requests online for general cargo transports throughout Europe and to book these directly. The new platform is especially

suited to smaller and medium customers. Similar developments are being prepared for air and ocean freight. In the process, DB Schenker is further implementing its digitalization strategy in a consistent way.

Environmental measures

- DB Schenker has joined the EV100 initiative and in doing so committed to switching all of its own vehicles with up to 3.5 t permitted total weight to electric power by 2030 and 50% of those with between 3.5 and 7.5 t.
- DB Schenker has acquired five Fuso eCanter **fully electric trucks** green. **no. 122** from Daimler subsidiary CharterWay and is testing these in real production conditions in a number of German cities and one major European city. The 7.5-t battery-powered electric trucks have a range of about 120 km and support low-CO_2, zero-emissions delivery and pickup of general cargo shipments in the cities. The Fuso eCanter can achieve loads of up to 4.5 t depending on its configuration and use.
- DB Schenker, along with its preferred carrier, Hapag Lloyd, was able to proceed in the move from heavy oil to low-sulfur marine diesel in unregulated ports in cooperation with top customers. An initial premium customer is paying a surcharge on all containers loaded in ports without sulfur emissions limits in order to finance low-sulfur fuel.
- As part of its **LED lighting** green. **no. 50** measure, DB Schenker has switched to fully LED lighting at six locations in France, Austria and Spain. The anticipated energy saving is about 1,100 MWh per year.
- In Poland, 7.82 m extra-large swap bodies consistently replaced standard semi-trailer equipment on modern tractor units, thereby saving over 3 million transport kilometers, while at the same time achieving loads almost 4 t greater. By the end of 2018 this has already saved over 6,000 t of CO_2 equivalent.
- During its **solar system** green. **no. 30** measure, DB Schenker built a 35,000 m^2 temperature-regulated warehouse in the United Arab Emirates with a 2.3 MWp photovoltaic power plant. The photovoltaic plant consists of 7,000 highly efficient 72-cell solar modules and other cutting-edge proprietary components, which are expected to generate about 85,000 MWh of power over their service lives. DB Schenker plans to use this plant to provide almost 100% of its own energy requirements for the building.

Investments

- In late November 2018, DB Schenker took over a 51% share of LogCap-IR Grundverwertungsgesellschaft mbH (LogCap GmbH) Vienna/Austria from Erste Bank Group AG. In 2005, the company was founded as a joint venture between Schenker & Co. AG, Vienna (49%) and Erste Bank Group AG (51%) to finance property investments for Schenker & Co. AG in Central Europe. All three of the properties most recently owned by LogCap GmbH or its subsidiary LogCap s.r.o., Slovakia, are part of Schenker's core network in Central Europe. The acquisition has ensured that these properties will be available to DB Schenker in the long term.

Other events

- DB Schenker launched its "Premium 13" service in Europe in the first half-year of 2018, which delivers goods by 1:00 p.m., while its "Premium 10" service guarantees customers delivery by 10:00 a.m. on the following day.
- For the third time in a row, DB Schenker received the award for best logistics services provider in the Rail category at the Asian Freight, Logistics and Supply Chain Awards (AFLAS). Continuous improvement of rail freight transport between Europe and Asia in terms of costs, delivery time and service options means we occupy a leading position in trans-Eurasian rail connections.
- DB Schenker operated the first block train carrying fresh agricultural produce from China to Russia. In the trial a train loaded with refrigerated containers took 17 days to travel from Chengdu to Moscow.

Changes in presentation of lines of business

- The land transport line of business now also includes some of the land transport activities outside Europe, mainly in Asia/Pacific, North America and Mexico. This has caused major restrictions in comparability to the previous year.
- Activities in air and ocean freight are now each presented in their own separate lines of business, excluding the activities of Fairs & Exhibitions and Global Projects.

Development in the year under review

- Market and competitive environment with positive stimuli.
- Positive development in land transport, ocean and air freight.
- Comprehensive initiatives for reducing costs, improving efficiency and digitalization.

Customer satisfaction deteriorated in the year under review. There are various causes for this. They include capacity problems, as well as the introduction of a new IT system, which did not always proceed smoothly. Since 2017 we have been surveying about 15,000 customers annually in 28 countries on customer satisfaction.

Volume development was positive in air and ocean freight. Land transport also recorded positive development overall.

The economic development was encouraging. The operating profit figures showed positive development due to a rise in income. Gross profit (+5.3%) also grew, most markedly in air freight. The gross profit margin improved.

Revenues were generated 42% in land transport, 22% in air freight, 17% in ocean freight and 15% in contract logistics.

The adjusted EBIT was generated 25% in land transport, 35% in air freight, 16% in ocean freight and 18% in contract logistics.

- The main drivers of the positive revenue development were land transport and air freight. Contract logistics and ocean freight also developed positively when adjusted for exchange rate effects.
- Other operating income (−11.3%) fell in the year under review.

On the expense side, quantity and freight rate developments made themselves felt:

- Cost of materials (+2.9%) rose, particularly within the air freight division as a result of freight rate developments.
- Personnel expenses (+4.7%) rose in the wake of a greater number of employees. The rise was even clearer when adjusted for exchange rate effects.
- Other operating expenses (+4.5%) rose in part due to the leasing of new space and higher levels of purchased IT services.
- Depreciation rose slightly at a low level.

Capital expenditure activities increased. The growth resulted primarily from the regions of Europe and America, with Europe continuing as the focus of capital expenditures.

At the end of the year under review, 28% of employees were employed in land transport, 9% in air freight, 7% in ocean freight and 32% in contract logistics. The number of employees increased. The principal drivers were growth in volume and the hiring of temporary workers.

			Change		
DB Schenker	**2018**	2017	absolute	%	2016
Customer satisfaction (SI)	71	74	–	–	–
Shipments in land transport (thousand)	106,468	100,452	+6,016	+6.0	99,638
Air freight volume (export) (thousand t)	1,304	1,300	+4	+0.3	1,179
Ocean freight volume (export) (thousand TEU)	2,203	2,169	+34	+1.6	2,006
Total revenues (€ million)	17,050	16,430	+620	+3.8	15,128
External revenues (€ million)	16,973	16,345	+628	+3.8	15,059
Gross profit margin (%)	34.8	34.3	–	–	36.0
EBITDA adjusted (€ million)	703	676	+27	+4.0	599
EBIT adjusted (€ million)	503	477	+26	+5.5	410
EBIT margin (adjusted) (%)	3.0	2.9	–	–	2.7
Gross capital expenditures (€ million)	273	246	+27	+11.0	209
Employees as of Dec 31 (FTE)	75,817	71,888	+3,929	+5.5	68,388
Employee satisfaction (SI)	3.8	–	–	–	3.8
Employee satisfaction – follow-up workshop implementation rate (%)	–	96.0	–	–	–
Share of women in Germany as of Dec 31 (%)	29.5	30.8	–	–	31.9
Specific greenhouse gas emissions (land transport) compared to 2006 (based on tkm) (%)	–25.8	–20.2	–	–	–16.3
Specific greenhouse gas emissions (air freight) compared to 2006 (based on tkm) (%)	–9.3	–8.8	–	–	–4.8
Specific greenhouse gas emissions (ocean freight) compared to 2006 (based on tkm) (%)	–61.2	–60.7	–	–	–60.3

Employee satisfaction is measured every two years, and remains at the same level as the 2016 employee survey.

The share of women in Germany fell slightly in the year under review.

The majority of DB Schenker's greenhouse gas emissions are the Scope 3 emissions of our subcontractors. We have therefore developed a comprehensive monitoring system to monitor our carriers' target development toward reducing greenhouse gas emissions overall. In the year under review, the reduction trend in ocean freight was maintained in view of additional market consolidations. In air freight, the reduction stabilized as a result of the carrier's successive fleet replacement. In land transport, significant reductions were recorded based on increasing consolidation in the new hub structure, the use of extra-large swap bodies in Poland and as a result of a significant increase in the proportion of biofuels in Sweden. The market-based mixed cargo effects also contribute to this, having caused a reduction in emissions.

Land transport line of business

- Within the system and direct transport areas, greater focus on international transport services.
- Price effects had a positive impact.
- Europe-wide cost reduction initiatives further implemented.

			Change	
Land transport line of business	**2018**	2017	absolute	%
Shipments in land transport (thousand)	106,468	100,452	+ 6,016	+ 6.0
Total revenues (€ million)	7,092	6,608	+ 484	+ 7.3
External revenues (€ million)	7,023	6,531	+ 492	+ 7.5
EBITDA adjusted (€ million)	196	163	+ 33	+ 20.2
EBIT adjusted (€ million)	125	94	+ 31	+ 33.0
Employees as of Dec 31 (FTE)	21,580	20,323	+ 1,257	+ 6.2

Activities previously allocated to contract logistics and other areas will be reported under the land transport line of business from the year under review onwards. This resulted in restrictions compared to the previous year.

Volume development in land transport was positive overall. A decline in general cargo transports was more than compensated for by the increased volume of the parcel business and direct transport. Adjusted for the effects of the reassignments, volume in direct transports fell due to cross-country declines in Europe.

The economic development was positive. The operating profit figures showed considerably improved development. However, this was largely as a result of the reassignments.

- Revenue development was up as a result of price and volume effects and the reassignments. This was partly offset by negative exchange rate effects.
- Cost of materials (+7.4%) rose. This was particularly as a result of higher expenses, caused by reclassifications of land transport activities and service expansions. Exchange rate effects reduced expenses.
- Personnel expenses (+5.4%) increased due to the reclassification of land transport activities and service expansions. In addition, personnel numbers increased as a result of taking on temporary workers.

The number of employees increased as a result of business development and taking on temporary workers.

Air freight line of business

- Significant effects due to freight rate development despite the expansion of capacity on the market.
- Focus on broadening the customer base and improving the cargo mix.
- A range of measures for standardization and improving productivity are being implemented.

			Change	
Air freight line of business	**2018**	2017	absolute	%
Air freight volume (export) (thousand t)	1,304	1,300	+ 4	+ 0.3
Total revenues (€ million)	3,804	3,530	+ 274	+ 7.8
External revenues (€ million)	3,804	3,530	+ 274	+ 7.8
EBITDA adjusted (€ million)	186	166	+ 20	+ 12.0
EBIT adjusted (€ million)	178	158	+ 20	+ 12.7
Employees as of Dec 31 (FTE)	7,032	6,571	+ 461	+ 7.0

There was slightly positive performance development. Drivers of this development include transatlantic transports and transports between Latin America and Europe. Performance was dampened by the market cooling off during the course of the year under review.

The economic development was positive; operating profit figures improved based on increased revenue and one-off effects. By contrast, exchange rate effects had a dampening influence.

- Revenue development was positive. The main drivers were freight rate and volume trends.
- Cost of materials also rose (+7.1 %) in line with the volume and freight rate trends.
- Personnel expenses (+5.4%) increased as a result of a higher number of employees.

The number of employees increased in part due to taking on temporary workers.

Ocean freight line of business

- Significant effects due to freight rate development.
- Focus on efforts to optimize capacity utilization, costs and purchase prices.

			Change	
Ocean freight line of business	**2018**	2017	absolute	%
Ocean freight volume (export) (thousand TEU)	2,203	2,169	+ 34	+ 1.6
Total revenues (€ million)	2,930	2,943	- 13	- 0.4
External revenues (€ million)	2,930	2,943	- 13	- 0.4
EBITDA adjusted (€ million)	84	82	+ 2	+ 2.4
EBIT adjusted (€ million)	81	80	+ 1	+ 1.3
Employees as of Dec 31 (FTE)	4,974	4,882	+ 92	+ 1.9

Performance development for ocean freight was also slightly positive. Business related to the Middle East and Africa (MEA) as well as trade between the Asia-Pacific and Europe regions had a positive impact.

The economic development was dampened because the increase in revenues was entirely offset by increased expenses. Operating profit figures benefited from one-off effects. Exchange rate effects, on the other hand, had a noticeably negative impact.

- Revenues declined slightly due to exchange rate effects. Growth adjusted for exchange rate effects was recorded, driven by freight rates and volume development.
- Cost of materials declined as a result of exchange rate effects. A rise in line with the volume increase was recorded when adjusted for exchange rates.
- Personnel expenses (+ 2.3%) also recorded an increase in line with the expansion of services dampened by exchange rate effects.

The number of employees increased in part due to taking on temporary workers.

Contract logistics line of business

- Good business development in the existing and new customer base.
- Measures taken to increase productivity.
- Operational challenges in Australia, Germany and the Netherlands.

			Change	
Contract logistics line of business	**2018**	2017	absolute	%
Warehouse space (million m²)	8.3	8.0	+ 0.3	+ 3.8
Total revenues (€ million)	2,622	2,634	- 12	- 0.5
External revenues (€ million)	2,621	2,633	- 12	- 0.5
EBITDA adjusted (€ million)	141	167	- 26	- 15.6
EBIT adjusted (€ million)	92	120	- 28	- 23.3
Employees as of Dec 31 (FTE)	24,439	22,081	+ 2,358	+ 10.7

Some activities previously allocated to contract logistics will be reported under the land transport line of business from the year under review onwards. This reduces revenues and expenses, resulting in restrictions in comparability.

The economic development in the contract logistics line of business was negative: operating profit figures recorded poorer development due to higher expenses combined with business expansions and as a result of the reclassification of land transport activities.

- Revenue declined slightly due to exchange rate effects. Business expansion resulted in an increase due to exchange rate effects. The reassignments had a dampening effect.
- Cost of materials (−17.8%) fell as a result of the reassignments. Exchange rate effects also reduced expenses.
- Personnel expenses (+10.7%) increased, partly as a result of a higher number of employees. By contrast, exchange rate effects reduced expenses.

The increase in the number of employees was due to the business expansion as well as the taking on of temporary workers.

Infrastructure

Introduction of the requirement plan implementation agreement

With effect from January 1, 2018, the Requirement Plan Implementation Agreement (Bedarfsplanumsetzungsvereinbarung; BUV), as concluded with the BMVI, was introduced in order to accelerate the realization of major projects. Under the agreed model for the implementation of new track infrastructure construction and expansion projects by the Federal Government, new plans and the results of early public participation are now presented annually to the German Parliament. In the year under review, reports on the Hanau—Fulda and the Fehmarn Belt Fixed Link projects were handed over to the BMVI.

Instead of the fixed amount for planning costs, the Federal Government subsidizes total project costs, with DB Group covering the economically viable share of the project portfolio. Planning support from the EBA will increase and non-compliance with commissioning dates will be penalized.

Modernization of the existing network is on schedule

In the fourth year of the **LuFV II** **🗋234 f.**, we continued to work hard towards modernizing the existing network. The 2018 annual program was also designed to contribute to the overarching objective of sustainably improving the quality and availability of the existing track infrastructure. Throughout, we continue to keep current and future customers of the infrastructure in mind. In the LuFV II, we made a commitment regarding quality, which we are making every possible effort to meet.

We believe that in the year under review, the targets set out in the agreement were achieved. This will be documented in the 2018 infrastructure state and development report, which we will submit to the Federal Government by April 30, 2019.

In order to be able to continue down this path of modernization consistently from 2020, we are currently in negotiations with the Federal Government regarding the follow-up agreement to the LuFV II, the period of which comes to an end on December 31, 2019.

Cost and schedule development for Stuttgart 21 and the Wendlingen—Ulm new construction line

On January 26, 2018, the Supervisory Board of DB AG deliberated the schedule and cost situation for the Stuttgart 21 project. The cost forecast was increased to a total value of about € 7.7 billion. To take into account unanticipated events, further funds of about € 0.5 billion have been earmarked, meaning that the overall financing framework has increased to € 8.2 billion. In addition to increases in construction prices, the increase in costs results in particular from significantly more extensive procedures for tunneling in the anhydrite rock, more extensive approval processes as a result of species protection and the postponement of commissioning to 2025, among other things.

The cost and schedule planning for the Wendlingen—Ulm new construction line was also deliberated. The cost forecast was increased to € 3.7 billion and the completion date postponed to 2022. The cost increase is mainly due to greater geological risks as well as additional capital expenditures in the modernization of Ulm Central Station. The delay results from more elaborate plan revision procedures for species protection in the Albvorland.

Future Capital Expenditure Program in the third year

As part of the ZIP, the BMVI also made additional Federal funds available for seaport hinterland transport, noise remediation, accessibility and digitalization for the years 2016–2018. In the first two years combined, a total of about € 293 million was spent on infrastructure, whereas in the year under review, the total was € 283 million. For the years 2019 and 2020, follow-up financing of about € 93 million has been agreed for some sub-programs.

Digital planning and construction becomes a reality

Building information modeling (BIM) is a collaborative method of working where all data on infrastructure facilities is fed into an optimized planning, construction and management process that covers the entire life cycle and is made available digitally. From the end of 2020, DB Group's RICs intend to use the BIM method to realize new projects that are standardizable or complex. Setting up the necessary bases for efficient digital processes and technologies in planning, construction and operation of rail infrastructure facilities should be completed by then. The BMVI is funding BIM trials in 13 major infrastructure projects. In addition, the method is being piloted in seven projects in the existing network. DB Netze Stations has been using the

BIM method to plan and construct all of its new station projects since January 2017. DB Engineering & Consulting (DB E&C) is currently using the BIM method in about 90 DB Group projects and plans to expand its portfolio by about 100 further BIM projects in 2019. In doing so, DB E&C is using state-of-the-art digital technologies in capturing inventory data, planning and construction monitoring, and is using a module-based training approach to ensure that employees are BIM-qualified.

Accident in Aichach

On May 7, 2018, a passenger train operated by Bayerische Regiobahn collided with a freight train near Aichach station. Two people died in the accident. Several passengers were injured.

Development of infrastructure

In the year under review, more than € 10 billion was expended on the expansion, modernization and maintenance of the rail network, stations and power systems. Across Germany, 12 new construction initiatives were launched in major projects, with construction starting on 23 projects. Eighteen new construction and expansion lines were put into operation. Bundling in over 100 corridors and a professional construction management are indispensable for the large number of construction sites – up to 800 a day at peak times. By pooling the construction sites, we can minimize the impacts on normal operation. In addition, construction-related delays (delays that could be directly attributed to a construction site) were successfully reduced by 10%, despite a further increase in construction volume due to the construction of the management center that began in the previous year. Construction works in the year under review are summarized in the **Construction Project Map 151**. Additional information can be found in our **Construction Information Portal (BauInfoPortal).**

Commissioned

- After more than three years of construction, the new electronic interlocking for the more than 6 km long tunnel main line of the Rhein-Main S-Bahn (metro) under the center of Frankfurt came into operation on August 6, 2018. This replaced the 40-year-old interlocking for the City Tunnel. In total, more than € 100 million was invested in new technology on one of the most-used lines in Germany.
- After about four years of construction, trains began operating in the new Pforzheimer Tunnel on September 10, 2018. This brought one of the largest measures of the modernization and capital expenditure program in the existing Baden-Württemberg network into use on time. About € 100 million in total was invested in the construction of the 909 m two-track tunnel.
- Commissioning of the line between Knappenrode and the German/Polish border took place in December 2018. Following the commissioning and after the timetable change, it began to be used for regional rail passenger transport and freight trains transitioning to the Polish overhead wire network.
- The new train formation yard in Halle (Saale) came into operation on June 29, 2018 as planned, after four and a half years of construction. On the site of the former Halle freight train station, one of the most up-to-date facilities in Europe has emerged. The Federal Government and DB Group invested a total of about € 180 million.
- With the commissioning of the Neufahrn electronic interlocking, the last major milestone in the overall commissioning of the Neufahrn Curve was reached at the end of July 2018, after about four years of construction. The commissioning took place as part of the timetable change in December 2018.

Under construction

Progress on the Stuttgart—Ulm project

Construction work on the Stuttgart 21 sub-project continued to progress in the year under review:

- In the construction of the future Stuttgart central station, the first chalice pillar, a so-called "Restkelch" (supporting chalice) and a total of six chalice feet have been concreted, while work has begun on the station's floor panel.
- In the Filder Tunnel, the fourth and final tunnel drive of the tunnel boring machine has been started. Tunnel boring at the northern end is complete, and all relevant anhydrite lenses in Cannstatt and Feuerbach tunnels have been successfully dealt with without any noteworthy issues.
- Concreting of the northern end, the connection between the Feuerbach and Bad Cannstatt tunnels and the future central station, has begun.
- The Neckar Bridge reached the eastern bank in May 2018.
- In June 2018, the fourth and final tunnel tube successfully crossed underneath the Neckar.
- About 43 km, representing more than two-thirds of the tunnels required for Stuttgart 21, have been drilled and excavated.

- Following the submission of an appeal to the Higher Administrative Court (Verwaltungsgerichtshof), the decision to reinstate the immediate enforceability of plan approval section 1.3a in the airport sector was suspended in December 2018; the Court has not yet issued the grounds for its ruling.

In the Wendlingen — Ulm new construction line sub-project, the tunnel boring machine also broke through the second tube of the 8,806 meter long Boßler tunnel above the Fils Valley in June 2018. In terms of the last major tunnel, the Albvorland tunnel, the two tunnel boring machines have each completed about 5.5 km of their more than 8 km long tunnel respectively. Restoration of the landscape along the line on the Alb plateau is underway. There, the skeleton of the new construction line is almost fully complete. In December 2018, the first track sections were handed over to railway technology/superstructure. On the Fistal bridge, the concreting of the bridge superstructure is ongoing; many pillars are already finished.

Expansion of the Cologne hub

The highly-frequented Cologne hub is to be expanded through a total of 15 infrastructure measures. The construction projects to expand the S13 from Troisdorf to Bonn-Oberkassel are proceeding as scheduled insofar as possible, including the first bridge construction works. The S11 project core package, including the planned expansion projects between Cologne central station and Bergisch Gladbach, is currently in the pre-planning phase; the planning agreement for the provision of the planning services for performance phases 3/4 (draft and approval planning) is currently in negotiation with the grant authorities. The southern Gummersbach Street expansion project is approaching the end of draft and approval planning. In expansion line project 4 Cologne—Aachen, works in plan approval section 1 Eschweiler station are in the execution phase and in plan approval section 2 Aachen-Rothe Erde, building services are currently being tendered.

Construction of new S-Bahn (metro) line from Hamburg to Bad Oldesloe

The expansion of the S4 S-Bahn (metro) line will help to strengthen local transport between Hamburg and Schleswig-Holstein and to improve the quality of long-distance and freight transport. The building permit procedures for all three plan approval sections are ongoing. The first public hearing for plan approval section 1 took place in April 2018; the documents for sections 2 and 3 are scheduled to go on display in 2019. The relevant decisions are expected in writing in 2019 and 2020. We are working towards a total completion before the commissioning of the Fehmarn Belt Fixed Link (2028). The financing for the entire project is currently being agreed amongst the states of Hamburg and Schleswig-Holstein, DB Netz AG and the BMVI.

Frankfurt hub expansion

The Frankfurt am Main hub is one of the most heavily frequented in our network. To ensure rail transport is made fit for the future, we are undertaking measures to rebuild the area around the Frankfurt Stadion station, building two tracks on the Homburg Damm, connecting Gateway Gardens to the S-Bahn (metro) network, expanding the S6 S-Bahn (metro) line in the direction of Friedberg and building an S-Bahn (metro) line on the northern side of the Main river. Work on the crossing at the Homburger Damm has commenced. Along the S6, work is ongoing to expand the line between Frankfurt West and Bad Vilbel to four tracks.

Tunnel boring measures in the Gateway Gardens project have advanced a great deal; excavation underneath Federal motorway 5 has started. Underground construction work on the open lines is proceeding as scheduled. Work to expand the interior of the tunnel by all the relevant experts will begin in April 2019 as scheduled.

Progress in the Emmerich—Oberhausen expansion line

Construction work on expansion line project 46/2 Emmerich—Oberhausen is progressing on schedule. With the final public hearing having taken place in November 2018 for plan approval section 3.5 Emmerich—Elten, all the plan approval sections have been discussed in public hearings. The plan approval decision on plan approval section 1.1 Oberhausen was communicated in 2015. The subsequent appeal by the town of Oberhausen for additional noise protection on plan approval section 1.1 Oberhausen was rejected by the Federal Administrative Court on December 13, 2018. The second plan approval decision on plan approval section 3.1 Rees—Haldern was delivered to DB Netz AG on December 21, 2018, but will only be published in 2019. Building permits for further plan approval sections are expected to be issued before the end of 2019.

Developments in the Breisgau S-Bahn (metro)

The overall commissioning of the expansion of the western Höllental Railway between Freiburg and Titisee took place in December 2018. Actions undertaken as part of the project included making stations fully accessible, refurbishing or rebuilding level crossings and passenger underpasses, renovating tracks and overhead wires section by section and building new interlockings.

On the eastern Höllental Railway between Neustadt and Donaueschingen, works have been continuing as scheduled since July 1, 2018. Since mid-September 2018, clearing works have been ongoing along the line, as have clean-up works in the tunnels.

The plan approval decision for the Breisacher railway between Freiburg and Breisach was issued in October 2018. The first actions in this section of the Breisgau S-Bahn (metro) will begin in February 2019.

Ground-breaking on the Southern railway

Following ground-breaking on March 23, 2018, construction works on the Ulm—Laupheim—Aulendorf section are underway.

In the Ulm—Laupheim section, works on underground cable laying, the reconstruction of 60 km of overhead wire and replacement of about 400 m of support walls and two road bridges have been proceeding at a good pace. These works are expected to be completed in 2019; in addition, about 60 km of superstructure works and the reconstruction of three level crossings are planned for 2019. Here, the measures for the project and the superstructure program are being bundled and implemented together.

In the Friedrichshafen—Lindau section, the tenders have been awarded and implementation planning has begun. Construction will begin in spring 2019.

Commissioning is planned for December 2021.

Progress in expansion line 48 Munich—Lindau

The building permit procedures were completed for 19 of the 20 sections in the year under review. Between now and 2020, the main construction phase will be carried out with widespread section-by-section line suspensions. The main works on the expansion line, which were planned for the year under review but set back after delays to the building permit being granted, were agreed following expansion of the rail replacement service on several stretches of track and therefore additional suspensions, primarily in the year under review.

Beginning of the main construction work at Dortmund central station

Main construction work to modernize the Dortmund central station began in June 2018. In addition to the expansion and modernization of the passenger underpasses, all of the station's platforms will be resurfaced and have new equipment and new roofs installed. After the work is completed, expected in 2024, the station will be fully accessible and will provide accessible integration with all other modes of transport. The total capital expenditures for the project are about € 130 million, borne by the Federal Government, the state of North Rhine-Westphalia and DB Group.

Building permit for the Lehrte MegaHub granted

In February 2018, the EBA granted its approval for the second amendment to the building permit for the Lehrte MegaHub project. The foundations for the future crane track started to be laid in mid-September 2018.

Following the successful awarding of the tender for the sorting facility on September 11, 2018, the performance planning is now taking place. All relevant tenders for the realization of the MegaHub have thus been awarded. Operational testing should take place in 2019.

Progress on the second S-Bahn (metro) main line in Munich

Since April 2018, legally valid building permits have been available for all three plan approval sections for the second main line in Munich.

At present, preparations for construction are ongoing in the Overground West section, Marienhof and at the central station. The tenders for the three main construction projects in this area were awarded at the end of 2018. In the Munich-Laim construction section, two construction site underpasses were created in preparation for the construction in 2018. These will be used from 2019 to allow access for the trucks and construction vehicles needed to start the main construction works on the track island to lay the fourth track at Laim station. At Marienhof and at the central station, the main construction works will also begin in 2019.

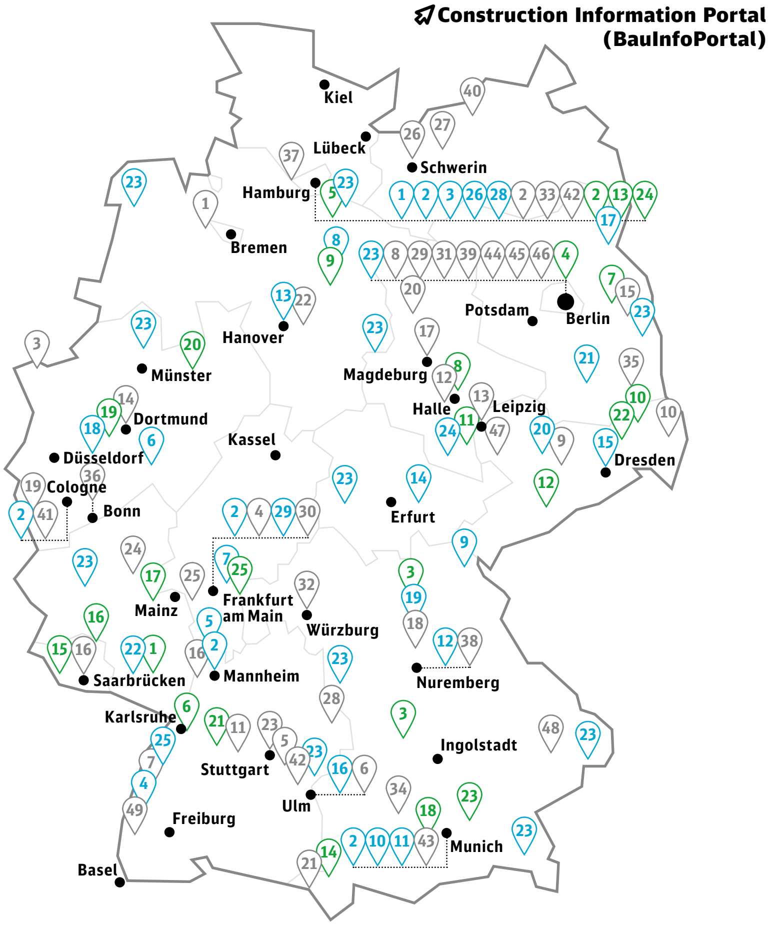
Planned

Start of planning for the 740 m network

Creating a continuous rail network for 740 m freight trains is a key element for enhancing cost-efficiency in rail freight transport and making more efficient use of the rail infrastructure.

BMVI has therefore defined a 740 m network action plan, which has been classified under the compound item "Further network measures aimed at relieving bottlenecks" in the potential requirements of the Federal Transport Infrastructure Plan (Bundesverkehrswegeplan; BVWP) 2030. BMVI has determined the profitability of the 740 m network and has assured Federal funding for the start of planning. The requirement plan measure is currently focusing on about 80 individual actions, such as relocating signals and installing switches to create new possibilities for overtaking.

SELECTION OF CONSTRUCTION PROJECTS IN 2018



Planned

1. Hamburg – Lübeck – Puttgarden expansion/new construction line (Fehmarn Belt Fixed Link)
2. Expansion of major hubs (Frankfurt am Main, Hamburg, Munich, Cologne, Mannheim)
3. Optimized Alpha-E: Hamburg - Hanover expansion/new construction line, Langwedel – Uelzen, Rotenburg – Verden – Minden/Wunstorf, Bremerhaven – Bremen – Langwedel expansion lines
4. Karlsruhe – Basel expansion/new construction line (sections 7 and 8)
5. Frankfurt – Mannheim new construction line
6. Hagen – Siegen – Hanau expansion line
7. Hanau - Würzburg/Fulda expansion/new construction line
8. Uelzen – Stendal – Magdeburg – Halle expansion line (East corridor north)
9. Hof – Marktredwitz – Regensburg – Obertraubling expansion line (East corridor south)
10. Munich – Rosenheim – Kiefersfelden – German/Austrian border (– Kufstein) expansion/new construction line
11. Munich – Mühldorf – Freilassing expansion line
12. Nuremberg – Marktredwitz – Hof/German/Czech border (– Prague) expansion line (Franconia-Saxony-Mainline)
13. Hanover – Berlin (Lehrte Mainline) expansion line
14. Weimar – Gera – Gößnitz expansion line
15. Dresden – Prague new construction line
16. Ulm – Augsburg expansion/new construction line
17. Angermünde – Stettin expansion line
18. Rhine-Ruhr-Express (Düsseldorf, Dortmund, Essen, Bochum, Cologne area)
19. German unification transport projects no. 8.1 Nuremberg – Erfurt expansion/new construction line (freight train track, Bamberg)
20. Leipzig – Dresden expansion line (German unification transport projects no. 9, 3rd construction phase)
21. Berlin – Dresden expansion line (remaining stages)
22. Saarbrücken – Ludwigshafen expansion line 23 (Paris-Eastern France-South-Eastern Germany South, Appenweier bend)
23. 740 m network (freight transport)
24. Southeast converter work (new construction)
25. Kuppenheim converter work (new construction)
26. S-Bahn (metro) S4 Hamburg – Bad Oldesloe
27. Munich central station and Starnberger branch station
28. Hamburg central station
29. Nordmainische S-Bahn (metro) (Frankfurt – Hanau)

Under construction

1. Oldenburg - Wilhelmshaven expansion line
2. Maschen bypass (Hamburg hub)
3. German/Dutch border – Emmerich – Oberhausen expansion line 46/2
4. Frankfurt hub: S6, Gateway Gardens, Homburger Damm
5. Stuttgart – Ulm – Augsburg expansion/new construction line (Wendlingen – Ulm)
6. Electrification of southern railway (Ulm – Lindau)
7. Karlsruhe – Basel expansion/new construction line
8. Berlin Nordkreuz (2nd construction phase)
9. Leipzig – Dresden expansion line (German unification transport projects no. 9, 3rd construction phase)
10. Hoyerswerda – Horka – German/Polish border expansion line (expansion and electrification)
11. Karlsruhe – Stuttgart – Nuremberg – Leipzig/Dresden expansion line (Saxony mainline: Lehndorf, Neukieritzsch area)
12. Halle hub with marshaling yard
13. Leipzig hub
14. Dortmund central station (conversion)
15. Berlin – Frankfurt/Oder – German/Polish border expansion line
16. Saarbrücken – Ludwigshafen (Paris-Eastern France-South-Eastern Germany north) expansion line 23
17. Magdeburg hub
18. German unification transport projects no. 8.1 Nuremberg – Ebensfeld (plan approval section 18 Baiersdorf – Eggolsheim)
19. Cologne – Aachen (Eschweiler station conversion) expansion line
20. Uelzen – Stendal (Rademin – Salzwedel) expansion line
21. Munich – Lindau – German/Austrian border expansion line 48
22. Lehrte MegaHub
23. Stuttgart 21
24. New traction current line 596 (Bengel to Koblenz)
25. New construction to replace traction current line 443 (Flörsheim to Bingen)
26. Schwerin local converter work (new construction)
27. Bützow local converter work (new construction)
28. Reinforcing traction current lines 488 (Aalen – Osterburken)
29. Berlin S-Bahn (metro) S21
30. Frankfurt central station (modernization)
31. Berlin Ostkreuz station (conversion)
32. Würzburg central station (conversion)
33. Elbbrücken S-Bahn (metro) station (new construction)
34. Augsburg central station (accessibility expansion)
35. Cottbus station (conversion)
36. Bonn station (modernization)
37. Pinneberg station (modernization)
38. Nuremberg station – German unification transport projects no. 8.1 expansion line Nuremberg – Ebensfeld
39. Berlin Ostkreuz station
40. Rostock – Berlin expansion line
41. Cologne hub
42. Merklingen station (new construction)
43. 2. S-Bahn (metro) main line in Munich
44. Berlin-Rummelsburg (track layout alteration)
45. Berlin Südkreuz – Blankenfelde (Dresdner Railway)
46. Berlin S-Bahn (metro) S2 South (rebuilding works)
47. Saxony-Franconia Mainline (Markkleeberg – Gaschwitz – Großdeuben section)
48. Straubing station (accessibility conversion)
49. Breisgau S-Bahn (metro) 2020

Commissioned

1. Saarbrücken – Ludwigshafen expansion line (Paris-Eastern France-South-Eastern Germany North, partially commissioned)
2. Hamburg hub (partially commissioned)
3. Nuremberg – Erfurt (4-track expansion - Baiersdorf – Forchheim) expansion/new construction line (partially commissioned)
4. Berlin Ostkreuz station (installing line and direction operations, installing regional platforms)
5. Stelle – Lüneburg (ETCS, 3rd track) expansion line
6. Karlsruhe – Stuttgart – Nuremberg – Leipzig/Dresden expansion line (partially commissioned)
7. Berlin – Frankfurt/Oder – German/Polish border expansion line (partially commissioned)
8. Halle train formation yard
9. Uelzen – Stendal expansion line (partially commissioned)
10. Hoyerswerda – Horka expansion line (partially commissioned)
11. Traction current line replacement work 304 (Großkorbetha to Weimar)
12. Traction current line replacement work 305 (Chemnitz to Dresden/Stetzsch)
13. Hamburg central station (renovation of rail bridges)
14. Leutkirch station (modernization)
15. Merzig station (station reconstruction)
16. Türkismühle station (station reconstruction)
17. Gensingen Horrweiler stop (new construction)
18. Stockdorf station (accessibility expansion)
19. Bochum-Dahlhausen station (modernization)
20. Gütersloh station (modernization)
21. Pforzheimer tunnel
22. Knappenrode – Horka and German/Polish border (two-track electrified line)
23. Erding ring closure, Neufahrn northern curve (including Neufahrn electronic interlocking)
24. Jungfernstieg, Stadthausbrücke and Altona stations, Hamburg (modernization)
25. Hanau – Nantenbach expansion line

Selection of new construction, expansion and station projects as of: Dec 31, 2018

Planning and implementation of the Karlsruhe—Basel project continued

In the Karlsruhe—Basel expansion/new construction line, planning is continuing, following the decisions handed down by the German Parliament and the State Parliament of Baden-Württemberg on the financing of noise remediation measures beyond the legally required level. The key requirements of the region, as discussed in the meetings of the project advisory board, are being integrated into the planning.

Hanau—Fulda planning is progressing

Planning for the new section of line between Gelnhausen and Fulda in the Hanau—Würzburg/Fulda expansion/new construction line project has progressed.

In order to select the train path, 13 versions comprising more than 1,000 line segments were mapped out as part of the investigation; these were compared in terms of environmental impact, regional planning and transport/economy and continuously presented in a dialog forum. The decision was preceded by intense discussions with the region that lasted several years. Our early and comprehensive involvement of the general public has been described as exemplary.

The so-called version IV was the version submitted to the regional planning process.

The benefits of version IV include shortening the travel time between Frankfurt and Fulda by 11 minutes and improving the local public transport offer.

Approval process for the Fehmarn Belt Fixed Link project

The Fehmarn Belt Fixed Link project is in the design and approval planning stage. The approval documentation for plan approval section 6 on Fehmarn was submitted to the EBA in April 2018. The next seven sections will be submitted by spring 2019. While the approval proceedings are ongoing, a report is being drafted for BMVI in preparation for the German Parliament's discussion of the demands of the region for additional noise remediation. Construction of a new link across the Fehmarn Sound is also being realized in connection with the Fehmarn Belt Fixed Link. The decision in favor of a preferred version will probably be made in the third quarter of 2019.

Implementation infrastructures for the Rhine-Ruhr-Express

The financing agreement with the Federal Government for the Düsseldorf electronic interlocking was signed in December 2018. The Federal Government and DB Group are together investing about € 330 million in the new command and control technology. The public hearing regarding plan approval section 2.1 Düsseldorf was held on September 25, 2018. Planning of performance phase 2 in Düsseldorf-Reisholz has commenced with the inclusion of Düsseldorf-Benrath as a stop in the Federal Transport Infrastructure Plan. Construction work on plan approval section 4.0 Mülheim has begun. The plan approval decision for plan approval section 1.2 (Leverkusen) was issued on October 8, 2018.

Relocation of the Hamburg-Altona long-distance train station

This project involves the replacement of the existing Hamburg-Altona terminus by a new construction at the Diebsteich site for long-distance and regional transport, including the construction of a new concourse building. The current S-Bahn (metro) station in Altona will remain. The new station will have six long-distance and two S-Bahn (metro) tracks.

In December 2017, the plan approval decision was given by the EBA. In January 2018, the immediate full execution was granted by the EBA. On August 15, 2018, the Higher Administrative Court (Oberverwaltungsgericht; OVG) Hamburg reinstated the suspensive effect of the complaint by the Transport Club of Germany Regional Union North e.V. (Verkehrsclub Deutschland Landesverband Nord e.V.) against the plan approval decision by the EBA for the Hamburg-Altona project. The decision of the OVG Hamburg is incontestable. As such, at the end of the main process, construction can neither be resumed, nor can the pending construction projects begin.

The OVG Hamburg decided that the motorail facilities available at the present station have not been sufficiently recognized in the plan approval decision. Currently, different scenarios to enable further realization of the project are being discussed with the project partners.

DB Netze Track business unit

Business model

DB Netze Track is Europe's number one rail infrastructure provider. More than one billion train-path kilometers are traveled each year on the tracks in Germany. The most important sources of income are revenues from train-path products, which constitute over 90% of total revenues. Train-path prices are established on a transparent basis by a train-path pricing system regulated by the BNetzA.

DB Netze Track is also responsible for managing infrastructure operations as well as for securing long-term infrastructure quality and availability and non-discriminatory access to train-paths and service facilities. This includes preparing timetables in close cooperation with customers, operations management, construction management and maintenance.

DB NETZE TRACK BUSINESS MODEL

Resources/inputs

Employees
About 47,000

Vehicles
726 maintenance vehicles

Networks and infrastructure
Rail network about 33,000 km in length, operation-critical facilities (tracks, switches, bridges, tunnels)

▼

Customer segments
- About 440 business customers (thereof more than 420 external customers)

Value proposition
- DB Netze Track provides non-discriminatory access to a safe, reliable rail network that is in line with requirements.

Customer access and retention
- Key account management
- Regional sales
- E-services

Key activities

Providing a safe, reliable infrastructure that is in line with requirements

Planning and operating networks

Operating trains

▼

Services/outputs

Train kilometers on track infrastructure
1.1 billion train-path km

▼

Outcomes

EBIT
€ 840 million

Customer satisfaction
SI of 64

Punctuality
92.9 %

Employee satisfaction
SI of 3.7

Track kilometers noise remediated in total
1,758 km

The cost structure is dependent on fixed costs. The rail network is one of the most important cost drivers. The use of resources for the operation and maintenance of infrastructure facilities is very much influenced by specific facility characteristics, requirements relating to operational opening hours and the degree of rationalization in operating business activities. As the dimensions of the infrastructure only change in the long term due to new construction or expansion projects or targeted dismantling, the optimal capacity utilization of the existing infrastructure is of major importance for economic success.

A high level of quality and availability for customers also calls for a forward-looking integrated capital expenditure and predictive maintenance strategy. Capacity utilization is measured by volume produced. In terms of relative network capacity utilization, this figure can be compared to track kilometers. To achieve further growth, it is important that new construction and expansion projects concentrate on removing bottlenecks and on the creation of additional capacities for growth in transport in the main corridors and metropolitan areas. The budgetary resources of public authorities, in particular the Federal Government, are of considerable relevance for the financing of replacement capital expenditures in the existing infrastructure, as well as for the financing of new construction and expansion projects. In this respect, integration of an entrepreneurial infrastructure into the Group structure is essential for enabling DB Group to continue making a contribution to the co-financing of these infrastructure measures.

Markets and strategy

The contributions made by the Federal Government to the infrastructure financing are particularly important to securing the competitiveness of rail as a mode of transport. A key tool here is the **LuFV** 🗋 **234 f.**

- **Economic** dimension: By developing infrastructure in line with customer and market requirements, we enable the entire rail transport sector to take advantage of opportunities for growth. Our vision places the focus on customers: “Together with our customers, we make rail the first choice.” This is how we make our contribution to the competitiveness of rail. We will achieve our vision through three key strategic fundamental points:
  - an increase in quality,
  - better control of capacity and
  - a simplification of the customer interface.

Capacity management is a particularly important factor for our network in terms of increasing customer satisfaction. Demand for passenger and, above all, freight transport has significantly increased over recent years, with infrastructure utilization also intensifying significantly. In addition to expansion and new constructions we are concentrating on other factors, such as more efficient use of service suspensions for the purposes of building activities, avoiding overburdening of the available capacities and reducing disruptions that cause unplanned extra burdens on capacity. In the mid to long term, we will particularly use digitalization of the infrastructure to achieve our goals. In addition to the **Digital Rail for Germany 71** program, which aims to generate up to 20% more capacity in the infrastructure through the envisaged long term roll-out of ETCS, conversion to digital interlockings and a digital rail operation, we are digitalizing processes, where sensible and necessary, in all of our added value stages. A fundamental part of implementing our vision is also the introduction of lean management in the organization. In the year under review, the first requirements for this have already been met. An example of its successful implementation is the standardization and digitalization of work preparation and performance in maintenance **(OPEX Standardization Production System Maintenance 75** project). The groundwork has been laid for a comprehensive rollout beginning January 2019, which, from around the middle of the year, will complement the initiatives already ongoing.

- **Social** dimension: One of the characteristics of the employee structure of DB Netze Track is its high average age. For this reason, we are currently working on a timely and successful recruitment campaign and the proactive qualification of new and existing employees. The focus here is particularly on digitalization and the interweaving of the digital and analog worlds that results from it – particularly in operating areas. It is very important to us to value the knowledge and skills of our employees in both of these worlds.
- **Environmental** dimension: In order to reduce specific station energy consumption and greenhouse gas emissions, DB Netze Track is focusing on effective efficiency measures, concentrating particularly on energy-intensive consumers **(switch heaters** green **no. 94,** track field lighting and interlockings).

General framework

BNetzA approves train-path prices for 2019

The competent ruling chamber approved the train-path prices for the schedule year 2018/2019 on January 17, 2018, including the proposed 1.8% increase of train-path prices in regional rail passenger transport. This follows from the statutory linking of the train-path price development to the growth rate of the regionalization funds. As set forth in the resolution to the 2018 train-path pricing system (TPS), the proposed train-path prices in long-distance rail passenger transport were increased as part of the approval and lowered in the rail freight transport by about € 28 million, respectively. DB Netz AG has appealed against this decision. The earliest an initial decision can be expected is the end of 2019.

BNetzA sets maximum limits on total costs for the working timetable period of 2019/2020

As part of regulating the incentivization of train-path prices, the BNetzA set the maximum limits for total costs of DB Netz AG and DB RegioNetz Infrastruktur GmbH for the working timetable period of 2019/2020 in a decision of August 13, 2018. The BNetzA granted recognition of the LuFV II on its first submission as a so-called qualified regulatory agreement. The minimum maintenance expenses specified there was included as a placeholder, as the actual relevant LuFV III is not yet available.

Incentive system not approved by the BNetzA

On August 31, 2018, the BNetzA did not approve the incentive system that DB Netz AG submitted as part of the rail network terms of usage (Schienennetz-Benutzungsbedingungen; SNB). The further development of the incentive system between the TOCs and DB Netz AG was originally intended to be introduced as part of the timetable change in December 2018. In comparison to the previous regulations, significantly higher payments would be levied for delays caused by construction sites, among other issues. However, an agreement regarding all the significant points of the incentive system in passenger transport was successfully reached as part of a market dialog on November 19, 2018. The changes to the SNB regarding the incentive system for rail passenger transport are still expected to come into effect in spring 2019 following the completion of the approval process by the BNetzA. In freight transport, no agreement has yet been reached. DB Netz AG has planned four customer events for 2019, in order to reach a collective agreement regarding the incentive system in rail freight transport to be introduced in December 2019.

Action plan for customer-friendly construction

In early June 2018, rail transport companies and associations submitted their “Round Table for Building Site Management” findings report to BMVI. The aim was to develop an action plan for more transport, improved quality and reliability in order to minimize the adverse effects on passengers and cargo customers wherever possible during the urgently needed modernization of the rail network. Specifically, the Construction Work Management Round Table recommended a total package comprising four key components: agreements between the Federal Government and DB Netz AG on customer-oriented construction, an incentive system between DB Netz AG and TOCs, improved risk distribution between public transport authorities and TOCs, and the optimization of construction processes and communication.

Digitalization and innovation

Rollout of drive-related switch diagnostics

In order to optimize the availability of switches, a digital remote diagnostic system is used to detect potential faults before they occur. The DIANA diagnostics platform can be used for preventive maintenance to remedy faults. This should make it possible to reduce drive-related switch defects by up to 50%. About 23,500 switches have been connected to DIANA since the end of 2018.

Environmental measures

Noise-based train-path pricing system supports refitting of freight cars

The noise-based train-path pricing system (lärmabhängiges Trassenpreissystem; LaTPS) currently provides for a surcharge of 5.5% on the regular train-path price for loud freight trains. Freight trains consisting of at least 90% cars with quiet brake shoes are exempt from the surcharge. In the working timetable period 2016/2017, about € 17 million was generated, which was used entirely to finance bonus payments to TOCs that use freight cars fitted with **quiet composite brake shoes** green. **no. 5.** In the year under review, we received and approved a total of 36,646 applications for program year 2017 in the LaTPS (2016: 25,643 applications) to promote the noise remediation of existing freight cars. A total of about € 8 million was paid as a bonus to the TOCs on the basis of the applications submitted (2016: € 4.4 million). The LaTPS will be in place until the end of 2020. The program is income-neutral for its entire duration.

Legal topics

Arbitration processes for the Rastatt Tunnel ongoing

Following the damage in the east tunnel of the Rastatt tunnel, preparations to reconstruct the tunnel have been underway since March 2018. At the same time, the mediation proceedings agreed between DB Group and ARGE Tunnel Rastatt are ongoing to clarify the cause of the damage during tunnel boring and thus who is responsible. A team of technical and legal experts is charged with investigating the causes and drafting a settlement proposal. However, the process is taking longer as further investigations are needed to clarify the causes of the damage. As a result, an extensive boring program was carried out, among other measures. The arbitration processes is still ongoing.

DB Netz AG concluded an agreement with ARGE Tunnel Rastatt on August 16, 2018 regarding further expansion of the undamaged west tunnel. In this agreement, both parties waived their right to terminate the agreement until the end of 2019 and it was determined that two possible paths to continue the work should be technically planned.

Other events

- With disruptions continuing on the Marsh railway (Marschbahn), we are working on a modernization concept. The main focus is a capital expenditure initiative in the superstructure to bring forward capital expenditures. To achieve this, we are raising the volume of capital expenditures over the next four years by € 53 million to nearly € 160 million.
- DB Netz AG has joined the Orient/East—Med European Rail Freight Corridor (RFC). The resulting cross-border transport axis stretches about 9,000 km from the North and Baltic Seas to the Aegean and Black Sea. The aim is to eliminate border hurdles and offer dependable and harmonized transport services, thus further strengthening rail freight transport beyond Europe’s borders.
- In order to properly maintain transport services, even during large international disruptions, DB Netz AG has worked with the Rhine-Alpine rail freight transport corridor to produce a handbook for international disruption management, and afterwards agreed on it with support from the European Commission with the sector. It was unanimously approved by the European infrastructure operators in May 2018. The handbook focuses on rapid processes to improve coordination and communication between infrastructure operators during international disruptions and the development and publication of international disruption scenarios across all European corridors, indicating all the relevant diversion routes and their technical parameters. This enables TOCs to prepare for diversions and to act quickly in the event of a disruption.

Development in the year under review

- Increased revenue from price and volume effects.
- Higher expenses, mainly for personnel and maintenance, hindered operating profit development.
- Gross capital expenditures increased on a high level.

The heavily utilized infrastructure and the high level of external interference led to a decrease in punctuality in the year under review.

Customer satisfaction also worsened. To assess this, about 240 customers are asked each year about their satisfaction with all of the services offered to them. Customers were particularly critical on infrastructure availability and construction works.

Train kilometers on track infrastructure increased primarily in the wake of higher demand from non-Group customers (especially in freight and regional transport) and from DB Long-Distance. Lower demand from intra-Group freight transport customers had the opposite effect.

However, economic development was modest overall. In particular, higher personnel and maintenance expenses exceeded the positive income development, meaning that the adjusted EBITDA was slightly below that of the previous year. Adjusted EBIT showed positive development due to lower depreciation.

- Total revenues developed positively as a consequence of increases in demand and price effects.
- Other operating income (+9.4%) increased, partly due to increased income from the disposal of property, plant and equipment (sale of real estate), and larger refund of expenses for projects and scrap.

Expenses recorded significant additional liabilities:

- Cost of materials (+5.2%) rose significantly as a result of increased expenses for quality measures, remediation of damage caused by weather and higher expenses for preventative measures against weather risks.
- Personnel expenses (+6.5%) increased as a result of collective bargaining agreements and the higher number of employees.
- The increase in other operational expenses (+4.5%) resulted, inter alia, from an increase in services, IT and rent as a result of volume effects. In addition, higher project expenses and price effects had an impact.
- Depreciation (−24.0%) decreased significantly, primarily due to the reassessment of economic useful lives.

			Change		
DB Netze Track	**2018**	2017	absolute	%	2016
Punctuality DB Group (rail) in Germany (%)	93.4	93.9	–	–	94.3
Punctuality (rail) in Germany [1] (%)	92.9	93.6	–	–	93.9
Customer satisfaction (SI)	64	67	–	–	69
Length of line operated as of Dec 31 (km)	33,299	33,348	-49	-0.1	33,241
Train kilometers on track infrastructure (million train-path km)	1,084	1,072	+12	+1.1	1,066
thereof non-Group railways	349.2	331.3	+17.9	+5.4	321.9
Share of non-Group railways (%)	32.2	30.9	–	–	30.2
Total revenues (€ million)	5,511	5,364	+147	+2.7	5,228
External revenues (€ million)	1,559	1,522	+37	+2.4	1,408
Share of total revenues (%)	28.3	28.4	–	–	26.9
EBITDA adjusted (€ million)	1,446	1,484	-38	-2.6	1,484
EBIT adjusted (€ million)	840	687	+153	+22.3	561
Operating income after interest (€ million)	634	442	+192	+43.4	311
ROCE (%)	4.6	3.8	–	–	3.1
Capital employed as of Dec 31 (€ million)	18,172	17,866	+306	+1.7	17,821
Net financial debt as of Dec 31 (€ million)	9,499	9,386	+113	+1.2	10,396
Redemption coverage (%)	13.9	14.0	–	–	12.7
Gross capital expenditures (€ million)	6,901	6,601	+300	+4.5	6,226
Net capital expenditures (€ million)	564	660	-96	-14.5	688
Employees as of Dec 31 (FTE)	46,969	45,375	+1,594	+3.5	43,974
Employee satisfaction (SI)	3.7	–	–	–	3.7
Employee satisfaction – follow-up workshop implementation rate (%)	–	99.1	–	–	–
Share of women in Germany as of Dec 31 (%)	19.2	18.8	–	–	18.6
Track kilometers noise remediated in total as of Dec 31 (km)	1,758	1,701	+57	+3.4	1,598

[1] Non-Group and DB intra-Group TOCs.

Operating income after interest also improved, further supported by lower interest expenses, which led to an improvement in net operating interest.

ROCE improved in the wake of positive EBIT development, despite being burdened by a slight increase in capital employed.

Net financial debt slightly exceeded the value at the end of the previous year, inter alia as a result of negative working capital effects. As a result, redemption coverage decreased slightly.

The volume of capital expenditures in the existing network increased significantly. As a consequence of the increase in **investment grants** **108 f.**, net capital expenditures dropped.

The number of employees increased significantly because of strategies to cover demand and ensure succession planning, particularly in the areas of maintenance, construction projects and operations.

Employee satisfaction is measured every two years. The satisfaction index remained stable.

The share of women rose slightly during the year under review.

Within the framework of the **noise remediation program** **92 f.** we also carried out noise remediation measures on additional lines in the year under review.

DB Netze Stations business unit

Business model

DB Netze Stations is the largest station operator in Europe. In addition to the core business, the development and operation of stations, the business unit offers a variety of mobility-oriented services in stations. With over 0.9 million m² of leasing area, we are among Germany's largest commercial landlords.

Each day, more than 410,000 trains from 100 TOCs with more than 20 million passengers and visitors in total use our stations. We set particular priorities in the areas of service, safety and cleanliness so that we can offer customers a high degree of quality. Our station managers also work hard on-site to ensure seamless operations.

DB NETZE STATIONS BUSINESS MODEL

Resources/inputs

Employees
About 5,800

Networks and infrastructure
About 5,400 stations, about 700 stops with marketing, about 9,500 platforms, about 6,100 passenger information facilities, about 6,700 dynamic information displays, about 2,300 elevators, about 1,000 escalators, about 300 parking garages and parking spaces

▼

Customer segments
- Retail customers
- Business customers, particularly TOCs, tenants and mobility service providers
- Contracting organizations

Value proposition
- DB Netze Stations provides attractive stations and concourse buildings with a range of mobility services and retail spaces.

Customer access and retention
- Key account management
- Regional sales
- Customer services at the station

Key activities

Operating stations

Leasing out commercial space

Providing reliable infrastructure

▼ ▼

Services/outputs

Station stops
151 million

Rented space
over 0.9 million m²

Outcomes

EBIT adjusted
€ 221 million

Employee satisfaction
SI of 3.7

Customer satisfaction
Traffic station (passengers/visitors) SI of 68, traffic station (TOCs and public transport authorities) SI of 61, tenants SI of 76

Facilities quality
Grade: 2.88

Primary energy consumption
-20.5 % compared to 2010 (absolute)

Our station portfolio has a particularly wide geographical coverage. The infrastructure required is characterized by high fixed costs. Maintaining facilities and building infrastructure in line with requirements is crucial to our commercial success.

Revenues are generated from station stops (regulated, about 70% share) in the stations and from leasing out commercial space (not regulated). Our most important regulatory partners are the BNetzA and the EBA.

Markets and strategy

We are facing a period of significant change. The mobility market is growing and changing. Digital solutions are massively accelerating this development. New forms of mobility are emerging and car traffic is increasingly being challenged. Social structures are undergoing changes: the age gap is continuing to expand; cities are growing and stretching their infrastructures to their limits; rural areas are shrinking but must nevertheless maintain their access to mobility. In order to co-create the future, we have further developed our strategy in key areas. By taking this new direction, we are actively contributing to the three dimensions of DB2020+:

- **Economic** dimension: The core of our strategy is the development of our stations to increase passenger growth and visitor numbers. For this purpose, we intend to improve the customer experience at our stations and also impact the area around the stations. In addition to expanding mobility hubs, we are creating pleasant amenities and increasing the number of offers and services at our stations. In the first step, we will develop specific designs for 16 future stations and trial them in 2019/2020. Free WiFi access at large stations and comfortable waiting areas already allow passengers to make the most of their waiting times. We are creating additional high-performance WiFi access points and are developing new digital services for our customers. Through new marketing concepts such as Station Food and the expansion of our branch mix, we are creating attractive consumption and retail offers. By continuously optimizing our cleaning and maintenance concepts and increasing the budget for it, we are improving the baseline quality of our stations and adjusting the capacity of stations with bottlenecks caused by high volumes. We are also continuing to work towards the quality initiatives set out as part of the Railway of the Future. In a special program during the year under review, we also redesigned 30 heavily frequented S-Bahn (metro) stations and improved the amenities for our customers.
- **Social** dimension: We work continuously on further developing our corporate culture and the satisfaction of our employees. Our guidelines in this effort are the five elements of customer focus, cooperation, leadership, responsibility and performance. At the same time, a performance culture, in addition to involving lofty goals and being able to accept criticism, includes an appreciation for the contribution that every employee makes. A common target culture is created in dialog formats and through management training. We focus on tools that promote continuing vocational training, to offer attractive development opportunities for high performers and those with high potential.
- **Environmental** dimension: From 2019, our top 15 stations will operate using eco-power. By 2030, we intend to reduce absolute primary energy use by 30% compared to 2010 and 15% compared to 2017. As an operator of a complex portfolio of facilities we are committed to using environmentally friendly facilities and building technologies. When modernizing old buildings or constructing new ones, we therefore investigate the use of **innovative lighting technologies** green **no. 50,** geothermal energy production, combined heat and power generation and **photovoltaic systems** green **no. 30** at all sites.

General framework

BNetzA approves station prices 2019

On July 10, 2018, the competent ruling chamber of the BNetzA approved the station prices of DB Station & Service AG as applied for. During the audit of the cost basis, there was a slight reduction, but this did not have any impact on the station price.

Development of infrastructure

Station campaign: Record capital expenditures in stations

It is planned that between 2019 and 2023, € 8.5 billion will be spent for the modernization and maintenance of stations. In order to modernize station infrastructure, particularly in order to improve accessibility, the Federal Government and Federal states are making significant funds available. The extensive projects include the transformation and redesign of the Dortmund, Frankfurt am Main, Munich and Stuttgart stations. Large capital expenditures are also being made in many smaller and mid-sized stations, for example in new escalators, elevators, information boards for passengers, benches, signage systems, floors and ramps for accessibility. In the meantime, 78% of the 5,400 passenger stations are step-free – meaning that we have already reached 84% of passengers. For those who are blind or visually impaired, more than 5,100 of the 9,200 platforms are already fitted with tactile, i.e. touch-based, signage systems on the floor of the platforms. Beyond that, all newly installed elevators provide tactile controls and a speech module.

Construction works in 2018 are summarized in the **Construction Project Map 🗋151.**

Regeneration of S-Bahn (metro) tunnel stations

Between now and 2020, we are spending a sum of several hundred million for the renovation of 27 underground metro stations in Frankfurt am Main, Hamburg, Munich and Stuttgart, which see a daily footfall of more than two million passengers. In total, about € 48 million will be spent to refresh the tunnel stations in the Hamburg S-Bahn (metro) network.

Improvement of amenities at stations

We have launched and completed numerous projects to improve the quality of our stations. In the year under review, a total of € 23 million was spent for measures to improve customer satisfaction. Of that, € 13 million went into individual actions. We spent about € 10 million for 30 highly frequented S-Bahn (metro) stations and in measures to upgrade their design.

Platform development program progressing

In August 2018, progress was made on the modernization program for the stations in the state of Schleswig-Holstein. Two framework agreements set out the actions and their financing for the next seven years. In total, 41 stations will be fully or partially modernized, including the construction of seven new train stations. The total cost of all the modernization measures set out in the agreement, including planning services, is about € 60 million. Half of the costs will be funded by the state of Schleswig-Holstein and half by Federal funds and DB funds. The program is also running in other Federal states with varying scopes.

Digitalization and innovation

Passenger information of the future

“Passenger information of the future” is the largest software development project for DB Netze stations to date. IRIS+, the new IT system, will allow information from the passenger information platform, the so-called “single point of truth” for passenger information, to be processed centrally. The impact of “Passenger information of the future” will be noticeable at stations through optimized layouts of existing displays. By the end of the year under review, 35 stations in Saxony had already been successfully fitted with this new system. In the long term – although already noticeable at some stations – the displays will be shown in various formats using a new generation of digital monitors. These will also make it possible to improve how new content, such as train delay updates and specific information during major disruptions, is displayed.

At stations, “Passenger information of the future” will be audibly noticeable thanks to the text-to-speech technology, which will enable more fluent, flexible announcements. DB employees and customer associations were involved in selecting the “new voice of the station.”

Piloting of frequency monitoring and crowd flow analysis

In the coming years, the number of passengers will continue to rise. In order to better understand what impact these increases will have on station operations, new frequency monitoring and crowd flow analysis technology is currently being tested. The first pilot was tested at Stuttgart central station in the year under review. By digitally counting passengers, we intend to recognize peak periods more precisely in future and to counteract operational bottlenecks more effectively, for example by adjusting passenger direction strategies.

Upgrading of facilities technology

DB Netze Stations operates many technical facilities at the stations, which require data connections to central systems. A large number of these facilities have so far been using modem and ISDN connections to the Group’s internal telephone network and to the public telephone network. As part of the TOPKO program, the facilities concerned will be upgraded with improved IP technology. In the year under review, the upgrades included the complete replacement of the emergency call systems of about 2,400 elevators at stations. Further conversions included fire alarm systems, building automation and emergency call phones. There was a constant particular focus on maintaining the functionality of facilities by minimizing the downtime required for conversion. Migrations to the new technology are expected to be completed in 2019. The “IP at stations” project (newly connecting about 1,000 stations to broadband IP access points) laid the groundwork for future digitalization projects.

New DB Accessible app

The DB Accessible (DB Barrierfrei) app provides digital journey support first and foremost to those with mobility and sensory impairments, but also to all other passengers. It provides up-to-date information about train services at all German stations. The progress of long-distance trains can also be followed in real time and users receive important information about changes to their journey as push notifications on their smartphones. In addition, the app provides up-to-date information about whether elevators and escalators are functioning. The app is designed to be fully accessible and can therefore also be used by those with vision or hearing impairments. Information is provided audibly and visually.

Other events

- The gastronomy joint venture Station Food opened its second food court in the Berlin central station at the beginning of October 2018.
- The successful pilot of platform coordinators (taking on operational activities for TOCs/railway infrastructure companies) in the Hanover and Frankfurt am Main central stations ended on December 31, 2018 and will be continued as a regular product. The offer was also expanded to two other stations (Dortmund and Mannheim central stations).
- During major disruptions, our operative service employees at 14 hub stations will in future be supported by on-call service employees from across the business units. Through this, we intend to ensure that we are providing the best possible service to our passengers, even in exceptional circumstances.

Development in the year under review

- Increased demand from additional traffic and increased schedule frequencies.
- Burdens on profits by cost increases (particularly in personnel and quality improvement measures).
- Leasing business stable.

Facilities quality is assessed locally and is determined on the basis of a detailed calculation and weighting algorithm in accordance with the provisions of the **LuFV II** **234 f.** Facilities quality remained stable at a good level.

Customer satisfaction worsened slightly. Lower scores, particularly on the issues of information about construction work, equipment and status of stations and visual and audio information should be noted. To assess customer satisfaction, about 27,000 passengers are asked each year, in two waves, about their satisfaction with the stations, and about 60 tenants and 90 public transport authorities are surveyed annually.

Performance development was marked by a slight increase in the number of station stops. This was mainly due to increased schedule frequencies and additional traffic in regional transport. In particular, the higher demand was driven by non-Group railways.

			Change		
DB Netze Stations	**2018**	2017	absolute	%	2016
Stations	5,368	5,365	+3	+0.1	5,367
Facilities quality (grade)	2.88 1)	2.89 1)	–	–	2.92
Customer satisfaction, traffic station (passengers/visitors) (SI)	68	69	–	–	69
Customer satisfaction, traffic station (TOCs and transport authorities) (SI)	61	62	–	–	62
Customer satisfaction, tenants (SI)	76	78	–	–	78
Station stops (million)	150.9	150.0	+0.9	+0.6	149.4
thereof non-Group railways	36.8	35.9	+0.9	+2.5	35.3
Total revenues (€ million)	1,314	1,265	+49	+3.9	1,233
thereof station revenues (€ million)	880	851	+29	+3.4	831
thereof rental (€ million)	391	384	+7	+1.8	377
External revenues (€ million)	569	540	+29	+5.4	519
EBITDA adjusted (€ million)	362	372	-10	-2.7	359
EBIT adjusted (€ million)	221	233	-12	-5.2	221
ROCE (%)	8.0	8.4	–	–	7.9
Capital employed as of Dec 31 (€ million)	2,758	2,766	-8	-0.3	2,777
Net financial debt as of Dec 31 (€ million)	1,260	1,268	-8	-0.6	1,257
Redemption coverage (%)	22.7	23.0	–	–	22.0
Gross capital expenditures (€ million)	883	709	+174	+24.5	584
Net capital expenditures (€ million)	164	103	+61	+59.2	117
Employees as of Dec 31 (FTE)	5,804	5,463	+341	+6.2	5,093
Employee satisfaction (SI)	3.7	–	–	–	3.7
Employee satisfaction – follow-up workshop implementation rate (%)	–	97.8	–	–	–
Share of women in Germany as of Dec 31 (%)	45.2	46.2	–	–	47.3
Absolute primary energy consumption (stations) compared to 2010 (%)	-20.5	-17.1	–	–	-16.8

1) Preliminary figure.

The economic development was negative: significant expense increases, particularly for additional quality-improvement measures and in the area of personnel, could not be completely compensated by growth on the income side, meaning that the operating profit figures decreased.

- The rise in revenues is attributable to higher station revenues primarily as a result of prices as well as higher revenues from rental and leasing. Improved performance also supported station revenues. The development of external revenues reflects the growing market share of non-Group railways.
- Other operating income (+21.8%) also grew strongly, primarily as a result of higher investment grants and increased income from selling real estate.

On the expenses side there were significant additional charges:

- Cost of materials (+10.2%) rose just as significantly, particularly as a result of additional quality improvement measures and higher expenses for maintenance. Lower energy expenses partially compensated this.
- Personnel expenses (+8.0%) rose sharply as a result of collective bargaining agreements and a larger number of employees.
- The increase in other operating expenses (+9.7) was partially due to increased IT and communication services, also resulting partially from the larger number of employees. Alongside rental expenses, disposals of property, plant and equipment also increased.
- Depreciation increased (+1.4%) in the wake of the larger volume of capital expenditures.

Declining EBIT development led to a worsening of ROCE, as capital employed continued to develop in an almost stable manner.

Net financial debt decreased slightly, mainly because of working capital effects.

Redemption coverage worsened, primarily as a result of lower operating cash flows caused by the profit development.

The higher capital expenditures were focused primarily on renovating existing stations and quality-improvement projects.

The number of employees rose principally because of staff increases in the areas of construction and facilities management.

Employee satisfaction is measured every two years. The satisfaction index remained stable.

The share of women decreased slightly.

With the further reduction of the primary energy consumption of the stations in comparison to 2010, for example through the use of energy saving technologies, the positive trend of the past years is continuing.

DB Netze Energy business unit

Business model

DB Netze Energy provides customer-oriented and environmentally friendly products and services in the areas of traction current, diesel and stationary energy. As an integrated energy company, DB Netze Energy's offer in Germany includes all the standard energy products in the field surrounding traction energy and stationary energy. These include traction current and diesel for rail transport, as well as electricity, gas and heat for stations and other DB Group properties. Furthermore, DB Netze Energy supplies industrial customers throughout Germany with a broad array of electricity and gas products. Private customers in Germany can also be provided with **certified eco-power** green. **no 4.** The range of services is rounded out with energy economics-related consulting and technical services.

The traction current grid is the technical backbone of traction power provision in Germany, for which DB Netze Energy as the network operator ensures a high level of provision reliability. The required electricity is produced in traction current plants and fed into the grid through **converters** green. **no. 99**/transformers. In order to provide for diesel traction units, DB Netze Energy offers a network of filling stations across Germany, which can also be partially used by road vehicles. In addition, DB Netze Energy operates 50 Hz medium-voltage networks to supply energy to stations and provides **a charging infrastructure for electric vehicles** green. **no. 36** on the road. The infrastructure operated by DB Netze Energy is to a high degree and in varying forms subject to regulation by the BNetzA.

Markets and strategy

DB Netze Energy is responsible for economically and ecologically efficient energy procurement and for reliable energy provision for TOCs. DB Netze Energy also has a high-performance infrastructure for the provision of electricity and diesel to mobile and stationary consumers. "Departure to the DB energy transition" (Aufbruch zur DB EnergieWende), the business unit strategy further developed in the year under review, enabled DB Netze Energy to focus on achieving DB Group's climate goals. In terms of ecologically sustainable energy provision, existing fossil

DB NETZE ENERGY BUSINESS MODEL

Resources/inputs

Employees
About 1,700

Networks and infrastructure
About 7,900 km traction current grid, 1,770 transformer stations, 197 gas stations

Additional production factors
51 power plants/converters/transformers

Customer segments

- Business customers
- Retail customers

Value proposition

- DB Netze Energy provides customer-oriented, environmentally friendly access to traction current and diesel products as well as stationary energies.

Customer access and retention

- Key account management
- Regional sales
- Online customer platforms

Key activities

Providing reliable infrastructure

Procuring energy

Selling energy

Offering energy economics-related and technical services

Services/outputs

Traction current (16.7 Hz and direct current)
8,245 GWh

Stationary energy (50 Hz and 16.7 Hz)
18,196 GWh

Diesel fuel
430 million l

Outcomes

EBIT adjusted
€ 21 million

Customer satisfaction
SI of 78

Supply reliability
99.99 %

Employee satisfaction
SI of 3.8

Share of renewable energies in the DB traction current mix
57.2 %

fuel power plant contracts will be replaced by renewable energies in future. At the same time, the replacement of diesel on the rails and the road will continue and energy efficiency in DB Group properties and real estate will be improved. Digitalization projects represent a further key strategic point in successfully managing the increasingly complex overall system of energy procurement with an ongoing high supply reliability. The third central strategic direction is ensuring economic value creation in an environment that remains challenging.

- **Economic** dimension: The supply reliability of the traction current grid managed by DB Netze Energy is high and consistently above the target value agreed with the Federal Government in the **LuFV** **234f.** This level of quality is also expressed in high customer satisfaction. DB Netze Energy deals with the prices of raw material on the energy market, which continue to be volatile, by taking a structured approach to energy procurement though effective management of energy ancillary costs and a reliability strategy determined within DB Group.
- **Social** dimension: Transparent information and communication are the basis of the cultural development process and a high level of employee satisfaction at DB Netze Energy. Our employees are given the opportunity to sign up to personal further development programs and to introduce their own ideas on innovation. Beyond that, channels have been introduced that allow them to participate in designing strategic themes.

- **Environmental** dimension: As the energy provider for TOCs in Germany, DB Netze Energy is implementing the climate target of DB Group in procurement and supply, thus making a fundamental contribution to the energy transition on the rails and in the entire transport sector. DB Netze Energy will pursue our vision of meeting 100% of our traction current requirements with CO_2-free renewable energies by 2050. Customers today are already able to take advantage of green products based entirely on renewable energies. In addition, DB Netze Energy is initiating and supporting measures to improve energy efficiency in DB Group. The services for efficiency measures and reduction in greenhouse gases are therefore provided not only to TOCs, but also to customers from industry and commerce. Through the wide-ranging offer of services surrounding the **charging infrastructure for electric mobility** green **no. 36,** DB Netze Energy is also making a contribution to the transition in road transport.

General framework

The BNetzA has to redetermine the equity yield rate in the electricity grid

On March 22, 2018, the Düsseldorf Higher Regional Court decided that the BNetzA had a faulty approach in its method to determine the equity yield rate. About 1,100 municipal utilities and network operators, including DB Netze Energy, had lodged a complaint against the permitted equity yield rate which BNetzA had reduced. The court did not provide any guidelines regarding the new rate. BNetzA has appealed against the decision to the Federal Supreme Court.

Further development of grid access model for traction current

DB Netze Energy has been providing network access to the traction current grid since 2014. In the year under review, we took significant steps to make process-related simplifications to the network access model. The corresponding suggestions are now the subject of a market consultation by the BNetzA that began in October 2018, which should lead to a formal determination by the Federal agency. This disposition will make the network access model binding and provide a stable basis for its IT-based implementation. Apart from that, the development of the market share of non-Group suppliers shows that there is functional competition in the traction current grid: in the year under review, some 70% of the final consumption of non-Group railways was provided by other suppliers.

Digitalization and innovation

Charging infrastructure for electric mobility

DB Netze Energy participated in the charging at the station project under the BMVI's Federal program on charging infrastructure for electric vehicles in Germany. A publicly accessible quick-charging infrastructure with eco-power has been set up at the Frankfurt am Main, Hanau, Regensburg and Düsseldorf stations. Thanks to participation in the roaming association, customers of other e-mobility providers can also use the charging infrastructure. With this project, we are supporting the further development of the intermodal interface between road and rail.

Development in the year under review

- Declining demand for traction current – industrial customer business growing.
- Significant price increases on the primary energy markets, which can only be partially passed on to customers.
- Increased capital expenditures in new construction and renovation of traction current lines.

Supply reliability remained at its previous high level.

We surveyed about 250 customers regarding customer satisfaction. Following the change in our data collection cycle, there was no measurement of customer satisfaction in the previous year. Customer satisfaction in the year under review was again high. The reduction in comparison to 2016 can be explained by changes in the area of traction current.

Development declined in volume terms:

- Sales of traction current declined slightly. The lower demand from intra-Group customers, particularly from freight transport, was largely compensated by increased demand from non-Group customers.
- The traction current volume passed through on behalf of non-Group customers decreased primarily because of the non-recurrence of one-off effects of the previous year.
- In stationary energy, the sales volume decreased. The key factor here was the reduced opportunities for optimization on the electricity market. On the opposite side, business with industrial customers increased.
- The declining demand for diesel fuels is attributable to the development of intra-Group customers in freight and regional passenger transport.

The economic development declined significantly. Sharp increases in purchase prices on the primary energy markets could only be partially compensated by revenue growth, meaning that the operating profit figures worsened.

- Revenues were higher than in the previous year as a result of price and volume increases in the industrial customer business, along with higher sales prices for mineral oil products. Decreased demand from intra-Group customers and declining sales volumes from the transmission of traction energy was therefore more than compensated.
- The significant increase in other operational income (+58.2%) resulted from positive effects from the release of provisions and increased insurance income.

On the expenses side, higher energy purchase prices was the key factor:

- Cost of materials (+6.5%) rose significantly. Negative effects from increased primary energy prices for electricity and mineral oil products were only marginally compensated by decreased purchase volumes.
- Personnel expenses (+3.3%) increased primarily as a result of collective bargaining agreements.
- The decrease in other operating expenses (–13.3%) can first and foremost be explained by changes to presentation not affecting profits. Cost of materials worsened by a counteracting effect.
- The decrease in depreciation (–4.3%) resulted from the adjustment of the balance sheet useful life of individual energy production facilities.

ROCE worsened significantly as a result of a disproportionate decrease in operating profit in comparison to capital employed. The decrease in capital employed is explained particularly by temporarily increased liabilities for energy procurement.

The significant decrease in redemption coverage resulted primarily from operating cash flow that was in sharp decline. The slightly lower net financial debt was supportive.

Increased capital expenditures in building new traction current lines and modernizing existing ones resulted in an increase in volume of capital expenditures.

The number of employees increased slightly.

Employee satisfaction is measured every two years. The satisfaction index remained stable.

The share of women remained unchanged.

The share of renewable energies in the **DB traction current mix** 🗋**90 f.** increased significantly.

			Change		
DB Netze Energy	**2018**	2017	absolute	%	2016
Supply reliability (%)	99.99 1)	99.99 1)	–	–	99.99
Customer satisfaction 2) (SI)	78	–	–	–	80
Customer satisfaction, traction current and diesel 2) (SI)	75	–	–	–	80
Customer satisfaction, electricity and gas plus (intra-Group customers) 2) (SI)	79	–	–	–	79
Customer satisfaction, electricity and gas plus (non-Group customers) 2) (SI)	81	–	–	–	82
Traction current (16.7 Hz and direct current) (GWh)	8,245	8,284	–39	–0.5	8,902
Traction current pass-through (16.7 Hz) (GWh)	1,576	1,906	–330	–17.3	1,419
Stationary energy (50 Hz and 16.7 Hz) (GWh)	18,196	19,331	–1,135	–5.9	17,589
Diesel fuel (million l)	429.6	436.1	–6.5	–1.5	433.7
Total revenues (€ million)	2,850	2,794	+56	+2.0	2,779
External revenues (€ million)	1,350	1,301	+49	+3.8	1,194
EBITDA adjusted (€ million)	87	141	–54	–38.3	197
EBIT adjusted (€ million)	21	72	–51	–70.8	126
ROCE (%)	2.0	6.7	–	–	14.3
Capital employed as of Dec 31 (€ million)	1,053	1,081	–28	–2.6	878
Net financial debt as of Dec 31 (€ million)	623	630	–7	–1.1	390
Redemption coverage (%)	9.8	17.7	–	–	32.9
Gross capital expenditures (€ million)	187	177	+10	+5.6	174
Net capital expenditures (€ million)	65	53	+12	+22.6	52
Employees as of Dec 31 (FTE)	1,734	1,721	+13	+0.8	1,736
Employee satisfaction (SI)	3.8	–	–	–	3.8
Employee satisfaction – follow-up workshop implementation rate (%)	–	100	–	–	–
Share of women in Germany as of Dec 31 (%)	13.8	13.5	–	–	13.3
Share of renewable energies in the DB traction current mix (%)	57.2	44.0	–	–	42.0

1) Preliminary figure (not rounded).

2) No survey conducted in 2017.

Subsidiaries/other

DB Engineering & Consulting

DB E&C expertise is in demand worldwide:

- DB E&C has been involved in planning the traffic systems and structural engineering for the TEN project Karlsruhe—Basel. The contract was expanded in the year under review to include equipment technical services. Through this, DB E&C is delivering a complete planning service including plan and acceptance testing and construction oversight for the plan approval section Haltingen—Weil am Rhein and Basel.
- Since June 2018, DB E&C has been tasked with overseeing the construction of platform facilities including passenger underpasses as part of the modernization of Dortmund central station. This includes construction management planning services, welding and environmental supervision, and health and safety coordination.
- In January 2018, DB E&C signed a consultancy agreement for “Mumbai Metro Line 4” in Mumbai, India. The 32.5 km line, with 32 stations, is planned to carry some 335,000 passengers every day in 2031. As general consultant, DB E&C is managing a consortium with Louis Berger and Hill International. After Bhopal and Indore, this is now the third major metro project that DB E&C has acquired in India in just a few months.
- Together with Yenon, DB E&C won the tender for planning and supervising the construction of the 28 km local “Purple Line” in Tel Aviv, Israel. The experts are also providing services to integrate a further local line (“Red Line,” 24 km) into the overall system for the CRTG-CREEG joint venture. Furthermore, DB E&C is advising ISR, Israel’s state-owned railway company, on its electrification program, on defining standards and on procuring rolling stock.

Digitalization and innovation

IBN-InfraTool provides efficient project development through digitalization

Managing commissioning requires the bundling of technical, organizational and schedule-related factors of an infrastructure project and ensures the conditions are met for safe, plan-compliant and punctual commissioning.The IBN-InfraTool supports commissioning management with structured data and document collection, management and assessment, smart connections, completeness and plausibility tests, and the automated generation of reports and applications.

Development in the year under review

- Personnel expenses increased as a result of collective bargaining agreements and a higher number of employees.
- Optimization of the service companies.
- Digitalization and Group projects advanced.

			Change	
Subsidiaries/other	**2018**	2017	absolute	%
Total revenues (€ million)	4,990	4,854	+136	+2.8
External revenues (€ million)	573	627	-54	-8.6
EBITDA adjusted (€ million)	-200	-136	-64	+47.1
EBIT adjusted (€ million)	-453	-392	-61	+15.6
Gross capital expenditures (€ million)	511	358	+153	+42.7
Net capital expenditures (€ million)	508	357	+151	+42.3
Employees as of Dec 31 (FTE)	53,877	51,937	+1,940	+3.7

The area Subsidiaries/other encompasses the governance functions (such as corporate development, finance and treasury, and Human Resources) and the dependent administrative service units (such as Shared Service Center accounting and HR services) of the holding company DB AG. This segment also bundles the legally independent administrative service units within DB Group (such as DB Temporary Work and DB JobService) and the independent operating service units (such as DB Vehicle Maintenance and DB Systel) which provide services to several DB Group business units.

The increase in total revenues resulted primarily from higher revenues generated with intra-Group customers, including in connection with an increased IT project business at DB Systel, projects in the area of construction works in infrastructure at DB Bahnbau, and for security and cleaning services. There was a counteracting effect partially from the decrease in construction and project business at DB Bahnbau with non-Group customers.

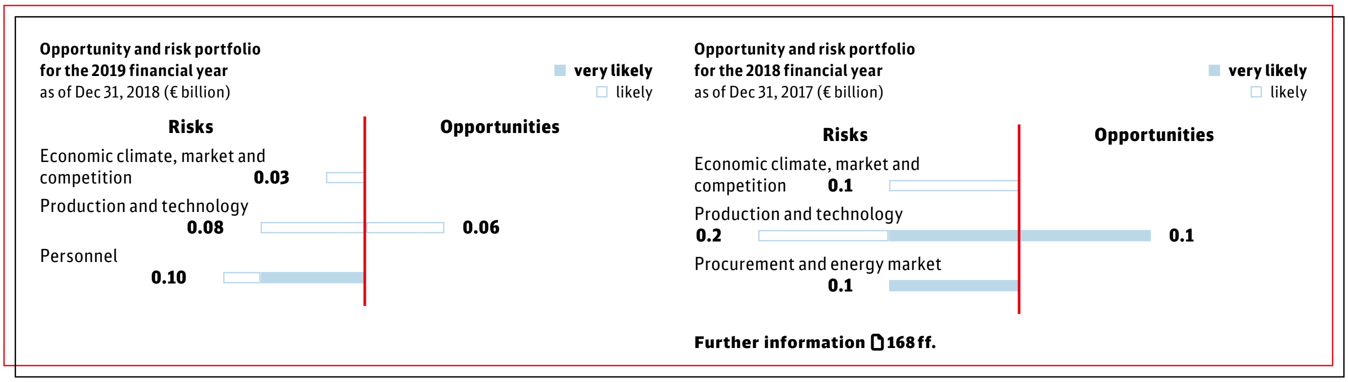
The decrease in operating profit came about primarily because of collective bargaining effects in personnel expenses, an increase in IT services expenses and project costs as a result of measures to improve reliability and product quality.

Higher capital expenditures resulted inter alia from contract extensions for two rental properties which are treated as finance leases. Beyond that, capital expenditures for Group projects increased, including in the area of digitalization and as a consequence of the purchase of construction vehicles at DB Bahnbau.

The number of employees increased, partly as a result of additional recruitment for Group projects and service commissions and the increase in in-house production volumes, especially at DB E&C, DB Systel, DB Services, DB Vehicle Maintenance and DB Security.

Opportunity and risk report

ASSESSMENT OF RISK POSITION BY CATEGORIES



Opportunity and risk management within DB Group

Opportunity and risk management in DB Group comprises the systematic identification, assessment and management of opportunities and risks. The primary objective of opportunity and risk management is to ensure the long-term existence of DB Group.

The principles of opportunity and risk management are laid down by Group management and implemented on a Group-wide basis. As part of our early-warning system, opportunity and risk reports are submitted to the Management Board and the Supervisory Board of DB AG three times a year. Major risks occurring outside of this reporting cycle must be reported immediately. Planned acquisitions are subject to additional specific monitoring.

Our risk management system (RMS) maps all of the opportunities and risks in an opportunity and risk portfolio and also individually in detail, factoring in materiality thresholds. The opportunities and risks considered within the risk management report are categorized and classified according to probability of occurrence. Together with possible consequences, the analysis also takes into account the starting position and the cost of countermeasures. In organizational terms, Group controlling is the central coordination point for our opportunity and risk management.

Our strategic opportunity and risk management efforts are mainly derived from the targets and strategies of our business units. Operational management personnel in the business units are directly responsible primarily for the early and regular identification, analysis and management of strategic opportunities and risks. These activities are an integral element of the Group-wide planning and controlling systems. We focus intensely on detailed analyses of our markets and competitors, market scenarios, relevant cost drivers and critical factors for success, including those within our political and regulatory environment. Concrete opportunities for specific business units are identified and analyzed from these.

DB Group's business environment is in a state of constant change. Only if we understand the change, we can actively shape it. We use DB.Trend.Radar to monitor the external developments most important to DB Group so that we can take advantage of opportunities and react to risks in good time. The focus is on the issue of how changes in society, politics, technology and the global economy affect our markets. The individual topics are all highly interconnected and of great importance for the future of DB Group. DB.Trend.Radar helps DB Group to focus its business operations on the future and actively make use of opportunities.

In conjunction with Group financing, with its strict focus on the operating business, Group Treasury is responsible for limiting and monitoring the resulting credit, market price and liquidity risks. The centralized handling of the relevant transactions (money market, securities, foreign exchange and derivative transactions) means that potential risks can be managed and limited centrally. Group Treasury is organized in line with the appropriate risk control and management system minimum requirements for banks (Mindestanforderungen an das Risikomanagement; MaRisk), which means that it complies with the resulting criteria of the Act on Supervision and Transparency in the Corporate Sector (Gesetze zur Kontrolle und Transparenz im Unternehmensbereich; KonTraG).

Key characteristics of ICS and RMS with regard to the Group accounting process

Our RMS is complemented by a Group-wide internal control system (ICS) that also includes the accounting-related processes. To the extent that is deemed to be appropriate, the components of our ICS take into account the principles published by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) called the "Internal Control – Integrated Framework" in its revised version from 2013. On that basis, our accounting-related ICS is a continuous process based on basic control mechanisms, such as system-based and manual reconciliations, the separation and clear definition of functions as well as the monitoring of compliance and further development of Group-wide guidelines and special work instructions.

The accounting-related control mechanisms we use beyond the instruments outlined above include standardized reporting throughout DB Group and the regular updating of the relevant accounting directives and accounting-related systems.

Subject to a binding schedule, business transactions of the accounting-relevant units are processed in line with IFRS principles and in compliance with Group-wide, uniform procedures. These are then transmitted to the centralized consolidation system.

The auditing activities of the intra-Group auditors, which represent a key element of our control mechanisms, are focused on evaluating the adequacy and effectiveness of our ICS. Audits are also conducted during the stocktaking of property, plant and equipment as well as inventories. In addition to these measures, the Audit and Compliance Committee and the Supervisory Board monitor the accounting process and the effectiveness of the ICS.

The management of the companies included in the scope of fully consolidated companies and of the individual business units of DB Group verifies the completeness and accuracy of the reporting data relevant to the financial statements among other aspects, using a quarterly internal reporting process. It is also confirmed that the Management responsible have implemented the centrally defined ICS minimum standards for reporting and, where appropriate, have supplemented these with their own documented management and monitoring tools.

Management assessment of the risk situation

The current risk situation is assessed on the basis of our RMS. The system is based on the requirements of the KonTraG and is continually evolving. During the year under review, there were no major methodological changes to that system.

On December 31, 2018, DB Group's main risks were in the area of production and technology. In comparison to the previous year, the year under review's total risk position relating to the EBIT forecast for the following year has reduced slightly (€ – 0.2 billion). Amongst other reasons, this is because risks with a higher probability of occurrence have already been almost completely accounted for in the forecast.

For the **forecast of EBIT development 🗋 178 f.** in the 2019 financial year, risks after taking into consideration countermeasures amounting to € 0.2 billion exist (thereof very likely (vl): € 0.1 billion). These risks are primarily in the areas of personnel, production and technology, as well as economic climate, market and competition.

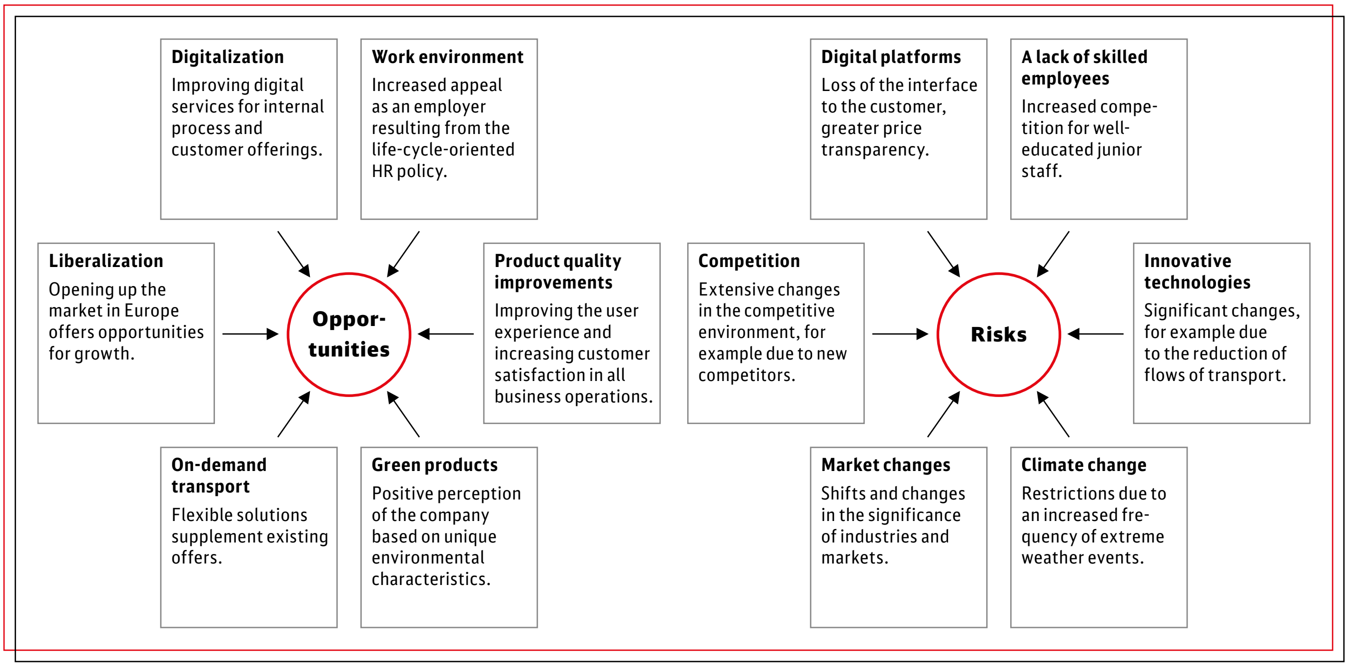
Opportunities beyond the EBIT forecast exist in the amount of € 0.1 billion (thereof vl: € 0.0 billion). These opportunities exist in production and technology.

We have addressed further quality improvements relating to punctuality and journey comfort in rail transport in Germany in our **Agenda for a Better Railway 🗋 66 ff.** and the **five-point plan 🗋 68** to be implemented in 2019.

Third-party evaluation is also an important indicator for overall risk assessment. In addition to internal risk assessment, DB Group's creditworthiness and its aggregated default risk is also assessed by the two **rating agencies 🗋 103** Moody's and S & P. Their external assessments of DB Group's overall risk position are reflected in the good ratings.

In terms of organization, we have created all of the conditions necessary to enable the early identification of possible risks. Our continuous risk management and the active management of key risk categories contribute to limiting risks. Key strategic opportunities and risks were identified at the business unit level and recorded in the course of the Strategic Management Process (SMP) for operationalization with measures. The results of our analyses of opportunities and risks, countermeasures, hedging and precautionary measures, together with the opinion of the Group

OVERVIEW OF OPPORTUNITIES AND RISKS



Opportunities

Digitalization Improving digital services for internal process and customer offerings.

Work environment Increased appeal as an employer resulting from the life-cycle-oriented HR policy.

Liberalization Opening up the market in Europe offers opportunities for growth.

Product quality improvements Improving the user experience and increasing customer satisfaction in all business operations.

On-demand transport Flexible solutions supplement existing offers.

Green products Positive perception of the company based on unique environmental characteristics.

Risks

Digital platforms Loss of the interface to the customer, greater price transparency.

A lack of skilled employees Increased competition for well-educated junior staff.

Competition Extensive changes in the competitive environment, for example due to new competitors.

Innovative technologies Significant changes, for example due to the reduction of flows of transport.

Market changes Shifts and changes in the significance of industries and markets.

Climate change Restrictions due to an increased frequency of extreme weather events.

Management Board based on the current risk assessment and our mid-term planning (MTP), indicate that there are no risks that, individually or jointly, could have an impact on the net assets or the financial or profit position of DB Group and would pose a threat to the Group as a going concern.

GRI 102-11 ↓

Major opportunities and risks

Economic climate, market and competition

- Scope: macroeconomic fundamentals, business environment, intermodal and intramodal competition, ordered services market for passenger transport, service offerings and penalties

Demand for our mobility services and, in particular, for our transport and logistics services is dependent on overall economic development, among other things:

- Economic growth fuels the trends underlying our strategy in our markets.
- Macroeconomic shocks such as economic and financial crises and economic fluctuations may adversely affect our business.
- Risks arising from depleted public sector budgets in some European countries could have negative effects (particularly in the form of spending cuts), especially on DB Arriva activities. The market volume here is greatly determined by the financial situation of the contracting organizations. However, this creates the possibility that new markets or market segments will be opened for competition. With DB Arriva, we have positioned ourselves in such a way that we are well prepared to take advantage of the opportunities posed by open and opening markets.
- Developments in the competitive environment are of particular importance for DB Group:
  - In long-distance transport, we are exposed to heavy intermodal competition, particularly with motorized individual transport as the dominant competitor, but also with long-distance bus services and air transport.
  - There is intense competition in regional transport throughout Europe for securing long-term transport contracts. There is a risk of performance losses. To be able to remain competitive in this market, we are constantly working to optimize our tender management and our cost structures. In addition, risks arise from performing transport contracts if the parameters of the underlying calculation do not proceed as planned. In order to continuously increase quality and customer satisfaction and improve our efficiency, we have put together appropriate programs at DB Regional and DB Arriva.
  - There is a great deal of competition in rail freight transport. Risks arise from the fact that competitors can operate with less expensive cost structures while enjoying greater flexibility. Further risks result from

    possible future efficiency gains of trucks, for example, by digitalization. Several measures have been implemented to tackle these challenges.
  - In the freight forwarding business, there is on the one hand intense competition with other providers, and on the other hand, a concentration in the carrier market that causes changes in the offerings of cargo space with corresponding effects on purchase and sales prices. We are responding to this by further expanding our networks and improving our cost structures, services and IT infrastructure.

Overall, a general risk is a loss of competitiveness. A key component in facing competition is improvements in service quality. In terms of the integrated rail system, we set out the **Agenda for a Better Railway 🗋 66 ff.**, particularly in order to improve the product quality.

Key opportunities for performance enhancements result from the trend towards digitalization:

- Processes can be made more efficient and more customer-focused.
- Customers can be offered improved and new digital services.
- Online portals and apps facilitate access for customers.
- In the medium-term, changes in the competitive environment may result from the following developments:
  - New competitors: In addition to established competitors, providers that have so far remained outside the industry, such as automobile manufacturers, IT groups and start-ups are increasingly active in our markets.
  - New platforms/data-driven business models: Digital platform providers increase the intensity of competition and transparency in passenger transport and logistics and also change how customers perceive prices. Start-ups in particular are the driving force behind the platform business and aim to occupy the digital customer interface.
  - Shifts in added value: Added value in the mobility and logistics sector could shift towards additional services.
  - Integrated on-demand mobility: Mobility-as-a-Service (MaaS) concepts are becoming part of the standard offer in the long term. The customer can order, book and pay for transport easily and in real time.
  - Demographic developments are increasing the pressure on the public sector to make use of favorable offers. Public transport authorities could also change their ordering behavior and tenders could be supplemented to include on-demand, minibus and shuttle services. This increases the cost pressure on established providers.
  - Supply chain visibility: Transparency in the value-added chain is one of the top trends in logistics. Start-ups and established players see data and analysis solutions as a significant business opportunity.
  - Goods structure effect: The production share of highly specialized goods such as pharmaceuticals and high-tech products is growing strongly. At the same time, types of goods with a generally lower weight and higher value density, such as electronic components, are growing at an above-average rate. Heavy, bulky goods, such as steel, paper and chemicals are becoming less important.

To adequately tackle the resulting risks and opportunities, we have developed, among other things, our comprehensive digitalization strategy with a separate **digital eco-management system 🗋 69 f.**

We are also responding to opportunities and risks arising from changing demand patterns and from shifts in traffic patterns throughout the Group with intensive market observation and by continuously upgrading our portfolio and our products.

The demand for our products and services is partly dependent on the development of our customers' sales markets:

- Our customers' economic development dictates their need for storage and transport services. In addition, there may be structural changes in the production structures of our customers. The rising costs of globally distributed production make regional production more efficient. Another reason for regionalization is the use of production innovations, such as automation, modularization and 3D printing with the potential to relativize wage cost differences and economies of scale.
- Rail freight transport is partly dependent on industries that are stagnating. The decline of coal as an energy source, for example, is having an effect.
- The development of demand in track infrastructure is dependent on the competitions of the rail mode of transport on the upstream transport markets.

Production and technology

- Scope: technical malfunctions, technology risks (vehicles, infrastructure, IT and telecommunications), customs offenses, thefts, maintenance, fire protection, environmental remediation, noise abatement, technical further development and sale of real estate

If the production quality of passenger transport services suffers, this has an impact on service quality and can lead to the loss of customers. Postponed deliveries of new vehicles may result in revenue losses and additional expenses, for example due to substitute transport services or penalty payments.

The availability and the condition of the track infrastructure are significant prerequisites for competitive rail transport. In order to maintain the future viability of rail in the long term, it is also necessary to modernize the infrastructure through digitalization and automation.

Intense construction work on the network affects schedules and the production quality of carriers to a different extent, depending on the region, some of which cannot be compensated for.

The range and quality of our services depends to a significant extent on the availability and reliability of the production resources used, the intermediate services procured and the quality of our partners' services. We therefore keep up an intense dialog with our suppliers and business partners on the subject of quality. This is of particular importance in the vehicle industry.

Sufficient availability of our vehicle fleet is particularly critical. Significant restrictions endanger operating schedules. In regional transport, there is the additional risk of penalties imposed by the relevant contracting organizations if trains are canceled or punctuality is inadequate. We try to minimize this risk by taking preventative actions and also by minimizing the consequences should it happen, such as by providing replacement vehicles or by organizing substitute transport.

The technical production resources used in rail transport must comply with applicable standards and any requirements which are potentially subject to change. As a result, we may receive technical complaints concerning our vehicles. This leads to the risk that we may not or only under certain conditions, such as limited speeds, shorter maintenance intervals or reduced wheel set loads, be permitted to use individual series or rail car types. In addition, we cannot accept newly purchased vehicles that have flaws or for which the necessary vehicle certification has not been granted. Technical defects or requirements may make modifications to vehicles necessary, potentially leading to significant restrictions to availability or even temporary suspensions.

In regional transport, a risk can arise from the redundancy of vehicles following the expiry or re-tendering of a transport contract. As a countermeasure, alternative possible uses are checked continuously.

Increasing digitalization means that dependence on secure IT that is available around the clock is increasing. This will result in risks, such as the interruption of the availability of IT systems or unauthorized third parties accessing customer data.

We combat these risks through forward-thinking IT security management, which provides the necessary security for our IT-based business processes. An important tool in this process is risk management of information, IT applications and IT infrastructures/services. The relevant risks are identified, analyzed, evaluated and reduced.

The remaining risks are documented and if necessary reported to and monitored by suitable bodies. Our IT security management follows international standards as set out in ISO 27001/27002:2013 and the NIST Cybersecurity Framework.

It is also vital to have an overall understanding of the risks on the technical and personnel levels in order to appropriately address security risks. Weaknesses in procedures and in compliance with security rules often create openings for attacks. Creating a lasting awareness of security in different groups of employees therefore contributes to recognizing unusual situations (such as phishing e-mails) early and consequently reducing exposure to attacks.

In order to minimize critical technical holes in security, a wide variety of countermeasures (e.g. firewalls, encryption and isolated server areas, prompt installation of software updates) are used. Appropriate redundancy in IT systems (also across several locations) increases overall protection against failure of critical business processes, applications and infrastructures. Redundancy is also built into the network infrastructure as a whole where this is required to ensure information security and business continuity.

Penetration tests and Red Team stress tests are conducted systematically and regularly for the most important processes and IT applications, with the aim of detecting weak points at an early stage and eliminating them.

Altogether, these measures reduce the risks of attacks, the failure of IT systems arising from them, the disruption of communication or the theft of confidential information, and therefore avoid the resulting damages to DB Group.

Punctuality **76 f.** is a key criterion for our rail freight transport customers when selecting a mode of transport. In addition to this, irregularities can occur during transport, such as customs offenses and theft. We combat these risks with measures such as engaging qualified customs coordinators and using an immediate reporting system for tax assessment notices.

Human Resources

- Scope: collective bargaining agreements, Group-wide labor market, pension commitments

To be able to hold our own against the competition, our personnel cost structure plays an important role. Our target is always to conclude competitive collective bargaining agreements in terms of the labor market and the transport market.

Due to demographic changes and the associated lack of skilled employees, it is becoming increasingly difficult to fill vacancies with qualified personnel. This in turn leads to risks such as lack of know-how transfer. At the same time, DB Group has a relatively high annual need for new employees. This is strengthened by the **selection model** **85** agreed as part of the collective bargaining negotiations. We counteract the resulting risks in particular by improving our **employer attractiveness** **83 f.** and by undertaking extensive recruitment measures.

Our life-cycle-oriented HR policy gives us the opportunity to promote loyalty among employees in the long term. Flexible working time models and jobs designed specifically for the age of the employee, the job security we offer and our intensive work on our corporate culture contribute to this.

Extensive new appointments create diversity in the workforce, which can lead to more creativity and productivity if there is an intensive transfer of knowledge and good diversity management. Young employees bring new ideas and concepts into the working routine. Older employees have varied and extensive experience and pass on their knowledge to new groups of employees. In addition, new perspectives and viewpoints are contributed to the solution-finding process in mixed teams. In the long term, and in an appropriate corporate culture, this can have an impact on the innovation capacity and performance of DB Group.

Regulation

- Scope: government intervention or changes in the regulatory environment relating to track infrastructure (access, pricing and unbundling requirements)

Regulation to the detriment of rail, for example due to additional legislative requirements, endangers intermodal competitiveness. Changes to the legal framework at national or European level could pose risks to our business. This general regulatory risk could therefore result in tangible negative effects on revenues and profits.

These regulations govern the individual components of the pricing systems, and general terms and conditions applied by our RIC. There are risks of complaints and intervention here. Measures that threaten or even prevent DB Group from attaining reasonable returns in the infrastructure business units (such as intervention in pricing systems) make it more difficult to control these activities from a business perspective and can therefore threaten financing contributions by DB Group for infrastructure capital expenditures.

Political risks are related particularly to the increase of applicable standards and railway industry regulations (e.g. passenger rights). The structure of DB Group may also be exposed to regulatory risks.

In order to respond to risks resulting from changing legal framework conditions on either a national or an international level, we take an active part in the discussions and debates that take place ahead of this type of change.

Procurement and energy market

- Scope: price trends on procurement markets, full auctioning of CO_2 certificates

Purchase prices for raw materials, energy and transport services vary according to market conditions.

We respond to the risk of increasing energy prices among other things by using appropriate **derivative financial instruments** **209 ff.** and entering into long-term procurement contracts. However, these safeguards also limit opportunities arising from trends in energy prices. In the event of falling prices, we do not participate in the market development.

This means that depending on the market and competitive situation, it may not be possible or may only be possible to a very limited extent to pass increased costs on to the customer in the short term. This in turn has a negative impact on margins.

The pooling of demands and optimization of procurement processes create opportunities to leverage further potential in terms of procurement prices.

Noticeable train-path price increases outside of Germany result in significant increases in costs for the utilization of infrastructure. Due to the competition situation, it is not always possible to pass on cost increases.

Capital markets and taxes

▶ Scope: interest rate and currency developments, taxes

A currency risk arises from our international business. This risk, however, is largely limited to the so-called translation risk since there is usually a high regional match between production and sales markets. We use primary and **derivative financial instruments 🗋 209 ff.** as one means of countering interest rate and currency risks from our operating business. Their use is only permitted for hedging purposes in DB Group. There is a risk that these hedging measures will not pay off, or not in the way expected.

To prevent counterparty default risk from financial and energy derivatives, we conclude credit support agreements (CSA) for all longer-term hedges.

Due to the long-term capital employed, we also use long-term, fixed-interest financial instruments. As a result, only new issues are exposed to the risk of rising interest rates. We apply a conservative planning approach to deal with risks arising from capital market performance or a deterioration in credit ratings.

Pensions and similar retirement benefit obligations are partially covered by plan assets from stocks, real estate, fixed-income securities and other investments. Value losses in these assets reduce the cover of pension obligations by plan assets, potentially resulting in DB Group having to provide additional cover.

In addition, there are potential risks from retrospective tax payments resulting from tax audits in progress and from amendments to tax laws.

Law and contracts

▶ Scope: compensation claims, lawsuits, active and passive claims

As a result of delayed vehicle deliveries and vehicle defects, operating difficulties and breaches of contract or non-compliance events arise with respect to contracting organizations in regional transport. Higher expenses and penalty payments combined with lower revenues from fares are the result. Ensuing damage claims are asserted against the manufacturers.

Provisions have been made for legal and contractual risks based on an assessment of their probability of occurrence.

Compliance with current laws, company guidelines and recognized regulatory standards is the task and duty of every DB Group employee. It is the mission of our **compliance department 🗋 254 f.** to ensure compliance with such criteria.

With its very high purchasing volume and over 40,000 suppliers, DB Group is one of the largest purchasers in Germany. Large-scale capital expenditures mean that the infrastructure business units in particular are exposed to a significant risk of becoming the target and victim of corruption, cartel agreements or fraud. As a provider of grants, the Federal Government places high demands on DB Group with its anti-corruption guidelines.

Opportunities arise from the discovery of cartels that operated in the past and the enforcement of claims for damages against cartel members. DB Group is seeking compensation for damage in over ten cases. This relates, amongst other issues, to cartels in trucks, rails, air freight, lifts and escalators, prestressing of steel, giro card and container transports. In more than ten other cases, DB Group is still determining if damage has been caused.

Significant events

▶ Scope: disasters and accidents, sabotage, extortion, global political events

Our activities are based on a technologically complex, networked production system. In general, we try to combat the risk of operational disruptions through regular maintenance and by taking on qualified employees, coupled with continuous quality assurance and improvement of our processes. The nature of rail transport as an open system means that operations can be negatively impacted by certain factors (such as natural disasters, accidents, sabotage and theft) over which we have only limited influence. Our efforts in such cases focus on minimizing the potential effects. However, this could also result in cost risks from countermeasures.

Damage to our infrastructure caused by weather conditions leads to loss of income, penalty payments and to a higher resource requirement for repairing damage and preventative measures, amongst other consequences. In order to adapt the means of production to extreme weather events (expansion of **vegetation management 🗋 77)** and to avoid restricted operating quality due to weather-related constraints, DB Group is working with national and international experts on the adaptation of external technical regulations to altered climatic conditions.

Additional measures to improve public security, including at passenger stations, such as upgrading **video surveillance 257,** may lead to additional cost burdens.

Other issues

Project risks

Our measures involve not only some large capital expenditure volumes, but also a large number of highly complex projects. Changes to the legal framework, delays in implementation (due among other things to more extensive public participation), necessary adjustments during terms often lasting several years, deviations from the ramp-up curve of funds for capital expenditures agreed with the Federal Government, or changes to purchase prices may lead to project and liquidity risks. The networked production structure means that these can also affect a number of business units. For example, in such cases planned modal shifts from road to rail will not be feasible. We keep up to date with this by closely monitoring projects. This applies in particular to large, centrally managed projects.

In implementing the planned measures from various programs, such as the **Agenda for a Better Railway 66 ff.** for the integrated rail system, or **Primus 142** at DB Schenker, there is the risk that it will either not be possible to implement the planned effects at all, or only to a limited extent, and/or with delays. At the same time, however, there is also the opportunity to exceed the planned effects.

Infrastructure financing

As a key element of the German Rail Reform, the Federal Government has the constitutional obligation to finance capital expenditures in rail infrastructure. The key factor here is securing sufficient funding, but also the ability to plan the availability of funding for the existing network as well as new construction and expansion (requirement plan capital expenditures). A limited availability may lead to less funding being available to maintain the existing network or overcome shortages, thereby restricting the competitiveness of rail as a mode of transport.

We have an agreement with the Federal Government that sets out the financing of the existing network until 2019. The **LuFV II 234 f.** and the associated long-term securing of infrastructure quality and availability improve the attractiveness of rail as a mode of transport in the long term, which also results in higher revenues for infrastructure companies. Negotiations regarding a successor agreement (LuFV III) are ongoing.

The profits of infrastructure companies in turn are plowed back into the infrastructure via the financing circle. Risks result from a potential failure to achieve the **contract objectives 147** specified in the LuFV II and from a possible reclaim by the Federal Government based on an audit of the proper application of funds.

The economic sustainability of capital expenditures or contributions to capital expenditure projects funded with DB funds is essential to ensure DB Group's ability to invest in the long term.

Political risks

DB Group is active in Great Britain through DB Arriva, DB Schenker and DB Cargo. The ongoing uncertainty regarding the modalities of Great Britain's exit from the European Union (Brexit) poses a risk to our activities. Here, it is primarily a weakening of the British economy and new trade restrictions hindering freight transport that may have a negative impact. DB Group is counteracting this risk by preparing as best as possible for a so-called "disorderly Brexit" (Brexit without any exit agreement).

EUROFIMA has given loans to state-owned railways in states that now have poor credit ratings. If these state-owned railways fail to meet their financial obligations to EUROFIMA, this could have repercussions for the carrying amount of the investment, and under certain circumstances trigger further financial obligations.

Environmental risks

Unique environmental features, such as climate-neutral transport services in passenger and freight transport on the basis of renewable energies, improve our customers' positive opinions and thus improve our external perceptions. This results in considerable opportunities. Our activities have a positive effect on the reduction of greenhouse gases and can also have a positive influence on customer satisfaction and our market position. Our mobility offer must become CO_2-free throughout in order to secure the climate advantage.

Strengthening of environmental protection laws also presents opportunities and risks for DB Group. Opportunities arise primarily for the public passenger transport, particularly rail transport. However, measures such as bans on diesel may also have negative impacts on our bus service activities.

Events after the balance sheet date

Three bonds issued

Through DB Finance, we issued three new bonds at the beginning of 2019:

ISIN	Issuer	Currency	Volume (million)	Volume (€ million)	Coupon (%)	Maturity	Term (years)
XS1936139770	DB Finance	EUR	1,000	1,000	1.125	Dec 18	10
XS1950499712	DB Finance	GBP	300	340	1.875	Feb 13	7
XS1951373585	DB Finance	NOK	1,000	103	2.705	Feb 21	15

Collective bargaining negotiations concluded successfully

The **collective bargaining negotiations 85** were successfully concluded with EVG on December 14, 2018 and with the GDL on January 4, 2019. Through these negotiations, DB Group succeeded in agreeing consistent regulations. The collective bargaining agreements are valid for 29 months – with retroactive effect from October 1, 2018 – until February 28, 2021. In addition to an overall pay increase of 6.1% in two parts, continuation and extension of the option to choose between pay increase, shortened working hours or additional vacation, and improvements to the operational retirement benefit were amongst the agreements reached.

Awarded tender for regional transport

- DB Regional's bid was accepted for batches 2 and 3 of the tender awarded for extensive regional transport services, including in particular the Federal states of Berlin and Brandenburg (Elbe-Spree network). One of the conditions of the tender was that no more than two batches could be awarded to a single provider. In the long term, we will be able to slightly expand our performance volume.
- DB Arriva was awarded its largest rail transport contract to date in the Czech Republic and from December 2019 will be operating four regional lines. The three-year contract with a value of € 45 million includes the option to extend for up to two years. It will use 27 diesel railcars taken over from DB Regional and modernized.

Civil proceedings on infrastructure utilization fees

The ECJ ruled in its judgment of November 9, 2017, that an **assessment of fairness of the infrastructure utilization fees through a civil court 61** pursuant to Section 315 BGB is incompatible with European Railway Law. On the basis of the ECJ judgment, several courts have already passed several judgments in favor of DB Netz AG and DB Station & Service AG. The judgments are not yet legally binding. A decision has not yet been reached by the Federal Supreme Court (BGH). The BGH, in a decision of January 29, 2019, suspended a pending proceeding until the BNetzA issues a decision on an application made by a plaintive TOC regarding a retroactive assessment of utilization fees. The proceeding is expected to be resumed as soon as a binding decision is available from the BNetzA regarding this matter.

Train accident in Denmark

On January 2, 2019, there was an accident on the Storbælt Bridge in Denmark involving a DB Cargo train. No final findings regarding the causes and triggers of the accident are yet available. DB Cargo is supporting the Federal agencies in their inquiry into the accident.

Long-distance train order

Following a Europe-wide tender, the Spanish manufacturer Talgo was awarded the order for new long-distance trains. The framework contract includes up to 100 trains, consisting of electric locomotives and passenger cars. We are ordering 23 new vehicles in the first batch (volume of capital expenditures: about € 550 million), the first of which should come into operation in 2023.

Outlook

Overall statement of the Management Board regarding the economic development of DB Group

Economic development in the year under review fell below expectations. This was particularly the case for the results in the integrated rail system. Measures introduced to achieve the targeted profit in spite of this included a qualified expense management. Following the challenging development in the year under review, the Management Board anticipates that DB Group's performance in the 2019 financial year will also be subdued. In our **Agenda for a Better Railway 🗋66 ff.**, we lay down the groundwork for a sustainably successful company. For it is only through high product quality and satisfied customers that revenues and profits can be improved sustainably. We will also increase our capital expenditures to achieve this. This is necessary to ensure that the integrated rail system is fit for the future and to create growth and employment. Our activities are subject to various risks, as described in the **Opportunity and risk report 🗋166 ff.** In the 2019 financial year, we particularly see risks in the areas of personnel and production and technology. The Management Board believes that DB Group has taken the measures necessary to protect itself from existing risks and to be able to take advantage of possible opportunities.

Future direction of DB Group

Future business policy

In the 2019 financial year, we intend to maintain our **market positions 🗋58** and continue to grow organically in our business units. Through our Agenda for a Better Railway we have laid the groundwork for the actions necessary to achieve this in the coming years. Following the weak development in the year under review, improving **punctuality 🗋76 f.** continues to be an area of focus for us.

Future strategic focus

As part of our strategy development in 2018, our Agenda for a Better Railway addresses the most important and urgent short-term areas of activity in the integrated rail system in Germany and consolidates them into a specific program portfolio. The focus in 2019 will be on the following programs:

- Managing and increasing network capacity and punctuality through capacity management and Digital Rail for Germany, expansion of vehicle capacity and availability in DB Long-Distance, securing the necessary staff capacity.
- Stabilizing and improving the situation at DB Cargo, stabilizing and improving the situation at DB Regional (rail and bus), passenger transport mobility portfolio.
- Reinforcing the process perspective and joint management and leadership.

The Agenda for a Better Railway forms the basis of the future strategic direction of DB Group. Based on this, we will develop a new corporate strategy in the first half-year of 2019 with a target horizon of 2030.

Future sales markets

Our opportunities for growth in the German passenger transport market are limited due to the intensity of competition and restrictions imposed by antitrust laws. As a result, we are primarily focused on defending our strong market position and improving the competitive position of the railways in intermodal competition. Over the medium term, we foresee a shift to demand-driven road transport in the German passenger transport market as new data-based business models are established. Autonomous driving, for example, will lead to ever fewer people having to own their own car. At the same time, autonomous transport on the road could potentially make certain areas of public transport independent of stops/stations and schedules, and thus enhance flexibility. Our growth potential in the area of passenger transport services lies in countries outside of Germany and in cross-border long-distance rail passenger transport services.

In the area of rail freight transport, our focus continues to be on the European market. We are well positioned in all of the central European corridors and offer service connections to locations as far afield as China.

We also do not expect significant changes in the area of freight forwarding and logistics in 2019. DB Schenker is already very well represented in all key markets and regions.

Economic outlook slightly lower

- Forecasts for development in 2019 are based on the assumption that there will be no material change in the geopolitical situation.

Anticipated development (%)	2018	**2019**
World trade	+4.3	~ +3.0
GDP world	+3.0	~ +2.5
GDP Eurozone	+1.8	~ +1.5
GDP Germany	+1.5	~ +1.5

The data for 2018, adjusted for price and calendar effects, is based on the information and estimates available as of February 2019.
Expectations for 2019 are rounded off to the nearest half percentage point.

Source: Oxford Economics

Primarily, it is expected that the current developments in the global economy will continue in 2019. Although growth in Europe and the Eurozone is continuing to weaken, it does remain positive. Economic growth in Asia is also shrinking, even if to a far higher level. In the USA, the economic cycle will probably peak in 2019, but growth remains comparatively stable. Following two relatively strong years, global trade has become noticeably weaker. In addition to the reduced momentum in economic development, the main causes of this are above all weakened expectations and increased uncertainty amongst companies. This reduces the growth in investments, which has a proportionately larger negative impact on worldwide trade.

One of the most significant risks to global economic development continues to be the unpredictability of the restrictions to the US economic and trading policy. The strength of the US dollar is expected to continue to negatively impact economic growth, particularly in many developing and emerging countries.

Growth of transport markets expected to continue

Passenger transport

Anticipated market development (%)	2018	**2019**
German passenger transport (based on pkm)	+1.0	~ +1.0

Expectations for 2019 are rounded off to the nearest half percentage point.

According to our forecast, the German passenger transport market is expected to continue to grow in 2019, while the growth in volume sold should be slightly above the level of the year under review. A significant factor in this respect is the foreseeable positive development of employment figures and disposable income. At the same time, a significant decrease in fuel prices is expected.

- In terms of rail passenger transport, we anticipate strong growth, supported by our own measures to improve our offer and quality. Long-distance transport is likely to grow more strongly than local transport.
- Stagnation is expected in public road transport. Although long-distance bus transport will again grow slightly, local bus transport is likely to decrease, however, because of demographic trends.
- Motorized individual transport may be expected to benefit from continued positive labor market conditions, income growth and decreasing fuel prices.
- Volume sold in domestic air transport is again expected to grow moderately following the slump in the year under review.

Despite the fact that the situation in Great Britain remains fraught with uncertainties as a result of Brexit, the European passenger transport market appears to be developing positively overall. Rising employment figures and disposable income combined with rising fuel prices should hold up demand, particularly in rail passenger transport. Above-average growth is expected particularly in countries with intensive intra- and intermodal competition, significant investments on infrastructure and vehicle fleets, and consistent measures to liberalize markets.

Freight transport and logistics

Anticipated market development (%)	2018	2019
German freight transport (based on tkm)	~ +1.5	+3.0
European rail freight transport (based on tkm)	~ +2.0	+2.5
European land transport (based on revenues)	+3.9	+3.0
Global air freight (based on t)	+3.5	+2.5
Global ocean freight (based on TEU)	+4.6	+3.5
Global contract logistics (based on revenues)	+4.4	+4.5

The data for 2018 and 2019 are based on information and estimates available as of February 2019.

Expectations for 2019 are rounded off to the nearest half percentage point.

In 2019, a continuing strong increase in demand for transport in the German freight transport market is to be expected. In view of the ongoing positive development of domestic demand and foreign trade, economic growth may continue at a slightly reduced rate if we assume that there are no catastrophic events, for example from Brexit or the tariff conflicts. The overall market will also continue to be characterized by inter- and intramodal competitive pressure and ongoing resource bottlenecks.

In order to develop rail freight transport in Germany, it is also expected that, in addition to the overall positive economic trends, there will be volume growth because of shifts away from road transport caused by the train-path price support element of the **master plan for rail freight transport 🗋63,** along with the significant increase in road tolls. Following the severe strain caused by low waters in the year under review, inland waterway transport will also benefit from the strong positive baseline effect and the expected increase in coal imports through the ARA ports (Amsterdam, Rotterdam and Antwerp) following the end of coal mining in Germany.

- The growth of the European rail freight transport market may be supported above all by intra-European trade with the associated momentum for intermodal transport.
- Moderate growth is expected in the European land transport market in 2019. This is influenced primarily by the current political situation in Western Europe whilst in Eastern Europe further strong growth is expected.
- The expectations for the global air freight market in 2019 remain limited as a result of the flat general market growth in the fourth quarter of 2018. As far as capacity in the air freight market is concerned, shortages are not anticipated given the continuing supply of new aircraft and addition of new routes. Rates are expected to remain at a strong level.
- In terms of global ocean freight, volume growth slightly below the level of the previous year is expected in 2019. It is expected that freight rates will continue to increase as shipping costs will continue to rise as a result of new regulations on low-sulfur ocean freight (IMO 2020).
- We expect continuously high growth particularly in the Asia/Pacific, Americas and European regions in contract logistics.

Infrastructure

Overall, we expect train-path demand to improve as a whole in 2019:

- In regional rail transport, we expect positive sales development thanks to increased regionalization funds.
- In long-distance rail transport, there may be increased volumes as a result of extended services.
- In rail freight transport, we expect to see significant volume growth as a result of the introduction of train-path price support in rail freight transport.

Also in view of the continuing high levels of construction activity, we anticipate a slightly increasing growth in the development of station stops. Here, the proportion of non-Group railways at the station stops should continue to increase.

Retail revenue (excluding motor vehicles and gas stations) is expected to continue its positive trend uninterrupted in 2019. Leasing income in stations should be slightly above that of the previous year.

Procurement markets

As a baseline scenario, we expect no shortages on the procurement side of the oil and electricity markets. Even if the OPEC+ group were to fully implement their agreed reductions, US production is likely to continue upward. The International Energy Agency anticipates a balanced market. The risks of rising prices are inherent in potential unplanned production failures.

In Germany, there will continue to be struggles over the design of the new electricity market (Electricity Market 2.0). Short-term price volatility is likely to be further amplified by the ongoing expansion of renewable energies due to the limited ability to forecast them. Wholesale prices are being boosted by the dismantling of conventional capacities. In addition, climate policy plans to accelerate the transition away from coal and a further cost increase of CO₂ emissions are also contributing factors.

We expect price levels in the construction industry to increase further.

Financial markets

The existing geopolitical risks and the increasing slowdown of the global economy are expected to create a challenging environment in 2019 for the global stock and bond market. To what extent these risks have already been priced into the weak market development in 2018 remains to be determined overall. The end of the stimulation effects, such as the US tax reform and a more restrictive monetary policy in the USA, also place a burden on markets. The ECB is likely to pursue its present course of gradually normalizing their currently still expansive monetary policy. The termination of their net bond purchases as part of the asset purchase program (APP) is the first sign of this.

Expected development of DB Group

Our forecasts for the development of DB Group and the business units in the 2019 financial year are based on our expectations of developments in the market, competition and environment, and the implementation success of the planned measures.

The 2019 financial year will be the first year that DB Group reports under the adoption of the new accounting reporting standard **IFRS 16** **189.** The changes to the recognition of obligations from leasing contracts will also noticeably influence the income and financial position:

- The elimination of leasing expenses as operating expenses will lead to a significantly higher operating profit before depreciation (EBITDA) (~ € + 0.8 billion).
- EBIT will only be slightly positively affected, however, as a result of the additional depreciation on leased assets (~ € +25 million).
- Capital expenditures will noticeably increase (~ € +1.0 billion).
- ROCE will decrease to a fundamentally lower level (~ - 0.4 percentage points) as the capital employed will be disproportionately increased compared to EBIT.
- In addition, financial debt as of December 31, 2019 will significantly increase on a one-time basis as a result of the inclusion of leasing liabilities (~ € + 4.4 billion).

Economic development

- Further improvements anticipated in the 2019 financial year.
- Noticeable effects of the first application of IFRS 16.
- Profit development expected to be weaker.

Anticipated development	2018	**2019**
Volume sold – rail passenger transport (Germany) (billion pkm)	84.5	> 85
Volume sold – rail freight transport (billion tkm)	88.2	> 97
Train kilometers on track infrastructure (billion train-path km)	1.1	>1.1
Shipments in land transport (million)	106.5	~ 110
Air freight volume (export) (million t)	1.3	>1.3
Ocean freight volume (export) (million TEU)	2.2	>2.4
Customer satisfaction – passengers (SI)	75.1	~77
Punctuality DB Group (rail) in Germany (%)	93.4	> 94
Punctuality DB Long-Distance (%)	74.9	76.5
Revenues (€ billion)	44.0	> 45
EBIT adjusted (€ billion)	2.1	≥1.9
ROCE (%)	5.8	~ 4.4
Redemption coverage (%)	17.6	~ 17

Volume sold should increase further in the 2019 financial year as a result of the improved service quality and the expansion of the services. Train-path demand should also increase as a result. The increase in demand for regional rail passenger transport due to additional regionalization funds as well as for rail freight transport as a result of stimuli created by the **master plan for rail freight transport** **63** will also have an impact in this respect. The trend of steadily increasing train-path demand from non-Group customers will continue.

We also expect a further positive development in volumes at DB Schenker.

In 2019, our focus is on stabilizing and improving punctuality. The **Agenda for a Better Railway** **66 ff.** should ensure an improvement in punctuality as soon as the first half-year of 2019.

As a result of the positive performance development, DB Schenker, DB Cargo and DB Long-Distance in particular are expected to drive revenue growth.

In terms of profits, we do not expect revenue gains to be mirrored in profit development. Here, additional expenses, e.g. tariff increases and our measures to improve quality and digitalization will be particularly noticeable.

As a result of the expected slight decline in the development of adjusted EBIT along with a simultaneous significant increase in capital employed (and also first application of IFRS 16), ROCE is expected to decrease. For 2020, we once again expect a noticeably positive development in operating profit and ROCE.

Redemption coverage may above all decrease as a result of the first application of IFRS 16.

Business units are expected to develop unevenly

	Revenues adjusted		EBIT adjusted	
Anticipated development (€ million)	2018	**2019**	2018	**2019**
DB Long-Distance	4,682	↗	417	↗
DB Regional	8,968	↘	492	↘
DB Arriva	5,441	→	300	→
DB Cargo	4,460	↗	-190	↗
DB Schenker	17,050	↗	503	↗
DB Netze Track	5,511	↗	840	↘
DB Netze Stations	1,314	↗	221	↘
DB Netze Energy	2,850	↗	21	↗

↗ Above the previous year's figure
→ At the previous year's level
↘ Below the previous year's figure

DB Long-Distance

At DB Long-Distance, we anticipate revenues in the 2019 financial year above that of the previous year, driven by the improvement to the offer, targeted marketing, measures to improve quality and the expected economic development. This is also positively reflected in the development of adjusted EBIT.

DB Regional

At DB Regional, we anticipate lower revenues in the 2019 financial year and a slightly decreased operating profit development as a result of performance losses.

DB Arriva

The challenging market environment at UK Bus and Mainland Europe and the cessation of the Arriva Trains Wales franchise at UK Trains is likely to offset the positive effects of the first-time full inclusion of VT-Arriva so that revenues and the operating profit ought to develop at a comparable level to that of the previous year.

DB Cargo

At DB Cargo we expect an increase in volume sold in the 2019 financial year because of the effects of the **master plan for rail freight transport 🗋 63** amongst other reasons. Revenues should therefore increase. The operating profit should also improve.

DB Schenker

At DB Schenker, we expect further growth in revenues and operating profit in the 2019 financial year resulting among other things from volume effects and further efficiency increases.

DB Netze Track

In the 2019 financial year, we expect revenue development at DB Netze Track to be positive as a result of both volume and price effects. Additional expense burdens arising from the **Agenda for a Better Railway 🗋 66 ff.** may, however, lead to a declining operating profit.

DB Netze Stations

At DB Netze Stations, revenues should increase in the 2019 financial year as a result of a volume effect at station stops and annual dynamization. Additional expense burdens arising from the **Agenda for a Better Railway 🗋 66 ff.** will, however, lead to an operating profit development slightly below that of the previous year.

DB Netze Energy

At DB Netze Energy, revenue development should be positively influenced, above all, by price effects, and also lead to an improvement in the operating profit.

Top employer

Anticipated development	2018	**2019**
Employee satisfaction (SI)	3.7	–
Employer attractiveness (rank in Germany)	13	13

We expect our appeal as an employer to develop at a stable rate to a high level. Demographic change will cause the intensity of competition on the labor market to increase further as the available workforce steadily shrinks in all target groups. In addition, other corporations are also focusing on employer branding and recruiting activities.

In accordance with our two-year cycle, there will not be an employee survey in 2019. Instead, follow-up workshops at the team-level will be carried out and their implementation rate will be measured. This format allows us to continue to work on, amongst other issues, improving our employee satisfaction.

Eco-pioneer

Anticipated development	2018	**2019**
Specific greenhouse gas emissions in comparison to 2006 (%)	-33.2	-33.7
Share of renewable energies in the DB traction current mix (%)	57.2	~ 60
Track kilometers noise remediated in total as of Dec 31 (km)	1,758	~1,840
Quiet freight cars in Germany as of Dec 31	50,409	~ 57,500

In terms of reducing our greenhouse gas emissions, we have already reached a good level as a result of the targeted efficiency improvements, particularly in ocean freight and land transport of DB Schenker and in rail transport in Germany. We will continue to reduce specific greenhouse gas emissions from our worldwide transports and the stationary facilities in Germany in 2019. The key measures here are the ongoing modernization of our fleets and facilities and the restriction of greenhouse gas intensity in traction current in Germany through continuously increasing the proportion of renewable energies. Our target here is a proportion of 80% by 2030. The refitting of our **freight cars** green. **no. 5** onto whisper brakes is moving further toward our target value for 2020.

With regard to **noise protection** green. **no. 25,** we expect additional noticeable relief for those residing close to railway tracks in 2019.

Anticipated capital expenditures

Anticipated development (€ billion)	2018	**2019**
Gross capital expenditures	11.2	>13
Net capital expenditures	4.0	>5.5

We will continue our quality and capital expenditure initiative for the integrated rail system in Germany with large capital expenditures. We thus intend to improve our quality and customer satisfaction, drive forward digitalization (including IT security improvements) and increase our performance capability.

In the 2019 financial year, capital expenditures are again expected to be above the level of the year under review. Increased vehicle capital expenditures at DB Long-Distance (ICE 4 and IC 2) and higher capital expenditures for track infrastructure make an impact in this respect. In addition, the first application of **IFRS 16** 🗋 **189** has a noticeable effect.

Anticipated financial position

Anticipated development (€ billion)	2018	**2019**
Maturities	2.2	2.2
Bond issues	2.9	≤3
Cash and cash equivalents as of Dec 31	3.5	~3
Net financial debt as of Dec 31 (excluding the effects of IFRS 16)	19.5	~20
Net financial debt as of Dec 31	23.7[1]	~24.4

[1] As of January 1, 2019 including the effects of IFRS 16.

Efficient liquidity management is once again a top priority for us in the 2019 financial year. We are focusing on continually forecasting the cash flow from operating activities, as this is our main source of cash and cash equivalents. We produce liquidity forecasts every month on the basis of a rolling 12-month liquidity plan. In the 2019 financial year, we must redeem financial liabilities falling due (excluding commercial paper and current bank liabilities) at about the same level as in the previous year. Funding needs for this are met by issuing public and non-public bonds. Roadshows are planned in Europe and Asia in conjunction with the bond issues.

At the time of producing this report, there was no final resolution regarding complete financing of the funding requirements in 2019.

We continue to have adequate financing scope for our capital market activities based on our **debt issuance programs** 🗋 **101 f.** and **commercial paper program** 🗋 **101 f.** The **guaranteed credit facilities** 🗋 **101 f.** serve as a fallback in the event of interrupted access to the capital market. Our short- and medium-term liquidity supply is therefore also secure in the 2019 financial year.

The majority of our gross capital expenditures in the 2019 financial year will again be covered by investment grants. The net capital expenditures to be financed by DB Group will likely also not be fully covered by internal sources in the 2019 financial year.

The net financial debt is therefore expected as of December 31, 2019 to be slightly above the level at the end of the year under review.

We will continue our M & A activities in a selective and focused manner in the 2019 financial year.

FORWARD-LOOKING STATEMENTS

This management report contains statements and forecasts pertaining to the future development of DB Group, its business units and individual companies. These forecasts are estimates based on information that is available at the current time. Actual developments and profits may diverge from the current expectations as a result of the assumptions upon which our forecasts are based not materializing or the materialization of risks such as those presented in the Risk report.

DB Group does not assume any obligation to update the statements made within this management report.

Consolidated financial statements

Consolidated statement of income

Jan 1 through Dec 31 (€ million)	Note	2018	2017
Revenues	(1)	44,065	42,693
Inventory changes and internally produced and capitalized assets	(2)	3,091	2,900
Overall performance		47,156	45,593
Other operating income	(3)	2,998	2,954
Cost of materials	(4)	-22,258	-21,457
Personnel expenses	(5)	-17,301	-16,665
Depreciation and impairments	(6)	-2,688	-2,847
Other operating expenses	(7)	-6,088	-5,890
Operating profit (EBIT)		**1,819**	**1,688**
Result from investments accounted for using the equity method	(8)	12	14
Net interest income	(9)	-645	-704
Other financial result	(10)	-14	-30
Financial result		**-647**	**-720**
Profit before taxes on income		**1,172**	**968**
Taxes on income	(11)	-630	-203
Net profit for the year		**542**	**765**
Net profit attributable to			
Shareholder of Deutsche Bahn AG		528	745
Non-controlling interests		14	20
Earnings per share (€ per share)	(12)		
undiluted		1.23	1.73
diluted		1.23	1.73

Reconciliation of consolidated comprehensive income

Jan 1 through Dec 31 (€ million)	2018	2017
Net profit for the year	542	765
Changes due to the revaluation of defined benefit plans	-818	651
Change in items recognized directly in equity which are not reclassified to the income statement	-818	651
Changes resulting from currency translation	23	-175
Changes resulting from market valuation of securities	0	-
Changes resulting from market valuation of cash flow hedges	16	51
Share of profit items not recognized in the income statement due to investments accounted for using the equity method	-1	-
Change in items recognized directly in equity which are reclassified to the income statement	38	-124
Balance of profit items covered directly in equity (before taxes)	**-780**	**527**
Revaluation of defined benefit plans	40	-41
Changes in deferred taxes on profit items recognized directly in equity, which are not reclassified to the income statement	**40**	**-41**
Deferred taxes relating to the change in the market valuation of securities	-	-
Deferred taxes relating to the change in the market valuation of cash flow hedges	-1	-4
Changes in deferred taxes on profit items recognized directly in equity, which are reclassified to the income statement	**-1**	**-4**
Balance of profit items recognized directly in equity (after taxes)	**-741**	**482**
Comprehensive income	**-199**	**1,247**
Comprehensive income attributable to		
Shareholder of Deutsche Bahn AG	-211	1,235
Non-controlling interests	12	12

Consolidated balance sheet

Assets

(€ million)	Note	Dec 31, 2018	Dec 31, 2017
NON-CURRENT ASSETS			
Property, plant and equipment	(13)	40,757	39,608
Intangible assets	(14)	3,730	3,599
Investments accounted for using the equity method	(15)	486	500
Available-for-sale financial assets	(17)	45	40
Receivables and other assets	(19)	380	302
Derivative financial instruments	(21)	216	160
Deferred tax assets	(16)	1,032	1,416
		46,646	**45,625**
CURRENT ASSETS			
Inventories	(18)	1,369	1,151
Available-for-sale financial assets	(17)	1	1
Trade receivables	(19)	4,962	4,571
Other receivables and other assets	(19)	1,870	1,620
Income tax receivables	(20)	62	52
Derivative financial instruments	(21)	47	19
Cash and cash equivalents	(22)	3,544	3,397
Held-for-sale assets	(23)	26	0
		11,881	**10,811**
Total assets		**58,527**	**56,436**

Equity and liabilities

(€ million)	Note	Dec 31, 2018	Dec 31, 2017
EQUITY			
Subscribed capital	(24)	2,150	2,150
Reserves	(25)	4,074	4,813
Retained earnings	(26)	7,211	7,110
Equity attributable to shareholder of Deutsche Bahn AG		**13,435**	**14,073**
Non-controlling interests	(27)	157	165
		13,592	**14,238**
NON-CURRENT LIABILITIES			
Financial debt	(28)	20,626	19,716
Other liabilities	(29)	258	233
Derivative financial instruments	(21)	372	341
Pension obligations	(32)	4,823	3,940
Other provisions	(33)	2,246	2,374
Deferred items	(34)	627	785
Deferred tax liabilities	(16)	152	121
		29,104	**27,510**
CURRENT LIABILITIES			
Financial debt	(28)	2,618	2,360
Trade liabilities	(29)	5,491	5,157
Other liabilities	(29)	3,660	3,399
Income tax liabilities	(30)	195	150
Derivative financial instruments	(21)	19	41
Other provisions	(33)	2,822	2,743
Deferred items	(34)	1,021	838
Held-for-sale liabilities	(23)	5	-
		15,831	**14,688**
Total assets		**58,527**	**56,436**

Consolidated statement of cash flows

Jan 1 through Dec 31 (€ million)	Note	**2018**	2017
Profit before taxes on income		1,172	968
Depreciation on property, plant and equipment and intangible assets		2,688	2,847
Write-ups/write-downs on non-current financial assets		8	0
Result on disposal of property, plant and equipment and intangible assets		-162	-121
Result on disposal of financial assets		-37	-19
Interest and dividend income		-25	-53
Interest expense		669	757
Foreign currency result		-2	19
Result of investments accounted for using the equity method		-12	-14
Other non-cash expenses and income		871	1,291
Changes in inventories, receivables and other assets		-950	-639
Changes in liabilities, provisions and deferred items		-176	-1,966
Cash generated from operating activities		4,044	3,070
Interest received		22	39
Received/paid (–) dividends and capital distribution		-8	-10
Interest paid		-529	-592
Paid (–)/reimbursed (+) taxes on income		-158	-178
Cash flow from operating activities		**3,371**	**2,329**
Proceeds from the disposal of property, plant and equipment and intangible assets		431	341
Payments for capital expenditures in property, plant and equipment and intangible assets		-11,242	-10,524
Proceeds from investment grants		7,209	6,724
Payments for repaid investment grants		-39	-63
Proceeds from sale of financial assets		0	5
Payments for investments in financial assets		-24	-28
Proceeds from sale of shares in consolidated companies less net cash and cash equivalents sold		0	2
Payments for acquisition of shares in consolidated companies less net cash and cash equivalents acquired		-3	-30
Proceeds from disposal investments accounted for using the equity method		0	4
Cash flow from investing activities		**-3,668**	**-3,569**
Proceeds from capital injection		-	1,000
Distribution of profits to shareholder		-450	-600
Distribution of profits to minority interests		-13	-12
Payments for finance lease transactions		-42	-53
Proceeds from issue of bonds		2,927	2,038
Payments for redemption of bonds		-1,900	-1,819
Payments for the redemption and repayment of interest-free loans		-204	-206
Proceeds from borrowings and commercial paper		185	100
Payments for the redemption of borrowings and commercial paper		-54	-209
Cash flow from financing activities		**449**	**239**
Net changes in cash and cash equivalents		**152**	**-1,001**
Cash and cash equivalents as of Jan 1	(22)	3,397	4,450
Changes in cash and cash equivalents due to changes in exchange rates		-5	-52
Cash and cash equivalents as of Dec 31	**(22)**	**3,544**	**3,397**

Consolidated statement of changes in equity

(€ million)	Subscribed capital	Reserves Capital reserves	Currency translation	Fair value valuation of securities	Fair value valuation of cash flow hedges	Revaluation of pensions	Other movements	**Total**	Retained earnings	**Equity attributable to shareholder of Deutsche Bahn AG**	Non-controlling interests	**Equity**
As of Jan 1, 2017	2,150	5,310	158	0	-168	-1,965	-12	**3,323**	7,000	**12,473**	184	**12,657**
⊕ Capital increase	–	1,000	–	–	–	–	–	**1,000**	–	**1,000**	9	**1,009**
⊖ Capital decrease	–	–	–	–	–	–	–	**–**	–	**–**	-3	**-3**
⊖ Dividend payment	–	–	–	–	–	–	–	**–**	-600	**-600**	-12	**-612**
± Other changes	–	–	–	–	–	–	–	**–**	-35	**-35**	-25	**-60**
± Comprehensive income	–	–	-167	–	47	610	–	**490**	745	**1,235**	12	**1,247**
thereof net profit for the year	–	–	–	–	–	–	–	**–**	745	**745**	20	**765**
thereof currency effects	–	–	-167	–	–	–	–	**-167**	–	**-167**	-8	**-175**
thereof deferred taxes	–	–	–	–	-4	-41	–	**-45**	–	**-45**	–	**-45**
thereof market valuation	–	–	–	–	51	–	–	**51**	–	**51**	–	**51**
thereof revaluation of defined benefit plans	–	–	–	–	–	651	–	**651**	–	**651**	–	**651**
thereof share of items not recognized in the income statement from investments accounted for using the equity method	–	–	–	–	–	–	–	**–**	–	**–**	–	**–**
As of Dec 31, 2017	**2,150**	**6,310**	**-9**	**0**	**-121**	**-1,355**	**-12**	**4,813**	**7,110**	**14,073**	**165**	**14,238**

GRI 201-1

(€ million)	**Subscribed capital**	**Reserves Capital reserves**	**Currency translation**	**Fair value valuation of securities**	**Fair value valuation of cash flow hedges**	**Revaluation of pensions**	**Other movements**	**Total**	**Retained earnings**	**Equity attributable to shareholder of Deutsche Bahn AG**	**Non-controlling interests**	**Equity**
As of Jan 1, 2018	2,150	6,310	-9	0	-121	-1,355	-12	**4,813**	7,110	**14,073**	165	**14,238**
⊕ Adjustment due to IFRS 9	–	–	–	–	–	–	–	**–**	24	**24**	–	**24**
⊕ Capital increase	–	–	–	–	–	–	–	**–**	–	**–**	3	**3**
⊖ Capital decrease	–	–	–	–	–	–	–	**–**	–	**–**	-1	**-1**
⊖ Dividend payment	–	–	–	–	–	–	–	**–**	-450	**-450**	-13	**-463**
± Other changes	–	–	–	–	–	–	–	**–**	-1	**-1**	-9	**-10**
± Comprehensive income	–	–	25	-1	15	-778	–	**-739**	528	**-211**	12	**-199**
thereof net profit for the year	–	–	–	–	–	–	–	**–**	528	**528**	14	**542**
thereof currency effects	–	–	25	–	–	–	–	**25**	–	**25**	-2	**23**
thereof deferred taxes	–	–	–	–	-1	40	–	**39**	–	**39**	–	**39**
thereof market valuation	–	–	–	0	16	–	–	**16**	–	**16**	–	**16**
thereof revaluation of defined benefit plans	–	–	–	–	–	-818	–	**-818**	–	**-818**	0	**-818**
thereof share of items not recognized in the income statement from investments accounted for using the equity method	–	–	–	-1	–	–	–	**-1**	–	**-1**	–	**-1**
As of Dec 31, 2018	**2,150**	**6,310**	**16**	**-1**	**-106**	**-2,133**	**-12**	**4,074**	**7,211**	**13,435**	**157**	**13,592**

Notes to the consolidated financial statements

Segment information according to segments

	DB Long-Distance		DB Regional		DB Arriva		DB Cargo		DB Schenker	
Jan 1 through Dec 31 or respectively as of Dec 31 (€ million)	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017
External revenues	4,528	4,193	8,862	8,629	5,433	5,338	4,177	4,209	16,973	16,345
Internal revenues	154	154	106	105	8	7	283	319	77	85
Total revenues	4,682	4,347	8,968	8,734	5,441	5,345	4,460	4,528	17,050	16,430
Other external income	141	167	264	234	210	256	354	269	267	304
Other internal income	49	81	92	151	6	–	43	76	9	7
Inventory changes and internally produced and capitalized assets	15	8	83	63	2	–	42	41	6	7
Total income	4,887	4,603	9,407	9,182	5,659	5,601	4,899	4,914	17,332	16,748
Cost of materials	-2,634	-2,495	-5,506	-5,383	-1,630	-1,606	-2,509	-2,513	-11,225	-10,906
Personnel expenses	-978	-946	-2,050	-1,968	-2,439	-2,393	-1,654	-1,618	-3,289	-3,142
Other operating expenses	-600	-551	-725	-675	-1,015	-1,033	-682	-653	-2,115	-2,024
EBITDA	675	611	1,126	1,156	575	569	54	130	703	676
Scheduled depreciation [2]	-258	-230	-633	-645	-273	-265	-230	-215	-199	-198
Impairment losses recognized/reversed [2]	–	0	-1	-3	-2	-3	-14	-5	-1	-1
EBIT (operating profit)	417	381	492	508	300	301	-190	-90	503	477
Net operating interest [3]	-1	4	-51	-48	-35	-39	-47	-51	-38	-38
Operating income after interest [3]	416	385	441	460	265	262	-237	-141	465	439
Property, plant and equipment	3,658	2,837	6,616	6,738	2,217	2,203	2,597	2,291	1,522	1,451
+ Intangible assets	8	8	29	22	1,726	1,711	180	161	1,422	1,417
thereof goodwill	0	0	6	5	1,377	1,387	1	1	1,146	1,131
+ Inventories	110	85	208	177	98	97	122	107	75	68
+ Trade receivables [4]	57	75	601	437	454	320	481	458	2,504	2,506
+ Receivables and other assets [4]	148	142	512	462	447	414	180	137	640	549
− Receivables from financing [4]	–	–	–	–	–	–	–	–	–	–
+ Income tax receivables	–	–	1	–	21	23	3	3	31	18
+ Available-for-sale assets [4]	–	–	–	–	–	–	–	–	–	–
− Trade liabilities [4]	-296	-248	-216	-322	-634	-548	-508	-506	-2,119	-1,975
− Miscellaneous and other liabilities [4]	-297	-293	-626	-517	-287	-242	-619	-311	-667	-539
− Income tax liabilities	0	–	-1	-1	-77	-83	-2	–	-105	-63
− Other provisions	-35	-60	-1,527	-1,349	-305	-137	-174	-198	-390	-458
− Deferred items	-474	-386	-138	-161	-246	-126	-4	-6	-12	-13
− Deferred liabilities [4]	-95	-131	-200	-172	-194	-189	-209	-167	-411	-373
− Held-for-sale liabilities [4]	–	–	–	–	–	–	–	–	–	–
Capital employed [5]	2,784	2,029	5,259	5,314	3,220	3,443	2,047	1,969	2,490	2,588
Net financial debt	463	-258	2,781	2,885	741	890	1,692	1,356	847	909
Investments accounted for using the equity method	1	–	4	4	99	124	38	28	11	13
Result from investments accounted for using the equity method	0	–	1	–	7	4	-1	4	1	2
Gross capital expenditures	1,081	1,060	539	674	326	374	587	328	273	246
Investment grants received	–	–	-13	-46	-14	-2	-1	-4	–	–
Net capital expenditures	1,081	1,060	526	628	312	372	586	324	273	246
Additions due to changes in the scope of consolidation (acquisition of companies)	–	–	–	–	165	66	–	3	–	5
Employees [6]	16,548	15,993	35,881	35,651	53,056	54,650	28,842	28,257	75,817	71,888

[1] Relating to special items and reclassification PPA amortization of customer contracts as well as the reconciliation of capital employed to the external display.

[2] The non-cash items are included in the segment result shown.

[3] Key figure from internal reporting, no external figures.

[4] Content allocation in accordance with management reporting. Previous year adjusted.

[5] Profit transfer agreements were not assigned to segment assets or liabilities.

[6] The number of employees comprises the workforce, excluding vocational trainees, and dual degree students at the end of the reporting period (part-time employees have been converted to full-time employees).

DB Netze Track		DB Netze Stations		DB Netze Energy		Subsidiaries/ Other		**Sum of segments**		Consolidation		**DB Group adjusted**		Reconciliation 1)		**DB Group**	
2018	2017	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	**2017**	**2018**	2017	**2018**	**2017**	**2018**	2017	**2018**	**2017**
1,559	1,522	569	540	1,350	1,301	573	627	44,024	42,704	–	–	44,024	42,704	41	-11	44,065	42,693
3,952	3,842	745	725	1,500	1,493	4,417	4,227	11,242	10,957	-11,242	-10,957	–	–	–	–	–	–
5,511	5,364	1,314	1,265	2,850	2,794	4,990	4,854	55,266	53,661	-11,242	-10,957	44,024	42,704	41	-11	44,065	42,693
832	735	167	134	53	127	574	572	2,862	2,798	–	4	2,862	2,802	136	152	2,998	2,954
251	255	23	22	34	-72	1,161	1,082	1,668	1,602	-1,668	-1,602	–	–	–	–	–	–
942	890	50	40	21	19	778	722	1,939	1,790	1,152	1,110	3,091	2,900	–	–	3,091	2,900
7,536	7,244	1,554	1,461	2,958	2,868	7,503	7,230	61,735	59,851	-11,758	-11,445	49,977	48,406	177	141	50,154	48,547
-1,968	-1,870	-594	-539	-2,617	-2,457	-2,933	-2,826	-31,616	-30,595	9,362	9,154	-22,254	-21,441	-4	-16	-22,258	-21,457
-2,945	-2,764	-338	-313	-124	-120	-3,331	-3,099	-17,148	-16,363	-1	0	-17,149	-16,363	-152	-302	-17,301	-16,665
-1,177	-1,126	-260	-237	-130	-150	-1,439	-1,441	-8,143	-7,890	2,308	2,218	-5,835	-5,672	-253	-218	-6,088	-5,890
1,446	1,484	362	372	87	141	-200	-136	4,828	5,003	-89	-73	4,739	4,930	-232	-395	4,507	4,535
-651	-839	-141	-139	-66	-69	-252	-255	-2,703	-2,855	49	48	-2,654	-2,807	-60	-73	-2,714	-2,880
45	42	–	0	0	0	-1	-1	26	29	–	–	26	29	–	4	26	33
840	687	221	233	21	72	-453	-392	2,151	2,177	-40	-25	2,111	2,152	-292	-464	1,819	1,688
-206	-245	-32	-34	-17	-16	-189	-215	-616	-682	-2	–	-618	-682	–	–	–	–
634	442	189	199	4	56	-642	-607	1,535	1,495	-42	-25	1,493	1,470	–	–	–	–
19,514	19,544	3,154	3,145	984	977	1,246	1,158	41,508	40,344	-751	-736	40,757	39,608	–	–	40,757	39,608
139	138	23	13	24	32	209	111	3,760	3,613	-30	-14	3,730	3,599	–	–	3,730	3,599
–	0	0	0	–	0	14	15	2,544	2,539	–	–	2,544	2,539	–	–	2,544	2,539
211	168	0	–	89	86	480	382	1,393	1,170	-24	-19	1,369	1,151	–	–	1,369	1,151
164	134	22	29	268	233	400	372	4,951	4,564	–	–	4,951	4,564	11	7	4,962	4,571
472	271	20	55	161	157	1,585	1,111	4,165	3,298	-2,052	-1,500	2,113	1,798	137	124	2,250	1,922
–	–	–	–	–	–	–	–	–	–	–	–	–	–	-174	-131	-174	-131
0	–	0	–	0	–	6	8	62	52	–	–	62	52	–	–	62	52
–	–	–	–	–	–	–	–	–	–	–	–	–	–	26	0	26	0
-587	-529	-92	-88	-361	-280	-572	-552	-5,385	-5,048	1	2	-5,384	-5,046	-107	-111	-5,491	-5,157
-674	-630	-191	-184	-59	-52	-885	-868	-4,305	-3,636	2,049	1,500	-2,256	-2,136	-1,662	-1,496	-3,918	-3,632
–	–	0	–	–	–	-28	-18	-213	-165	18	15	-195	-150	–	–	-195	-150
-275	-342	-34	-56	-39	-59	-2,280	-2,446	-5,059	-5,105	-9	-12	-5,068	-5,117	–	–	-5,068	-5,117
-521	-663	-122	-131	-3	-3	-127	-135	-1,647	-1,624	-1	1	-1,648	-1,623	–	–	-1,648	-1,623
-271	-225	-22	-17	-11	-10	-361	-323	-1,774	-1,607	–	–	-1,774	-1,607	1,774	1,607	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	-5	–	-5	–
18,172	17,866	2,758	2,766	1,053	1,081	-327	-1,200	37,456	35,856	-799	-763	36,657	35,093	–	–	36,657	35,093
9,499	9,386	1,260	1,268	623	630	1,643	1,557	19,549	18,623	–	–	19,549	18,623	–	–	19,549	18,623
1	1	0	–	0	–	332	330	486	500	–	–	486	500	–	–	486	500
1	–	–	–	0	–	3	4	12	14	–	–	12	14	–	–	12	14
6,901	6,601	883	709	187	177	511	358	11,288	10,527	-83	-63	11,205	10,464	–	–	11,205	10,464
-6,337	-5,941	-719	-606	-122	-124	-3	-1	-7,209	-6,724	–	–	-7,209	-6,724	–	–	-7,209	-6,724
564	660	164	103	65	53	508	357	4,079	3,803	-83	-63	3,996	3,740	–	–	3,996	3,740
–	–	–	–	–	–	–	1	165	75	–	–	165	75	–	–	165	75
46,969	45,375	5,804	5,463	1,734	1,721	53,877	51,937	318,528	310,935	–	–	318,528	310,935	–	–	318,528	310,935

Information by regions

	External revenues		Non-current assets [1]		Capital employed [1]		Gross capital expenditures		Net capital expenditures		Employees [1]	
Jan 1 to Dec 31 (€ million)	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017
Germany	24,929	24,093	38,207	36,961	30,903	29,330	10,682	9,906	3,487	3,184	196,334	189,423
Europe (excluding Germany)	13,593	13,318	6,044	6,030	5,356	5,340	506	546	492	544	92,336	93,655
Asia/Pacific	3,035	2,935	847	793	787	824	79	61	79	61	16,751	15,971
North America	1,905	1,801	196	192	371	339	16	9	16	9	9,736	8,921
Rest of world	562	557	27	28	43	39	5	5	5	5	3,371	2,965
Consolidation	–	–	-782	-749	-803	-779	-83	-63	-83	-63	–	–
DB Group adjusted	**44,024**	**42,704**	**44,539**	43,255	**36,657**	35,093	**11,205**	**10,464**	**3,996**	**3,740**	**318,528**	**310,935**
Reconciliation	41	-11	–	–	–	–	–	–	–	–	–	–
DB Group	**44,065**	**42,693**	**44,539**	43,255	**36,657**	35,093	**11,205**	**10,464**	**3,996**	**3,740**	**318,528**	**310,935**

[1] As of the balance sheet date.

Basic principles and methods

Fundamental information

Deutsche Bahn AG (DB AG) and its subsidiaries (together DB Group) provide services in the fields of passenger transport as well as freight transport and logistics, and operate an extensive rail infrastructure which is also available to non-Group users on a non-discriminatory basis. Whereas rail infrastructure activities are conducted primarily in the company's domestic market of Germany, business activities in passenger transport are conducted on a Europe-wide basis and freight transport and logistics activities are conducted on a worldwide basis.

DB AG, Potsdamer Platz 2, 10785 Berlin is an Aktiengesellschaft (joint stock corporation); its shares are held entirely by the Federal Republic of Germany (Federal Government). The company is maintained under the number HRB 50000 in the commercial register of the Amtsgericht (local court) Berlin-Charlottenburg. DB Group has issued securities in accordance with section 2 (1) clause 1 of the Securities Trading Act (Wertpapierhandelsgesetz; WpHG); these securities are traded on organized markets in accordance with section 2 (11) WpHG.

These consolidated financial statements have been prepared by the Management Board, and will be submitted to the Supervisory Board for the Supervisory Board meeting on March 27, 2019.

Principles of preparing financial statements

The consolidated financial statements are prepared on the basis of section 315e Commercial Code (Handelsgesetzbuch; HGB) and in accordance with the International Financial Reporting Standards (IFRS) as applied in the EU and their interpretation by the IFRS Interpretations Committee. The accounting standards have been consistently applied throughout the entire reporting period with no changes compared with the previous year.

The financial year of DB AG and its incorporated subsidiaries is the same as the calendar year. The consolidated financial statements are prepared in euros. Unless otherwise specified, all figures are stated in million euros (€ million).

a) Standards, revisions of standards and interpretations which are the subject of mandatory first-time adoption for reporting periods from January 1, 2018 onwards

In the year under review, the consolidated financial statements took account of all new and revised standards and interpretations which are the subject of mandatory first-time adoption starting on or after January 1, 2018, which are also relevant for DB Group and which have not been the subject of early adoption in previous periods. The changes to the standards have been recognized in accordance with the transitional regulations. First-time adoption of these new regulations has not had any material impact on the consolidated financial statements. The relevant new standards, clarifications and interpretations which are significant for DB Group are as follows:

- IFRS 9: "Financial Instruments" (published July 2014; applicable for reporting periods from January 1, 2018 onwards)

With the first-time application of IFRS 9, there have been changes affecting the classification of financial instruments as well as changes affecting the calculation of impairments of receivables. In addition, all investments as well as all receivables which are sold on within the framework of factoring agreements will be classified "at fair value" in future.

Within the framework of IFRS 9, the number of categories previously applicable under IAS 39 has been reduced from four to three. A distinction is still made as to whether the valuation effects from other income are reclassified to the statement of income or remain in shareholders' equity upon maturity or disposal.

Operational risk management and hedge accounting have been linked more closely for the recognition of hedges.

- IFRS 15: “Revenue from Contracts with Customers” (published May 2014; applicable for reporting periods from January 1, 2018 onwards)

The standard provides for a uniform, principle-based five-stage model for revenue identification and recognition which is applicable for all contracts with customers. It replaces in particular IAS 18 “Revenue” and IAS 11 “Construction Contracts.” IFRS 15 also contains additional details regarding the identification of performance obligations, principal-agent considerations and licenses, as well as regarding the application of transitional relief. The application of IFRS 15 does not have any major impact on the consolidated financial statements.

b) Standards, revisions of standards and interpretations which had been adopted as of the reporting date, but which are not yet the subject of mandatory adoption and early adoption

Standard	Subject	Published	Applicable starting	Effects
IFRS 16	Leasing	January 2016	2019	Effects on the consolidated financial statements

IFRS 16 which was adopted in 2016 governs the way in which leases are recognized. Accordingly, from the point of view of the lessee, a right to use an asset has to be capitalized for every lease arrangement, and the corresponding obligation to pay lease installments has to be capitalized as a liability. In the case of leases for assets of low value and for short-term leases with a term of 12 months or less, IFRS 16 provides for exemptions, which are utilized by DB Group. The accounting regulations for lessors on the other hand remain essentially unchanged.

DB Group will apply IFRS 16 for the first time as of January 1, 2019, using the modified retrospective method, and will not adjust previous year financial statements. In the case of leases which were active at the time of first-time adoption and which were classified as operating leases under IAS 17, lease liabilities are shown and, in the amount of the remaining lease payments, are discounted with the DB incremental borrowing rate at the time of first-time adoption. The initial carrying amount of the right-of-use comprises the amount of the lease liability and any accrued income. On the other hand, deferred income recognized for leases reduce the carrying amount of the right-of-use.

For the first-time adoption of IFRS 16, DB Group has initiated a group-wide project in which all leases which are affected by the changeover are collated, inventorized and evaluated in in-house software. We anticipate that the capital employed and financial debt will increase by € 4.2 billion as of January 1, 2019 as a result of the first-time adoption. We do not anticipate that the first-time adoption of IFRS 16 will have any major impact on other balance sheet items, including the retained earnings.

There are also shifts in the statement of income as the linearized other operating expenses of the ongoing recognition of the lease payments is no longer applicable. On the other hand, write-downs have to be recognized in relation to the right-of-use and interest expenses from the compounding of the lease liability. We anticipate that these changes will result in an improvement of about € 25 million in EBIT for the 2019 financial year.

In the statement of cash flows, the different methods for stating the former lease expenses and the depreciation charges result in an improved cash flow from operating activities and lower cash flow from financing activities.

Structure of the balance sheet and the income statement

Assets and liabilities are stated in the balance sheet either as current or non-current items. Assets and liabilities are classified as current if they are realized or due within 12 months after the end of the year under review. The structure of the balance sheet takes account of the requirements of the ordinance relating to the structure of the financial statements of transport companies. The income statement uses the structure of the total cost accounting.

Principles underlying the consolidated financial statements

GRI 102-48 ↓

Comparability with the previous year

After due consideration is given to the following issues, the financial information presented for the year under review is comparable with the financial information for the previous year:

Changes in the scope of consolidation

The changes in the scope of consolidation which are not significant have resulted in financial information in the balance sheet, the income statement, the cash flow statement as well as segment reporting which is not directly comparable with that of the previous year. Detailed information relating to these acquisitions as well as explanations concerning the other transactions are set out in the section “Changes in DB Group.”

Review of useful lives in the segment DB Netze Track

At the beginning of 2018, DB Group carried out a review of the useful lives recognized for depreciation purposes in order to determine the extent to which they reflect actual wear and tear. For some asset classes, the review has resulted in the recognition of higher useful lives, so that the depreciation in the DB Netze Track segment has declined from € 839 million in the previous year to € 651 million in the year under review mainly due to this reason. Subsequent years are also expected to see lower depreciation compared with the previous year for the existing assets in these asset classes.

Adjustment of estimate parameters for measuring inventories

Inventories are capitalized at cost of purchase or production. At the balance sheet date, inventories are measured individually at the lower of cost and net realizable value. In the year under review, some estimate parameters, in particular those relating to the usability of material which has to be stocked for longer periods of time, have been adjusted to reflect the changed conditions. This is the main reason for the decline in the impairments on inventories from € 372 million to € 316 million. It is not possible to determine the extent to which the adjustment of the estimate parameters will have an impact on the subsequent years.

Consolidation methods

a) Consolidation principles

DB AG and all companies (subsidiaries) whose financial and business policy can be determined by DB AG are fully consolidated in the consolidated financial statements. They are incorporated in the consolidated financial statements at the point at which DB AG acquires the possibility of control in accordance with IFRS 10.

For the purpose of uniform accounting, the affiliated companies have applied the accounting guidelines of the parent company.

Capital is consolidated in accordance with the acquisition method in line with IFRS 3.

The equity attributable to Group shareholders is shown separately from the non-controlling interests in the equity of subsidiaries. The amount is calculated based on the non-controlling interests at the time of the initial consolidation and the changes in equity attributable to this interest after that time.

Intra-Group liabilities as well as expenses and income and intercompany results between fully consolidated companies are completely eliminated.

b) Business combinations

All subsidiaries acquired after December 31, 2002 have been consolidated using the acquisition method under IFRS 3.

Any difference between the purchase costs of the business combination and the acquired assets valued at fair value is shown as goodwill. If the purchase price is lower than the fair value of the acquired assets, the difference, following a further assessment, is shown immediately in the income statement.

Non-controlling interests are calculated on a pro rata basis from the assets, liabilities and contingent obligations valued with their fair value.

The acquisition and sale of shares in an already fully consolidated company which does not result in a change of control is shown directly in equity. There have accordingly been no changes to the carrying amounts of the assets and liabilities recognized from such transactions.

c) Joint ventures, joint operations and associated companies

Joint ventures are defined as companies which are managed by DB AG jointly with another party either directly or indirectly, and in which the partners own rights to the net assets of the company.

A joint operation is defined as agreements which are managed by DB AG jointly with another party either directly or indirectly, and in which the parties involved in the joint operation have rights relating to the assets and obligations or their liabilities attributable to the agreement.

Associated companies are defined as equity participations for which DB Group is able to exercise a major influence on the financial and business policy. Major influence is normally defined as a situation in which DB AG directly or indirectly holds 20 to 50% of the voting rights in these companies and the related assumption of association is not refuted.

In exceptional cases, companies in which DB Group holds fewer than 20% of the voting rights are also classified as associates. Despite such a low shareholding, a major influence is deemed to exist in such cases, for instance as a result of various rights of co-determination in major issues of business policy or because members of management are appointed by DB Group.

Joint ventures and associated companies are accounted for using the equity method in accordance with IAS 28 (Investments in Associates and Joint Ventures). Alternatively, they are valued in accordance with IFRS 5 if the shares are classified as held-for-sale.

Intercompany results attributable to transactions with associated companies or joint ventures are eliminated on a pro rata basis.

In the case of joint operations, the assets, liabilities, income and expenditures have to be recognized on a pro rata basis.

Changes in DB Group

a) Subsidiaries

According to IFRS 3, the acquisition cost of a business combination are measured as the aggregate of the fair values, at the date of the transaction, of assets given and liabilities incurred or assumed. The acquired identifiable assets, liabilities and contingent liabilities are valued under IFRS 3 with their fair value at the date of acquisition, irrespective of any non-controlling interests. Alternatively, acquired non-current assets or groups of assets which are classified as held-for-sale in accordance with IFRS 5 are shown with their fair value less costs to sell.

Movements in the group of fully consolidated companies of DB Group are detailed in the following:

Number	Germany 2018	Foreign 2018	Total 2018	Total 2017
FULLY CONSOLIDATED SUBSIDIARIES				
As of Jan 1	126	452	**578**	**618**
Additions	5	4	**9**	**18**
Additions due to changes in type of incorporation	1	2	**3**	**2**
Disposals	7	28	**35**	**60**
Disposals due to changes in type of incorporation	0	0	**0**	**0**
As of Dec 31	**125**	**430**	**555**	**578**

The additions include the acquisition of the remaining 51% of the shares in LogCap-IR Grundverwertungsgesellschaft m.b.H., Vienna/Austria. No business operation has been acquired as defined by IFRS 3; a business combination in the sense of IFRS 3 does not exist in this case.

Additions of companies and parts of companies

Overall, a total of net € 70 million was spent on company acquisitions according to IFRS 3 in the year under review (previous year: net € 37 million). From the portfolio point of view of DB Group, none of the acquisitions was significant. They are set out in the following:

Company	Activities	Segment	Date of inclusion in the consolidated financial statements
Operations in Germany (acquisition of buses, brands and property rights as well as assumption of staff)	Bus services	DB Regional	Jun 18, 2018
GHT Mobility GmbH (acquisition of 45.486 %)	Passenger transport	Subsidiaries/Other	Aug 7, 2018
VT-ARRIVA Személyszállító es Szolgáltató Kft. (VT-Arriva), Székesfehérvár/Hungary (acquisition of 50.09 %)	Bus services	DB Arriva	Dec 1, 2018

The goodwill resulting from the acquisitions is calculated as follows:

(€ million)	2018	Thereof operations	Thereof GHT Mobility GmbH	thereof VT-Arriva
PURCHASE PRICE				
Payments made	18	2	6	10
+ Outstanding purchase price payments	52	–	–	52
Total compensation	**70**	**2**	**6**	**62**
+ Fair value of the amount of equity held before the acquisitions	64	–	3	61
− Fair value of net assets acquired	124	1	–[1]	123
Goodwill	**1**	**1**	**–[1]**	**0**

[1] GHT Mobility GmbH was acquired with the intention of selling on the shares within one year. No purchase price allocation has been made for this reason.

The preliminary acquired net assets of the addition VT-Arriva are detailed in the following: this purchase price allocation has not yet been finalized as a result of the short period between the closing date and the time at which the consolidated financial statements were prepared.

(€ million)	Carrying amount	Adjustment	Fair value
Property, plant and equipment	76	–	76
Intangible assets	0	88	88
Available-for-sale financial assets	0	0	–
Inventories	1	–	1
Trade receivables	17	–	17
Other receivables and other assets	3	–	3
Cash and cash equivalents	17	–	17
Assets	**114**	**88**	**202**
Financial debt	55	–	55
Liabilities	12	–	12
Deferred tax liabilities	4	8	12
Liabilities	**71**	**8**	**79**
thereof recognized contingent liabilities in accordance with IFRS 3	–	–	–
Non-controlling interests	–	–	–
Net assets acquired	**43**	**80**	**123**
Purchase price paid in cash and cash equivalents	10	–	10
Cash and cash equivalents acquired	17	–	17
Inflow of cash and cash equivalents due to transactions	**-7**	**–**	**-7**

The fair value of the trade receivables is € 17 million; this figure does not include any impairments.

If VT-Arriva had been included in the consolidated financial statements as of January 1, 2018, DB Group would have reported additional revenues of € 71 million and an additional net profit of € 9 million.

After being initially consolidated, VT-Arriva has generated revenues of € 7 million and a net profit of € 1 million.

Disposals of companies and parts of companies

The disposals from the scope of consolidation relate to 13 mergers, 21 liquidations and one sale. The sale has not resulted in an inflow of cash.

As was the case in the previous year, there were no major effects on results due to the loss of control in the year under review.

The results are shown in the other operating expenses or income.

Effects on the consolidated income statement

The following table shows a summary of the effects on the consolidated income statement resulting from the changes in the scope of consolidation which have taken place compared with the previous year:

(€ million)	DB Group Jan 1 to Dec 31, 2018	Thereof due to additions to scope of consolidation	Amounts due to disposals from scope of consolidation
Revenues	44,065	45	-1
Inventory changes and internally produced and capitalized assets	3,091	0	–
Overall performance	47,156	45	-1
Other operating income	2,998	3	-1
Cost of materials	-22,258	-15	0
Personnel expenses	-17,301	-19	3
Depreciation and impairments	-2,688	-3	–
Other operating expenses	- 6,088	-11	1
Operating profit (EBIT)	**1,819**	**0**	**2**
Result from investments accounted for using the equity method	12	0	–
Net interest income	- 645	-1	0
Other financial result	-14	0	0
Financial result	**- 647**	**-1**	**0**
Profits before taxes on income	**1,172**	**-1**	**2**
Taxes on income	- 630	0	0
Net profit for the year	**542**	**-1**	**2**

The revenues attributable to changes in the scope of consolidation are as follows:

Jan 1 to Dec 31, 2018 (€ million)	Revenues due to Additions to scope of consolidation	 Disposals from scope of consolidation
Autotrans d.o.o., Cres/Croatia [1]	25	–
Trans-Eurasia Logistics GmbH, Berlin (now named DB Cargo Eurasia GmbH, Berlin) [1]	7	–
VT-Arriva	7	–
Etihad Rail DB Operations LLC, Abu Dhabi/United Arab Emirates	5	–
Innovationszentrum für Mobilität und gesellschaftlichen Wandel (InnoZ) GmbH, Berlin [1]	1	–
RIVIERA TRASPORTI LINEA S.P.A., Imperia/Italy	–	1
Total	**45**	**1**

[1] Acquired during the previous year.

b) Joint ventures, associated companies and companies with joint operations

Number	Germany 2018	Foreign 2018	Total 2018	Total 2017
JOINT VENTURES ACCOUNTED FOR USING THE EQUITY METHOD				
As of Jan 1	13	17	**30**	**30**
Additions	0	0	**0**	**2**
Additions due to changes in type of incorporation	0	0	**0**	**0**
Disposals	1	0	**1**	**1**
Disposals due to changes in type of incorporation	0	3	**3**	**1**
As of Dec 31	**12**	**14**	**26**	**30**
ASSOCIATED COMPANIES ACCOUNTED FOR USING THE EQUITY METHOD				
As of Jan 1	50	44	**94**	**100**
Additions	1	0	**1**	**2**
Additions due to changes in type of incorporation	0	0	**0**	**0**
Disposals	3	2	**5**	**6**
Disposals due to changes in type of incorporation	0	0	**0**	**2**
As of Dec 31	**48**	**42**	**90**	**94**
COMPANIES WITH JOINT OPERATIONS				
As of Jan 1	0	0	**0**	**0**
Additions	0	0	**0**	**0**
Additions due to changes in type of incorporation	0	1	**1**	**0**
Disposals	0	0	**0**	**0**
Disposals due to changes in type of incorporation	0	0	**0**	**0**
As of Dec 31	**0**	**1**	**1**	**0**

The disposals resulting from the changes in the type of incorporation affecting the joint ventures accounted for using the equity method include Etihad Rail DB Operations LLC, Abu Dhabi/United Arab Emirates, which has been reclassified to the joint operations (Joint Operations, IFRS 11).

From the perspective of DB Group, no joint venture and associated company is significant, either individually or when viewed together.

Currency translation

Currency translation uses the concept of functional currency according to IAS 21 (The Effects of Changes in Foreign Exchange Rates) or IAS 29 (Financial Reporting in Hyperinflationary Economies) for annual financial statements of subsidiaries which are based in a hyperinflationary country.

No major subsidiary was domiciled in a hyperinflationary economy in the reporting and comparison period.

The consolidated financial statements are prepared in euros (reporting currency); in accordance with IAS 21, the financial statements of subsidiaries whose functional currency is not the euro are converted into the reporting currency.

The following exchange rates are some of the rates used for currency translation purposes:

	As of Dec 31		Annual average	
€ 1 equivalent to)	2018	2017	2018	2017
Australian Dollar (AUD)	1.62200	1.53460	1.57968	1.47317
Canadian Dollar (CAD)	1.56050	1.50390	1.52936	1.46472
Swiss Franc (CHF)	1.12690	1.17020	1.15496	1.11167
Renminbi Yuan (CNY)	7.87510	7.80440	7.80808	7.62900
Danish Krone (DKK)	7.46730	7.44490	7.45317	7.43863
Pound Sterling (GBP)	0.89453	0.88723	0.88471	0.87667
Hong Kong Dollar (HKD)	8.96750	9.37200	9.25594	8.80451
Japanese Yen (JPY)	125.85000	135.01000	130.39588	126.71118
Norwegian Krone (NOK)	9.94830	9.84030	9.59749	9.32704
Polish Zloty (PLN)	4.30140	4.17700	4.26149	4.25701
Swedish Krona (SEK)	10.25480	9.84380	10.25826	9.63509
Singapore Dollar (SGD)	1.55910	1.60240	1.59261	1.55882
US Dollar (USD)	1.14500	1.19930	1.18095	1.12968

Capital management in DB Group (in accordance with IAS 1 "Presentation of Financial Statements")

The purpose of financial management of DB Group is not only to achieve sustainable growth in the enterprise value and but also to comply with a capital structure which is adequate for maintaining a very good rating.

Based on adjusted EBIT, return on capital employed (ROCE) is calculated as a key component of the value management concept. The capital employed represents the use of capital provided by shareholders and providers of debt which is tied up in DB Group and which is associated with yield expectations. The parameter is derived on the basis of the closing balance sheet for the year under review. The following table shows the process of calculating capital employed, using the asset and liability items shown in the balance sheet.

			Change	
As of Dec 31 (€ million)	**2018**	2017	absolute	%
Property, plant and equipment	40,757	39,608	+1,149	+2.9
⊕ Intangible assets/goodwill	3,730	3,599	+131	+3.6
⊕ Inventories	1,369	1,151	+218	+18.9
⊕ Trade receivables	4,962	4,571	+391	+8.6
⊕ Receivables and other assets	2,250	1,922	+328	+17.1
⊖ Receivables from financing	-174	-131	-43	+32.8
⊕ Income tax receivables	62	52	+10	+19.2
⊕ Held-for-sale assets	26	0	+26	-
⊖ Trade liabilities	-5,491	-5,157	-334	+6.5
⊖ Miscellaneous and other liabilities	-3,918	-3,632	-286	+7.9
⊖ Income tax liabilities	-195	-150	-45	+30.0
⊖ Other provisions	-5,068	-5,117	+49	-1.0
⊖ Deferred items	-1,648	-1,623	-25	+1.5
⊖ Held-for-sale liabilities	-5	-	-5	-
Capital employed	**36,657**	**35,093**	**+1,564**	**+4.5**

For further calculation, the adjusted EBIT and EBITDA in the following table is derived from the operating result (EBIT) shown in the income statement. The corresponding details at the segment level have been calculated using the same method.

			Change	
(€ million)	**2018**	2017	absolute	%
Operating profit (EBIT)	1,819	1,688	+131	+7.8
Income from the disposal of financial instruments	-56	-20	-36	-
Expenses from the disposal of financial instruments	19	1	+18	-
Restructuring/contract obligations (personnel)	120	224	-104	-46.4
Potential losses (DB Arriva)	204	-	+204	-
Provisions in superstructure (DB Netz AG)	-24	125	-149	-
Provision for civil proceedings infrastructure fees	-50	15	-65	-
Other	20	46	-26	-56.5
Operating profit (EBIT) adjusted for special items	**2,052**	**2,079**	**-27**	**-1.3**
PPA amortization customer contracts (depreciation)	59	73	-14	-19.2
EBIT adjusted	**2,111**	**2,152**	**-41**	**-1.9**
Depreciation	2,688	2,847	-159	-5.6
PPA amortization customer contracts (depreciation)	-59	-73	+14	+19.2
Impairments and recoveries in value	-1	4	-5	-
EBITDA adjusted	**4,739**	**4,930**	**-191**	**-3.9**

Special items totaling € 233 million were adjusted in EBIT in the year under review. These are mainly attributable to the creation of a provision for potential losses at DB Arriva as well as provisions for restructuring and for obligation surpluses relating to employment agreements (segment Subsidiaries/Other). The addition for restructuring relates mainly to the segments DB Arriva and DB Cargo. On the other hand, provisions for civil proceedings in connection with infrastructure fees were reversed because the risk assessment has declined as a result of a ruling of the ECJ. In addition, the amortization of customer and franchise agreements has been reclassified from EBIT; these will be written down over the remaining term of the respective contracts as a result of being capitalized as intangible assets as part of the process of purchase price allocations (PPA) (€ 59 million). This amount is mainly attributable to DB Arriva.

The capital employed and the adjusted EBIT have resulted in the following figures for ROCE:

			Change	
(€ million)	**2018**	2017	absolute	%
EBIT adjusted	2,111	2,152	-41	-1.9
⊘ Capital employed as of Dec 31	36,657	35,093	+1,564	+4.5
ROCE (%)	**5.8**	**6.1**	**-**	**-**

Gearing is no longer used for managing the capital structure in DB Group.

Critical assessments and appraisals

The consolidated financial statements are based on assessments and assumptions relating to the future. Based on past experience and reasonable expectations of future events, the estimates and assessments which are derived are continuously reviewed and adjusted where appropriate. Nevertheless, the assessments will not always correspond to subsequent actual circumstances.

The assessments and assumptions which may involve a significant risk during the next year under review in the form of major adjustments to the carrying amounts of assets and liabilities are discussed under the relevant items.

Notes to the statement of income

Revenues generated in DB Group relate to the provision of passenger transport, freight transport and logistics services, the provision of rail infrastructure, the sale of goods and other services related particularly to rail operations, less value-added tax, discounts and any price reductions. They are recognized with their fair value.

Services provided by DB Group are normally completed within a few hours/days. Accordingly, with the exception of season tickets, revenues in regional and long-distance services are recognized at the time at which the tickets are sold. Exceptions in this respect are the segments DB Regional and DB Arriva, where order processing in the form of long-term transport contracts concluded with the ordering organizations of the Federal states in Germany and the franchisors in other European countries are very important for the development of business. Contractual relations with clients covering several years also exist in the contract logistics line of business in the DB Schenker segment, which accounts for about 6% of Group revenues.

Revenue recognition in accordance with IFRS 15 is based on the principle that revenues are recognized when control over a product or service is transferred to the customers. Revenues generated by the rendering of services are recognized with the amount which is expected as the consideration as soon as control over the services has been transferred.

All expense and income items are normally recognized without being netted, unless the accounting principles under IFRS permit or require netting.

Expenses are recognized in the income statement at the point at which the service is used or at the point at which the expenses are incurred.

The special items detailed at income and expenses ("Total") are issues which are considered to be unusual either in terms of the amount involved and/or the actual reason behind the issue. Irrespective of the amount involved, this item is used for disclosing book profits and losses arising from transactions with investments/financial investments as well as depreciation on long-term customer contracts, which have been capitalized as part of the purchase price allocation process in connection with company acquisitions. In addition, the special items recognize individual issues if they are of an exceptional nature, if they are definable for accounting purposes, if they can be measured and if the amount involved is material. In addition to the special items, effects from changes in the scope of consolidation and effects from changes in exchange rates are also disclosed separately. The item "Total – comparable" does not involve IFRS figures; instead, it involves additional disclosures in accordance with internal reporting.

(1) Revenues

(€ million)	**2018**	2017
Revenues from freight and passenger transport services	39,490	38,293
thereof concession fees for rail transport	6,472	4,761
Revenues from operating infrastructure	1,760	1,704
Revenues from letting and leasing	437	432
Revenues from sales of products	1,393	1,339
Other revenues	1,057	1,004
Revenue reductions	–72	–79
Total	**44,065**	**42,693**
± Special items	– 41	11
± Effects from changes in scope of consolidation	– 45	–1
± Effects from changes in exchange rates	507	–
Total – comparable	**44,486**	**42,703**

The revenues from freight and passenger transport services were generated mainly by companies operating in the segments DB Schenker, DB Regional, DB Arriva and DB Long-Distance. Revenues from operating infrastructure relate to the segments DB Netze Track and DB Netze Stations. Revenues generated by product sales were recorded mainly in the segment DB Netze Energy, and rental and leasing revenues were mainly generated in the segment DB Netze Stations. Other revenues relate to virtually all segments.

Compared with the previous year, there has been a change to the disclosure of the "thereof" item "concession fees for rail transport" from gross contracts at DB Regional. In the previous year, the concession fees disclosed as part of gross contracts were reduced by allowable fare revenues. In the year under review, fees of DB Regional from gross contracts are disclosed entirely as concession fees. If the same disclosure method had been used, the previous year figure would have been € 921 million higher. This has not changed the revenues from freight and passenger transport services.

In the year under review, revenues increased by € 1,372 million (+3.2%) to € 44,065 million. This revenue growth compared with the previous year is mainly attributable to DB Long-Distance, DB Regional and DB Schenker. DB Schenker reflects the impact of higher transport volumes as well as higher air freight rates on the procurement side. These cost increases can be passed on to customers to a certain extent. The higher revenues of DB Long-Distance are attributable to considerably higher volume sold as well as a higher specific revenue rate. As a result of higher concession fees (adjusted by the change in disclosure), DB Regional is up on the previous year, due to various factors, including the dynamization of concession fees. DB Arriva has also outperformed the previous year in terms of revenues, mainly as a result of higher concession fees at Arriva Rail North.

Revenues include negative exchange rate effects of € 507 million, mainly affecting DB Schenker. These negative exchange rate effects are mainly attributable to the weaker development (compared with the previous year) of the Swedish krona and the US dollar.

Even when adjusted for special items, effects from changes in the scope of consolidation and exchange rates, the revenues are higher than the previous year figure (€ +1,783 million, +4.2%).

Movements in revenues broken down according to business segments and regions are set out in segment reporting.

Revenue reductions of long-term transport contracts (contractual penalties) are netted directly with the revenues of freight and passenger services. The separately disclosed revenue reductions (€ −72 million) also relate mainly to revenues of freight and passenger services (for instance passenger rights).

The order book of customer contracts with contractually agreed outstanding revenues (secured revenues) is broken down as follows:

Secured order book (nominal values) as of Dec 31 (€ million)	2018
Transport contracts	62,222
Logistics contracts [1]	208
Other contracts [1]	114
Total	**62,544**

[1] Contracts with a duration of at least 12 months and a total volume of at least € 5 million.

Most of the secured order book will be fulfilled within a period of ten years, with percentages declining over a period of time **(order book in passenger transport 🗋114).**

The exemption regulation of IFRS 15.121 (a) has been used for the logistics contracts and the other contracts.

Variable considerations of transport contracts as well as price escalation clauses or contractual penalty are only taken into consideration for estimating the assured revenues if they are highly likely.

Claims relating to contractual assets[1] of € 29 million are recognized together with the other receivables and assets and have developed as follows:

Contractual assets (€ million)	2018
As of Jan 1	96
Additions	113
Impairments	-1
Changes due to changed terms of payment	-
Fulfillment/payment	-118
Other changes	-61
As of Dec 31	**29**

A figure of € 12 million is attributable to long-term contractual assets.

The contractual liabilities in DB Group include advance payments received as well as other payments received in advance in relation to revenues for subsequent periods (for example for season tickets). Obligations from contractual liabilities of € 1,266 million (thereof non-current € 40 million) are shown under the trade payables and deferred items and have developed as follows:

Contractual liabilities (€ million)	2018
As of Jan 1	1,158
Additions	3,157
Fulfillment of liabilities	-3,177
Other changes	128
As of Dec 31	**1,266**

Most of the fulfillment as of the balance sheet date relates to contractual liabilities which accrued in the year under review.

(2) Inventory changes and internally produced and capitalized assets

(€ million)	2018	2017
Inventory changes	15	-36
Other internally produced and capitalized assets	3,076	2,936
Total	**3,091**	**2,900**
± Special items	-	-
± Effects from changes in scope of consolidation	0	-
± Effects from changes in exchange rates	0	-
Total - comparable	**3,091**	**2,900**

Own investments relate mainly to construction and project business in rail infrastructure and also the modernization of rolling stock as well as the processing of appropriate spare parts. The increase compared with the previous year is attributable to a higher construction volume in rail infrastructure.

(3) Other operating income

(€ million)	2018	2017
SERVICES FOR THIRD PARTIES AND SALE OF MATERIALS		
Income from maintenance and repair	5	20
Sale of materials and energy	123	112
Other services for third parties	505	530
	633	**662**
Leasing and rental income	181	182
Income from claims for damages and cost refunds	271	268
INCOME FROM FEDERAL GRANTS		
Federal compensation payments	114	92
Other investment grants	0	1
Income from release of deferred items	144	144
Other Federal grants	278	161
	536	**398**
Income from the disposal of property, plant and equipment and intangible assets	278	257
Income from the disposal of non-current financial instruments	56	20
Income from reversal of provisions	341	336
OTHER INCOME		
Income from third-party fees	38	51
Income from remediation of ecological burdens	51	47
Utilization of provisions for potential losses	71	55
Miscellaneous other income	542	678
	702	**831**
Total	**2,998**	**2,954**
± Special items	-136	-152
± Effects from changes in scope of consolidation	-3	-1
± Effects from changes in exchange rates	7	-
Total - comparable	**2,866**	**2,801**

Adjusted by special items, effects from changes in scope of consolidation and in exchange rates, other operating income is slightly higher than the previous year (€ +65 million). The increase in income from Federal grants is mainly attributable to the promotion of rail freight transport via Federal grants for train-path usage fees as well as higher compensation payments for level crossings. The decline in the miscellaneous other income is mainly attributable to the refund of the nuclear fuel tax in the previous year (€ −104 million).

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[1] The contractual assets also show claims relating to work-in-progress from long-term production.

(4) Cost of materials

(€ million)	2018	2017
EXPENSES FOR RAW MATERIALS AND SUPPLIES AND OF PURCHASED GOODS		
Energy expenses		
Electricity	1,872	1,771
Electricity tax	158	156
Diesel, other fuel	1,078	1,052
Other energies	233	205
Energy price derivatives	18	51
	3,359	**3,235**
Other supplies and purchased goods	571	552
Price and value adjustments for materials	-176	-91
	3,754	**3,696**
EXPENSES FOR PURCHASED SERVICES		
Purchased transport services	12,058	11,660
Cleaning, security, disposal, winter service	397	359
Commissions	171	161
Expenses for utilization of infrastructure		
Train-path usage	351	359
Station usage [1]	57	63
Use of local installations	14	13
	422	**435**
Other purchased services	1,047	953
	14,095	**13,568**
Expenses for maintenance and production	4,409	4,193
Total	**22,258**	**21,457**
± Special items	-4	-16
± Effects from changes in scope of consolidation	-15	0
± Effects from changes in exchange rates	317	–
Total – comparable	**22,556**	**21,441**

[1] Previous year's figure adjusted.

Compared with the previous year, the cost of materials has risen by € 801 million (+3.7%).

The increases in value recognized in cost of materials amount to € 64 million (previous year: value adjustments of € 24 million). The decline of € 88 million in the recognized value adjustments is due mainly to the change in estimate parameters.

The expenses for electricity have increased compared with the previous year as a result of higher energy prices.

The expenses for purchased services have increased considerably compared with the previous year (+3.9%). This increase is attributable to higher expenses for purchased transport services at DB Schenker resulting from higher transport volumes as well as higher freight rates.

The expenses for maintenance and carrying out construction measures and processing spare parts increased by 5.2% in the year under review.

(5) Personnel expenses and employees

(€ million)	2018	2017
WAGES AND SALARIES		
Employees	13,024	12,324
Civil servants assigned	1,012	1,058
	14,036	**13,382**
SOCIAL SECURITY EXPENSES		
Employees	2,402	2,268
Civil servants assigned	229	238
Expenses for adjusting staffing levels	151	282
Retirement benefit expenses	483	495
	3,265	**3,283**
Total	**17,301**	**16,665**
± Special items	-152	-302
± Effects from changes in scope of consolidation	-19	-3
± Effects from changes in exchange rates	104	–
Total – comparable	**17,234**	**16,360**

The figure stated for personnel expenses (social security contributions) includes expenses of € 1,182 million for defined contribution plans (previous year: € 1,121 million).

The amount shown for adjusting staffing levels mainly comprises expenses for restructuring costs, obligation surpluses relating to employment agreements as well as costs of severance payment and semi-retirement agreements.

The retirement benefit expenses relate to active persons as well as persons who are no longer employed in DB Group or their surviving dependants. They are attributable primarily to service costs, employers' contributions to the company top-up benefit scheme as well as the contributions to Pensions-Sicherungs-Verein aG (pension backing association). The interest expense resulting from compounding the pension obligations and the expected income from plan assets is shown in financial result. For detailed explanations regarding the development of pension obligations, please refer to **Note (32) 🗋 220 ff.**

The activities of civil servants in DB Group are based on statutory allocation within the framework of the Rail Restructuring Act (Eisenbahnneuordnungsgesetz; ENeuOG), Art. 2 §12. For the work of the assigned civil servants, DB AG reimburses to the Federal Railway Fund (Bundeseisenbahnvermögen; BEV) those costs which would be incurred if an employee covered by collective bargaining arrangements were to be employed instead of the assigned civil servant (pro forma calculation).

The increase in wages and salaries in Germany is mainly attributable to the elective model applicable since January 1, 2018 (linear increase of 2.6% in remuneration rates, six days more vacation or reduction of one hour in weekly working time) from the collective bargaining arrangement 2016/2017. The decision of the employees for 2.6% resulted in increased remuneration rates. The decision for six days more vacation or a reduction of one hour in weekly working time resulted in an increased personnel requirement and consequently in an increase in personnel. The one-off payment of € 1,000 per employee for the period October 2018 to June 2019 agreed in the collective bargaining agreement 2018/2019 also had an impact. It has been recognized for 2018 on a pro rata basis in personnel expenses.

In addition, the increase in the number of employees has also resulted in a considerable rise in personnel expenses.

The development in the number of employees in DB Group, converted to full-time employees (FTE) in each case, is shown in the following:

	As of Dec 31		Annual average	
(FTE)	**2018**	2017	**2018**	2017
Employees	298,343	288,565	294,337	284,459
Civil servants	20,185	22,370	22,564	24,212
Employees	**318,528**	**310,935**	**316,901**	**308,671**
Trainees and dual degree students	11,053	10,983	9,695	9,857
Total	**329,581**	**321,918**	**326,596**	**318,528**

In the event of changes in the scope of consolidation, the employees are included on a pro rata basis up to the time of deconsolidation or after the date of initial consolidation.

At the end of the year, the number of persons employed in DB Group was higher than at the end of the previous year. At the level of the segments, the increase in the number of employees is evident particularly at DB Schenker as a result of the continuing growth in the field of contract logistics and at DB Netze Track in the fields of maintenance and construction projects. There has also been an increase in the number of employees at DB Long-Distance and DB Cargo.

The development in the number of employees, based on the number of natural persons (NP), is shown in the following:

	As of Dec 31	
(NP)	**2018**	2017
Employees	310,443	300,391
Civil servants	21,125	22,990
Employees	**331,568**	**323,381**
Trainees and dual degree students	11,053	10,983
Total	**342,621**	**334,364**

(6) Depreciation and impairments

For property, plant and equipment, depreciation is taken to the income statement on a straight-line basis over the expected service life of the asset. The following useful-service lives for the main groups of property, plant and equipment are taken as a basis:

	Years
Permanent way structures, tunnels, bridges, railway crossings	15-100
Track infrastructure	13-30
Buildings, halls, roofs	10-75
Other structures	8-60
Signaling equipment	10-40
Telecommunications equipment	5-20
Traction current installations	10-40
Rolling stock	10-30
Other technical equipment, machinery and vehicles	5-40
Fixtures and fittings	3-15

The appropriateness of the chosen depreciation method and the service lives is subject to an annual review. Our expectations regarding the residual value are also updated annually.

Intangible assets are depreciated using the straight-line method. The following useful lives are used as the basis for depreciation:

	Years
Franchises, rights, etc.	Duration of contract
Trademarks	Economic life
Brand names	Economic life
Customer base	Economic life
Purchased software	3-10
Software produced in-house	3-15

Goodwill arises as a positive difference between the costs of purchasing the shares and the fair values of the individually acquired assets, absorbed liabilities and contingent liabilities. It is not depreciated; instead, it is subject to an annual impairment test. Impairment losses in relation to goodwill are not reversed.

The adequacy of the depreciation method and the service life are subject to an annual review.

Impairments of assets

IAS 36 governs the impairment test for property, plant and equipment and intangible assets with a certain economic life, which is carried out using a so-called indicator-based asset impairment test. Such an asset impairment test has to be carried out when indicators (so-called triggering events) indicate a possible loss of value. In addition, according to IAS 36, goodwill as well as intangible assets with an indefinite service life have to be subjected at least once a year to an impairment test.

Definition of cash-generating units

Goodwill impairment tests have to be carried out at the level of individual assets as part of the asset impairment test. If it is not possible to determine future cash flows, which are to a large extent independent, for an individual asset, so-called cash-generating units (CGUs) have to be formed as an aggregation of assets whose future cash flows depend on each other. Since the beginning of the 2016 financial year, the CGU structure is fully in line with the planning and reporting structure of DB Group. In the 2018 financial year, no adjustments were made to the CGU structure.

Due to the congruence between management structure and legal structure, the identified CGUs also always consist of at least one legal unit. This means that the data necessary for the asset impairment test can be derived from annual financial statements and planning data.

The impairment test for goodwill is carried out at the level of the CGU or group of CGUs to which the goodwill has been allocated. This has been equivalent to the operating segments since January 1, 2016. Significant goodwill currently exists in the CGUs DB Arriva and DB Schenker. With regard to the recognition of goodwill for each CGU, please also refer to the segment information according to business segments.

Method

In the impairment test in accordance with IAS 36, the carrying amount of an asset or a CGU has to be compared with the corresponding recoverable amount. If the positive carrying amount is no longer covered by the recoverable amount, this results in a corresponding impairment requirement.

The carrying amount of a CGU is established by adding the carrying amounts of the assets less the liabilities which are related to the relevant assets (net position). In addition, for determining the carrying amount of a CGU, it is also necessary to recognize corporate assets and corporate liabilities jointly used by several CGUs, and the working capital necessary for the corresponding CGU must also be taken into consideration.

The recoverable amount is defined as the higher of the fair value less costs of disposal and the value in use. In the impairment tests carried out in DB Group, the recoverable amount is represented by the value in use. The value in use is established as the present value of the free cash flows before interest and after tax attributable to the continuation of a CGU. A global tax rate of 30.5% has again been used in relation to EBIT (unchanged compared with the previous year). The forecast of cash flows reflects previous experience, and takes account of management expectations with regard to future market developments. These cash flow forecasts are based on the mid-term planning adopted by the Group Management Board of DB AG and which covers a planning horizon of five years. If cash flow forecasts are necessary beyond the five-year planning horizon, a sustainable free cash flow is derived from the forecast and is extrapolated on the basis of a growth rate related to the specific market development. As was the case in the previous year, an average growth rate of 1% per annum has been assumed. For the CGU DB Arriva, a growth rate of 1% has also been used since the 2018 financial year (previous year: 2%); a uniform assumption for growth has thus been made for all CGUs in DB Group.

A weighted average cost of capital is used for discounting the free cash flows; this reflects the expectation of return on the capital market for providing debt capital and shareholders' equity to DB Group. Because free cash flow after taxes has been calculated, a cost-of-capital rate after tax has also been used. Risks of free cash flows are recognized by a risk-equivalent capitalization rate.

Compared with the previous year, the cost of capital of DB Group has declined from 4.8% to 4.7%. Taking account of the typical tax rate of 30.5% in relation to EBIT, this is equivalent to a corresponding capitalization rate before tax of 6.8% (previous year: 7.0%).

A specific cost of capital rate is determined for passenger transport, freight transport and logistics as well as infrastructure.

The WACCs of the CGUs of the various segments which are applicable for the 2017 and 2018 annual financial statements are detailed in the following table:

	2018		2017	
(%)	**Before taxes**	**After taxes**	Before taxes	After taxes
DB Group	6.8	4.7	7.0	4.8
Passenger transport	6.9	4.8	7.3	5.1
Freight transport and logistics	8.5	5.9	8.6	6.0
Infrastructure	5.8	4.0	6.0	4.2

The changes in the WACCs compared with the previous year are attributable to current expectations of medium- to long-term developments of the capital market.

Asset impairment test

Processes which comply with the specific requirements of IAS 36 have been implemented in order to carry out the asset impairment test. The service lives of the individual CGUs used for the asset impairment test are based on the service life of the asset or a group of homogenous assets which is (are) most significant for the particular CGU.

In addition, the process of establishing the service life disregards assets or future cash flows which result from major structural changes, disinvestment measures or extension investments. Resultant adjustments to the original plans relate mainly to the major new and expansion infrastructure projects, where it is assumed that the construction process will be completed beyond the mid-term (beyond 2023) and for which most of the planned own funds have not yet been invested. Accordingly, the project Stuttgart 21 also did not have to be taken into consideration for calculating the value in use (in accordance with IAS 36.44) because a major part of the capital expenditures had not been realized as of the balance sheet date and because the project is to be completed beyond the mid-term period. The cash flow forecasts take account of internal transfer prices on the basis of arm's length assessments of the companies involved. The published infrastructure prices are applicable for goods and services exchanged between transport and infrastructure segments; price increases in the period covered by the forecast have also been taken into consideration.

After the medium-term planning has been completed, a regular check is carried out to determine whether impairments are necessary at the CGU level. In addition to this annual cycle, a test is also performed if current issues arising from the development in business or changes in assumptions indicate that there has been a major deterioration in the value in use.

The impairment tests carried out in the period under review identified surplus cover for all CGUs.

Independently of the impairment tests carried out in relation to the CGUs, impairments are recognized in relation to individual assets which are no longer capable of being used fully. These impairments are shown under the disclosures for the respective balance sheet item.

Goodwill impairment test

A goodwill impairment test must be carried out annually for all CGUs to which goodwill can be allocated. Because the goodwill which arises in DB Group as a result of acquisitions is always clearly allocated to a CGU, this goodwill impairment test is an integral part of the asset impairment test which is always carried out annually for all CGUs.

The goodwill impairment tests carried out for the segments which are carrying goodwill did not identify any impairment requirement for the CGUs.

The respective recoverable amount is represented by the value in use of the CGU, which in turn has been derived from the mid-term planning of the relevant segments. The details relating to methods presented above are thus applicable correspondingly. At DB Arriva and DB Schenker it also has to be borne in mind that separate assumptions relating to the development of the economy, market and competition as well as currency relations have been made for the relevant international markets. These assumptions have been based on the external and internal expert assessments available at the time of the planning.

Critical assessments and appraisals

Impairment of cash-generating units (CGUs)

Within the framework of the impairment tests, the main assumptions which have an impact on the value of a CGU are reviewed in the form of standard sensitivity analyses.

DB Cargo is still facing major challenges from the market and the competition. Sustainable stabilization of the profit situation continues to be expected starting in the 2019 financial year.

Also infrastructure CGUs are still exposed to risks relating to the extent of long-term investment grants for replacement capital expenditures in the existing network and the related extent of own funds at the infrastructure companies. The investment grants included in mid-term planning are based on the Performance and Financing Agreement (Leistungs- und Finanzierungsvereinbarung; LuFV) II which has since been signed by the Federal Ministry of Transport and Digital Infrastructure (Bundesministerium für Verkehr und digitale Infrastruktur; BMVI) and DB Group.

EBIT margin

The risk of an EBIT margin reduced by 10% has been considered for analyzing a scenario in which results fail to perform in line with budget. This model calculation has identified an impairment requirement at DB Cargo of € 303 million; this means that the value-in-use for this CGU no longer provides adequate cover for the carrying amount of the capital employed. In scenarios in which the EBIT margin is reduced, the CGU DB Cargo is robust up to a reduction of 5.8%. All other CGUs report stable surplus coverage even if the EBIT margin is reduced by 10%.

Average real growth rate of cash flows

A reduction of 10% in the long-term growth rate has been simulated in order to assess the sensitivity of the impairment test result in relation to the assumed long-term growth of cash flow (1%). As was the case in the previous year, no impairment requirement has been identified for any of the CGUs considered in this scenario.

Weighted average cost of capital

Risks relating to the assumptions of the capitalization rate, which is normally used for calculating the present value of value in use, have been analyzed by simulating the value of each CGU in conjunction with a capital cost mark-up of 10%. The currently used weighted costs of capital (after tax) have been used as the basis of this simulation: DB Group 4.7%, passenger transport 4.8%, freight transport and logistics 5.9%, infrastructure 4.0%. In this scenario, there is no impairment requirement for any CGU. The CGU DB Cargo shows slight surplus cover in this scenario.

Useful life and residual value

With regard to the assumptions relating to useful life and residual value, the effect of a 10% reduction in the residual value at the end of useful life (= terminal value) was analyzed. All CGUs also showed surplus cover in this scenario.

Depreciation is broken down as follows:

(€ million)	**2018**	2017
Scheduled depreciation	2,714	2,880
Recognized impairments	25	165
Recognized recoveries in value	-51	-198
Total	**2,688**	**2,847**
± Special items	-60	-69
± Effects from changes in scope of consolidation	-3	-
± Effects from changes in exchange rates	6	-
Total - comparable	**2,631**	**2,778**

In the year under review, depreciation was lower than in the previous year, and relates mainly to the property, plant and equipment used as rail infrastructure as well as the rolling stock. It is shown in the income statement less any recovery in value recognized in the reporting period. The decline in depreciation is attributable to the recognition of higher useful lives for individual asset classes **(Comparability with the previous year 189)**.

For further explanations, please refer to the details concerning the development in property, plant and equipment or intangible assets under **Notes (13) 202 ff. and (14) 204 f.**

(7) Other operating expenses

(€ million)	2018	2017
EXPENSES FROM LEASING, RENTS AND LEASES		
Operating lease expenses	1,801	1,768
Conditional leasing expenses	1	2
	1,802	**1,770**
Legal, consultancy and audit fees	355	345
Fees and contributions	248	249
Insurance expenses	172	179
Advertising and sales promotion expenses	178	188
Printing and stationery expenses	69	73
Travel and representation expenses	323	311
Research and non-capitalized development costs	29	23
OTHER PURCHASED SERVICES		
Purchased IT services	487	435
Other communication services	47	55
Other services	794	745
	1,328	**1,235**
Expenses from claims for damages	175	164
Impairments recognized in relation to receivables and other assets [1]	27	36
Losses from the disposal of property, plant and equipment and intangible assets	116	136
Expenses from disposal of non-current financial instruments	19	1
Other operating taxes	67	66
OTHER EXPENSES		
Grants for third-party facilities	94	81
Concession fees for passenger transport	124	111
Other personnel-related expenses	230	213
Miscellaneous other expenses	732	709
	1,180	**1,114**
Total	**6,088**	**5,890**
± Special items	-253	-218
± Effects from changes in scope of consolidation	-11	-1
± Effects from changes in exchange rates	71	-
Total – comparable	**5,895**	**5,671**

[1] Including payments for receivables written down in the previous year.

The other operating expenses have increased by € 198 million (+3.4%) compared with the previous year.

This increase is mainly attributable to other purchased services. The purchased IT services have increased in virtually all segments. The increase in other services is attributable to the expansion of business in contract logistics in the segment DB Schenker.

The increase in other expenses is mainly attributable to the segment DB Arriva. The miscellaneous other expenses include the addition to the provision for potential losses at DB Arriva. On the other hand, the miscellaneous other expenses declined in the segment Subsidiaries/Other due to the fact that the addition to the provision for ecological burdens included in the previous year is now longer applicable.

The legal, consultancy and audit fees comprise fees of € 29.4 million for the auditor of the consolidated financial statements (previous year: € 27.6 million[1]); this figure comprises auditing services of € 8.2 million (previous year: € 8.1 million), other certification services of € 5.0 million (previous year: € 4.2 million), tax advice services of € 0.6 million (previous year: € 0.6 million) as well as other services of € 15.6 million (previous year: € 14.7 million[1]). Of the figure shown for the other rendered services, € 8.5 million (previous year: € 7.4 million) is attributable to services of associates of the auditor of the consolidated financial statements.

(8) Result from investments accounted for using the equity method

The following contributions to profits are recognized in the income statement as a result of shares in companies over which significant influence can be exercised or which are managed as joint ventures.

(€ million)	2018	2017
JOINT VENTURES		
VT-ARRIVA Személyszállíto es Szolgáltató Kft., Székesfehérvár/Hungary	5	6
Trieste Trasporti S.P.A., Trieste/Italy	4	3
Other	0	4
	9	**13**
ASSOCIATED COMPANIES		
EUROFIMA European Company for the Financing of Railroad Rolling Stock (EUROFIMA), Basel/Switzerland	3	3
Other	0	-2
	3	**1**
Total	**12**	**14**

(9) Net interest income

(€ million)	2018	2017
INTEREST INCOME		
Net interest income from pension provisions	6	4
Other interest and similar income	21	43
Income from securities	0	1
Operating interest income	**27**	**48**
Interest income from the reversal of deferred items and other interest income	-3	5
	24	**53**
INTEREST EXPENSES		
Other interest and similar expenses	-519	-624
Net interest expenses for pension provisions	-99	-82
Interest expenses from finance leases	-27	-27
Operating interest expenses	**-645**	**-733**
Compounding of long-term provisions and liabilities	-24	-24
	-669	**-757**
Total	**-645**	**-704**
± Special items	-	0
± Effects from changes in scope of consolidation	1	0
± Effects from changes in exchange rates	-1	-
Total – comparable	**-645**	**-704**
For information only:		
Net operating interest income	-618	-685

Of the figure shown for the decline in income from other interest and similar income, about € 17 million is attributable to the refund of the nuclear fuel tax in the previous year.

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[1] Figure adjusted.

The expenses from other interest and similar expenses have declined considerably as a result of the average lower interest rates for the bonds issued in the year under review and the previous year compared with the bonds repaid in this period despite an overall increase in financial debt. The decline is also attributable to the fact that interest expenses of one-off items in the previous year are no longer applicable.

(10) Other financial result

(€ million)	2018	2017
Result from equity investments	1	0
Result from currency exchange gains	-57	324
Result from currency-related derivatives	59	-343
Result from other derivatives	0	5
Result from disposal of financial instruments	0	-
Impairments on financial instruments	-8	-
Other financial result	-9	-16
Total	**-14**	**-30**
± Special items	-	-
± Effects from changes in scope of consolidation	0	0
± Effects from changes in exchange rates	-3	-
Total – comparable	**-17**	**-30**

Dividend income is recognized at the point at which the right to receive the payment arises. Interest income is recognized in the income statement using the effective interest method in the period in which the income arises.

The result from exchange rate effects is attributable to the conversion of foreign currency liabilities and receivables with an impact on the income statement using the spot rate applicable on the reference date (IAS 21). The result from exchange rate effects has to be netted with the result from currency-related derivatives. The moderate exchange rate fluctuations in the year under review are mainly attributable to the development of the exchange rate between the euro and the Swiss franc, the Australian dollar and the Japanese yen. The significant exchange rate fluctuations in the previous year were due to the exchange rate between the euro and most other currencies, and in particular the Swiss franc. The result from currency-related derivatives comprises reclassifications of currency-related changes in the market value of cash flow hedges recognized under shareholders' equity with no impact on the income statement. The result from other derivatives relates to the development in the market value of derivatives which are not classified as effective hedges in accordance with IAS 39 (Financial Instruments: Recognition and Measurement).

(11) Taxes on income

(€ million)	2018	2017
Actual tax expense	-222	-202
Income due to lapsing of tax obligations	30	22
Actual taxes on income	**-192**	**-180**
Deferred tax expense	-438	-23
Taxes on income	**-630**	**-203**

The actual taxes on income continued to be incurred mainly at foreign Group companies. In the year under review, the expenses associated with deferred taxes were considerably higher than was the case in the previous year. This is attributable almost exclusively to Germany, and is the result primarily of the writing down of deferred tax assets. Because of the weaker expectations for profits in the planning period, it is expected that there will be less utilization in future of loss carry-forwards as well as temporary differences. Outside Germany, there are effects attributable to higher income tax risks as well as new tax losses which will probably not be able to be used for offsetting purposes.

Starting with the net profit of DB Group before taxes on income and the theoretical taxes on income calculated using a theoretical tax rate of 30.5%, the following reconciles the calculated taxes with the actual taxes on income:

(€ million)	2018	2017
Profit before taxes on income	1,172	968
Group tax rate (%)	30.5	30.5
Expected tax expense (-)	**-357**	**-295**
Adjustment of the expected future use of loss carry-forwards and new temporary differences which have arisen and loss carry-forwards	-299	-3
Impact of tax rate changes	0	-15
Income not subject to tax	30	28
Tax effects related to IAS 12.33	55	59
Expenses not deductible for tax purposes	-16	-7
Differences in tax rates for foreign companies	30	48
Other effects	-73	-18
Taxes on income as reported	**-630**	**-203**
Effective tax rate (%)	53.8	21.0

The reconciliation amount as detailed in IAS 12.33 relates exclusively to additional tax write-downs resulting from the fact that tax-free grants in the IFRS financial statements have been deducted directly from the costs of purchasing the assets. It is not permissible for deferred taxes to be created in relation to these temporary differences.

In the year under review, the other effects include in particular effects attributable to the difference in the assessment bases of different income tax bases, and the creation of provisions for income tax risks outside Germany.

(12) Earnings per share

Under IAS 33 (Earnings per Share), undiluted earnings per share are calculated by dividing the net profit of DB Group attributable to the shareholders of DB AG by the weighted average number of shares in issue during the year under review. Undiluted earnings per share correspond to diluted earnings per share.

(€ million)	2018	2017
Net profit for the year	542	765
thereof attributable to non-controlling interests	14	20
thereof due to shareholders of DB AG	528	745
Number of issued shares as of Dec 31	430,000,000	430,000,000
Earnings per share (€ per share)		
undiluted	1.23	1.73
diluted	1.23	1.73

Notes to the balance sheet

(13) Property, plant and equipment

Property, plant and equipment is measured at cost in accordance with IAS 16 (Property, Plant and Equipment). The cost of production comprises individual costs as well as overhead costs which are directly allocatable.

If at least two years are required for manufacturing an asset in order to place it in its intended state in which it is capable of being used or sold, any directly attributable borrowing costs are capitalized as costs of production of the asset. If a direct link cannot be established, the average borrowing cost rate of the year under review is used. Turnover tax incurred in connection with the purchase or production of property, plant and equipment is only capitalized if input tax is not permitted to be deducted.

Subsequent costs are capitalized if the expenses enhance the economic benefit of the property, plant and equipment and if the costs can be reliably measured. On the other hand, all other repairs or maintenance are expensed.

Components of property, plant and equipment which are significant in relation to the total costs of purchase and costs of production are recognized separately and written down over their useful lives using the straight-line method.

Investment grants are deducted directly from the cost of purchase or cost of production of the assets for which the grants have been given.

Finance lease assets

Rented and leased assets where the underlying leases are classified as finance leases under IAS 17 (Leases) are capitalized with the lower of fair value or the present value of minimum lease payments at the start of the lease, and are depreciated using the straight-line method over the financial service life of the asset or the shorter duration of the lease.

Property, plant and equipment (€ million)	Land	Commercial, operating and other buildings	Permanent way structures	Track infrastructure, signaling and control equipment	Rolling stock for passenger and freight transport	Technical equipment and machinery	Other equipment, operational and office equipment	Advance payments and construction in progress	Total
COST OF PURCHASE AND COST OF PRODUCTION									
As of Jan 1, 2018	4,150	7,707	15,210	16,921	31,317	1,842	5,107	4,108	**86,362**
Changes in the scope of consolidation	3	30	–	–	112	1	1	0	**147**
thereof additions	3	30	–	–	112	1	1	0	**147**
thereof disposals	–	–	–	–	–	–	0	–	**–**
Additions	51	326	767	1,168	1,868	114	447	6,138	**10,879**
Addition borrowing costs	–	–	–	–	–	–	–	39	**39**
Investment grants	0	-87	-640	-1,012	-16	-24	-53	-5,335	**-7,167**
Transfers	8	226	160	135	220	56	157	-961	**1**
Transfers related to held-for-sale assets	–	–	–	–	–	–	–	–	**–**
Changes with no impact on the income statement	–	0	–	–	–	–	0	–	**0**
Disposals	-55	-79	-22	-194	-529	-76	-369	26	**-1,298**
Currency translation differences	-2	-10	0	0	-34	-3	-5	0	**-54**
As of Dec 31, 2018	**4,155**	**8,113**	**15,475**	**17,018**	**32,938**	**1,910**	**5,285**	**4,015**	88,909
ACCUMULATED DEPRECIATION									
As of Jan 1, 2018	-681	-3,489	-5,253	-12,583	-20,049	-1,295	-3,399	-5	-46,754
Changes in the scope of consolidation	0	-14	–	–	-36	-1	0	–	**-51**
thereof additions	–	-14	–	–	-36	-1	0	–	**-51**
thereof disposals	–	–	–	–	–	–	0	–	**–**
Depreciation	-8	-245	-193	-353	-1,224	-97	-398	0	**-2,518**
Impairments	-1	-2	0	-1	-3	-1	-2	–	**-10**
Recoveries in value	–	0	–	45	5	1	0	–	**51**
Transfers	1	4	0	1	28	9	-42	-1	**0**
Disposals	19	60	13	178	444	71	314	0	**1,099**
Currency translation differences	0	7	0	1	19	1	3	0	**31**
As of Dec 31, 2018	**-670**	**-3,679**	**-5,433**	**-12,712**	**-20,816**	**-1,312**	**-3,524**	**-6**	-48,152
Carrying amount as of Dec 31, 2018	**3,485**	**4,434**	**10,042**	**4,306**	**12,122**	**598**	**1,761**	**4,009**	**40,757**
Carrying amount as of Dec 31, 2017	3,469	4,218	9,957	4,338	11,268	547	1,708	4,103	**39,608**

Property, plant and equipment (€ million)	Land	Commercial, operating and other buildings	Permanent way structures	Track infra-structure, signaling and control equipment	Rolling stock for passenger and freight transport	Technical equipment and machinery	Other operational and office equipment	Advance payments and construction in progress	**Total**
COST OF PURCHASE AND COST OF PRODUCTION									
As of Jan 1, 2017	4,194	7,517	14,984	16,869	30,286	1,762	4,976	3,623	**84,211**
Changes in the scope of consolidation	9	22	–	–	36	3	2	0	**72**
thereof additions	11	28	–	–	52	3	3	–	**97**
thereof disposals	-2	-6	–	–	-16	0	-1	–	**-25**
Additions	23	257	740	1,338	1,468	87	497	5,796	**10,206**
Addition borrowing costs	–	–	–	–	–	–	–	38	**38**
Investment grants	0	-108	-653	-1,222	-49	-12	-58	-4,594	**-6,696**
Transfers	3	126	150	127	200	49	104	-763	**-4**
Transfers related to held-for-sale assets	–	–	–	–	–	–	1	–	**1**
Changes with no impact on the income statement	–	0	–	–	–	–	0	–	**0**
Disposals	-67	-76	-10	-191	-578	-42	-380	9	**-1,335**
Currency translation differences	-12	-31	-1	0	-46	-5	-35	-1	**-131**
As of Dec 31, 2017	**4,150**	**7,707**	**15,210**	**16,921**	**31,317**	**1,842**	**5,107**	**4,108**	**86,362**
ACCUMULATED DEPRECIATION									
As of Jan 1, 2017	-819	-3,306	-5,038	-12,160	-19,395	-1,254	-3,349	-6	**-45,327**
Changes in the scope of consolidation	-1	-10	–	–	-23	-3	-3	–	**-40**
thereof additions	-1	-12	–	–	-34	-3	-3	–	**-53**
thereof disposals	–	2	–	–	11	0	0	–	**13**
Depreciation	-8	-247	-223	-521	-1,197	-86	-394	–	**-2,676**
Impairments	0	-5	-1	-127	-8	-1	0	–	**-142**
Recoveries in value	120	0	–	48	30	0	0	–	**198**
Transfers	0	1	0	0	-1	5	-6	1	**0**
Disposals	23	63	8	177	521	40	328	0	**1,160**
Currency translation differences	4	15	1	0	24	4	25	0	**73**
As of Dec 31, 2017	**-681**	**-3,489**	**-5,253**	**-12,583**	**-20,049**	**-1,295**	**-3,399**	**-5**	**-46,754**
Carrying amount as of Dec 31, 2017	**3,469**	**4,218**	**9,957**	**4,338**	**11,268**	**547**	**1,708**	**4,103**	**39,608**
Carrying amount as of Dec 31, 2016	3,375	4,211	9,946	4,709	10,891	508	1,627	3,617	**38,884**

The additions to the borrowing costs include an average borrowing cost rate of 2.54% (previous year: 2.77%).

The impairments of € 10 million (previous year: € 142 million) mainly relate to rolling stock for passenger and freight transport.

Recoveries in value of € 51 million (previous year: € 198 million) relate mainly to track infrastructure, signaling and control equipment of DB Netz AG (€ 45 million) as well as freight transport of Euro Cargo Rail SAS, Paris/France.

In the year under review, the carrying amount disposals for assets under construction included carrying amount disposals of € 27 million (previous year: € 18 million). These are attributable to the repayment of investment grants which had been received in previous years and deducted from assets.

As of December 31, 2018, restrictions to rights of disposal in relation to property, plant and equipment existed to the extent of € 39 million (as of December 31, 2017: € 37 million) mainly at S.I.A. Società Italiana Autoservizi S.P.A., Brescia/Italy and S.A.B. Autoservizi S.R.L., Bergamo/Italy.

Property, plant and equipment includes rented assets which are shown separately in the following overview. The rented property, plant and equipment comprises assets which are substantially but not legally owned by DB Group, so that the underlying lease agreements have to be classified as finance leases.

Rented assets classified as finance leases (€ million)	**Land**	**Commercial, operating and other buildings**	**Rolling stock for passenger and freight transport**	**Other operational and office equipment**	**Total**
Cost of purchase and cost of production	17	711	143	0	**871**
Accumulated depreciation	-5	-233	-51	0	**-289**
Carrying amount as of Dec 31, 2018	**12**	**478**	**92**	**0**	**582**
Cost of purchase and cost of production	20	646	171	0	**837**
Accumulated depreciation	-5	-219	-63	0	**-287**
Carrying amount as of Dec 31, 2017	**15**	**427**	**108**	**0**	**550**

The figure shown for the commercial, operating and other buildings under leased assets also relates to real estate of DB AG, concourse buildings of DB Station & Service AG and energy installations of DB Energie GmbH. The figure shown under rolling stock for passenger and freight transport relates mainly to rolling stock used by the transport companies of DB Group (locomotives, freight cars and buses). The additions in the year under review relate mainly to commercial and operating buildings as well as rolling stock for passenger and freight transport.

The assets which in certain cases are determined on the basis of retrospective calculations and completed surveys and which are leased by way of operating leases have the following residual carrying amounts:

Rented assets classified as operating leases (€ million)	**Properties**	**Mobile assets**
Cost of purchase and cost of production	1,470	6,092
Accumulated depreciation	-459	-4,616
Carrying amount as of Dec 31, 2018	**1,011**	**1,476**
Cost of purchase and cost of production	1,518	5,781
Accumulated depreciation	-469	-4,522
Carrying amount as of Dec 31, 2017	**1,049**	**1,259**

The residual carrying amounts and cumulative depreciation for the properties (land and buildings) and also the mobile assets (mainly vehicles) are in line with the previous year figures. The increased leasing of new vehicles or vehicles with higher cost of purchase or cost of production compared with the previous year was one of the factors resulting in slightly higher residual carrying amounts for mobile assets as well as a slight increase in the scheduled depreciation. Rental and leasing income resulting from the rental and leasing of these assets are expected to be received in future years as detailed in the following:

	Residual maturity							
Expected rental and leasing income (nominal values) (€ million)	**Less than 1 year**	**1 to 2 years**	**2 to 3 years**	**3 to 4 years**	**4 to 5 years**	**More than 5 years**	**Total more than 1 year**	**Total**
AS OF DEC 31, 2018								
Minimum lease income	374	206	170	147	133	671	**1,327**	**1,701**
AS OF DEC 31, 2017								
Minimum lease income	377	228	177	127	104	434	**1,070**	**1,447**

(14) Intangible assets

Purchased intangible assets are shown with their cost of purchase in accordance with IAS 38 (Intangible Assets). Intangible assets manufactured in-house are recognized with their cost of production, and consist mainly of software.

Cost of production comprise mainly costs for materials and services, wage and salary costs as well as relevant overhead costs.

Intangible assets (excluding goodwill and the Arriva brand) are subsequently valued at cost of purchase or cost of production less depreciation and impairments plus any recoveries in value.

	Capitalized development costs – products in use		Capitalized development costs – products under development		Purchased intangible assets		Goodwill		Intangible assets with indefinite useful life		Advance payments		**Total**	
Intangible assets (€ million)	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	**2017**
COST OF PURCHASE AND COST OF PRODUCTION														
As of Jan 1	175	108	186	239	2,455	2,281	3,026	3,120	5	5	0	0	**5,847**	**5,753**
Changes in the scope of consolidation	–	–	–	–	89	20	1	9	–	–	–	–	**90**	**29**
thereof additions	–	–	–	–	89	21	1	10	–	–	–	0	**90**	**31**
thereof disposals	–	–	–	–	–	-1	–	-1	–	–	–	–	**–**	**-2**
Additions	59	60	230	143	37	55	–	0	–	0	–	–	**326**	**258**
Investment grants	–	-1	-41	-26	-1	-1	–	–	–	–	–	–	**-42**	**-28**
Transfers	45	13	-71	-154	25	145	0	–	–	0	–	0	**-1**	**4**
Changes with no impact on the income statement	–	–	–	–	0	-10	–	–	–	–	–	–	**0**	**-10**
Disposals	-1	-4	-8	-15	-170	-11	-2	0	–	–	0	–	**-181**	**-30**
Currency translation differences	-1	-1	0	-1	-9	-24	0	-103	–	0	–	–	**-10**	**-129**
As of Dec 31	**277**	**175**	**296**	**186**	**2,426**	**2,455**	**3,025**	**3,026**	**5**	**5**	**0**	**0**	**6,029**	**5,847**
ACCUMULATED DEPRECIATION														
As of Jan 1 adjusted	-40	-30	-2	-2	-1,719	-1,546	-487	-484	0	0	–	–	**-2,248**	**-2,062**
Changes in the scope of consolidation	–	–	–	–	0	0	–	–	–	–	–	–	**0**	**0**
thereof additions	–	–	–	–	0	0	–	–	–	–	–	–	**0**	**0**
thereof disposals	–	–	–	–	–	0	–	–	–	–	–	–	**–**	**0**
Depreciation	-22	-14	–	–	-174	-190	–	–	–	–	–	–	**-196**	**-204**
Impairments	-5	–	-5	-6	-4	-17	-1	–	–	–	–	–	**-15**	**-23**
Recoveries in value	–	–	–	–	–	–	–	–	–	–	–	–	**–**	**–**
Transfers	–	–	2	0	-1	0	–	–	–	0	–	–	**1**	**0**
Disposals	0	4	–	6	147	16	3	–	–	0	–	–	**150**	**26**
Currency translation differences	0	0	–	0	5	18	4	-3	–	0	–	–	**9**	**15**
As of Dec 31	**-67**	**-40**	**-5**	**-2**	**-1,746**	**-1,719**	**-481**	**-487**	**0**	**0**	**–**	**–**	**-2,299**	**-2,248**
Carrying amount as of Dec 31	**210**	**135**	**291**	**184**	**680**	**736**	**2,544**	**2,539**	**5**	**5**	**0**	**0**	**3,730**	**3,599**
Carrying amount as of Dec 31 of previous year	135	78	184	237	736	735	2,539	2,636	5	5	0	0	**3,599**	**3,691**

The acquired intangible assets mainly comprise software (about € 276 million carrying amount), franchises and rights (about € 148 million carrying amount) and acquired customer and franchise contracts (about € 210 million carrying amount).

There are no other legal, regulatory, contractual, competition-related, economic or other factors which limit the useful life of the acquired Arriva brand (carrying amount € 32 million).

Impairments of about € 14 million (previous year: € 23 million) were recognized mainly at DB Cargo AG and Transportes Ferroviarios Especiales S.A., Madrid/Spain.

Segment reporting shows the allocation of reported goodwill to the various segments.

(15) Investments accounted for using the equity method

Shares in associated companies and joint ventures are accounted for using the equity method. The carrying amount, based on the Group costs of purchase at the time of the purchase, is updated according to DB Group share of changes in equity position of the company accounted for using the equity method.

The shares in the investments accounted for using the equity method have developed as follows:

(€ million)	2018	2017
As of Jan 1	500	534
Additions	0	0
Disposals	-26	-1
Share of DB Group in profits	12	14
Capital increase	0	0
Dividends received	-11	-19
Impairments	-	-
Currency translation differences	11	-28
Other valuation	0	0
As of Dec 31	**486**	**500**

The figure shown in the balance sheet as of December 31, 2018 is mainly attributable to the shares held in the associated companies EUROFIMA European Company for the Financing of Railroad Rolling Stock (EUROFIMA), Basel/Switzerland and Barraqueiro SGPS SA, Lisbon/Portugal. The shares in EUROFIMA are subject to restrictions in terms of being sold; new shareholders must be railway administration entities which additionally require a guarantee of their respective country guaranteeing their obligations. The disposals relate mainly to **VT-Arriva** **190 ff.**

(16) Deferred taxes

Deferred taxes are calculated in accordance with IAS 12 (Income Taxes).

The theoretical income tax rate for corporations for domestic companies used as the basis for calculating deferred taxes is 30.5%. The income tax rate comprises the corporation tax rate plus solidarity surcharge and an average trade tax rate. Foreign subsidiaries use their relevant local tax rates for calculating deferred taxes.

A deferred tax asset is recognized in accordance with IAS 12.24 or IAS 12.34 if, after corresponding deferred tax liabilities have been deducted, it is likely that adequate taxable income is available. The mid-term planning is used as the basis in this respect. Deferred tax assets relating to income which can be generated after the mid-term period are not recognized, on the grounds that they cannot be reliably determined.

Deferred taxes are established on the basis of the tax rates which can be expected for the period in which the deferred tax is realized on the basis of existing laws or laws which have in essence been adopted.

Critical assessments and appraisals

The calculation of deferred tax assets is generally based on the mid-term planning. If the sum of net profits planned for the mid-term planning period were to decline by 10% in conjunction with otherwise unchanged tax parameters, deferred tax assets would have to be reduced by € 93 million (previous year: € 142 million).

Deferred tax assets are broken down as follows:

As of Dec 31 (€ million)	2018	2017
Deferred tax assets in respect of temporary differences	506	652
Deferred tax assets in respect of losses carried forward	526	764
Total	**1,032**	**1,416**

No deferred tax assets have been created in relation to the following losses carried forward and temporary differences:

As of Dec 31 (€ million)	2018	2017
Tax loss carry-forwards for which no deferred tax asset has been created	14,440	13,564
Temporary differences for which no deferred tax asset has been created	4,622	3,917
Temporary differences which are not permitted to be recognized in accordance with IAS 12.24b in conjunction with 12.33	2,273	2,465
Total	**21,335**	**19,946**

The losses carried forward are mainly attributable to the tax law treatment of Federal Government grants paid in the past to DB AG in accordance with section 21 (5) and section 22 (1) Deutsche Bahn Foundation Act (Deutsche Bahn Gründungsgesetz; DBGrG) as a contribution.

On the basis of current law, the domestic losses carried forward are fully allowable in accordance with current legislation (in terms of the actual amount and justification).

The temporary differences which are not permitted to be recognized in accordance with IAS 12.33 relate exclusively to additional tax depreciation from previously received tax-free investment grants.

The following deferred tax assets and deferred tax liabilities shown in the balance sheet are due to statement and valuation differences for the individual balance sheet items and tax losses carried forward:

	Deferred tax assets		Deferred tax liabilities	
As of Dec 31 (€ million)	**2018**	2017	**2018**	2017
NON-CURRENT ASSETS				
Property, plant and equipment	119	186	150	145
Intangible assets	3	2	43	42
Shares in companies accounted for using the equity method	1	1	1	1
Other financial assets	5	5	0	2
CURRENT ASSETS				
Inventories	3	3	1	1
Trade receivables	8	9	1	1
Other financial assets	5	5	9	12
NON-CURRENT LIABILITIES				
Financial debt	38	71	2	3
Other liabilities	61	45	4	7
Derivative financial instruments	4	7	0	0
Pension obligations	207	172	3	3
Other provisions	109	138	0	1
CURRENT LIABILITIES				
Financial debt	6	23	1	1
Other liabilities	39	41	46	20
Other provisions	30	72	23	10
Losses carried forward	526	764	0	0
Total	**1,164**	**1,544**	**284**	**249**
Netting [1]	-132	-128	-132	-128
Amount stated in the balance sheet	**1,032**	**1,416**	**152**	**121**

[1] To the extent permitted by IAS 12 (Income Taxes).

Tax assets and liabilities are netted if they exist in relation to the same tax authority, if they are of identical maturity and if they relate to the same tax subject.

Of the deferred tax assets of € 1,164 million (as of December 31, 2017: € 1,544 million), a figure of € 91 million (as of December 31, 2017: € 153 million) will probably be realized in the course of the next 12 months. Of the deferred tax liabilities of € 284 million (as of December 31, 2017: € 249 million), a figure of € 83 million (as of December 31, 2017: € 45 million) will probably be realized in the course of the next 12 months.

Deferred tax assets recognized directly in equity (€ 110 million; as of December 31, 2017: € 77 million) are shown in the figure disclosed in the balance sheet for deferred taxes.

(17) Other investments and securities

Other investments are shown with their fair value.

Long- or short-term securities are recognized with their market values as of the reporting date – where such values exist. Changes in fair value are recognized with no impact on the income statement in the reserve attributable to the marking-to-market of securities.

Other investments and securities have developed as follows:

	Other investments		Securities		**Total**	
(€ million)	**2018**	2017	**2018**	2017	**2018**	**2017**
As of Jan 1	38	10	3	3	**41**	**13**
Currency translation differences	0	0	0	0	**0**	**0**
Changes in scope of consolidation	-1	–	–	–	**-1**	**–**
Additions	15	28	0	0	**15**	**28**
Disposals through sale	0	0	–	0	**0**	**0**
Other disposals	0	–	–	–	**0**	**–**
Fair value changes	–	–	-1	0	**-1**	**0**
Reclassifications	-8	0	–	–	**-8**	**0**
Other	0	0	–	–	**0**	**0**
As of Dec 31	**44**	**38**	**2**	**3**	**46**	**41**
thereof at cost/cost of purchase	–	38	0	0	**0**	**38**
thereof fair value (recognized directly in equity)	28	–	2	3	**30**	**3**
thereof fair value (recognized in the income statement)	16	–	–	–	**16**	**–**
Non-current portion	44	38	1	2	**45**	**40**
Current portion	–	–	1	1	**1**	**1**

(18) Inventories

All costs which are directly related to the procurement process are capitalized as the costs of purchase of the inventories. The average method is used as the basis for establishing the cost of purchase of fungible and homogeneous raw materials and supplies. The costs of production comprise the individual costs and also the directly attributable overheads; borrowing costs and idle costs are not capitalized, and instead are recognized as expense in the period in which they are incurred.

As of the balance sheet date, inventories are measured with the lower of cost or net realizable value.

Inventories are broken down as follows:

As of Dec 31 (€ million)	**2018**	2017
Raw materials, consumables and supplies	1,383	1,253
Unfinished products, unfinished services	159	136
Finished products and goods	102	93
Advance payments	41	41
Impairments	-316	-372
Total	**1,369**	**1,151**

(19) Receivables and other assets

In general, receivables and other financial assets are measured at amortized cost of purchase. Finance lease receivables, advance payments made and plan assets in accordance with IAS 19 (Employee Benefits) are not allocated to any category of IFRS 9 (previous year: IAS 39) **(valuation categories in accordance with IFRS 9 🗋 219)**.

Receivables for which there are substantial objective indications of an impairment are adjusted appropriately. Portfolio-based allowances are also recognized in relation to groups of assets; in particular, historical default rates are taken into consideration. In DB Group, the maturities of the receivables and default risks are monitored constantly.

Some transport contracts include a handing over obligation specifying that the deployed assets owned by DB Group have to be handed over at the end of the contract. Other transport contracts include that the deployed assets have to be rented from the contracting organization or a capital service guarantee to be provided by the contracting organization for leasing from independent financial service providers. In accordance with IFRIC 12 (Service Concession Arrangements), the corresponding capital expenditures are capitalized as receivables from transport concession arrangements at the end of the contract, with the guaranteed residual values being separated. The receivables are redeemed out of the concession fees, which means that not all of the concession fees result in revenues. The residual value receivables are disclosed at their present value under the financing receivables.

Critical assessments and appraisals

The impairment of doubtful receivables to a considerable extent comprises assessments and appraisals of individual receivables which are based on the creditworthiness of the particular customer, current economic developments as well as an analysis of historical bad debts at the portfolio level. If the impairment is derived on the basis of historical default rates at the portfolio level, any decline in the overall volume of receivables results in a corresponding reduction of such provisions (and vice versa).

Receivables and other assets comprise the following:

(€ million)	Trade receivables	Receivables from financing	Receivables from transport concessions	Advance payments	Other assets	Total
AS OF DEC 31, 2018						
Gross value	5,128	184	163	282	1,638	**7,395**
Impairments	-142	-10	0	-	-31	**-183**
Net value	**4,986**	**174**	**163**	**282**	**1,607**	**7,212**
thereof due from related parties	34	12	-	0	384	**430**
AS OF DEC 31, 2017						
Gross value	4,791	137	126	243	1,442	**6,739**
Impairments	-181	-6	-	-	-59	**-246**
Net value	**4,610**	**131**	**126**	**243**	**1,383**	**6,493**
thereof due from related parties	41	14	-	0	276	**331**

DB Group concluded factoring agreements with a bank; according to the terms of this agreement, the bank is obliged to purchase on a revolving basis current trade receivables in certain companies of the DB Schenker segment up to a maximum volume of € 709 million. Criteria for defining the receivables include the following: legal enforceability, the invoice falling due within 180 days of the invoice date, and the fact that the debtor is not an intra-Group debtor. The agreement has been concluded for an indefinite period of time. DB Group will continue to be responsible for sales ledger accounting and the dunning system on behalf of the bank until further notice. The risks relating to the receivables which are sold and which are relevant for the risk assessment are the credit risk and the risk of late payment. The purchase price is equivalent to the nominal amount. DB Group bears bad debt related to credit risks from the various tranches as well as late-payment risks up to a maximum amount of € 162 million. The other bad debts related to the credit risk are borne by the bank. Virtually none of the opportunities and risks associated with the receivables have been transferred or retained (breakdown of major risks between DB Group and bank). For some of the receivables, the right of disposal over the receivables which have been sold has been transferred to the bank as the bank has the actual ability to sell on the receivables. These receivables have been completely derecognized. As of December 31, 2018, outstanding receivables with a volume of € 686 million had been sold; of this figure, an amount of € 250 million had been entirely derecognized and an amount of € 436 million had been derecognized to the extent of the transferred risk. Purchase price payments received by the bank increased the cash flow from operating activities.

The receivables from financing include residual values of € 62 million agreed with the public transport authorities for transport contracts. These residual value receivables mainly relate to rolling stock which are sold for a fixed price at the end of the transport contract to the public transport authority or to a third party designated by the public transport authority.

The other assets disclose for the first time contract fulfillment costs of € 22 million.

The impairments for the financial instruments classified in accordance with IFRS 7 have developed as follows:

(€ million)	**Trade receivables**	**Receivables from financing**	**Receivables from transport concessions**	**Other assets**	**Total**
As of Jan 1, 2018	-181	-6	–	-59	**-246**
Change in method IFRS 9	24	0	–	0	**24**
Additions	-26	-4	0	-3	**-33**
Reversals	24	–	–	11	**35**
Amounts used	17	0	–	20	**37**
Changes in the scope of consolidation	0	–	–	0	**0**
Currency translation differences	0	0	–	0	**0**
As of Dec 31, 2018	**-142**	**-10**	**0**	**-31**	**-183**
As of Jan 1, 2017	-206	-3	–	-47	**-256**
Change in method IFRS 9	–	–	–	–	**–**
Additions	-15	-3	0	-18	**-36**
Reversals	32	–	–	5	**37**
Amounts used	7	0	–	1	**8**
Changes in the scope of consolidation	-2	0	–	0	**-2**
Currency translation differences	3	0	–	0	**3**
As of Dec 31, 2017	**-181**	**-6**	**–**	**-59**	**-246**

Individual allowances are created in relation to receivables if there are objective indications of an impairment. In the case of identical receivables (portfolios of receivables) which cannot be identified as impaired individually, the year under review has for the first time seen the creation of risk provisioning for expected loan losses within the framework of the first-time adoption of **IFRS 9 🗋188.** Any impairments which are recognized are deducted from financial assets on the assets side of the balance sheet. Previous impairments are reversed if the reasons for the original impairments are no longer applicable.

Expenses of € 49 million were incurred in the year under review for the complete derecognition of receivables and other assets (previous year: € 50 million).

Income of € 16 million was reported for payments received in relation to previously derecognized receivables and other assets (previous year: € 5 million).

For trade receivables, DB Group uses the simplified approach according to IFRS 9 in order to measure the expected loan losses. Accordingly, for all trade receivables, the loan losses expected over the life of the receivables are used for this purpose. For measuring the expected loan losses, trade receivables are pooled on the basis of common credit risk features. The expected loan losses are determined on a collective basis using impairment matrices. These are determined on the basis of the individual segments within DB Group. The expected loan losses amounted to € 23 million as of December 31, 2018.

As of Dec 31, 2018 (€ million)	**Net carrying amount**	**Expected loss rate (%)**	**Risk provisioning**	**thereof risk provisioning for past due receivables**	**thereof risk provisioning for receivables not past due**
Trade receivables	4,986	0.46	23	13	10

Major receivable defaults can be used as the basis for breaking down the impairment matrices for past due receivables into the following maturity structure:

	Past due (days)		
As of Dec 31, 2018 (€ million)	**up to 30**	**31–120**	**more than 120**
Risk provisioning for past due receivables	1	7	5

For receivables from financing as well as other financial receivables, the expected impairment requirement for major items was determined in relation to specific receivables. Risk provisioning totaling € 6 million was created for this purpose as of December 31, 2018.

For major other financial receivables, the current counterparty-specific default rates are used for this purpose. With a gross carrying amount of € 55 million, this results in a loss rate of 6.0%. The average rated default rate of a specific country is used for other financial receivables. With a gross carrying amount of € 1,456 million, this results in a loss rate of 0.2%.

The change in the process of determining expected losses results in a one-off positive effect of € 24 million in DB Group; this was disclosed separately in equity **(Consolidated statement of changes in equity 🗋185).**

The following overview shows the maturity structure of the receivables for the financial instruments classified in accordance with IFRS 7 and the advance payments which have been made:

	Residual maturity							
(€ million)	Less than 1 year	1 to 2 years	2 to 3 years	3 to 4 years	4 to 5 years	More than 5 years	Total more than 1 year	Total
AS OF DEC 31, 2018								
Trade receivables	4,962	15	8	1	0	0	**24**	**4,986**
Receivables from financing	98	3	1	1	1	70	**76**	**174**
Receivables from transport concessions	16	10	10	10	10	107	**147**	**163**
Advance payments	230	52	–	–	–	–	**52**	**282**
Other assets	1,526	27	3	15	6	30	**81**	**1,607**
Total	**6,832**	**107**	**22**	**27**	**17**	**207**	**380**	**7,212**
thereof non-financial assets	549	64	2	5	0	13	**84**	**633**
AS OF DEC 31, 2017								
Trade receivables	4,571	17	14	7	1	0	**39**	**4,610**
Receivables from financing	77	7	3	1	1	42	**54**	**131**
Receivables from transport concessions	13	10	10	10	10	73	**113**	**126**
Advance payments	196	47	–	–	–	–	**47**	**243**
Other assets	1,334	30	11	0	0	8	**49**	**1,383**
Total	**6,191**	**111**	**38**	**18**	**12**	**123**	**302**	**6,493**
thereof non-financial assets	513	47	–	–	–	6	**53**	**566**

The significant increase in trade receivables compared with the previous year was attributable to almost all segments. A slightly opposite development was evident mainly in the DB Long-Distance segment.

The current other assets also comprise the customs receivables of the DB Schenker segment. In virtually all segments, there have been increases in the other assets compared with the previous year; significant reductions relate to the DB Arriva segment. The increase in the other assets was mainly due to higher receivables due from the Federal Government.

As a result of the large number of customers in the various operating segments, there is no evidence of any concentration of credit risks with trade receivables.

The fair values of the balance sheet items receivables and other assets, trade receivables as well as other receivables and assets essentially correspond to the carrying amounts.

The maximum default risk is essentially equivalent to the carrying amount in each case. Collateral is not normally held.

As of the closing date, there are no indications that debtors of the receivables which are neither impaired nor overdue will not meet their payment obligations.

(20) Income tax receivables

The income tax receivables relate to advance payments which have been made as well as allowable withholding taxes.

(21) Derivative financial instruments

Upon conclusion of a contract, derivative financial instruments are generally classified as hedging instruments for hedging the cash flows from contractual obligations or anticipated transactions (cash flow hedge).

Cash flow hedges

Cash flow hedges are used to provide protection against fluctuations in the cash flows of financial assets or liabilities or anticipated transactions. When future cash flows are hedged, the hedging instruments are also recognized with their fair value. Changes in value are initially recognized in shareholders' equity with no impact on the income statement, and are only recognized in the income statement at the point at which the corresponding losses or profits from the underlying have an impact on the income statement or the transactions expire. Any ineffectiveness is recognized in the income statement in accordance with IFRS 9.

Derivative financial instruments which do not satisfy the requirements for recognizing hedges in accordance with IFRS 9

If hedges which in economic terms are used for interest, currency or price hedging do not satisfy the restrictive requirements of IFRS 9 for being recognized as a hedge, the changes in value are immediately recognized in the income statement.

Calculation of the fair value

The fair value of financial instruments which are traded in an active market is derived from the market price applicable on the balance sheet date. Common valuation methods such as option price or present-value models are used for determining the fair value of financial instruments which are not traded in an active market. If valuation-relevant parameters are not directly observable on the market, forecasts are used based on comparable financial instruments which are traded in an active market; these forecasts are then adjusted by premiums or discounts on the basis of historical data. The mean value of bid and offer rates is used. Trades for which no premium has been paid have a fair value of zero upon conclusion. DB AG operates with long-dated financial derivatives on a hedged basis, and does not perform any credit risk adjustment for *the present value for hedged transactions. For considerations of materiality, no credit risk adjustment is used for current derivatives. If credit risk adjustment is used, the relevant discounts are derived from the credit default swap (CDS) figures observable on the market.*

All derivatives used in DB Group are measured using common methods such as option price or present value models, because their fair values are not traded on an active market. No parameters from non-observable markets are used for measurement purposes.

The volume of hedges which have been taken out is shown in the following overview of nominal values:

	Nominal values of the hedged liabilities			
As of Dec 31 (€ million)	**2018**	**Remaining term up to 1 year**	**Remaining term more than 1 year**	2017
INTEREST-BASED CONTRACTS				
Interest swaps	92	0	92	100
	92	**0**	**92**	**100**
CURRENCY-BASED CONTRACTS				
Currency swaps	796	796	0	925
Currency forwards	1,683	1,636	48	1,471
Cross-currency swaps	6,061	248	5,813	5,545
	8,540	**2,680**	**5,861**	**7,941**

	Volume			
As of Dec 31 (1,000 t)	**2018**	**Remaining term up to 1 year**	**Remaining term more than 1 year**	2017
OTHER CONTRACTS				
Diesel	962	126	836	1,117
Hard coal	4,116	1,284	2,832	60

The volume of interest rate swaps declined to € 92 million; no new business was transacted. The changes in holdings of currency swaps and forwards vary in line with the corresponding hedging requirements of the subsidiaries. In the year under review, the nominal value of the cross-currency swaps increased by € 516 million to € 6,061 million, because the year under review saw the issue of foreign currency bonds whose cash flows were swapped into euros.

The volume of diesel derivatives declined by 0.1 million t to 1.0 million t as the volume of the expiring transactions exceeded the new transactions. The volume of coal hedges has increased considerably as of December 31, 2018 by about 4.0 million t to 4.1 million t due to a higher hedging preference.

The following table shows the average hedging prices/hedging rates for the main derivative hedging instruments of DB Group (per currency) in the year under review:

	Hedging price		**Hedging rate**			
Currency	**Diesel**	**Hard coal**	**Cross-currency swaps (CCS)**	**Interest rate swaps (IRS)**	**Currency swap**	**Currency forward**
EUR	533.51	66.40	–	0.04	–	–
USD	–	–	1.27	–	1.15	1.15
GBP	381.91	–	0.87	–	0.90	0.90
CHF	–	–	1.22	–	–	1.13
JPY	–	–	117.50	–	–	127.52
AUD	–	–	1.52	–	–	1.60
HKD	–	–	–	–	9.02	8.93
NOK	–	–	8.67	–	9.94	9.88
SEK	–	–	8.99	–	–	10.31
DKK	–	–	7.46	–	–	7.47
SGD	–	–	1.63	–	1.56	1.57
NZD	–	–	1.65	–	–	1.67
PLN	1,706.00	–	4.23	–	4.47	4.29
CZK	10,853.69	–	26.26	–	–	25.79
HUF	–	–	300.20	–	–	327.67
RON	–	–	4.51	–	4.66	4.68
HRK	–	–	7.45	–	7.47	7.42
CNY	–	–	–	–	–	7.96
ILS	–	–	–	–	–	4.27
SAR	–	–	4.29	–	–	–
AED	–	–	–	–	–	4.19
QAR	–	–	–	–	–	4.39

All derivative financial instruments are marked-to-market on the reporting date. The following overview shows the structure of the item stated in the balance sheet depending on the type of underlying hedge:

	Assets		Liabilities	
As of Dec 31 (€ million)	**2018**	2017	**2018**	2017
INTEREST-BASED CONTRACTS				
Interest swaps	–	–	9	11
Interest forwards	0	–	–	–
	0	**–**	**9**	**11**
CURRENCY-BASED CONTRACTS				
Currency swaps	1	1	5	3
Currency forwards	4	5	6	5
Other currency derivatives	0	0	0	0
Cross-currency swaps	202	126	326	316
thereof effects from currency hedges	199	119	222	194
	207	**132**	**337**	**324**
OTHER CONTRACTS				
Energy price derivatives	56	47	45	47
	56	**47**	**45**	**47**
Total	**263**	**179**	**391**	**382**
Interest-based contracts	–	–	9	11
Currency-based contracts	168	113	326	296
Other contracts	48	47	37	34
Non-current portion	**216**	**160**	**372**	**341**
Current portion	47	19	19	41

Cash flow hedges

In order to minimize the interest rate and exchange rate risk, foreign currency issues as well as intra-Group foreign currency loans within the Group are in principle translated into euros, and floating-rate financial liabilities are generally converted into fixed-income financial liabilities. Energy price hedging is intended to reduce price fluctuations attributable to energy sourcing.

The negative valuation of the interest rate swaps is still due to a continuous decline in the level of interest rates since the transactions were concluded. The development in the value of the cross-currency swaps is mainly attributable to the weakening of the euro against the Swiss franc and the Japanese yen, partially offset by the strengthening against the British pound and Australian dollar.

The positive market value of the energy price derivatives reflects the development on the underlying raw materials markets.

The market values of the cash flow hedges are shown as follows under assets and liabilities:

	Assets		Liabilities	
As of Dec 31 (€ million)	**2018**	2017	**2018**	2017
INTEREST-BASED CONTRACTS				
Interest swaps	–	–	9	11
	–	**–**	**9**	**11**
CURRENCY-BASED CONTRACTS				
Currency swaps	1	1	5	3
Cross-currency swaps	202	126	291	277
	203	**127**	**296**	**280**
OTHER CONTRACTS				
Energy price derivatives	56	47	45	47
Miscellaneous/other derivatives	–	–	0	–
	56	**47**	**45**	**47**
Total	**259**	**174**	**350**	**338**
Interest-based contracts	–	–	9	11
Currency-based contracts	167	113	291	256
Other contracts	48	47	37	34
Non-current portion	**215**	**160**	**337**	**301**
Current portion	44	14	13	37

Cash flow hedges are not classified under any category of IFRS 9.

The hedged cash flows of the underlyings will probably materialize, and have an impact on the income statement, in the years 2019 to 2032 (interest payments and payments of principal) or in the years 2019 to 2025 (payments for energy).

Details for hedges and underlyings in accordance with IFRS 9

	2018		31.12.2018
(€ million)	Change in hedges	Change in underlyings	Status of hedging cash flow hedges
INTEREST-BASED CONTRACTS			
Interest swaps	+2	–	– 6
CURRENCY-BASED CONTRACTS			
Currency swaps	– 2	–	+1
Cross-currency swaps	+ 62	–	– 112
OTHER CONTRACTS			
Energy price hedges	+11	–	+ 4

In the case of interest and cross-currency hedges, the effectiveness of the hedge is assessed prospectively using the critical terms match method. This method is used because the major valuation parameters of the underlying and hedges are identical. Ineffectiveness is measured as of every balance sheet date by means of the hypothetical derivative method. In this method, the development in value of the hedge which is actually taken out is compared with the development in value of a theoretical hedge in which all valuation-relevant parameters are identical to those of the underlying. The retrospective effectiveness measurement is carried out as of every balance sheet date by means of linear regression. The ineffectiveness is calculated using the dollar-offset method. Under this method, the changes in the market values of the underlying are compared with the changes in the market value of the hedging instrument. The resultant quotient determines the ineffectiveness.

The ineffectiveness of cash flow hedges of the energy price derivatives recognized in the income statement amounted to € 0 million in the year under review (previous year: € 0 million).

Non-hedge derivatives

Currency forwards taken out to hedge operations are normally classified as non-hedge derivatives.

The market values of the non-hedge derivatives are shown under assets and liabilities as follows:

	Assets		Liabilities	
As of Dec 31 (€ million)	**2018**	2017	**2018**	2017
INTEREST-BASED CONTRACTS				
Interest forwards	–	–	–	–
	–	**–**	**–**	**–**
CURRENCY-BASED CONTRACTS				
Currency forwards	4	5	6	5
Cross-currency swaps	–	–	35	39
	4	**5**	**41**	**44**
OTHER CONTRACTS				
Energy price derivatives	0	0	–	–
	0	**0**	**–**	**–**
Total	**4**	**5**	**41**	**44**
Currency-based contracts	1	0	35	40
Non-current portion	**1**	**0**	**35**	**40**
Current portion	3	5	6	4

The cross-currency swaps are based on a redesignation of hedges as a result of the transfer of transactions between banks. The conditions including the cash flows of the derivatives were unchanged and the economic hedge is thus still in place. The slight decline is attributable to the reversal of the redesignated amounts in line with the remaining maturities of the swaps.

The non-hedge derivatives are classified under the category held-for-trading of IFRS 9.

The financial instruments recognized at fair value are classified under valuation level 2 and to a lesser extent under valuation level 1.

	2018				2017			
As of Dec 31 (€ million)	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
ASSETS								
Available-for-sale financial assets (securities at fair value)	2	–	–	**2**	2	–	–	**2**
Derivatives – non-hedging	–	4	–	**4**	–	5	–	**5**
Derivatives – hedging	–	259	–	**259**	–	174	–	**174**
Total	**2**	**263**	**–**	**265**	**2**	**179**	**–**	**181**
LIABILITIES								
Derivatives – non-hedging	–	41	–	**41**	–	44	–	**44**
Derivatives – hedging	–	350	–	**350**	–	338	–	**338**
Total	**–**	**391**	**–**	**391**	**–**	**382**	**–**	**382**

There have been no reclassifications between the valuation levels in the year under review.

For establishing the fair values of the derivative financial instruments, the contractually agreed or most probable cash flows are discounted using the appropriate market interest rate, whereby due consideration is given to the credit risk by means of credit spreads. No credit risk mark-downs have been recognized in the case of secured exposures. The credit risk resulting from the derivative portfolio is treated on a net basis. Credit support annexes, which are subject to daily security settlement with a threshold value of € 0, were concluded to minimize the credit risk of long-term interest and cross-currency transactions.

(22) Cash and cash equivalents

This item comprises cash in hand and checks, deposits at banks which are due on sight, as well as cash equivalents. Cash at banks comprises overnight money as well as time deposits (including repurchase agreements (repos)) due within three months.

Cash and cash equivalents are recognized with their nominal value (at amortized cost).

Cash and cash equivalents are broken down as follows:

As of Dec 31 (€ million)	2018	2017
Cash in hand and cash at banks	3,543	3,396
Cash equivalents	1	1
Total	**3,544**	**3,397**
Effective interest rate on short-term bank deposits (%)	- 0.20	- 0.16
Average term of short-term bank deposits (months)	0.4	0.4

The interest rates for current bank deposits were in a range of between –0.60% and 0.19% (previous year: between –0.55% to 0.18%) and relate to investments in euros. The maturities of the investments are between one day and three months.

With regard to cash and cash equivalents, please refer to section **“Notes to the statement of cash flow” 227.**

(23) Assets available for sale

Under IFRS 5, non-current assets are classified as held-for-sale non-current assets if their carrying amount is to be realized by way of sale and not by way of continued use. This can be an individual asset, a disposal group or part of a company. Non-current held-for-sale assets are stated with the lower of carrying amount or market value less costs which are incurred.

The disclosure relates to GHT Mobility GmbH, Berlin, in which DB Group acquired a majority of shares in the year under review by way of several tranches. The simplified method according to IFRS 5, IG example 13, was used for integrating the company.

(24) Subscribed capital

The share capital of DB AG is € 2,150 million. It consists of 430,000,000 no-par-value bearer shares. All shares are held by the Federal Republic of Germany.

(25) Reserves

a) Capital reserves

Capital reserves comprise reserves which have not been part of profits.

b) Reserve resulting from valuation with no impact on the income statement

Reserve for currency translation differences

The currency translation differences resulting from the method of functional currency (IAS 21) are shown separately as part of consolidated shareholders’ equity.

Reserve for market valuation of securities

The reserve includes the changes in the market value of financial instruments to be recognized directly in equity. The reserve has to be reversed to the income statement or eliminated when a financial instrument is sold, became due or was reclassified.

In the year under review, the measurement of financial instruments directly in equity has not resulted in the creation of any deferred tax assets (as of December 31, 2017: none).

Reserve attributable to the market valuation of cash flow hedges

The development in the reserve is shown in the following:

(€ million)	2018	2017
As of Jan 1	-121	-168
Change in market value	90	-368
Reclassifications		
Financial result	-59	344
Net interest income	3	24
Cost of materials	-18	51
Changes in deferred taxes	-1	-4
As of Dec 31	**-106**	**-121**

Reserve for the revaluation of pensions

The effects resulting from the revaluation of defined benefit plans in accordance with IAS 19 (Employee Benefits) are recognized directly in equity.

Other changes in the reserves

This item mainly shows amounts resulting from transactions in relation to reductions or increases in non-controlling interests between the shareholders of DB AG and the non-controlling interests.

(26) Retained earnings

The generated shareholders' equity comprises the entire net profits generated since January 1, 1994 less the goodwill offset under HGB up to December 31, 2002 as well as the dividends paid to the shareholder.

This item also shows the impact on shareholders' equity attributable to the first-time adoption of IFRS if they are not included in the reserves attributable to valuation with no impact on the income statement.

(27) Non-controlling interests

Non-controlling interests comprise the share of third parties in the net assets of consolidated subsidiaries. Third-party interests in the currency reserve amount to € -8 million (as of December 31, 2017: € -6 million).

(28) Financial debt

Liabilities are normally recognized in accordance with IFRS 9 with their nominal amount, which corresponds to the fair value at the point at which the liability is initially recognized and the amortized costs of purchase up to the date at which the liability is settled. Financial debt and other non-current liabilities, when initially recognized, are stated with the amount which corresponds to the fair value of the received assets, where appropriate less transaction costs. Subsequently, they are stated using amortized costs of purchase using the effective interest method. The differences between the amount paid out less transaction costs and the amount repaid are recognized in the income statement over the life of the liability.

Interest-free loans which are related to infrastructure capital expenditures are recognized with the present value of the amounts to be repaid, and are adjusted to their nominal repayment amount over their life. The difference between the nominal amount of the loan and the present value is recognized as an interest benefit under deferred items. The income from pro rata reversal of these deferred items is shown as other operating income.

Liabilities arising from leases which are classified as finance leases in accordance with the allocation criteria of IAS 17 are recognized at the lower of fair value and the present value of minimum leasing payments at the beginning of the lease, and are subsequently stated under financial debt in the amount of amortized cost of purchase. The leasing installments are broken down into an interest component and a repayment component. The interest component of the leasing installment is recognized in the income statement. Liabilities arising from finance leases are not classified under any category of IFRS 9.

Some transport contracts comprise the leasing particularly of rail vehicles from the public sector or from independent financial service providers, whereby the latter receive a capital service guarantee, a redeployment guarantee or similar from the public transport authority. The present value of these payment obligations is shown under the financing liabilities from transport concessions.

The financial debt comprises all interest-bearing liabilities including the interest-free loans stated with their present values. The maturity structure of financial debt is as follows:

	Residual maturity							
(€ million)	Up to 1 year	1 to 2 years	2 to 3 years	3 to 4 years	4 to 5 years	More than 5 years	Total more than 1 year	Total
AS OF DEC 31, 2018								
Interest-free loans	174	153	140	134	128	122	**677**	**851**
Bonds	1,958	2,137	1,804	1,544	1,916	11,353	**18,754**	**20,712**
Bank borrowings	240	4	1	400	0	1	**406**	**646**
EUROFIMA loan	–	–	200	–	–	–	**200**	**200**
Finance lease liabilities	44	43	59	36	41	339	**518**	**562**
Finance liabilities from transport concessions	6	6	6	7	7	13	**39**	**45**
Other financial liabilities	196	24	1	0	6	1	**32**	**228**
Total	**2,618**	**2,367**	**2,211**	**2,121**	**2,098**	**11,829**	**20,626**	**23,244**
thereof due to related companies	186	153	341	134	128	122	**878**	**1,064**
AS OF DEC 31, 2017								
Interest-free loans	200	167	146	134	128	239	**814**	**1,014**
Bonds	1,900	1,940	2,085	1,809	1,547	10,335	**17,716**	**19,616**
Bank borrowings	121	5	2	2	400	1	**410**	**531**
EUROFIMA loan	–	–	–	200	–	–	**200**	**200**
Finance lease liabilities	75	33	33	42	28	290	**426**	**501**
Finance liabilities from transport concessions	6	6	6	6	7	21	**46**	**52**
Other financial liabilities	58	102	0	1	0	1	**104**	**162**
Total	**2,360**	**2,253**	**2,272**	**2,194**	**2,110**	**10,887**	**19,716**	**22,076**
thereof due to related companies	208	167	146	335	128	239	**1,015**	**1,223**

The following fair values are summarized compared with the carrying amounts:

	2018		2017	
As of Dec 31 (€ million)	Carrying amount	Fair value	Carrying amount	Fair value
Interest-free loans	851	955	1,014	1,152
Bonds	20,712	21,722	19,616	20,921
Bank borrowings	646	647	531	532
EUROFIMA loan	200	223	200	229
Finance lease liabilities	562	712	501	647
Financing liabilities from transport concessions	45	47	52	53
Other financial liabilities	228	229	162	172
Total	**23,244**	**24,535**	**22,076**	**23,706**

The differences between the carrying amounts and the fair values of the financial debt are due to the usually changed market interest rates for financial debt with a comparable risk profile. In view of the short maturities involved and also in view of the fact that interest charged is closely linked to market rates, there are no significant differences between the carrying amounts and the fair values of other financial liabilities.

Interest-free loans are attributable almost exclusively to financing provided by the Federal Government for capital expenditures in expanding and replacing track infrastructure. This is based on the responsibility for the transport needs of the public which is anchored in section 87e (4) of the Basic Law (Grundgesetz; GG) and specified in the Federal Rail Infrastructure Extension Act (Bundesschienenwegeausbaugesetz; BSWAG).

The arrangements for repaying the loans are detailed in individual and collective financing agreements. In general, the loans are repaid in equal annual installments, which are based on the corresponding annual depreciation applicable for the financed assets.

Interest-free loans have developed as follows:

(€ million)	2018	2017
As of Jan 1	1,014	1,172
Redemption	-204	-206
Reclassifications	–	–
Compounding	41	48
As of Dec 31	**851**	**1,014**

The issued bonds consist of the following transactions:

Bonds as of Dec 31 (€ million)	Issue volume	Issue currency	Residual maturity (years)	Effective interest rate (%)	**2018**		2017	
					Carrying amount	**Fair value**	Carrying amount	Fair value
UNLISTED BONDS								
DB Finance	973	AUD, JPY, EUR	0.8 – 13.8		931	994	731	784
					931	**994**	**731**	**784**
LISTED BONDS OF DB FINANCE								
Bond 2003 – 2018	1,000	EUR	0.0	5.000	–	–	1,000	1,010
Bond 2004 – 2018	300	EUR	0.0	4.850	–	–	300	303
Bond 2006 – 2018	300	EUR	0.0	4.510	–	–	300	303
Bond 2007 – 2019	600	EUR	0.6	5.110	600	617	599	649
Bond 2009 – 2019	1,000	EUR	0.2	4.923	1,000	1,009	999	1,061
Bond 2009 – 2021	600	EUR	2.7	4.445	599	669	599	697
Bond 2010 – 2020	500	EUR	1.4	3.572	500	526	499	545
Bond 2010 – 2025	500	EUR	6.5	3.870	497	597	496	618
Bond 2010 – 2020	410	JPY	1.8	1.150	374	381	349	358
Bond 2010 – 2022	500	EUR	3.8	3.464	498	562	498	578
Bond 2010 – 2020	567	CHF	1.4	1.924	664	686	638	675
Bond 2011 – 2021	700	EUR	2.4	3.797	699	765	699	791
Bond 2012 – 2022	496	GBP	3.5	2.821	446	468	449	482
Bond 2012 – 2023	400	EUR	4.1	2.116	398	431	398	436
Bond 2012 – 2024	83	CHF	5.1	1.586	88	96	85	93
Bond 2012 – 2024	500	EUR	5.2	3.119	497	567	497	580
Bond 2012 – 2072	75	GBP	53.9	4.524	67	105	67	110
Bond 2013 – 2018	300	EUR	0.0	FRN	–	–	300	300
Bond 2013 – 2028	50	EUR	9.1	2.707	50	58	50	58
Bond 2013 – 2025	202	NOK	6.2	4.017	151	166	152	172
Bond 2013 – 2023	386	CHF	4.6	1.425	421	452	405	439
Bond 2013 – 2026	497	GBP	7.6	3.351	468	518	471	534
Bond 2013 – 2023	500	EUR	4.7	2.578	498	553	498	560
Bond 2013 – 2020	300	EUR	1.8	1.899	299	311	298	316
Bond 2013 – 2019	186	USD	0.2	FRN	218	218	208	208
Bond 2014 – 2024	59	AUD	5.1	5.395	55	61	59	64
Bond 2014 – 2021	142	SEK	2.1	2.940	122	128	127	135
Bond 2014 – 2021	40	SEK	2.1	FRN	34	34	36	36
Bond 2014 – 2019	73	SGD	0.1	2.338	80	80	78	78
Bond 2014 – 2024	246	CHF	5.7	1.522	266	290	256	282
Bond 2014 – 2029	500	EUR	10.2	2.886	494	581	493	588
Bond 2014 – 2020	300	EUR	1.6	FRN	300	301	300	302
Bond 2014 – 2022	300	EUR	3.7	FRN	300	302	300	304
Bond 2014 – 2022	300	EUR	3.1	FRN	300	302	300	303
Bond 2015 – 2023	600	EUR	4.8	FRN	599	605	599	610
Bond 2015 – 2025	600	EUR	6.8	1.391	595	628	594	630
Bond 2015 – 2030	366	NOK	11.8	2.760	341	344	345	350
Bond 2015 – 2025	115	AUD	6.8	3.864	110	117	116	120
Bond 2015 – 2030	650	EUR	11.8	1.707	644	678	644	685
Bond 2015 – 2025	161	CHF	6.9	0.143	155	155	149	150
Bond 2016 – 2026	500	EUR	7.2	0.880	496	503	495	509
Bond 2016 – 2031	750	EUR	12.5	0.964	742	709	742	713
Bond 2016 – 2021	350	EUR	2.5	0.040	350	350	350	349
Bond 2016 – 2028	500	EUR	9.7	0.765	493	487	493	487
Bond 2016 – 2024	41	HKD	5.2	2.100	39	37	37	36
Bond 2017 – 2032	79	NOK	13.1	2.514	70	68	71	71
Bond 2017 – 2032	500	EUR	13.9	1.541	497	504	497	510
Bond 2017 – 2025	341	GBP	6.5	1.437	334	328	337	335
Bond 2017 – 2032	55	SEK	13.6	2.226	52	51	54	52
Bond 2017 – 2030	261	CHF	11.9	0.463	266	262	256	257
Bond 2017 – 2024	300	EUR	5.9	FRN	303	301	303	305
Bond 2018 – 2027	1,000	EUR	9.0	1.086	993	1,013	–	–
Bond 2018 – 2033	750	EUR	14.6	1.680	745	765	–	–
Bond 2018 – 2028	346	CHF	9.6	0.470	356	359	–	–
Bond 2018 – 2031	500	EUR	12.2	1.508	493	505	–	–
Bond 2018 – 2043	125	EUR	24.9	1.867	125	125	–	–
Total					**19,781**	**20,728**	**18,885**	**20,137**
Total amount bonds					**20,712**	**21,722**	**19,616**	**20,921**

In the year under review, one fixed-income listed bond of Deutsche Bahn Finance GmbH (DB Finance) for € 1,600 million (issued in three tranches: € 1,000 million and two issues of € 300 million) and a variable-interest listed bond for € 300 million were repaid on schedule.

DB Finance also issued six bonds and topped up an existing bond. The transactions had a total value of € 2,948 million. They comprised five fixed-income listed bonds of € 1,000 million, € 750 million, CHF 400 million (€ 346 million), € 500 million and € 125 million as well as one fixed-income unlisted bond for AUD 206 million (€ 133 million). One fixed-income unlisted bond was topped up by AUD 150 million (€ 94 million).

Bank borrowings are detailed in the following table:

Bank borrowings as of Dec 31 (€ million)	Currency	Residual maturity (years)	Nominal interest rate (%)	**2018**		2017	
				Carrying amount	**Fair value**	Carrying amount	Fair value
Bank loan 2002–2022	EUR	3.7	FRN	200	200	200	200
Bank loan 2003–2022	EUR	3.7	FRN	200	200	200	200
Other				246	247	131	132
Total				**646**	**647**	**531**	**532**

The increase in other bank borrowings is mainly attributable to an increase in short-term collateral (€ 114 million; previous year; € 61 million) resulting from collateral agreements within the framework of derivative transactions.

Liabilities are not secured in DB Group in principle.

As of December 31, 2018, guaranteed credit facilities with a total volume of € 4,561 million (as of December 31, 2017: € 4,292 million) were available to DB Group. Of this figure, € 2,080 million (as of December 31, 2017: € 2,080 million) was attributable to back-up lines for the € 2.0 billion commercial paper program of DB AG and DB Finance. None of these back-up lines had been drawn down as of December 31, 2018. Global credit facilities totaling € 2,481 million (as of December 31, 2017: € 2,212 million) are used for working capital and surety for payment financing of subsidiaries with worldwide operations, primarily in the segments DB Schenker and DB Arriva.

The liabilities due to EUROFIMA are detailed in the following:

Liabilities due to EUROFIMA as of Dec 31 (€ million)	Currency	Residual maturity (years)	Nominal interest rate (%)	**2018**		2017	
				Carrying amount	**Fair value**	Carrying amount	Fair value
Loan 2010 – 2021	EUR	2.8	4.050	200	223	200	229
Total				**200**	**223**	**200**	**229**

No new EUROFIMA loans were raised. The liabilities due to EUROFIMA are secured by way of transfer of ownership of rolling stock in view of the statutes of EUROFIMA.

Of the figure shown for liabilities from finance leases, € 19 million (as of December 31, 2017: € 22 million) related to a real estate lease for a concourse building of DB Station&Service AG.

The mobile asset lease for rail cars was repaid on schedule at the end of the year under review. These agreements have been concluded mainly as sale-and-leaseback transactions for achieving advantageous financing conditions with German lessors.

The following table provides information concerning the main finance leases:

As of Dec 31 (€ million)	Nominal volume	Currency	Residual maturity (years)	Nominal interest rate (%)	**2018**		2017	
					Carrying amount	**Fair value**	Carrying amount	Fair value
FINANCE LEASES MOBILE ASSETS								
Diesel rail cars for regional transport (2009)	55	EUR	0.0	8.34	0	0	44	47
					0	**0**	**44**	**47**
FINANCE LEASES REAL ESTATE								
Concourse buildings (1998)	254	EUR	3.0	5.550	19	21	22	24
					19	**21**	**22**	**24**
Other					543	691	435	576
Total					**562**	**712**	**501**	**647**

The finance lease agreement for the concourse building of DB Station&Service AG has a remaining term of three years, and cannot be terminated during the fixed lease. At the end of the lease, the lessee is able to buy the assets for a fixed price. If this option is not exercised, the lease is extended for a second period, at the end of which the lessor has a put option for the property with regard to DB Station&Service AG.

In addition, liabilities attributable to finance leases **(Note (13) 🗎 202 ff.)** are secured by rights of the lessors in relation to the leased assets. The leased assets have a carrying amount of € 582 million (as of December 31, 2017: € 550 million).

The position Other comprises numerous Europe-wide leases for buses and trains at DB Arriva and the carrying amount of a power procurement agreement of DB Energie GmbH worth € 58 million (as of December 31, 2017: € 67 million) as well as the carrying amount of an inverter agreement of DB Energie GmbH in the amount of € 28 million (as of December 31, 2017: € 32 million). Both agreements are classified as embedded financial leases as a result of the fact that the power is procured primarily by DB Energie GmbH and also in view of the underlying agreement duration in accordance with IFRIC 4 in conjunction with IAS 17.

The increase in the item Other is attributable to the acquisition of finance leases for buses in the amount of € 51 million as a result of the purchase of VT-Arriva as well as a contract prolongation ahead of schedule (€ 41 million) and also a reclassification within the framework of a contract prolongation (€ 38 million) for two existing properties. On the other hand, the financing volume declined due to scheduled repayments.

In the subsequent years, the following payments have to be made in connection with finance leases:

	Residual maturity							
Liabilities from finance leases (€ million)	**Less than 1 year**	**1 to 2 years**	**2 to 3 years**	**3 to 4 years**	**4 to 5 years**	**More than 5 years**	**Total more than 1 year**	**Total**
AS OF DEC 31, 2018								
Minimum lease payments (nominal)	63	61	75	50	54	497	**737**	**800**
Less future interest charges	19	18	16	14	13	158	**219**	**238**
Total	**44**	**43**	**59**	**36**	**41**	**339**	**518**	**562**
AS OF DEC 31, 2017								
Minimum lease payments (nominal)	96	50	48	56	40	450	**644**	**740**
Less future interest charges	21	17	15	14	12	160	**218**	**239**
Total	**75**	**33**	**33**	**42**	**28**	**290**	**426**	**501**

The finance liabilities from transport concessions in accordance with IFRIC 12 are detailed in the following:

				2018		2017	
Finance liabilities from transport concessions as of Dec 31 (€ million)	Currency	Residual maturity (years)	Nominal interest rate (%)	**Carrying amount**	**Fair value**	Carrying amount	Fair value
Freight locomotives (2016)	EUR	7.0	1.06	36	38	42	43
Rail cars (2016)	EUR	7.0	1.06	9	9	10	10
Total				**45**	**47**	**52**	**53**

In order to enable the company to meet its obligations with regard to providing regional rail passenger transport services in the Schleswig-Holstein network, various locomotives and rail cars were leased by the relevant contracting organization over the entire term of the transport contract of nine years. The finance liabilities from transport concessions are opposed by receivables from transport concessions **(Note (19) 🗋 207 ff.).**

The fair values of the non-current financial debt are allocated to the following valuation categories:

	2018				2017			
As of Dec 31 (€ million)	**Level 1**	**Level 2**	**Level 3**	**Total**	Level 1	Level 2	Level 3	**Total**
NON-CURRENT FINANCIAL DEBT								
Interest-free loans	–	781	–	**781**	–	952	–	**952**
Bonds	2,642	17,095	–	**19,737**	1,902	17,104	–	**19,006**
Bank borrowings	–	407	–	**407**	–	411	–	**411**
EUROFIMA loan	–	223	–	**223**	–	229	–	**229**
Finance lease liabilities	–	668	–	**668**	–	572	–	**572**
Finance liabilities from transport concessions	–	41	–	**41**	–	47	–	**47**
Other financial liabilities	–	33	–	**33**	–	114	–	**114**
Total	**2,642**	**19,248**	**–**	**21,890**	**1,902**	**19,429**	**–**	**21,331**

The interest-free loans shown at amortized cost are established by discounting the nominal values of the interest-free loans broken down into maturity buckets using the DB interest curve (market interest curve plus current DB spread; source: Thomson Reuters or Bloomberg) and a term until 2024.

Market prices from an active market, multiplied by the foreign currency rates applicable on the balance sheet date, are used for bonds of DB Finance which are classified as level 1. Various sources are used for these prices, including Thomson Reuters and Bloomberg. The bonds for which the market activity does not comply with the requirements of an active market have been allocated to level 2. For establishing the market prices of these bonds, binding offers were used from various sources, including Thomson Reuters and Bloomberg; these have been verified on the basis of the valuation models using the parameters which are observable on the market, such as interest rate curves and exchange rates.

Theoretical refinancing via bonds of DB Finance are assumed for assessing the market value of outstanding EUROFIMA loans. A discounted cash flow method is used for calculation purposes. The reference interest rate which is used is established by interpolation of the yields for matching maturities of bonds of DB Finance.

The fair value of the finance leases as well as finance liabilities from transport concessions is calculated by discounting the outstanding leasing payments using the DB interest curve (market interest curve plus current DB spread; source: Thomson Reuters or Bloomberg).

(29) Other liabilities

Liabilities are normally recognized in accordance with IFRS 9 with their nominal amount, which corresponds to the fair value at the point at which the liability is initially recognized and the amortized costs of purchase up to the date at which the liability is settled, where applicable less transaction costs. Subsequently, non-current liabilities are stated using amortized costs of purchase using the effective interest method. The differences between the amount paid out less transaction costs and the amount repaid are recognized in the income statement over the life of the liability.

The fair values of the balance sheet items other liabilities, trade liabilities and other liabilities essentially correspond to the carrying amounts.

Severance package obligations for agreements agreed as of the balance sheet date are recognized as other liabilities and – if they are not yet included in individual agreements and if they are part of a restructuring obligation in accordance with IAS 37 – are stated as other provisions.

Movements in other liabilities are shown in the following:

	Residual maturity							
(€ million)	**Up to 1 year**	**1 to 2 years**	**2 to 3 years**	**3 to 4 years**	**4 to 5 years**	**More than 5 years**	**Total more than 1 year**	**Total**
AS OF DEC 31, 2018								
Trade liabilities including received prepayments	5,491	116	14	15	9	13	**167**	**5,658**
Miscellaneous other liabilities	3,660	10	7	7	6	61	**91**	**3,751**
Total	**9,151**	**126**	**21**	**22**	**15**	**74**	**258**	**9,409**
thereof non-financial liabilities	2,306	24	2	1	2	11	**40**	**2,346**
thereof received prepayments	219	24	2	1	2	11	**40**	**259**
thereof due to related parties	323	0	0	0	0	0	**0**	**323**
AS OF DEC 31, 2017								
Trade liabilities including received prepayments	5,157	59	57	13	10	20	**159**	**5,316**
Miscellaneous other liabilities	3,399	13	9	6	7	39	**74**	**3,473**
Total	**8,556**	**72**	**66**	**19**	**17**	**59**	**233**	**8,789**
thereof non-financial liabilities	1,998	30	24	2	1	12	**69**	**2,067**
thereof received prepayments	177	30	24	2	1	12	**69**	**246**
thereof due to related parties	222	0	0	0	0	0	**0**	**222**

Non-financial liabilities and received prepayments are not classified under any category of IFRS 9.

The miscellaneous other liabilities comprise the following:

As of Dec 31 (€ million)	**2018**	2017
PERSONNEL-RELATED LIABILITIES		
Unused holiday entitlements	368	339
Outstanding overtime	279	248
Social security	118	115
Severance payments	25	25
Christmas bonuses	8	6
Holiday pay	24	17
Other personnel obligations	889	741
OTHER TAXES		
Value-added tax	97	56
Payroll and church taxes, solidarity surcharge	139	148
Miscellaneous other taxes	140	125
Interest payable	206	257
Revenue reductions	62	114
Deferred construction grants	277	185
Liabilities due to Railway Crossings Act	3	2
Reconveyance obligations	4	4
Miscellaneous other liabilities	1,112	1,091
Total	**3,751**	**3,473**

The other personnel obligations also include bonus obligations.

As of December 31, 2018, other liabilities were secured in an amount of € 0 million (as of December 31, 2017: € 0 million).

The miscellaneous other liabilities include existing risks for factoring agreements.

(30) Income tax liabilities

The income tax liabilities as of December 31, 2018 related mainly to obligations to the fiscal authorities in Great Britain, the USA and Germany.

(31) Additional disclosures relating to the financial instruments

If covered by the scope of IFRS 9, the financial assets and liabilities are categorized and measured in accordance with IFRS 9. Financial assets and liabilities which are not covered by the scope of IFRS 9 are measured in accordance with the relevant standards and not categorized under any measurement category according to IFRS 9.

The carrying amounts as well as the net result per valuation category of IFRS 9 are shown in the following. The fair values and the details of individual classes of financial instruments are shown within the notes to the respective balance sheet items.

In DB Group, financial assets which are allocated to a valuation category according to IFRS 9 mainly comprise trade receivables and cash and cash equivalents.

In DB Group, financial liabilities which are allocated to a valuation category according to IFRS 9 mainly comprise interest-free loans, bonds, EUROFIMA loans, bank borrowings, trade payables and other liabilities.

a) Classification of financial assets

Due to **first-time adoption of IFRS 9 188**, the number of categories previously applicable under IAS 39 has been reduced from four to three. The previous category "Available for sale" has been transferred to the category "Fair value through profit or loss" (€ 24 million) and the category "Fair value through other comprehensive income" (€ 14 million). The reclassification has not had any impact on results. A distinction is still made as to whether the valuation effects from other comprehensive income are reclassified to the income statement or remain in shareholders' equity.

	Fair value (through profit or loss)	Fair value (through other comprehensive income)	Amortized cost of purchase
Financial assets as of December 31, 2017	5	2	9,333
Reclassification of other investments	+24	+14	-38
Reclassification of receivables earmarked for factoring	+353	–	-353
Financial assets as of Jan 1, 2018	**382**	**16**	**8,942**

The valuation categories of IFRS 9 are set out in the following:

	Fair value through profit or loss		Fair value through other comprehensive income				Derivatives in hedges		At amortized cost of purchase		Not covered by scope of IFRS 7		**Total**	
			with recycling		without recycling									
(€ million)	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	**2018**	**2017**
CARRYING AMOUNT AS OF DEC 31														
Non-current financial assets	17	0	1	2	28	–	215	160	295	282	85	58	**641**	**502**
Current financial assets	598	358	1	0	–	–	44	14	9,207	8,698	600	538	**10,450**	**9,608**
Non-current financial liabilities	35	40	–	–	–	–	337	301	20,326	19,454	558	495	**21,256**	**20,290**
Current financial liabilities	6	4	–	–	–	–	13	37	9,419	8,843	2,355	2,073	**11,793**	**10,957**
Net result	-1	6	–	–	–	–	–	–	30	20	-531	-632	**-502**	**-606**

Since the year under review, and following the first-time adoption of IFRS 9 in DB Group, other participations have been measured at fair value and not, as previously, classified under the category "Available for sale."

There have also been changes in relation to trade receivables which are sold on within the framework of factoring agreements and which have previously been classified under the category "At amortized cost of purchase"; these have now been classified under the category "Fair value through profit or loss."

The net result according to valuation categories in particular includes interest income of € 18 million (previous year: € 34 million) as well as interest expenses of € 516 million (previous year: € 595 million) relating to the financial assets and liabilities which are not measured at fair value through profit or loss.

b) Hedge accounting

With regard to the recognition of hedges, there have been additions in the field of designation possibilities as well as a closer link between hedge accounting and risk management. There is also the need to implement extended accounting and measurement logic. In DB Group, this is relevant particularly for a differentiated treatment of the currency basis spreads which, under IFRS 9, will not be an element of the underlying of a hedge. Any resultant ineffectiveness is, where necessary, recognized in the income statement. With IFRS 9, the quantitative limits for the effectiveness test are no longer applicable.

(32) Pension obligations

DB Group grants post-employment benefits to its employees in numerous countries. The form of the pension commitments depends on the legal, economic and tax conditions applicable in the particular country.

In DB Group, there are defined benefit as well as defined contribution retirement pension schemes. The defined benefit commitments are accounted for in accordance with IAS 19. Major pension obligations exist only in Germany and in Great Britain. For this reason, only these pension obligations are described in greater detail in the following.

Germany

Pension obligations of DB Group in Germany comprise pension obligations for civil servants and also for employees.

After they retire, civil servants assigned to the companies of DB Group receive pensions from the BEV under the Civil Servants Benefits Act (Beamtenversorgungsgesetz).

Only while the assigned civil servants are actively working for DB Group are payments made to the Federal Railroad Fund as part of a pro forma settlement in the same way as for newly recruited employees (section 21 (1) DBGrG). This also includes theoretical amounts for contributions to statutory pension insurance schemes as well as theoretical costs in accordance with the collective bargaining agreement regarding the additional company pension scheme for employees of DB AG (Tarifvertrag über die betriebliche Zusatzversorgung für die Arbeitnehmer der DB AG; ZVersTV). The payments made to the Federal Railroad Fund for retirement pensions and supplementary benefits of civil servants are defined contribution retirement schemes.

The pension obligations with regard to employees mainly relate to the following:

a) Employees who were employed by DB AG before the company was established (January 1, 1994) enjoy supplementary benefits in view of their former membership of the public sector. The employees are entitled to benefits from this additional pension insurance from German Pension Fund Knappschaft-Bahn-See (KBS). As an official authority, KBS has not only assumed responsibility for managing and paying the statutory pension for DB Group employees; it also continues the additional pension insurance for the transferred employees who are beneficiaries.

The Federal Railroad Fund bears the costs of these additional benefits, less the contribution made by the employees themselves (section 14 (2) DBGrG). Accordingly, DB AG does not set aside any provisions for these public sector benefits.

b) Employees of the former Deutsche Reichsbahn and the employees who have been recruited after January 1, 1994 receive an additional company pension from DB AG within the framework of the ZVersTV. This supplementary company pension is a defined benefit scheme, which is linked to salary and length of service. The current pension benefits are adjusted every year in line with the regulations of the Company Pensions Act (Betriebsrentengesetz). Retirement benefits, invalidity benefits and benefits to surviving dependants are provided in the form of a lifetime pension. No plan assets are created for this scheme.

c) Various defined benefit pension obligations exist with regard to senior executives in DB Group who were granted a senior executive commitment before January 1, 2007. The extent of the benefits depend on the length of service and the salary of the beneficiary. In general, retirement benefits, invalidity benefits and benefits to surviving dependants are provided in the form of a lifetime pension. Apart from a small number of reinsurance policies, there are no plan assets.

d) Senior executives of DB Group who were granted a senior executive commitment after December 31, 2006, are provided with a retirement benefit scheme in the form of a defined contribution commitment. For this purpose, a benefit module is calculated in each year of service, depending on the salary and age of the beneficiary. These benefits are financed by way of a contractual trust arrangement (CTA), namely Deutsche Bahn Pension Trust e.V. The extent of the benefits depends on the yield of the CTA, whereby a minimum return is guaranteed. To avoid longevity risks, the benefits are granted in the form of a five-year installment. The assets of the CTA are classified as plan assets. The pension obligation is covered by the plan assets on the assumption that the CTA produces a corresponding performance, thus minimizing investment risks. There are no legal or regulatory obligations requiring Deutsche Bahn Pension Trust e.V. to make minimum payments into the scheme. The contributions are invested in line with the fundamental assumption that the benefit commitment is guaranteed by a corresponding guarantee element. For each payment relating to the individual beneficiary, an age-related amount is invested in prime zero bonds. The investment amount remaining after the payment has been made into the guarantee element is mainly invested in passively managed European equity and bond funds (or equivalent products) with the aim of optimizing returns.

e) Senior executives are able to participate in a deferred compensation program. This employee-financed form of company pension scheme constitutes a defined benefit obligation.

Great Britain

a) The company pension scheme of DB Cargo (UK) Holdings Limited is essentially a defined benefit pension scheme (linked to salary and length of service) within the British Railway Pension Scheme. The plan assets are managed by an independent trustee. The process of collating the data of members in the plan for the purpose of compliance with legal requirements in relation to the members of the plan is generally carried out every three years, most recently as of December 31, 2016. As of the intermediate valuation dates, the obligations in the plan are measured on the basis of the correspondingly updated data. The pension scheme is based on final salary, and lifetime pensions are provided as benefits. The pension obligations are essentially covered by plan assets. Capital is invested by the trustee of the plan assets following liaison with DB Group.

b) At DB Arriva, there are mainly defined benefit retirement benefit commitments. Important defined benefit plans (related to salary and length of service) relate to employees of DB Arriva within the Railway Pension Scheme in Great Britain. These are sections other than the DB Cargo UK scheme within the railway pension scheme. The costs of the pension schemes are shared between the employer and the employee in the ratio 60:40 and accordingly recognized in the balance sheet. The pension schemes are based on final salary, and lifetime pensions are provided as benefits. The corresponding pension obligations are to a large extent covered by fund assets. Capital is invested by the trustee of the plan assets following liaison with DB Group.

Some companies pay contributions within the framework of a franchise agreement to the British Railway Pension Scheme for employees employed for the duration of the agreement (franchise period). The obligations to these employees as well as the plan assets are completely disclosed after deduction of the element financed by the employees (40%). Within the framework of recognizing the effect of franchise agreements, the present value of the contributions payable for the duration of the franchise agreements for reducing a scheme deficit remains as a net liability recognized in the balance sheet. The current contributions to the benefit scheme are shown as personnel expenses.

In addition, individual companies of DB Arriva also issued defined contribution retirement benefit commitments to their employees. Under such arrangements, the employer does not enter into any obligations apart from paying contributions to an external benefit scheme. The extent of the future pension benefits depends exclusively on the amount of contributions paid to the external benefit scheme, including the income generated by investing these contributions.

In addition, some contributions have also been paid to social pension funds within the context of statutory regulations (government schemes).

Critical assessments and appraisals

In the case of the defined benefit pension obligations in Germany and abroad, the actuarial risks are borne by DB Group. Actuarial methods have been used for measuring defined benefit pension commitments as well as benefit commitments which are similar to pensions and the resultant expenses and income. The valuations are based on actuarial assumptions. There are the following actuarial risks which are considered to be typical for companies with defined benefit schemes.

- *Interest risk: The discount factors which are used reflect the interest rates (giving due consideration to the duration of the underlying obligation) which are achieved on the balance sheet date for high-quality fixed-income bonds with a corresponding term. A change in the discount rate results in a change in the present value of the total obligation (DBO).*
- *Inflation risk: Part of the pension obligations, particularly as a result of adjustments to current pensions, is linked to the development of inflation.*
- *Longevity risk: A longevity risk may occur in the form of extended periods in which pensions are paid out as a result of an increase in life expectancy in future.*
- *Investment risk: In the case of externally financed pension plans, the values of the corresponding plan assets or the refund claims are based on the market values as of the balance sheet date. The capital investment is exposed to numerous risks, which may have an impact on the present value recognized for the plan assets. In the case of pension schemes with an obligation to pay into the scheme, the amount of future contributions may be affected by the investment risk.*

Key assumptions for expenses and income attributable to pension commitments and benefit commitments similar to pensions are to some extent based on current market conditions. Expenses and income relating to pension commitments and benefit commitments similar to pensions may change as a result of changes to these underlying key assumptions.

The figures stated for pension provisions in the balance sheet are detailed in the following:

	Gemany		Europe (excluding Germany)		Rest of world		**Total**	
As of Dec 31 (€ million)	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	**2017**
Funded obligations	307	268	6,262	6,932	57	54	**6,626**	**7,254**
Unfunded obligations	3,691	3,008	309	269	9	7	**4,009**	**3,284**
Total obligations	**3,998**	**3,276**	**6,571**	**7,201**	**66**	**61**	**10,635**	**10,538**
Fair value of plan assets	-225	-200	-4,505	-5,060	-36	-38	**-4,766**	**-5,298**
Effects due to cost sharing	-	-	-422	-526	-	-	**-422**	**-526**
Effects due to franchise agreements	-	-	-625	-779	-	-	**-625**	**-779**
Amount not recognized as an asset as a result of the restriction of IAS 19.58	-	-	0	0	-	-	**0**	**-**
Assets recognized in the balance sheet as pension assets	-	-	1	5	-	-	**1**	**5**
Net obligations recognized in the balance sheet	**3,773**	**3,076**	**1,020**	**841**	**30**	**23**	**4,823**	**3,940**

The development of the total pension obligations is detailed in the following:

	Germany		Europe (excluding Germany)		Rest of world		**Total**	
(€ million)	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	**2017**
Obligations as of Jan 1	3,276	3,717	7,201	7,162	61	78	**10,538**	**10,957**
Service cost, excluding employee contributions	110	126	70	84	3	3	**183**	**213**
Employee contributions	2	2	45	47	0	0	**47**	**49**
Interest expense	78	59	126	113	1	1	**205**	**173**
Payments	-81	-74	-232	-185	-4	-3	**-317**	**-262**
thereof pensions	-80	-74	-203	-185	-4	-3	**-287**	**-262**
thereof payments for settlements	-1	–	-29	–	–	–	**-30**	**–**
Past service costs and profit or losses from settlements	9	1	-2	-2	0	0	**7**	**-1**
Transfers	3	6	-636	6	–	1	**-633**	**13**
Changes in scope of consolidation	–	–	–	–	–	–	**–**	**–**
Actuarial gains (-) or losses (+)	601	-561	50	232	6	-14	**657**	**-343**
Revaluations based on experience	-14	-47	262	128	0	-9	**248**	**72**
Due to change in demographic assumptions	28	-1	3	-95	0	–	**31**	**-96**
Due to change in financial assumptions	587	-513	-215	199	6	-5	**378**	**-319**
Effects from changes in exchange rates	–	–	-51	-256	-1	-5	**-52**	**-261**
Obligations as of Dec 31	**3,998**	**3,276**	**6,571**	**7,201**	**66**	**61**	**10,635**	**10,538**

The figures shown under transfers in the preceding and following tables mainly relate to disposals following the loss of a franchise agreement (Arriva Trains Wales).

The development of the plan assets is detailed in the following:

	Germany		Europe (excluding Germany)		Rest of world		**Total**	
(€ million)	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	**2017**
Fair value of plan assets as of Jan 1	200	191	5,060	4,791	38	41	**5,298**	**5,023**
Employer contributions	22	20	103	113	1	2	**126**	**135**
Employee contributions	2	0	44	47	0	0	**46**	**47**
Expected return from plan assets	5	3	107	92	1	0	**113**	**95**
Payments	-5	-5	-218	-173	-4	-3	**-227**	**-181**
thereof pensions	-5	-5	-189	-173	-4	-3	**-198**	**-181**
thereof payments for settlements	–	–	-29	–	–	–	**-29**	**–**
Transfers	0	1	-387	4	–	–	**-387**	**5**
Revaluation	1	-10	-162	377	1	1	**-160**	**368**
Administration costs: costs of pension assurance	–	–	-10	-13	0	0	**-10**	**-13**
Effects from changes in exchange rates	–	–	-32	-178	-1	-3	**-33**	**-181**
Fair value of plan assets as of Dec 31	**225**	**200**	**4,505**	**5,060**	**36**	**38**	**4,766**	**5,298**

The reported plan assets are broken down as follows:

	Germany		Europe (excluding Germany)		Rest of world		**Total**	
As of Dec 31 (€ million)	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	**2017**
Stocks and other securities	7	6	3,047	3,606	13	15	**3,067**	**3,627**
thereof with market price listing	7	6	3,047	3,606	13	15	**3,067**	**3,627**
Interest-bearing securities	138	113	802	823	18	19	**958**	**955**
thereof with market price listing	138	113	802	823	18	19	**958**	**955**
Reinsurance	79	80	73	23	–	–	**152**	**103**
thereof with market price listing	79	80	16	1	–	–	**95**	**81**
thereof without market price listing	–	–	57	22	–	–	**57**	**22**
Private equity	–	–	329	337	–	–	**329**	**337**
thereof without market price listing	–	–	329	337	–	–	**329**	**337**
Investments in infrastructure	–	–	152	181	–	–	**152**	**181**
thereof with market price listing	–	–	116	110	–	–	**116**	**110**
thereof without market price listing	–	–	36	71	–	–	**36**	**71**
Cash and other assets	1	1	102	90	5	4	**108**	**95**
thereof with market price listing	1	1	66	63	3	2	**70**	**66**
thereof without market price listing	–	–	36	27	2	2	**38**	**29**
	225	**200**	**4,505**	**5,060**	**36**	**38**	**4,766**	**5,298**
thereof assets classified as pension assets	0	0	-1	-5	0	–	**-1**	**-5**
	225	**200**	**4,504**	**5,055**	**36**	**38**	**4,765**	**5,293**

The development of the net pension provision is detailed in the following:

	Germany		Europe (excluding Germany)		Rest of world		**Total**	
(€ million)	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	**2017**
Provision as of Jan 1	3,076	3,526	841	959	23	37	**3,940**	**4,522**
Pension expenses	192	185	98	116	4	4	**294**	**305**
thereof service cost	110	128	71	84	3	3	**184**	**215**
thereof interest income and interest expenses	73	56	19	21	1	1	**93**	**78**
thereof administrative expenses	–	–	10	13	0	0	**10**	**13**
thereof past service costs and profits or losses from settlements	9	1	-2	-2	0	0	**7**	**-1**
Employer contributions	-22	-20	-102	-113	-2	-2	**-126**	**-135**
Payments	-76	-69	-14	-12	0	0	**-90**	**-81**
thereof pensions	-75	-69	-14	-12	0	0	**-89**	**-81**
thereof payments for settlements	-1	–	–	–	–	–	**-1**	**–**
Transfers	3	5	0	2	–	1	**3**	**8**
Changes in scope of consolidation	–	–	–	–	–	–	**–**	**–**
Revaluation	600	-551	213	-84	5	-15	**818**	**-650**
Revaluations based on experience	-14	-47	198	66	0	-9	**184**	**10**
Due to change in demographic assumptions	29	-1	15	-75	0	–	**44**	**-76**
Due to change in financial assumptions	587	-513	-149	227	6	-5	**444**	**-291**
Difference between actual income and theoretical income from plan assets	-2	10	149	-302	-1	-1	**146**	**-293**
Effects from changes in exchange rates	–	–	-11	-30	0	-2	**-11**	**-32**
Change in recognized assets	–	–	-5	3	–	0	**-5**	**3**
Provisions as of Dec 31	**3,773**	**3,076**	**1,020**	**841**	**30**	**23**	**4,823**	**3,940**

The effects of cost splitting and franchise agreements increased by € 1 million in the year under review as a result of revaluations (previous year: decline of € 61 million). The interest expense and expected income from the plan assets are recorded under net interest income.

All other items are recognized under personnel expenses.

The actuarial parameters used for assessing the value of most of the pension provision are set out in the following:

(%)	**2018**	2017
DISCOUNT RATE		
Germany and abroad (excluding Great Britain)	1.70	2.40
Great Britain	2.80	2.60
EXPECTED RATE OF WAGE AND SALARY INCREASES		
Germany and abroad (excluding Great Britain)	3.10	3.10
Great Britain	4.00	4.00
EXPECTED RATE OF PENSION INCREASES (DEPENDENT ON STAFF GROUP)		
Germany and abroad (excluding Great Britain)	2.00	1.75
Great Britain	2.30	2.30

The 2018 G mortality tables of Professor Dr. Klaus Heubeck (previous year: mortality tables 2005 G) have been used for valuing the pension obligations for the German Group companies. Country- or benefit-scheme-specific mortality tables have been used for valuing the pension obligations of the other Group companies.

Sensitivities and additional information:

As of Dec 31 (€ million)	**2018**	2017
Total obligation for an interest rate increased by 1 percentage point	8,774	8,716
Total obligation for an interest rate reduced by 1 percentage point	13,030	12,850
Total obligation with salary growth increased by 0.5 %	10,807	10,721
Total obligation for pensions increased by 0.5 %	11,318	11,201
Total obligation for life expectancy increased by 1 year	10,964	10,862
Total obligations	10,635	10,538
thereof active beneficiaries	5,688	5,587
thereof former employees	1,587	1,543
thereof pensioners	3,360	3,408
Payments into plan assets expected for next year	117	118
Direct pension payments for next year	104	99
Duration of benefit obligation (years)	20.1	19.8

The sensitivity figures have been established using the method which was used for calculating the extent of the obligation. One assumption was modified while the other assumptions were retained, which means that interdependencies between the individual assumptions were disregarded.

(33) Other provisions

Other provisions are set aside if there is a legal or constructive obligation resulting from a past event which is more than 50% likely to result in an outflow of resources and if the extent of the obligation can be reliably estimated (IAS 37 – Provisions, Contingent Liabilities and Contingent Assets).

Non-current provisions are discounted using market interest rates. Environmental protection provisions for the remediation of existing ecological burdens are discounted on the basis of real interest rates, which are adjusted to reflect the risk and the period until fulfillment. The difference between the nominal value of the expected outflows and the present value recognized for the environmental protection provisions of DB AG for transferred liabilities for the remediation of ecological burdens from the time previous to the foundation of DB AG is stated under deferred items, and represents the interest benefit resulting from the longer-term release of the provision. The cumulative interest expense attributable to other provisions is recognized in financial result. Provisions for potential losses are measured as the lower of the amount of the expected costs for fulfilling the contract and the expected costs for terminating the contract.

Critical assessments and appraisals

The process of determining all types of provisions is associated with estimates regarding the extent and/or timing of obligations.

The environmental protection provisions relate primarily to the obligation of DB AG to remedy the ecological burdens which arose before January 1, 1994 on the land of Deutsche Bundesbahn and the former Deutsche Reichsbahn. Ecological burdens are defined as contamination of soil and groundwater which requires rehabilitation and which pose risks, considerable disadvantages or considerable problems for private individuals or society at large. The legal basis for defining rehabilitation obligations are summarized in the soil and water laws of the Federal Government and the Federal states of Germany. The process of dealing with ecological burdens also comprises necessary rehabilitation measures for existing sewers, in order to avoid soil and groundwater contamination caused by leaks from the sewer system, as well as measures for shutting down old landfill sites.

The provision has been calculated on the basis of a discounting method using the present value, where rehabilitation measures are probable, the rehabilitation costs can be reliably estimated and no future benefit is expected to be derived from these measures.

The estimation of future rehabilitation costs is subject to various factors. Major drivers in this respect can be the application of innovative rehabilitation measures, changes in legal conditions and also the development in market prices for disposing of the high volumes of hazardous waste.

In order to make a realistic assessment of the rehabilitation costs in individual cases, the working programs have included adjustments to cost estimates as a result of greater knowledge and official agreements in the successive processing stages.

For the valuation of provisions as of the balance sheet date, the investigation and rehabilitation obligations which are currently known have been used as the basis for estimating the expected costs in relation to the current price level.

The provision is discounted on the basis of expected cash outflows, using a risk-adjusted rate of 0.74% (previous year: 0.74%). Provisions for potential losses of pending transactions are created if a loss is probable and can be reliably estimated. In view of the uncertainty associated with this assessment, the actual losses may differ from the original estimates and may thus also differ from the amount of the provision. In DB Group, such uncertainty results particularly from the estimates of future income from transport contracts, the associated material- and personnel-related expenses as well as any penalty payments. Changes in the estimates of these potential losses from pending transactions may have a considerable impact on the future results of operations.

Movements in other provisions are shown in the following:

	Personnel-related provisions		Revenue reductions		Provisions for pending losses		Decommissioning provisions		Environmental protection provisions		Other provisions		**Total**	
(€ million)	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	**2017**
As of Jan 1	1,094	1,140	1,166	1,021	191	186	349	765	1,064	940	1,253	1,282	**5,117**	**5,334**
Currency translation differences	0	-2	0	0	-2	-2	0	0	0	-1	-2	-6	**-4**	**-11**
Changes in scope of consolidation	0	0	0	0	0	0	–	–	–	–	0	0	**0**	**0**
thereof additions	0	0	–	–	–	–	–	–	–	–	0	0	**0**	**0**
thereof disposals	0	0	0	0	0	0	–	–	–	–	0	0	**0**	**0**
Amounts used	-290	-325	-223	-235	-78	-65	-41	-429	-51	-48	-240	-242	**-923**	**-1,344**
Reversals	-89	-148	-138	-129	-39	-31	0	-8	0	0	-256	-160	**-522**	**-476**
Reclassifications	-5	-8	1	4	0	0	–	–	–	–	-2	2	**-6**	**-2**
Additions	287	436	492	505	324	103	1	4	0	170	285	379	**1,389**	**1,597**
Compounding and discounting	1	1	–	–	0	0	17	17	-3	3	2	-2	**17**	**19**
As of Dec 31	**998**	**1,094**	**1,298**	**1,166**	**396**	**191**	**326**	**349**	**1,010**	**1,064**	**1,040**	**1,253**	**5,068**	**5,117**

The following table breaks down the other provisions into current and non-current amounts, and also details their estimated residual maturity:

	Residual maturity							
(€ million)	Up to 1 year	1 to 2 years	2 to 3 years	3 to 4 years	4 to 5 years	More than 5 years	Total more than 1 year	Total
AS OF DEC 31, 2018								
Personnel-related provisions	402	162	112	69	52	201	**596**	**998**
Revenue reductions	1,298	–	–	–	–	–	**–**	**1,298**
Provisions for pending losses	260	37	29	26	21	23	**136**	**396**
Decommissioning provisions	24	22	18	18	18	226	**302**	**326**
Environmental protection provisions	57	52	54	54	54	739	**953**	**1,010**
Miscellaneous other provisions	781	62	27	21	23	126	**259**	**1,040**
Total	**2,822**	**335**	**240**	**188**	**168**	**1,315**	**2,246**	**5,068**
AS OF DEC 31, 2017								
Personnel-related provisions	472	173	119	73	53	204	**622**	**1,094**
Revenue reductions	1,166	–	–	–	–	–	**–**	**1,166**
Provisions for pending losses	67	43	24	19	14	24	**124**	**191**
Decommissioning provisions	42	23	23	22	22	217	**307**	**349**
Environmental protection provisions	62	56	59	58	58	771	**1,002**	**1,064**
Miscellaneous other provisions	934	111	28	20	27	133	**319**	**1,253**
Total	**2,743**	**406**	**253**	**192**	**174**	**1,349**	**2,374**	**5,117**

Personnel-related provisions

Benefits arising on the occasion of the termination of employment agreements (severance packages) become payable if an employee is released from his/her duties under the terms of an early-retirement or semi-retirement scheme before reaching normal pensionable age (which would not involve any reduction of retirement benefits) or if an employee voluntarily terminates his/her employment contract in return for a severance package. Severance payments are recognized if there is a demonstrable obligation either to terminate the employment agreements of current employees in accordance with a detailed formal plan which cannot be reversed or to pay severance payments if the employment contract is voluntarily terminated by employees within the framework of employment contract termination agreements.

Severance package obligations for agreements agreed as of the balance sheet date are recognized as other liabilities and – if they are not yet included in individual agreements and if they are part of a restructuring obligation in accordance with IAS 37 – are stated as other provisions.

Semi-retirement agreements are based on the so-called block model. The top-up amounts paid in addition to salary by DB Group during the semi-retirement period as well as additional contributions to the statutory pension insurance scheme are collected in installments up to the end of the active phase of the semi-retirement period and are recognized as provisions in accordance with IAS 19. The compensation backlog (plus the employer's contributions to social insurance) for the additional work performed during the employment phase is also shown with the present pro rata value as another non-current employee benefit.

If certain conditions are satisfied, DB Group offers its employees the opportunity to reduce their working hours to a level below their regular working hours (special semi-retirement arrangement). In these cases, the number of working hours is reduced to 81% of the reference or regular working hours, whereby the employees' remuneration is topped up to 90%. Payments into the company pension scheme are granted on the basis of 100% of the reference or regular working hours.

The personnel-related provisions are structured as follows:

As of Dec 31 (€ million)	2018	2017
Contractual personnel obligations	525	608
Early retirement and semi-retirement obligations	228	232
Service anniversary provisions	116	116
Other	129	138
Total	**998**	**1,094**

The personnel-related provisions include obligations arising from employment agreements which result from the entitlement of many employees under labor law and the willingness of DB AG not to terminate employment contracts for operational reasons. In such cases, DB Group will incur losses in the form of personnel expenses which will have to be borne until the employment contract is terminated or the employee is placed with another company; no reciprocal benefit will be provided in return for these costs (obligation surpluses relating to employment agreements). The contractual personnel obligations also include restructuring provisions.

A figure of about € 402 million was allocated to the provision for obligation surpluses as of December 31, 2018; this item accounts for a considerable percentage of the personnel provisions in DB Group (as of December 31, 2017: € 435 million). This provision recognizes the personnel-related obligations of DB AG for the employment guarantee included in the collective bargaining agreement designed to address demographic change (Demografietarifvertrag; DemografieTV).

In the DB Schenker segment, € 83 million (as of December 2017: € 118 million) were added for the global restructuring program Boost (boosting profitability).

The provisions set aside to cover semi-retirement and early retirement obligations cover the obligations arising from collective bargaining agreements, and have mostly been calculated on the basis of actuarial reports. In the regulations of the DemografieTV, this includes an amount of € 88 million (as of December 31, 2017: € 90 million) for the entitlement of employees with many years of service and also many years of shift working to enjoy special semi-retirement benefits.

Revenue reductions

The items disclosed under revenue reductions include cuts in connection with concession fees.

Provisions for pending losses

The provisions for pending losses mainly relate to transport contracts in which obligation surpluses build up over the life of the contracts. The additions relate mainly to DB Arriva and DB Regional.

Decommissioning provisions

The decommissioning provisions refer to the pro rata decommissioning obligation in relation to a joint power station. The valuation of the provision is based on an unchanged discount rate of 5.0%.

Environmental protection provision

Of the figure stated for environmental protection provisions, € 1,003 million (as of December 31, 2017: € 1,055 million) relate to remedial action obligations of DB AG. In order to take account of the remedial action obligations recognized in the environmental protection provisions, DB AG has set up various programs, including the following programs:

- the 4-stage soil decontamination program
- the 3-stage sewerage network program
- the 2-stage landfill shut-down program

The structured processing ensures that the procedure for recognizing, assessing the risk and taking appropriate remedial action is consistent with all legal requirements and optimized in terms of costs.

In the 4-stage soil decontamination program, existing soil and/or groundwater contamination is localized via the stages “historic exploration,” “orienting investigation” and “detail investigation,” and is assessed on the basis of the relevant statutory testing criteria. If any negative change in soil conditions or ecological burdens is identified, implementation of the necessary remedial action is planned by the steps feasibility study, model planning and approval planning. The process of carrying out the remedial action is supported by a binding remedial action plan or a public-sector agreement with defined remedial action objectives. Stage 1 “historic exploration” has been completed.

The 3-stage sewerage network program aims to remedy any contamination of soil and/or groundwater resulting from leaks. The program also involves a plan to optimize the existing sewerage network to ensure that it is capable of meeting future requirements and to ensure that the need to take remedial action can be limited to this future network. The network which is not necessary for operation will be decommissioned. The sewerage program will be carried out via the stage 1 “recording,” stage 2 “inspection” and stage 3 “remedial action/decommissioning.” Legal requirements are set out in the Water Resources Accounting Act (Wasserhaushaltsgesetz; WHG), the Water Acts of the Federal states and the own control regulations.

The 2-stage program “shut-down of landfill sites” systematically records all legacy landfill sites operated by DB Group (stage 1). The requirements resulting from the Recycling Accounting Act (Kreislaufwirtschaftsgesetz; KrWG) and the Landfill Site Regulation (Deponieverordnung; DepV) are used as the basis for planning and implementing the processes of decommissioning and recultivating the areas (stage 2a) and the subsequent maintenance (stage 2b).

Miscellaneous other provisions

The miscellaneous other provisions comprise provisions for litigation risks, decommissioning and demolition obligations, claims for damages, real estate risks, guarantee and warranty obligations, other tax risks, third-party obligations for maintenance, liability pensions, as well as insurance and project risks for numerous other issues which individually are of minor significance.

(34) Deferred items

DB Group receives various public-sector grants, which are provided in relation to specific assets or on the basis of a specific performance. The grants are recognized in the balance sheet as soon as it is certain that they will be provided and as soon as the conditions necessary for receiving the grants have been satisfied. The grants related to assets, and in particular investment grants, are deducted directly from the assets for which the grants have been received. The interest benefit (difference between nominal value and present value) of interest-free loans is deferred on the basis of the contractual grant conditions. The income from pro rata reversal of these accruals is shown as other operating income.

Deferred profits from sale-and-lease-back agreements

If capital gains are realized in conjunction with sale-and-lease-back agreements and if the subsequent lease is classified as a finance lease, these are deferred and released with an impact on the income statement over the life of the relevant agreements.

The deferred items contain the following:

As of Dec 31 (€ million)	2018	2017
Deferred Federal grants	569	699
Deferred revenues	775	584
Other	304	340
Total	**1,648**	**1,623**
Non-current portion	627	785
Current portion	1,021	838

The deferred Federal grants comprise mainly the interest benefit (difference between the nominal value and present value) attributable to the interest-free loans; this has developed as follows during the year under review:

(€ million)	2018	2017
As of Jan 1	499	643
Reversals	-144	-144
As of Dec 31	**355**	**499**

Of the figure shown for reversals in the year under review, € 59 million (previous year: € 59 million) is attributable to the annual reversal of deferred items. The remainder is attributable to the release of amortized deferrals relating to premature one-off repayments at the present value in 1999, 2004 and in 2011.

Deferred revenues constitute that part of compensation which is attributable to the period after the balance sheet date.

Notes to the statement of cash flows

The statement of cash flows shows the changes in cash and cash equivalents in the year under review, and was prepared in accordance with IAS 7 (Cash Flow Statements). The indirect method has been used for showing the cash flow from operating activities.

Interest income and interest payments, dividend income as well as tax payments are stated under operating activities.

Cash and cash equivalents include the cash and cash equivalents stated in the balance sheet with a residual maturity of less than three months (cash in hand, cash deposited with the Bundesbank, cash at banks and checks as well as securities). In the year under review, of the total figure stated for cash and cash equivalents, € 856 million (previous year: € 638 million) was subject to disposal restrictions mainly as a result of provisions of the rail franchises in Great Britain, external solvency requirements for DB Group's own insurance companies as well as country-specific and contractual restrictions particularly in international logistics business.

Cash and cash equivalents also include current receivables due from banks (€ 216 million; previous year: € 271 million) resulting from hedges in connection with financial futures. These receivables are repaid in the event of a positive market development, and are repaid by no later than the maturity of the financial futures.

Cash flow from operating activities

The cash flow from operating activities is calculated by adjusting the net profit for the period before taxes by items which are not cash-effective (in particular additions to and reversals of other provisions) and by adding other changes in current assets, in liabilities (excluding financial debt) and provisions. The cash flow from operating activities is then established after due consideration is given to interest and tax payments.

The inflow of cash from operating activities increased considerably compared with the previous year. This is due mainly to higher pension provisions.

The non-cash effective expenses and income have declined (€ – 420 million), and mainly comprise slightly lower expenses relating to additions to other provisions as well as higher income from the reversal of other provisions.

Cash flow from investing activities

The cash flow from investing activities is calculated as the cash flow provided by the disposal of property, plant and equipment and intangible assets as well as by investment grants, and the cash outflow for capital expenditures in property, plant and equipment and intangible assets as well as for non-current financial assets.

Payments received from investment grants are shown under investing activities due to the close connection between investment grants received and the payments made for capital expenditures in property, plant and equipment assets.

The slight increase in the outflow of cash from investing activities is mainly due to the increase in outflows for capital expenditures in property, plant and equipment (+ 6.8%) in conjunction with another increase in the net inflows of investment grants (+7.6%). The outflows for the acquisition of shares in consolidated companies have declined significantly compared with the previous year (year under review: € 3 million; previous year: € 30 million).

When changes take place in the scope of consolidation as a result of the acquisition or sale of companies, the acquisition price which is paid (excluding any liabilities which are transferred) less the acquired or sold financial resources are stated as cash flow from investing activities.

Cash flow from financing activities

The cash flow from financing activities is due to the net inflows and outflows attributable to issued bonds, changes in bank borrowings and other loans as well as outflows for the redemption of finance lease liabilities and interest-free loans.

The increase in cash flow from financing activities is due in particular to considerable increases resulting from the issuing and redemption of bonds, an increase in net inflows from the raising of funds as well as a profit distribution to the Federal Government reduced by € 150 million.

Information regarding the changes in financial liabilities in accordance with IAS 7

			Non-cash-effective changes				
(€ million)	Jan 1, 2018	Cash-effective change (inflow (+)/ outflow (-))	Acquisition (+)/ sale (-) of companies	Currency effects	Addition (+)/ disposal (-) of finance leases	Compounding	As of Dec 31, 2018
Receivables from financing	-131	- 43	–	0	–	–	-174
LIABILITIES FROM FINANCING							
Interest-free loans	1,014	-204	–	–	–	41	851
Bonds	19,616	1,027	–	56	–	13	20,712
Commercial paper	–	–	–	–	–	–	–
Bank borrowings	531	115	–	0	–	–	646
EUROFIMA loan	200	–	–	–	–	–	200
Finance lease liabilities	501	- 42	55	–	21	27	562
Liabilities from transport concessions	52	-7	–	–	–	–	45
Other financial liabilities	162	66	–	0	–	–	228
	22,076	**955**	**55**	**56**	**21**	**81**	**23,244**
Total	**21,945**	**912**	**55**	**56**	**21**	**81**	**23,070**

Notes to the segment information

Segment reporting of DB Group has been prepared in accordance with IFRS 8 (Operating Segments). The operating segments of DB Group result from the aggregation of fully consolidated legal entities; these legal entities have been allocated to specific segments on the basis of the company-specific operational performance on a defined market. The Group Management Board takes its decisions and carries out economic analyses as well as appraisals at the level of the operating segments ("management approach").

The allocation of legal entities to operating segments in external accounting is consistent with the allocation in internal management reporting. This means that the management and legal structure of DB Group are coincident. As a result of this allocation principle, there are no partial balance sheets or partial income statements within a legal entity which are allocated to different segments.

In this connection, management reporting is addressed to the Group Management Board in its function as the primary decision maker. Management reporting in DB Group is based on the accounting principles in accordance with IFRS. With regard to reconciling the segment data with the corresponding corporate data, it is accordingly mainly necessary to take account of consolidation effects. For this reason, a consolidation column is used for reconciliation purposes. The operations of the business segments are covered in the reporting format in line with the corporate organization structure of DB Group. The main regions covered by DB Group are detailed in the segment information by regions.

DB Group uses the following primary segments:

- DB Long-Distance: The segment DB Long-Distance comprises all cross-regional transport operations and other passenger transport services. Most of these transport services are provided in Germany.
- DB Regional: The segment DB Regional combines the activities for the German transport and general services in regional rail and road local passenger transport. These activities also comprise the S-Bahn (metro) operations in Berlin and Hamburg.
- DB Arriva: All European local transport activities (rail and bus) outside Germany are pooled in the DB Arriva segment.
- DB Cargo: The segment DB Cargo pools the European activities in rail freight transport. It operates primarily in Germany, Denmark, the Netherlands, Italy, Great Britain, France, Poland and Spain.
- DB Schenker: All global logistics activities of DB Group are managed in the DB Schenker segment. These comprise the freight, transport and other services in commodity and goods transport.
- DB Netze Track: The segment DB Netze Track is responsible for installing, maintaining and operating the complete track-related rail infrastructure in Germany.
- DB Netze Stations: The segment DB Netze Stations comprises the operation, development and marketing of passenger stations and retail facilities in stations in Germany.
- DB Netze Energy: The segment DB Netze Energy provides all standard energy products in the fields of transport energy and stationary energy.
- Subsidiaries/Other: DB AG with its numerous management, financing and service functions in its capacity as the management holding of DB Group is shown in this segment. This also includes the service companies which mostly render the services within DB Group in the fields of transport, logistics, information technology and telecommunications. The other subsidiaries and remaining activities are classified under Subsidiaries/Other as well.

The data concerning the segments are shown after intra-segment relations have been eliminated. The transactions between the segments (inter-segment relations) are eliminated in the column consolidation.

The income and expenses detailed on the basis of operating segments in the segment information are adjusted by issues which are of an exceptional nature in terms of the amount involved or in terms of the reason for the specific issue. A general adjustment is recognized for book profits and losses attributable to transactions with investments/financial investments and in the amount of the depreciation on long-term customer contracts, which have been capitalized as part of the purchase price allocation process of company acquisitions. In addition, an adjustment is recognized for individual issues if they are of an exceptional nature, if they are definable for accounting purposes, if they can be measured and if the amount involved is material. They are shown in the reconciliation column. This column also reconciles the balance sheet items of capital employed (contents allocated in accordance with management reporting) and the external presentation in accordance with the consolidated balance sheet of DB Group.

Segment reporting is based on the management key figures which are used for internal management of the operating segments. These key figures form the basis of the value-oriented management concept (see **Capital management in DB Group (in accordance with IAS 1) 🗋 192 f.).**

The external revenues and other revenues consist exclusively of income generated by the segments with non-Group parties. The internal revenues and other income show the income with other segments (inter-segment income). Market prices are used for establishing the transfer prices for intra-Group transactions.

EBITDA (earnings before interest, taxes, depreciation and amortization) is used for assessing the purely operational profitability of the operating segments. It does not include any costs of essential capital in the form of depreciation and interest. Accordingly, EBITDA is not influenced by segment-specific financing structures and long-term investment cycles (in particular in the infrastructure segments); consequently, depreciation is incurred sooner than the positive returns generated by these capital expenditures. EBITDA thus has the character of pre-tax cash flow.

On the other hand, EBIT additionally comprises depreciation recognized in relation to fixed assets (property, plant and equipment and intangible assets). EBIT is the result generated by operations which is available for meeting the return requirements of the providers of capital.

The financing costs which are incurred as a result of the (in certain cases) very high amounts of capital tied up in the operating segments of DB Group (particularly in the infrastructure segments) are also relevant for a long-term assessment of results. This is the reason why net operating interest is additionally taken into consideration in the key figure operating income after interest.

The essential assets which are used (capital employed) also have to be taken into consideration in addition to the above-mentioned parameters for internal management of the operating segments. The capital employed comprises the essential capital which is used by providers of equity and providers of debt and for which interest has to be paid.

Net financial debt is defined as the balance of interest-bearing external liabilities and finance lease liabilities as well as cash and cash equivalents and interest-bearing external receivables. The net financial debt of the segments also comprises the receivables and liabilities attributable to Group financing and internal finance lease.

Gross capital expenditures consist of capital expenditures in property, plant and equipment and intangible assets excluding capitalized borrowing costs. Net capital expenditures are calculated by deducting the participation of third parties in the financing of specific capital expenditure projects (essentially the investment grants of the Federal Government and the Federal states).

Additions from changes in the scope of consolidation are shown as part of segment gross capital expenditures, and comprise exclusively the capital expenditures in property, plant and equipment and intangible assets, including the goodwill acquired as part of company acquisitions or included in the consolidated financial statements for the first time.

The number of employees comprises the workforce, excluding trainees and dual degree students (students on courses combining theory and practice), at the end of the reporting period (part-time employees have been converted to full-time employees).

The accounting and valuation principles described for the segments are the same as those applicable for the consolidated financial statements of DB Group **(Basic principles and methods 188 ff.).** Intra-Group segment transactions are generally conducted on an arm's length basis.

Explanations concerning the information by regions

External revenues are stated on the basis of the registered offices of the Group company providing the service.

Non-current assets are allocated on the basis of the location of the company. The non-current assets comprise intangible assets, property, plant and equipment as well as non-current receivables and other assets (excluding financial instruments, deferred tax assets, rights from insurance policies as well as assets in conjunction with benefits after termination of the employment agreement).

Information concerning major customers

In the year under review as in the previous year, no single customer accounted for more than 10% of overall Group revenues.

Risk management and derivative financial instruments

Management of financial and energy price risks

As a mobility, transport and logistics group with international operations, DB Group is exposed to financial risks in the form of changes in interest rates and exchange rates. In addition, there are also energy price risks on the procurement side as a result of fluctuations in the prices of diesel fuel and electricity. One of the aspects of corporate policy is to actively manage and thus limit these risks by means of the use of derivative financial instruments.

DB AG is responsible for all financing and hedging transactions of DB Group with its central Group Treasury, and operates in close cooperation with the subsidiaries, where the risk positions primarily rise. Group Treasury follows the relevant regulations for risk management (minimum requirements for risk management (Mindestanforderungen an das Risikomanagement; MaRisk) and Corporate Sector Supervision and Transparency Act (Gesetz zur Kontrolle und Transparenz im Unternehmensbereich; KonTraG)). Speculation is not permitted. Ongoing market and risk assessment takes place as part of risk management.

Derivative financial instruments are used exclusively for hedging interest, currency and energy price risks. All individual transactions correspond to on-balance-sheet or anticipated underlyings (for instance bonds, purchases of diesel fuel and electricity). The aim is to achieve qualification as an effective hedge in accordance with IFRS 9.

Interest rate risks

The interest rate risks are attributable to borrowings raised in conjunction with variable interest rates.

In accordance with IFRS 7, the effects of theoretical changes in market interest rates on income and shareholders' equity are investigated by means of a sensitivity analysis. For this purpose, the following financial instruments are considered:

- Derivatives designated in cash flow hedges (interest hedges and cross-currency hedges) have an impact on the hedge reserve in shareholders' equity and are therefore taken into consideration in the sensitivity calculations relating to shareholders' equity.
- The sensitivity calculations for net interest income include financial instruments with variable interest (cash at banks, short-term borrowings/investments, cross-currency swaps, loans, finance leases).

If the level of market interest rates for the exposure had been 100 basis points higher (lower) as of the balance sheet date, the comprehensive income would have been affected as follows:

	2018		2017	
	Change in market level of interest rates			
(€ million)	+100 BP[1]	-100 BP[1]	+100 BP[1]	-100 BP[1]
Impact on comprehensive income	+28	-31	+40	-43
thereof net profit for the year	+7	-7	+8	-8
thereof covered directly in equity	+21	-24	+21	-24

[1] Basis points.

Foreign currency risks

The foreign currency risks are attributable to financing measures and operating activities.

In order to avoid interest rate and foreign currency risks, the foreign currency bonds issued and loans within the framework of Group financing are converted into euro liabilities and receivables by means of cross-currency swaps. However, it is not necessary for such bonds to be converted in individual cases if there is a guarantee that the bond can be serviced out of inflows of foreign currency payments.

Subsidiaries hedge all significant foreign currency positions in their functional currency via Group Treasury. In exceptional cases and to a limited extent, subsidiaries are permitted to hedge foreign currency positions with banks themselves.

The currency sensitivity analysis in accordance with IFRS 7 is based on the following assumptions:

- The cross-currency swaps which are concluded and the current currency transactions are always allocated to original underlyings.
- All major foreign currency positions arising from operating activities are always 100% hedged. If exchange rate changes are 100% hedged, they do not have any impact on profits or equity capital.
- Foreign currency risks can only occur if a 100% hedge does not exist in justified exceptional cases; for instance if a conservative estimate is made for hedge volumes for anticipated foreign currency cash flows in order to avoid overhedging.

- On-balance-sheet foreign currency risks may result from energy price hedging which is not denominated in the respective functional currency.

If the following foreign currencies for currency hedges had weakened (or strengthened) by 10% as of the balance sheet date, comprehensive income would not have been significantly affected.

	2018		2017	
	Appreciation of foreign currency by			
(€ million)	+10%	-10%	+10%	-10%
USD	+4	-4	+7	-7
CNY	+4	-5	+3	-3
ILS	+1	-1	0	0
QAR	+1	-1	+1	-1
SAR	+1	-1	+1	-1
MXN	0	0	-1	+2
SGD	-2	+2	0	0
TRY	-1	+2	0	0

DB Group has numerous equity investments in foreign subsidiaries, whose net assets are exposed to a translation risk. This translation risk is not perceived to be a foreign currency risk for the purposes of IFRS 7, and is not hedged.

Energy price risks

The Energy Price Risk Management Committee (ERMC) is responsible for managing and minimizing energy risks; this committee is responsible for ensuring the implementation of the risk policy of DB Group specifically with regard to energy price risks (in particular for procurement of diesel and electricity). The ERMC takes decisions with regard to specific hedging strategies and measures in which financial and energy derivatives are used.

Swaps relating to the commodities underlying the price formulae (coal and heavy fuel oil) are used as hedges for the risks of price changes for sourcing electricity. Diesel price risks are for instance limited by taking out diesel swaps (hybrid hedges of diesel price and currency risks and individual hedges of currency risks are possible in exceptional cases).

The following assumptions have been made for performing the sensitivity analyses in accordance with IFRS 7:

- In the case of energy price swaps, the effective part is recognized in shareholders' equity, and the ineffective part is recognized in the income statement.
- If options are used (collars), the intrinsic value constitutes the effective part of the hedge, so that the intrinsic value is shown in shareholders' equity. On the other hand, the fair value is not part of the hedge, and is shown in the income statement.

If the energy prices at the end of the year had been 10% lower (or higher), comprehensive income would have been affected as follows:

	2018		2017	
	Changes in market prices			
(€ million)	+10%	-10%	+10%	-10%
Impact on comprehensive income	+71	-71	+50	-50
thereof covered directly in equity	+71	-71	+50	-50
Diesel	+42	-42	+50	-50
Hard coal	+29	-29	0	0

Counterparty default risk of interest, currency and energy derivatives

The default risk is actively managed by way of strict requirements relating to the creditworthiness of the counterparty at the point at which the transactions are concluded and also throughout the entire life of the transactions, and also by way of defining risk limits.

In order to minimize the credit risk of derivatives, DB AG has concluded credit support agreements (CSAs) with its core banks. In the CSA, it was agreed that both parties would mutually provide cash securities for interest and cross-currency swaps as well as energy derivatives. Securities are exchanged daily with all relevant banks.

Related amounts which are not netted in the balance sheet:

	Financial assets/ liabilities shown in the balance sheet		Related amounts which are not netted in the balance sheet					
			Financial Instruments		Cash securities received/provided		**Net amounts**	
As of Dec 31 (€ million)	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017
Derivative financial instruments - assets	263	179	-149	-111	-114	-61	**0**	**7**
Derivative financial instruments - liabilities	391	382	-149	-111	-216	-271	**26**	**0**

The assets of financial derivatives and thus the maximum counterparty default risk have increased as a result of exchange rate fluctuations of the euro against other currencies, particularly against the Swiss franc and the Japanese yen. The liabilities of derivative financial instruments have increased only slightly. The cash collateral provided is still predominant. The maximum individual risk (default risk in relation to individual contract partners) is € 54 million (as of December 31, 2017: € 33 million) and exists in relation to a bank with a Moody's rating of A1. For transactions with terms of more than one year, all contract partners which are exposed to a default risk have a Moody's rating of at least Baa2.

Liquidity risk

Liquidity management involves maintaining adequate liquid assets, constantly checking the commercial paper market for ensuring adequate market liquidity and depth, and the constant availability of financial resources via **guaranteed credit facilities of banks (Note (28) 213 ff.).**

The following table shows the contractually agreed undiscounted interest payments and redemption payments relating to the original financial liabilities as well as the derivative financial instruments with a positive and negative fair value of DB Group:

	2019		2020		2021-2023		2024-2028		2029 ff.	
Maturity analysis of financial liabilities as of Dec 31, 2018 (€ million)	Fixed/ variable interest	Redemption	Fixed/ variable interest	Redemption	Fixed/ variable interest	Redemption	Fixed/ variable interest	Redemption	Fixed/ variable interest	Redemption
NON-DERIVATIVE FINANCIAL LIABILITIES										
Interest-free loans	–	178	–	163	–	469	–	155	–	–
Bonds	438	1,900	359	1,940	821	5,441	713	6,669	396	3,666
Commercial paper	–	–	–	–	–	–	–	–	–	–
Bank borrowings	0	240	0	4	–	401	–	1	–	–
EUROFIMA loan	8	–	8	–	8	200	–	–	–	–
Finance lease liabilities	19	44	18	43	42	136	47	140	111	199
Finance liabilities from transport concessions	1	6	1	6	7	20	1	13	–	–
Other financial liabilities	3	196	–	24	–	7	–	1	–	–
Trade payables	–	5,157	–	59	–	80	–	20	–	–
Other/miscellaneous liabilities	–	3,399	–	13	–	22	–	39	–	–
DERIVATIVE FINANCIAL LIABILITIES (NET/GROSS SETTLED)										
Cross-currency derivatives connected with cash flow hedges	59	30	58	439	124	321	122	1,407	16	448
Interest derivatives not connected with cash flow hedges	–	–	–	–	–	–	–	–	–	–
Interest derivatives connected with cash flow hedges	5	–	5	–	4	–	–	–	–	–
Currency derivatives connected with cash flow hedges	–	463	–	–	–	–	–	–	–	–
Currency derivatives not connected with cash flow hedges	–	1,131	–	2	–	–	–	–	–	–
Energy price derivatives	20	–	12	–	12	–	4	–	–	–
DERIVATIVE FINANCIAL ASSETS (GROSS SETTLED)										
Cross-currency derivatives connected with cash flow hedges	65	301	58	649	108	530	77	1,364	26	506
Interest derivatives not connected with cash flow hedges	–	–	–	–	–	–	–	–	–	–
Interest derivatives connected with cash flow hedges	–	–	–	–	–	–	–	–	–	–
Currency derivatives connected with cash flow hedges	–	339	–	0	–	–	–	–	–	–
Currency derivatives not connected with cash flow hedges	–	726	–	38	–	7	–	–	–	–
Energy price derivatives	–	–	–	–	–	–	–	–	–	–
VOLUNTARY INFORMATION ABOUT DERIVATIVES										
DERIVATIVE FINANCIAL ASSETS (NET SETTLED)										
Cross-currency derivatives connected with cash flow hedges	–	–	–	–	–	–	–	–	–	–
Interest derivatives not connected with cash flow hedges	–	–	–	–	–	–	–	–	–	–
Interest derivatives connected with cash flow hedges	–	–	–	–	–	–	–	–	–	–
Currency derivatives connected with cash flow hedges	–	–	–	–	–	–	–	–	–	–
Currency derivatives not connected with cash flow hedges	–	0	–	0	–	–	–	–	–	–
Energy price derivatives	-15	–	-13	–	-22	–	-6	–	–	–
INFLOW OF FUNDS FROM DERIVATIVE FINANCIAL INSTRUMENTS (GROSS SETTLED)										
Cross-currency derivatives connected with cash flow hedges	-116	-372	-112	-1,155	-272	-870	-250	-2,676	-63	-915
Interest derivatives not connected with cash flow hedges	–	–	–	–	–	–	–	–	–	–
Interest derivatives connected with cash flow hedges	–	–	–	–	–	–	–	–	–	–
Currency derivatives connected with cash flow hedges	–	-800	–	–	–	–	–	–	–	–
Currency derivatives not connected with cash flow hedges	–	-1,856	–	-42	–	-8	–	–	–	–
Energy price derivatives	–	–	–	–	–	–	–	–	–	–
FINANCIAL WARRANTIES										
Financial warranties	–	17	–	–	–	–	–	–	–	–

	2018		2019		2020–2022		2023–2027		2028 ff.	
Maturity analysis of financial liabilities as of Dec 31, 2017 (€ million)	Fixed/ variable interest	Redemption	Fixed/ variable interest	Redemption	Fixed/ variable interest	Redemption	Fixed/ variable interest	Redemption	Fixed/ variable interest	Redemption
NON-DERIVATIVE FINANCIAL LIABILITIES										
Interest-free loans	–	204	–	178	–	476	–	311	–	–
Bonds	481	1,900	401	1,942	824	5,453	654	6,561	331	3,842
Commercial paper	–	–	–	–	–	–	–	–	–	–
Bank borrowings	0	121	0	5	1	404	–	1	–	–
EUROFIMA loan	8	–	8	–	16	200	–	–	–	–
Finance lease liabilities	21	75	16	33	41	103	45	121	114	169
Finance liabilities from transport concessions	1	6	1	6	1	19	0	21	–	–
Other financial liabilities	3	58	3	102	–	1	–	1	–	–
Trade liabilities	–	5,157	–	59	–	80	–	20	–	–
Other/miscellaneous liabilities	–	3,399	–	13	–	22	–	39	–	–
DERIVATIVE FINANCIAL LIABILITIES (NET/GROSS SETTLED)										
Cross-currency derivatives connected with cash flow hedges	58	241	53	106	116	730	85	1,143	11	261
Interest derivatives not connected with cash flow hedges	–	–	–	–	–	–	–	–	–	–
Interest derivatives connected with cash flow hedges	5	–	5	–	4	–	–	–	–	–
Currency derivatives connected with cash flow hedges	–	717	–	–	–	–	–	–	–	–
Currency derivatives not connected with cash flow hedges	–	886	–	7	–	–	–	–	–	–
Energy price derivatives	22	–	9	–	15	–	6	–	–	–
DERIVATIVE FINANCIAL ASSETS (GROSS SETTLED)										
Cross-currency derivatives connected with cash flow hedges	63	126	60	216	127	668	121	1,517	39	599
Interest derivatives not connected with cash flow hedges	–	–	–	–	–	–	–	–	–	–
Interest derivatives connected with cash flow hedges	–	–	–	–	–	–	–	–	–	–
Currency derivatives connected with cash flow hedges	–	208	–	0	–	–	–	–	–	–
Currency derivatives not connected with cash flow hedges	–	901	–	3	–	1	–	–	–	–
Energy price derivatives	–	–	–	–	–	–	–	–	–	–
VOLUNTARY INFORMATION ABOUT DERIVATIVES										
DERIVATIVE FINANCIAL ASSETS (NET SETTLED)										
Cross-currency derivatives connected with cash flow hedges	–	–	–	–	–	–	–	–	–	–
Interest derivatives not connected with cash flow hedges	–	–	–	–	–	–	–	–	–	–
Interest derivatives connected with cash flow hedges	–	–	–	–	–	–	–	–	–	–
Currency derivatives connected with cash flow hedges	–	–	–	–	–	–	–	–	–	–
Currency derivatives not connected with cash flow hedges	–	0	–	0	–	–	–	–	–	–
Energy price derivatives	−16	–	−11	–	−15	–	−8	–	–	–
INFLOW OF FUNDS FROM DERIVATIVE FINANCIAL INSTRUMENTS (GROSS SETTLED)										
Cross-currency derivatives connected with cash flow hedges	−115	−361	−104	−347	−262	−1,396	−260	−2,612	−67	−825
Interest derivatives not connected with cash flow hedges	–	–	–	–	–	–	–	–	–	–
Interest derivatives connected with cash flow hedges	–	–	–	–	–	–	–	–	–	–
Currency derivatives connected with cash flow hedges	–	−924	–	–	–	–	–	–	–	–
Currency derivatives not connected with cash flow hedges	–	−1,787	–	−10	–	−1	–	–	–	–
Energy price derivatives	–	–	–	–	–	–	–	–	–	–
FINANCIAL WARRANTIES										
Financial warranties	–	17	–	–	–	–	–	–	–	–

This includes all instruments which were held as of December 31, 2018 and for which payments had already been agreed. Foreign currency amounts have been translated using the spot rate applicable as of the reference date. The variable interest payments attributable to the financial instruments have been calculated on the basis of the interest rates applicable on December 31, 2018 (previous year: on December 31, 2017). Financial liabilities which can be repaid at any time are allocated to the earliest possible time segment.

The financial liabilities are opposed by cash and cash equivalents of € 3,544 million (as of December 31, 2017: € 3,397 million), consisting of positive account balances and current fixed-term deposits.

Other disclosures

(35) Contingent receivables and liabilities, and guarantee obligations

Contingent receivables were stated as € 46 million as of December 31, 2018 (as of December 31, 2017: € 23 million). They mainly comprise a recovery claim in conjunction with construction grants which have been provided but which had not been sufficiently determined as of the balance sheet date in terms of the specific amount and the time at which the claim would become due.

As of the balance sheet date, no contingent receivables had been recognized for all injunction proceedings in view of the high level of uncertainty relating to refund claims, the timing of refunds and the probability of refunds.

The contingent liabilities are broken down as follows:

As of Dec 31 (€ million)	2018	2017
Contingent liabilities from warranties	–	30
Other contingent liabilities	99	124
Total	**99**	**154**

Other contingent liabilities also comprise risks arising from litigation which had not been stated as provisions because the expected probability of occurrence is less than 50%.

There are also contingencies of € 17 million from guarantees as of December 31, 2018 (as of December 31, 2017: € 17 million). Property, plant and equipment with carrying amounts of € 13 million (as of December 31, 2017: € 7 million) were also used as security for loans. The reported figure essentially relates to rolling stock used at the operating companies in the segment DB Long-Distance.

DB Group acts as guarantor mainly for equity participations and consortiums, and is legally subject to joint and several liability for all consortiums in which it is involved.

(36) Other financial obligations

The other financial obligations amounted to € 21,964 million as of December 31, 2018 (as of December 31, 2017: € 20,507 million).

Capital expenditures in relation to which the company has entered into contractual obligations as of the balance sheet date, but for which no consideration has yet been received, are broken down as follows:

As of Dec 31 (€ million)	2018	2017
Committed capital expenditures		
Property, plant and equipment	15,931	14,478
Intangible assets	31	55
Acquisition of financial assets	417	402
Total	**16,379**	**14,935**

The increase in committed capital expenditures in property, plant and equipment is mainly due to the planned expenditures due to own construction services; these are opposed mainly by effects resulting from acquisitions/deliveries of new vehicles. In the case of some supply arrangements, there are independent admissions of guilt with regard to fulfilling the order commitment; these are opposed by claims of the same amount, backed by bank guarantees and insurance policies with very good ratings. The order commitment for the acquisition of property, plant and equipment also contains future obligations for vehicles in connection with transport contracts to be recognized in accordance with IFRIC 12.

The figure of € 417 million shown for the acquisition of financial assets (as of December 31, 2017: € 402 million) relates to outstanding contributions at EUROFIMA which have not been called in.

Various companies in DB Group have leased assets, e.g. property, buildings, technical equipment, plant and machinery as well as operational and business equipment within the framework of operating lease agreements.

The terms of the future minimum lease payments arising from operating lease agreements are set out in the following table:

	Nominal values	
As of Dec 31 (€ million)	2018	2017
Up to 1 year	1,174	1,289
1 to 2 years	820	848
2 to 3 years	604	651
3 to 4 years	463	466
4 to 5 years	380	369
More than 5 years	1,264	1,175
Total	**4,705**	**4,798**

Future operating leases have also resulted in minimum lease payments totaling € 880 million (as of December 31, 2017: € 774 million) – thereof up to one year: € 33 million (as of December 31, 2017: € 5 million), thereof 1 to 5 years: € 291 million (as of December 31, 2017: € 242 million), thereof more than 5 years: € 556 million (as of December 31, 2017: € 527 million).

(37) Structured companies

DB AG holds 100% of the shares in DB Barnsdale AG and DB Competition Claims GmbH. The purpose of these structured companies is to enforce claims for damages from cartel operations; they are included as subsidiaries in the consolidated financial statements. There are profit and loss transfer agreements with DB AG.

(38) Infrastructure and transport contracts

The following notes and information refer to the requirements of SIC-29 (Disclosure – Service Concession Arrangements).

Infrastructure contracts

The main rail infrastructure companies (RIC) of DB Group are DB Netz AG, DB Station&Service AG and DB Energie GmbH.

On the basis of section 6 of the General Railways Act (Allgemeines Eisenbahngesetz, AEG), the RICs which operate track, control and security systems or platforms require approval for such operations. This is applicable particularly for DB Netz AG and DB Station&Service AG, whose approvals are valid until the end of December 31, 2048.

The rights of the RIC to operate the railway infrastructure is connected to various obligations. In particular, they are obliged to ensure that their operations are managed safely, that all rail infrastructure is constructed safely and maintained in a safe condition (section 4 (3) AEG). With regard to compliance with this regulation, the RIC of DB Group are regulated by the Federal Railway Authority (Eisenbahn-Bundesamt; EBA).

In addition, the RIC also have to observe statutory duties in the case of any new and expansion projects, for instance with regard to noise abatement. DB Group voluntarily participates in the rail noise abatement program of the Federal Government for existing lines.

The RIC provide non-discriminatory access to the rail infrastructure in accordance with sections 10 ff. Railway Regulation Act (Eisenbahnregulierungsgesetz; EReG), and charge the TOC for this access. The fees of DB Netz AG and DB Station&Service AG must comply with the requirements of the EReG. The fees for the usage of traction power lines of DB Energie GmbH have to comply with the requirements of the Energy Industry Law (Energiewirtschaftsgesetz; EnWG).

In the year under review, DB Netz AG, DB Station&Service AG and DB Energie GmbH generated overall revenues of € 9,516 million (previous year: € 9,218 million); thereof € 3,434 million (previous year: € 3,269 million) was generated with non-Group customers.

The assets of the rail infrastructure are the legal and economic property of the companies.

Transport contracts

DB Regio AG and its subsidiaries provide transport services on the basis of ordered services. These so-called transport contracts for local rail passenger transport services are signed with the contracting organization of the transport services authorized by the Federal states (e.g. special-purpose association, local transport company); these contracts determine the volume and the quality level of the transport service, the future development as well as the compensation (concession fees).

The funds necessary for this purpose are made available to the Federal states by the Federal Government in accordance with the regulations of the Regionalization Act (Regionalisierungsgesetz; RegG). The total concession fees received by the subsidiaries of the segment DB Regional for rail transport amounted to € 5,474 million in the year under review (previous year: € 3,900 million) **(Note (1) 🗋194 f.).** Contrary to the previous year, this amount includes a figure of € 1,438 million (previous year: € 921 million) for revenues from fares which had to be netted against the claims for concession fees within the framework of gross contracts.

In addition, there are similar transport contracts with international contracting organizations in the segment DB Arriva, with a volume of € 998 million in the year under review (previous year: € 861 million) **(Note (1) 🗋194 f.).**

About 80% of the secured transport contracts run until at least 2022, about 40% run until at least 2027 and about 25% run until at least 2030. The transport contracts can only be terminated by the ordering organization during the term of the contract for a compelling reason.

In many cases, the companies enjoy legal and beneficial ownership of the assets necessary for providing the services, and in particular the rolling stock. Some transport contracts include obligations whereby the assets which are deployed have to be handed over at the end of the life of the contract. In addition, DB Group is recording an increasing share of transport contracts in which the rolling stock is either leased by the contracting organization or for which the leasing arrangement is supported by capital service guarantees by the contracting organization.

(39) Related-party disclosures

The following parties are deemed to be related parties of DB Group in accordance with IAS 24 (Related-Party Disclosures):

- the Federal Government in its capacity as the owner of all shares in DB AG,
- the companies or enterprises subject to the control of the Federal Government (Federal companies),
- affiliated, non-consolidated and associated companies as well as joint ventures of DB Group, as well as
- the members of the Management Board and the Supervisory Board of DB AG and their close relatives.

Transactions with related parties are conducted on an arm's length basis. The figures attributable to related companies and persons are stated under the corresponding items of the "Notes to the balance sheet" with the designation "thereof." Individual figures are set out in the **Notes (19) 🗋207 ff., (28) 🗋213 ff.** and **(29) 🗋218.**

Details and explanations of transactions between DB Group and the Federal Government are included in the **Notes (3) 🗋195, (5) 🗋196 f., (9) 🗋200 f., (13) 🗋202 ff., (32) 🗋220 ff., (36) 🗋233** and **(38) 🗋233 f.**

Significant economic relations which need to be reported separately between DB Group and related companies and persons are explained in the following:

Relationships with the Federal Government

GRI 203-1 ↓

(€ million)	Federal Government 2018	 2017
SERVICES RECEIVED BY DB GROUP		
Purchase of goods and services	1,333	1,386
Rents and leases	1	1
Other services	0	0
Investment grants [1]	6,314	5,612
Other income grants	229	215
	7,877	**7,214**
SERVICES RENDERED BY DB GROUP		
Sale of goods and services	382	339
Rents and leases	14	13
Other services	107	61
Repayment of loans	204	206
Repayment of investment grants	29	41
Repayment from cartel proceedings	–	2
	736	**662**
OTHER DISCLOSURES		
Unsecured receivables [2]	384	276
Unsecured liabilities [2]	1,155	1,217
Current total of guarantees received [2]	1,139	1,104

[1] Including € 406 million EU subsidies paid out via the Federal Government (previous year: € 257 million).

[2] As of the balance sheet date.

Purchases of goods and services mainly comprise the fees paid to the Federal Government within the framework of the pro forma billing of the allocated civil servants as well as cost refunds for staff secondments in the service provision field.

With the law for improving the opportunities for re-integration on the labor market, the corresponding regulations in German social security code (Sozialgesetzbuch; SGB) III were revised. In accordance with section 54 SGB III, the Federal Employment Agency provides a subsidy of up to € 231 per month for career opportunity qualifications. In the year under review, about 280 young persons were offered a training opportunity within the framework of the career preparation program Chance plus.

DB AG and the RIC have signed a Performance and Financing Agreement (Leistungs- und Finanzierungsvereinbarung; LuFV) I with the Federal Government represented by the Federal Ministry of Transport, Building and Urban Development (Bundesministerium für Verkehr, Bau und Stadtentwicklung; BMVBS) for the initial period 2009 to 2013. This agreement has reformed the financing regime for the existing network. Whereas up to the point at which the LuFV I came into force, framework, individual and collective agreements have been used as the basis for financing replacement capital expenditures in relation to individual measures, the use of Federal funds within the LuFV framework is managed in a quality-oriented manner. The plannability, efficiency and transparency of the use of funds for maintaining the infrastructure has been improved with the LuFV I. The agreement came into force on January 1, 2009. The duration of the LuFV was extended from the end of 2013 to the end of 2015 by way of a second addendum to the performance and financing agreement of September 6, 2013. The LuFV I was replaced by the follow-up agreement LuFV II with effect from January 1, 2015.

The negotiations concerning the LuFV II between DB Group and the Federal Government were concluded in October 2014. The LuFV II, which was signed on January 12, 2015 and which has been applicable since January 1, 2015, is a target-oriented instrument for financing and managing capital expenditures. The core objectives are to maintain and further improve the quality and availability of the existing infrastructure (existing network) and to assure financing for the existing network for the years 2015 to 2019.

Under the terms of the LuFV II, the contractually defined volume of funds was considerably increased: the infrastructure contribution of the Federal Government was increased to an average of € 3.316 billion per calendar year. The envisaged dividend distributions of DB AG are reinvested completely in the rail infrastructure as Federal grants. The share for improving local rail passenger transport was increased to € 1.1 billion for the entire life of the LuFV II. The maintenance contribution to be provided by the RIC has increased to a minimum of € 8.0 billion for the life of the LuFV II.

The own funds to be provided by the RIC for capital expenditures every year on the other hand now amount to € 100 million per calendar year (LuFV I: € 500 million per calendar year).

The quality parameters from the LuFV I have been retained in principle, whereby the targets have been increased. A new “status category fully and partially renewed bridges” has been agreed in the LuFV II. If at least 875 railway bridges are not fully or partially renewed during the life of the LuFV II, and/or if the average status category of these bridges does not improve by at least one status category, the Federal Government can demand a one-off repayment of € 15 million.

In addition to the previous reasons for demanding repayments, the Federal Government can demand repayment of € 1.0 million per bridge in the event of a bridge having to be closed due to a fault for which the RIC is responsible. In addition, under certain conditions, the Federal Government can also demand repayment in the event of data errors. And finally, the Federal Government can demand repayment of a proportionate amount in the event of a deliberate or grossly negligent contravention of the principle of efficient and cost-effective application of funds if it is disadvantaged in this way.

The LuFV II has also specified in greater detail the statutory assessment and audit rights of the Federal Audit Office (Bundesrechnungshof).

The negotiations for the LuFV III are currently ongoing. This is expected to come into force on January 1, 2020.

The RIC and the Federal Government signed the Requirement Plan Implementation Agreement (Bedarfsplanumsetzungsvereinbarung; BUV) on July 25, 2017. This came into force on January 1, 2018, and governs the financing of requirement plan projects. Key elements include a readjustment of planning costs, fixing the own fund participation of the RIC in the projects as well as the agreement of binding commissioning dates which are subject to penalties if not met.

The Federal Government will in future absorb all costs of the projects, in other words also the entire planning costs. The previous regulation in the form of a fixed amount for planning costs equivalent to 18% of the construction costs has been canceled.

In future, the RIC will participate in all costs of the projects in accordance with their own economic benefit, i.e. including the entire construction costs. This provides a powerful incentive to avoid increases in construction costs.

The RIC give the Federal Government a commitment for milestones and binding commissioning dates for the projects. The penalties in the event of failure to meet these deadlines provide an incentive for complying with the deadlines.

Further investment grants are provided in accordance with the Municipal Transport Financing Act (Gemeindeverkehrsfinanzierungsgesetz; GVFG) for measures of the transport program, in accordance with the noise abatement program of the Federal Government in relation to existing track of the railways and within the framework of the Future Capital Expenditure Program (Zukunftsinvestitionsprogramm; ZIP) which was adopted in 2016.

DB Netz AG has received funds from the European Union for infrastructure projects in the field of trans-European networks (TEN) and for priority measures for expanding the trans-European network (Connecting Europe Facility; CEF funds).

The grants recognized in the income statement relate also to payments provided by the Federal Government for covering excessive burdens borne by DB Group as a result of operating and maintaining level crossings with roads of all construction authorities.

Sales of products and services also comprise services for carrying severely disabled persons, Bundeswehr soldiers and Bundeswehr traffic.

DB AG repaid to the Federal Government interest-free loans of € 204 million (previous year: € 206 million) in accordance with the BSWAG. The payments were made within the framework of the agreed annual standard redemption payment to the Federal Government.

The liabilities due to the Federal Government comprise the extended loans, which are shown here with their present values, and other liabilities of € 304 million (as of December 31, 2017: € 203 million).

The guarantees received from the Federal Government primarily relate to the loans received from EUROFIMA as well as the outstanding contributions and liabilities arising from collective liability of DB AG at EUROFIMA. The guarantees which have been received include a maximum commitment of € 1,153 million of the Federal Government for loans of EUROFIMA. The loan volume amounted to € 200 million as of December 31, 2018 (unchanged).

The following agreements were concluded with the Federal Government in the year under review:

Eight new financing agreements were concluded in the year under review in addition to the Adjustment Agreement 2018 (Anpassungsvereinbarung; APV), in certain cases still charged against the ZIP. The Federal Government has provided finance totaling about € 1,325 million for the new agreements. Of this figure, about € 19 million related to the year under review. The financing agreements have different terms, which in certain cases extend to the year 2029. Financing is provided completely in the form of investment grants which do not have to be repaid.

Sections 21 (5) No. 2 and (6) of the DBGrG have resulted in claims of DB AG against the Federal Government. Section 21 (5) No. 2 DBGrG specifies that the Federal Government bears those costs which are incurred by DB AG in the performance of technical, operational or organizational measures as a result of the fact that employment agreements cannot be terminated. Section 21 (6) DBGrG states that (5) No. 2 is applicable accordingly for assigned civil servants. The joint implementation of the DBGrG is based on an agreement in accordance with section 21 (8) DBGrG in relation to section 21 (5) No. 2 and (6) DBGrG of June 10/17, 2015 between the Federal Railway Fund on the one hand and DB AG on the other. The Federal Ministry of Transport and Digital Infrastructure (Bundesministerium für Verkehr und digitale Infrastruktur; BMVI) and the Federal Ministry of Finance (Bundesministerium der Finanzen; BMF) approved this agreement on June 24/July 28, 2015. The new agreement states that DB AG shall provide evidence (with documentation of each individual case) that an employee of DB JobService GmbH (a civil servant or employee subject to collective bargaining agreements satisfying certain criteria at the foundation in 1994) was affected by a rationalization measure and employment elsewhere is not possible. The personnel expenses plus an additional amount of 10% of the personnel expenses to cover costs shall be reimbursed only after each individual case has been reviewed by the Federal Railway Fund. By the end of the year under review, a total of € 84.6 million (excluding reimbursement costs) was settled for the cases which have so far been confirmed by the Federal Railway Fund. The Federal Railway Fund transferred a figure of € 8.5 million as reimbursement of costs to DB JobService GmbH.

The annual financial statements 2018 of DB JobService GmbH disclose reimbursement claims of DB AG against the Federal Government in the total amount of € 64.4 million (including 10% reimbursement of costs) on the basis of section 21 (5) and (6) DBGrG. Reimbursements in accordance with Section 21 (5) No. 2 and (6) DBGrG are audited by the Federal Railway Fund on the basis of individual documentation. For those cases which have changed to DB JobService GmbH in January 2014 after the DemografieTV came into force (new cases), extensive supporting evidence has to be provided on the basis of original receipts by the companies. In the autumn of 2017, the Federal Railway Fund carried out a further audit of the 670 outstanding cases (dissent cases) which were concluded in the year under review. Of the 670 outstanding cases, 389 were confirmed (confirmation rate: 57.5%), and a total of € 40.7 million (including reimbursement of costs) was recognized retrospectively for the years 2015 to 2017. The annual financial statements 2017 of DB AG recognized a receivable due from the Federal Railway Fund of € 28.7 million for the outstanding cases for the years 2015 to 2017 on the basis of an assumed confirmation ratio of 50%. Accordingly, the actual retrospective recognition in the year under review for the previous years was higher than the figure assumed in the annual financial statements 2017 as a result of the higher confirmation ratio.

Relations with Federal companies

Most of the transactions carried out in accordance with IAS 24 in the year under review and in the previous year related to operations, and were overall of minor significance for DB Group. The receivables and liabilities which had arisen were virtually completely settled as of the balance sheet date.

Business relations with Deutsche Telekom and Deutsche Post regarding the use of telecommunications and postal services have taken place to the usual extent.

Relations with affiliated, non-consolidated companies, associates and joint ventures

In the year under review, DB Group purchased goods and services worth € 116 million (previous year: € 114 million), mainly for purchasing passenger transport and freight services. At € 85 million (previous year: € 80 million), most of the total figure which has been reported is attributable to transactions with associates. Rental and leasing payments of € 6 million were also made (previous year: € 7 million).

Interest payments of € 8 million (previous year: € 8 million) were also incurred in the year under review. This figure relates almost exclusively to interest payments for the loans extended by EUROFIMA **(Note (28) 🗋213 ff.)**.

In the year under review, DB Group generated revenues of € 386 million (previous year: € 373 million) from sales of goods and services. The revenues were generated mainly in the DB Cargo segment and relate to revenues generated by transport services which were provided.

Guarantees totaling € 6 million (as of December 31, 2017: € 6 million) have been extended; of this figure € 6 million (as of December 31, 2017: € 6 million) was attributable to joint ventures. An equivalent volume of transactions with related companies was conducted in the previous year.

Relations with the Management Board and Supervisory Board of DB AG

The following section sets out the transactions between DB Group and the members of the Management Board and the Supervisory Board, as well as the companies in which members of the Management Board or the Supervisory Board own a majority interest.

(€ thousand)	**2018**	2017
SERVICES RENDERED BY DB GROUP		
Sale of goods and services	6,603	11,748
Trade receivables as of Dec 31	435	255
SERVICES RECEIVED BY DB GROUP		
Purchase of goods and services	3,976	11,220
Trade liabilities as of Dec 31	889	1,740

The revenues of € 6,603 thousand (previous year: € 11,748 thousand) generated by DB Group (service provider) mainly relate to transport and freight forwarding services of the segments DB Cargo and DB Schenker which were provided to the Georgsmarienhütte Holding GmbH Group.

The goods and services purchased by DB Group (service recipient) comprise almost entirely supplies of Georgsmarienhütte Holding GmbH Group.

Compensation of the Management Board

(€ thousand)	**2018**	2017
Benefits due in the short term	6,498	6,270
Post-employment benefits	1,222	1,940
Other benefits due in the long term	1,049	369
Payments on the occasion of termination of employment contracts	–	2,251
Share-based compensation	–	–
Total compensation of the Management Board according to IFRS	**8,769**	**10,830**
Fixed	4,665	4,906
Variable	4,104	3,673
Payments on the occasion of termination of employment contracts	–	2,251
Pension provisions for active members of the Management Board [1]	17,885	23,409
Total compensation of the Management Board according to HGB	6,498	8,521
Compensation of former members of the Management Board and their surviving dependants	10,406	14,865
Retirement benefit obligations in respect of former members of the Management Board and their surviving dependants [1]	171,091	149,214

[1] Details of defined benefit obligations.

No loans and advances were extended to members of the Management Board in the year under review. Nor did the company take on any contingencies for the benefit of members of the Management Board.

Compensation of the Supervisory Board

(€ thousand)	**2018**	2017
Total compensation of the Supervisory Board	865	910
thereof short-term	865	910
thereof fixed	514	508
thereof variable	154	224
thereof attendance fees	46	42
thereof benefits in kind from discounted travel	61	89
thereof compensation for membership in supervisory board/advisory boards of DB Group companies (including attendance fees)	90	47

No compensation was incurred for former members of the Supervisory Board and their surviving dependants. There are no pension obligations for former members of the Supervisory Board and their surviving dependants. The members of the Supervisory Board only receive benefits due in the short term.

No loans and advances were extended to members of the Supervisory Board in the year under review. Nor did the company take on any contingencies for the benefit of members of the Supervisory Board.

The total amount of compensation for the Management Board and Supervisory Board was € 9,634 thousand in the year under review (previous year: € 11,740 thousand). Individual details as well as further details concerning the payments of the members of the Management Board and Supervisory Board are included in the Corporate Governance report in the Group management report.

(40) Events after the balance sheet date

Bond issues

In January and February 2019, the following bonds were issued by DB Finance:

Issue volume	Duration (years)	Coupon (%)	Placing
€ 1 billion	10	1.125	Institutional investors mainly in Germany, France and Great Britain
GBP 300 million (about € 340 million)	7	1.875	Institutional investors mainly in Great Britain
NOK 1 billion (about € 103 million)	15	2.705	Private placement

Wage bargaining negotiations

The wage bargaining negotiations with the EVG and GDL trade unions were successfully concluded on December 14, 2018 and January 4, 2019 respectively. The agreements are due to run (retrospectively from October 1, 2018) for 29 months until February 28, 2021.

(41) Exemption of subsidiaries from the disclosure requirements of the German Commercial Code

The following subsidiaries intend to utilize the possibility of section 264 (3) or 264b HGB not to disclose their financial statements:

- AMEROPA-REISEN GmbH, Bad Homburg v. d. Höhe
- Autokraft GmbH, Kiel
- Bayern Express & P. Kühn Berlin GmbH, Berlin
- BRN Busverkehr Rhein-Neckar GmbH, Ludwigshafen am Rhein
- BVO Busverkehr Ostwestfalen GmbH, Bielefeld
- BVR Busverkehr Rheinland GmbH, Düsseldorf
- DB Barnsdale AG, Berlin
- DB Cargo BTT GmbH, Mainz
- DB Cargo Logistics GmbH, Kelsterbach
- DB Cargo Vermögensverwaltungs-Aktiengesellschaft, Mainz
- DB Competition Claims GmbH, Berlin
- DB Dialog GmbH, Berlin
- DB Engineering & Consulting GmbH, Berlin
- DB FuhrparkService GmbH, Frankfurt am Main
- DB Gastronomie GmbH, Frankfurt am Main
- DB Intermodal Services GmbH, Mainz
- DB JobService GmbH, Berlin
- DB Kommunikationstechnik GmbH, Berlin
- DB Media & Buch GmbH, Kassel
- DB Projekt Stuttgart—Ulm GmbH, Stuttgart
- DB Regio Bus Bayern GmbH, Ingolstadt
- DB Regio Bus Mitte GmbH, Ludwigshafen am Rhein
- DB Regio Bus Nord GmbH, Hamburg
- DB Regio Bus Ost GmbH, Potsdam
- DB Regionalverkehr Bayern GmbH, Ingolstadt
- DB Sicherheit GmbH, Berlin
- DB Systel GmbH, Frankfurt am Main
- DB Systemtechnik GmbH, Minden
- DB Vertrieb GmbH, Frankfurt am Main
- DB Zeitarbeit GmbH, Berlin
- Deutsche Bahn Connect GmbH, Frankfurt am Main
- Deutsche Bahn Digital Ventures GmbH, Berlin
- Deutsche Bahn International Operations GmbH, Berlin
- DVA Deutsche Verkehrs-Assekuranz-Vermittlungs-GmbH, Bad Homburg v. d. Höhe
- ELAG Emder Lagerhaus und Automotive GmbH, Emden
- EVAG Emder Verkehrs und Automotive Gesellschaft mbH, Emden
- Friedrich Müller Omnibusunternehmen GmbH, Schwäbisch Hall
- Haller Busbetrieb GmbH, Walsrode
- Hanekamp Busreisen GmbH, Cloppenburg
- ioki GmbH, Frankfurt am Main
- Karpeles Flight Services GmbH, Frankfurt am Main
- Mobimeo GmbH, Berlin
- MTS MarkenTechnikService GmbH & Co. KG, Karlsruhe
- NVO Nahverkehr Ostwestfalen GmbH, Münster
- Omnibusverkehr Franken GmbH (OVF), Nuremberg
- ORN Omnibusverkehr Rhein-Nahe GmbH, Mainz
- RBO Regionalbus Ostbayern GmbH, Regensburg
- Regional Bus Stuttgart GmbH RBS, Stuttgart
- Regionalbus Brunswick GmbH – RBB –, Brunswick
- Regionalverkehr Allgäu GmbH (RVA), Oberstdorf
- Regionalverkehr Oberbayern Gesellschaft mit beschränkter Haftung, Munich
- Regionalverkehre Start Deutschland GmbH, Frankfurt am Main
- RMV Rhein-Mosel Verkehrsgesellschaft mbH, Koblenz
- RVS Regionalverkehr Südwest GmbH, Karlsruhe
- S-Bahn Hamburg Service GmbH, Hamburg
- SBG SüdbadenBus GmbH, Freiburg im Breisgau
- Schenker Aktiengesellschaft, Essen
- Schenker Dedicated Services Germany GmbH, Essen
- Schenker Deutschland AG, Frankfurt am Main
- Schenker Europe GmbH, Frankfurt am Main
- Schenker Global Management & Services GmbH, Essen
- Schenker GmbH für Beteiligungen, Essen
- Schenker Technik GmbH, Essen
- TFG Transfracht Internationale Gesellschaft für kombinierten Güterverkehr mbH, Mainz
- TRANSA Spedition GmbH, Offenbach am Main
- UBB Usedomer Bäderbahn GmbH, Heringsdorf
- Verkehrsgesellschaft mbH Untermain – VU –, Aschaffenburg
- Verkehrsgesellschaft Start Augsburg mbH, Frankfurt am Main
- Verkehrsgesellschaft Start Emscher—Münsterland mbH, Frankfurt am Main
- Verkehrsgesellschaft Start Niedersachsen mbH, Frankfurt am Main
- Verkehrsgesellschaft Start NRW mbH, Frankfurt am Main
- Verkehrsgesellschaft Start Ostsachsen mbH, Berlin
- Verkehrsgesellschaft Start Unterelbe mbH, Cuxhaven
- WB Westfalen Bus GmbH, Münster
- Weser—Ems Busverkehr GmbH (WEB), Bremen

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(42) List of shareholdings

The list of shareholdings is set out on the following pages.

Breakdown of shareholdings of DB AG

(in accordance with section 313 (2) HGB)

Subsidiary Name and registered offices	Currency	Shareholders' equity (TLC) 1)	Ownership (%)
DB LONG-DISTANCE			
FULLY CONSOLIDATED			
AMEROPA-REISEN GmbH, Bad Homburg v. d. Höhe	EUR	2,869	100.00
DB Bahn Italia S.r.l., Verona/Italy	EUR	8,357	100.00
DB Fernverkehr Aktiengesellschaft, Frankfurt am Main	EUR	2,337,182	100.00
DB Reise&Touristik Suisse SA, Basel/Switzerland	CHF	– 4,054	100.00
AT EQUITY			
Alleo GmbH, Saarbrücken 2), 3)	EUR	380	50.00
Railteam B.V., Amsterdam/the Netherlands 2), 4)	EUR	116	20.00
Rheinalp GmbH, Frankfurt am Main 2), 3)	EUR	131	50.00
DB REGIONAL			
FULLY CONSOLIDATED			
Autokraft GmbH, Kiel	EUR	17,250	100.00
Bayern Express&P. Kühn Berlin GmbH, Berlin	EUR	7,217	100.00
BRN Busverkehr Rhein-Neckar GmbH, Ludwigshafen am Rhein	EUR	8,431	100.00
Busverkehr Märkisch-Oderland GmbH, Strausberg	EUR	5,017	51.17
Busverkehr Oder-Spree GmbH, Fürstenwalde	EUR	8,265	51.17
BVO Busverkehr Ostwestfalen GmbH, Bielefeld	EUR	13,127	100.00
BVR Busverkehr Rheinland GmbH, Düsseldorf	EUR	7,918	100.00
DB Regio Aktiengesellschaft, Frankfurt am Main	EUR	2,185,464	100.00
DB Regio Bus Bayern GmbH, Ingolstadt	EUR	7,242	100.00
DB Regio Bus Mitte GmbH, Ludwigshafen am Rhein	EUR	59,591	100.00
DB Regio Bus Nord GmbH, Hamburg	EUR	1,729	100.00
DB Regio Bus Ost GmbH, Potsdam	EUR	6,316	100.00
DB Regio Bus Rhein-Mosel GmbH, Montabaur	EUR	2,117	74.90
DB Regionalverkehr Bayern GmbH, Ingolstadt	EUR	50	100.00
DB RegioNetz Verkehrs GmbH, Frankfurt am Main	EUR	61,334	100.00
DB ZugBus Regionalverkehr Alb-Bodensee GmbH (RAB), Ulm	EUR	61,869	100.00
Friedrich Müller Omnibusunternehmen GmbH, Schwäbisch Hall	EUR	3,175	100.00
Haller Busbetrieb GmbH, Walsrode	EUR	6,315	100.00
Hanekamp Busreisen GmbH, Cloppenburg	EUR	3,345	100.00
KOB GmbH, Oberthulba	EUR	2,055	70.00
NVO Nahverkehr Ostwestfalen GmbH, Münster	EUR	873	100.00
Omnibusverkehr Franken GmbH (OVF), Nuremberg	EUR	22,601	100.00
ORN Omnibusverkehr Rhein-Nahe GmbH, Mainz	EUR	13,718	100.00
RBO Regionalbus Ostbayern GmbH, Regensburg	EUR	15,853	100.00
Regional Bus Stuttgart GmbH RBS, Stuttgart	EUR	26,862	100.00
Regionalbus Braunschweig GmbH – RBB –, Brunswick	EUR	8,562	100.00
Regionalverkehr Allgäu GmbH (RVA), Oberstdorf	EUR	4,490	70.00
Regionalverkehr Oberbayern Gesellschaft mit beschränkter Haftung, Munich	EUR	19,938	100.00
Regionalverkehre Start Deutschland GmbH, Frankfurt am Main	EUR	5,903	100.00
rhb rheinhunsrückbus GmbH, Simmern	EUR	170	48.69
RMV Rhein-Mosel Verkehrsgesellschaft mbH, Koblenz	EUR	12,966	74.90
RVS Regionalverkehr Südwest GmbH, Karlsruhe	EUR	17,020	100.00
S-Bahn Berlin GmbH, Berlin	EUR	170,251	100.00
S-Bahn Hamburg GmbH, Hamburg	EUR	84,511	100.00
S-Bahn Hamburg Service GmbH, Hamburg	EUR	25	100.00
SBG SüdbadenBus GmbH, Freiburg im Breisgau	EUR	15,486	100.00
Verkehrsgesellschaft mbH Untermain – VU –, Aschaffenburg	EUR	3,228	100.00
Verkehrsgesellschaft Start Augsburg mbH, Frankfurt am Main	EUR	48	100.00
Verkehrsgesellschaft Start Emscher-Münsterland mbH, Frankfurt am Main	EUR	17	100.00
Verkehrsgesellschaft Start Niedersachsen mbH, Frankfurt am Main	EUR	49	100.00
Verkehrsgesellschaft Start NRW mbH, Frankfurt am Main	EUR	49	100.00
Verkehrsgesellschaft Start Ostsachsen mbH, Berlin	EUR	49	100.00
Verkehrsgesellschaft Start Unterelbe mbH, Cuxhaven	EUR	1,550	100.00
WB Westfalen Bus GmbH, Münster	EUR	9,872	100.00
Weser-Ems Busverkehr GmbH (WEB), Bremen	EUR	13,711	100.00
AT EQUITY			
"Rhein-Nahe Nahverkehrsverbund GmbH," Ingelheim am Rhein 2), 3)	EUR	125	28.67
"ZOB" Zentral-Omnibus-Bahnhof Gesellschaft mit beschränkter Haftung, Bremen 2), 4)	EUR	29	25.60
Bodensee-Oberschwaben Verkehrsverbundgesellschaft mit beschränkter Haftung, Ravensburg 2), 3)	EUR	205	25.32
Connect-Fahrplanauskunft GmbH, Hannover 2), 4)	EUR	198	42.00
FahrBus Ostalb GmbH, Aalen 2), 3)	EUR	255	49.90
Filsland Mobilitätsverbund GmbH, Göppingen 2), 3)	EUR	79	30.00
FSN Fahrzeugservice Neunkirchen GmbH, Neunkirchen 2), 4)	EUR	172	47.50
Kahlgrund-Verkehrs-Gesellschaft mit beschränkter Haftung, Schöllkrippen 2), 3)	EUR	8,960	28.00
Kitzinger Nahverkehrsgemeinschaft (KiNG), Kitzingen 2), 5)	EUR	4	50.00
Kreisbahn Aurich GmbH, Aurich 2), 3)	EUR	1,141	33.33
Main-Spessart-Nahverkehrsgesellschaft mbH i.L., Gemünden (Main) 2), 5)	EUR	107	25.00
Niedersachsentarif GmbH, Hanover 2), 3)	EUR	54	12.50
NSH Nahverkehr Schleswig-Holstein GmbH, Kiel 2), 3)	EUR	46	46.90
OstalbMobil GmbH, Aalen 2), 3)	EUR	50	39.30
RBP Regionalbusverkehr Passau Land GmbH, Bad Füssing 2), 4)	EUR	67	33.33
Regio-Verkehrsverbund Freiburg GmbH (RVF), Freiburg im Breisgau 2), 3)	EUR	343	42.50
Saarländische Nahverkehrs-Service GmbH, Saarbrücken 2), 4)	EUR	60	31.67
stadtbus Ravensburg Weingarten GmbH, Ravensburg 2), 3)	EUR	25	45.20
TGO – Tarifverbund Ortenau GmbH, Offenburg 2), 3)	EUR	100	49.00
Verkehrsgemeinschaft am Bayerischen Untermain – VAB GmbH, Aschaffenburg 2), 4)	EUR	25	60.00
Verkehrsgemeinschaft Mittelthüringen GmbH (VMT), Erfurt 2), 3)	EUR	123	11.11
Verkehrsgesellschaft Landkreis Nienburg mbH (VLN), Nienburg/Weser 2), 4)	EUR	26	48.54
Verkehrsunternehmen Hegau-Bodensee Verbund GmbH (VHB), Konstanz 2), 3)	EUR	30	34.00

Subsidiary Name and registered offices	Currency	Shareholders' equity (TLC) 1)	Ownership (%)
Verkehrsunternehmens-Verbund Mainfranken GmbH – VVM, Würzburg 2), 3)	EUR	30	18.64
Verkehrsverbund Großraum Nürnberg GmbH (VGN), Nuremberg 2), 3)	EUR	54	25.93
Verkehrsverbund Neckar-Alb-Donau GmbH (naldo), Hechingen 2), 3)	EUR	440	18.12
Verkehrsverbund Schwarzwald-Baar GmbH (VSB), Villingen-Schwenningen 2), 3)	EUR	115	45.00
Verkehrsverbund Süd-Niedersachsen GmbH (VSN), Göttingen 2), 3)	EUR	98	31.16
VGC Verkehrsgesellschaft Bäderkreis Calw mbH, Calw 2), 3)	EUR	780	32.50
VHN Verkehrsholding Nord GmbH & Co. KG, Schleswig 2), 3)	EUR	720	20.00
VHN Verwaltungsgesellschaft mbH, Schleswig 2), 3)	EUR	1,131	20.00
VMS Verkehrs-Management und Service GmbH, Trier 2), 3)	EUR	30	38.46
WNS Westpfälzische Nahverkehrs-Service GmbH, Kaiserslautern 2), 4)	EUR	212	45.00
WTV Waldshuter Tarifverbund GmbH, Waldshut-Tiengen 2), 3)	EUR	84	40.00
FAIR VALUE			
Regio Verkehrsverbund Lörrach GmbH (RVL), Lörrach 2), 3)	EUR	116	54.00
Verkehrsverbund Pforzheim-Enzkreis GmbH (VPE), Pforzheim 2), 3)	EUR	51	25.00
Verkehrsverbund Rottweil GmbH (VVR), Villingen-Schwenningen 2), 5)	EUR	72	70.20
vgf Verkehrs-Gemeinschaft Landkreis Freudenstadt GmbH, Waldachtal 2), 3)	EUR	199	51.42
VVW Verkehrsverbund Warnow GmbH, Rostock 2), 3)	EUR	27	21.61
DB ARRIVA			
FULLY CONSOLIDATED			
00741078 Limited, Sunderland/Great Britain	GBP	569	100.00
ACTIJOVEN CONSULTING & TRAVELLING s.l., Madrid/Spain	EUR	376	100.00
Alliance Rail Holdings Ltd, Sunderland/Great Britain	GBP	0	100.00
Ambuline Limited, Sunderland/Great Britain	GBP	1,551	100.00
APS (Leasing) Ltd, Sunderland/Great Britain	GBP	676	100.00
Arriva Alpetour, družba za prevoz potnikov, d.o.o., Kranj/Slovenia	EUR	35,158	100.00
Arriva Bus & Coach Holdings Limited, Sunderland/Great Britain	GBP	28,275	100.00
Arriva Bus & Coach Ltd, Sunderland/Great Britain	GBP	15,164	100.00
Arriva Bus Abu Dhabi Limited, Sunderland/Great Britain	GBP	0	100.00
Arriva Bus Transport Polska Sp. z o.o., Toruń/Poland	PLN	10,433	99.80
Arriva City s.r.o., Prague/Czech Republic	CZK	719,536	100.00
Arriva Cymru Limited, Sunderland/Great Britain	GBP	39,285	100.00
Arriva Danmark A/S, Kastrup/Denmark	DKK	1,629,101	100.00
Arriva Dolenjska in Primorska, družba za prevoz potnikov, d.o.o., Koper/Slovenia	EUR	35,214	100.00
Arriva Durham County Limited, Sunderland/Great Britain	GBP	39,647	100.00
Arriva East Herts & Essex Ltd, Sunderland/Great Britain	GBP	0	100.00
Arriva Finance Holding B.V., Heerenveen/the Netherlands	EUR	48	100.00
Arriva Finance Lease Limited, Sunderland/Great Britain	GBP	1,570	100.00
Arriva Galicia S.L., Ferrol/Spain	EUR	23,278	100.00
Arriva Hongarije Holding BV, Heerenveen/the Netherlands	EUR	33,473	100.00
Arriva Hrvatska d.o.o., Osijek/Croatia	HRK	273,514	100.00
Arriva Hungary Zrt., Budapest/Hungary	HUF	24,937,360	100.00
Arriva Insurance A/S, Kastrup/Denmark	DKK	87,623	100.00
Arriva Insurance Company (Gibraltar) Limited, Gibraltar/Gibraltar	GBP	4,252	100.00
Arriva International (Northern Europe) Limited, Sunderland/Great Britain	EUR	404	100.00
Arriva International (Southern Europe) Limited, Sunderland/Great Britain	EUR	404	100.00
Arriva International Limited, Sunderland/Great Britain	EUR	1,178,456	100.00
Arriva International Trains (Leasing) Limited, Sunderland/Great Britain	EUR	15,699	100.00
ARRIVA INVESTIMENTOS SGPS,SA, Almada/Portugal	EUR	222,599	100.00
Arriva Italia Rail S.R.L., Milan/Italy	EUR	2,708	100.00
Arriva Italia s.r.l., Milan/Italy	EUR	334,860	100.00
Arriva Kam-Bus, družba za prevoz potnikov, d.o.o., Kamnik/Slovenia	EUR	6,341	100.00
Arriva Kent & Surrey Limited, Sunderland/Great Britain	GBP	75,576	100.00
Arriva Kent Thameside Limited, Sunderland/Great Britain	GBP	76,156	100.00
Arriva Letbane ApS, Kastrup/Denmark	DKK	1,546	100.00
ARRIVA Liorbus, a.s., Ružomberok/Slovakia	EUR	15,343	60.42
ARRIVA LISBOA TRANSPORTES SA, Almada/Portugal	EUR	-1	100.00
Arriva LITAS d.o.o. Požarevac, Požarevac/Serbia	RSD	1,982,952	100.00
Arriva Liverpool Limited i.L., Sunderland/Great Britain	GBP	0	100.00
ARRIVA LONDON NORTH LTD, Sunderland/Great Britain	GBP	66,206	100.00
ARRIVA LONDON SOUTH LTD, Sunderland/Great Britain	GBP	72,314	100.00
ARRIVA MADRID MOVILIDAD S.L., Madrid/Spain	EUR	39,509	100.00
Arriva Manchester Limited, Sunderland/Great Britain	GBP	0	100.00
Arriva Merseyside Limited, Sunderland/Great Britain	GBP	143,485	100.00
ARRIVA METROPOLITANA S.L., Paseo de la Estacion/Spain	EUR	237	100.00
ARRIVA Michalovce, a.s., Michalovce/Slovakia	EUR	12,245	60.14
Arriva Middle East FZE, Dubai/United Arab Emirates	AED	-11	100.00
Arriva Midlands Limited, Sunderland/Great Britain	GBP	47,454	100.00
Arriva Midlands North Limited, Sunderland/Great Britain	GBP	44,046	100.00
Arriva Mobility Solutions, s.r.o., Nitra/Slovakia	EUR	159	100.00
Arriva Morava a.s., Ostrava/Czech Republic	CZK	1,713,093	100.00
Arriva Motor Holdings Limited, Sunderland/Great Britain	GBP	97,345	100.00
Arriva Multimodaal BV, Heerenveen/the Netherlands	EUR	18	100.00
ARRIVA NITRA a.s., Nitra/Slovakia	EUR	17,244	60.48
Arriva North East Limited, Sunderland/Great Britain	GBP	6,319	100.00
Arriva North West Limited, Sunderland/Great Britain	GBP	5,395	100.00

Subsidiary Name and registered offices	**Currency**	**Shareholders' equity (TLC)** [1]	**Ownership (%)**
Arriva Northumbria Limited, Sunderland/Great Britain	GBP	26,653	100.00
ARRIVA Nove Zamky, a.s., Nove Zamky/Slovakia	EUR	15,714	60.36
Arriva Östgötapendeln AB, Stockholm/Sweden	SEK	17,291	100.00
Arriva Passenger Services Pension Trustees Limited, Sunderland/Great Britain	GBP	0	100.00
Arriva Personenvervoer Nederland BV, Heerenveen/the Netherlands	EUR	307,428	100.00
Arriva plc, Sunderland/Great Britain	GBP	706,611	100.00
Arriva Polen Holding B.V., Heerenveen/the Netherlands	EUR	2,540	100.00
Arriva Polska Sp. z o.o., Warsaw/Poland	PLN	18,199	100.00
ARRIVA PORTUGAL – TRANSPORTES LDA, Guimaraes/Portugal	EUR	8,782	100.00
Arriva Rail East Midlands Limited, Sunderland/Great Britain	GBP	0	100.00
Arriva Rail London Limited, Sunderland/Great Britain	GBP	28,958	100.00
Arriva Rail North Limited, Sunderland/Great Britain	GBP	–144,839	100.00
Arriva Rail XC Limited, Sunderland/Great Britain	GBP	0	100.00
Arriva RP Sp. z o.o., Toruń/Poland	PLN	28,407	100.00
Arriva Scotland West Limited, Inchinnan/Great Britain	GBP	2,669	100.00
Arriva Service A/S, Kastrup/Denmark	DKK	230	100.00
Arriva Service s.r.o., Komárno/Slovakia	EUR	30,152	100.00
Arriva Services a.s., Králův Dvůr/Czech Republic	CZK	92,285	100.00
ARRIVA Slovakia a.s., Nitra/Slovakia	EUR	15,972	100.00
Arriva South Eastern Rail Limited, Sunderland/Great Britain	GBP	0	100.00
ARRIVA SPAIN HOLDING, S.L., Madrid/Spain	EUR	62,167	100.00
Arriva Spain Rail S.A., Madrid/Spain	EUR	260	100.00
Arriva Stajerska, družba za prevoz potnikov, d.d., Maribor/Slovenia	EUR	15,588	75.90
Arriva Středni Čechy s.r.o., Kosmonosy/Czech Republic	CZK	794,307	100.00
Arriva Sverige AB, Stockholm/Sweden	SEK	626,743	100.00
Arriva Sverige Buss Regional AB, Stockholm/Sweden	SEK	3,678	100.00
Arriva Tag AB, Malmö/Sweden	SEK	45,431	100.00
Arriva Techniek BV, Heerenveen/the Netherlands	EUR	1,030	100.00
Arriva the Shires Limited, Sunderland/Great Britain	GBP	67,192	100.00
Arriva Tog A/S, Kastrup/Denmark	DKK	112,858	100.00
Arriva Touring BV, Heerenveen/the Netherlands	EUR	1,593	100.00
Arriva Trains Holdings Limited, Sunderland/Great Britain	GBP	107,755	100.00
Arriva Trains Romania SRL, Bucharest/Romania	RON	7,463	100.00
Arriva Trains Wales/Trenau Arriva Cymru Limited, Sunderland/Great Britain	GBP	31,566	100.00
Arriva Transport Ceska Republika a.s., Prague/Czech Republic	CZK	3,402,970	100.00
Arriva Transport Solutions Limited, Sunderland/Great Britain	GBP	–1,359	100.00
ARRIVA TRANSPORTES DA MARGEM SUL, SA, Almada/Portugal	EUR	84,293	100.00
ARRIVA Trnava, a.s., Trnava/Slovakia	EUR	19,491	60.50
Arriva Trustee Company Limited, Sunderland/Great Britain	GBP	0	100.00
Arriva UK Bus Holdings Limited, Sunderland/Great Britain	GBP	447,479	100.00
Arriva UK Bus Investments Limited, Sunderland/Great Britain	GBP	393,251	100.00
Arriva UK Bus Limited, Sunderland/Great Britain	GBP	3,896	100.00
Arriva UK Bus Properties Limited, Sunderland/Great Britain	GBP	1,681	100.00
Arriva UK Trains Limited, Sunderland/Great Britain	GBP	352,879	100.00
Arriva Veneto S.r.l., Venice/Italy	EUR	614	50.00
ARRIVA VIAJES AGENCIA OPERADORA S.L., Madrid/Spain	EUR	350	100.00
Arriva vlaky s.r.o., Prague/Czech Republic	CZK	51,577	100.00
Arriva Východní Čechy a.s., Chrudim/Czech Republic	CZK	680,212	100.00
Arriva West Sussex Limited i.L., Sunderland/Great Britain	GBP	0	100.00
Arriva Yorkshire Ltd, Sunderland/Great Britain	GBP	52,559	100.00
Arriva Zuid Europa Holding B.V., Heerenveen/the Netherlands	EUR	347	100.00
At Seat Catering (2003) Limited, Sunderland/Great Britain	GBP	14	100.00
Autobusni kolodovr d.o.o. Karlovac, Karlovac/Croatia	HRK	3,776	72.87
Autocares Mallorca, s.l., Alcudia/Spain	EUR	4,629	100.00
Autoprometno poduzeće d.d. Požega, Požega/Croatia	HRK	90,650	77.98
Autos Carballo, S.L., Paseo de la Estacion/Spain	EUR	7,304	100.00
Autoservizi F.V.G. S.P.A. – SAF, Udine/Italy	EUR	89,192	60.00
Autotrans d.o.o., Cres/Croatia	HRK	166,276	78.35
Autotrans Lika d.d., Otočac/Croatia	HRK	5,219	62.24
Bergamo Trasporti Est S.c.a.r.l., Bergamo/Italy	EUR	10	93.67
Botniatag AB, Umeå/Sweden	SEK	43,038	60.00
Bus Nort Balear s.l., Alcudia/Spain	EUR	41	100.00
BUS Service Jármüjavitó és Szolgáltató Kft., Budapest/Hungary	HUF	485,953	100.00
Busdan 32.1 A/S, Kastrup/Denmark	DKK	55,027	100.00
BUSDAN 34 ApS, Kastrup/Denmark	DKK	53,083	100.00
BUSDAN 35 ApS, Kastrup/Denmark	DKK	25,072	100.00
BUSDAN 36 ApS, Kastrup/Denmark	DKK	125,642	100.00
BUSDAN 37 ApS, Kastrup/Denmark	DKK	260,578	100.00
BUSDAN 38 ApS, Kastrup/Dänemark	DKK	50,921	100.00
BUSDAN 39 ApS, Kastrup/Denmark	DKK	40,508	100.00
Centrebus Holdings Limited, Sunderland/Great Britain	GBP	1,317	100.00
Classic Coaches (Continental) Limited, Sunderland/Great Britain	GBP	0	100.00
CSAD MHD Kladno a.s., Kladno/Czech Republic	CZK	263,025	100.00
DB Regio Tyne and Wear Limited, Sunderland/Great Britain	GBP	–1,094	100.00
EMPRESA DE BLAS Y COMPANIA S.A., Madrid/Spain	EUR	124,082	100.00
ESFERA BUS S.L., Madrid/Spain	EUR	1,737	100.00
Estacion de autobuses de Ferrol S.A., Ferrol/Spain	EUR	380	80.14
Grand Central Railway Company Limited, Sunderland/Great Britain	GBP	16,193	100.00
Great North Eastern Railway Company Limited, Sunderland/Great Britain	GBP	0	100.00
Great North Western Railway Company Ltd, Sunderland/Great Britain	GBP	0	100.00
Greenline Travel Ltd, Sunderland/Great Britain	GBP	8	100.00

Subsidiary Name and registered offices	Currency	Share-holders' equity (TLC) 1)	Owner-ship (%)
INTEGRAL AVTO prodaja, servisi in tehnični pregledi vozil d.o.o., Jesenice/Slovenia	EUR	3,315	100.00
KD SERVIS a.s., Kladno/Czech Republic	CZK	151,320	100.00
KM S.P.A., Cremona/Italy	EUR	7,798	100.00
London and North Western Railway Company Limited, Sunderland/Great Britain	GBP	15,562	100.00
M40 Trains Limited, Sunderland/Great Britain	GBP	77,324	100.00
MTL Services Limited, Sunderland/Great Britain	GBP	115,999	100.00
NETOSEC S.L., Madrid/Spain	EUR	278	100.00
Network Colchester Limited, Sunderland/Great Britain	GBP	0	100.00
NV Personeel de Noord-Westhoek, Heerenveen/the Netherlands	EUR	421	100.00
PAA Pan Alpen Adria Internationale Personenverkehrssysteme GmbH i.L., Ludwigshafen am Rhein	EUR	68	78.35
Panturist dioničko društvo za prijevoz putnika i turizam d.d., Osijek/Croatia	HRK	38,510	99.88
Premier Buses Ltd, Sunderland/Great Britain	GBP	2,000	100.00
S.A.B. AUTOSERVIZI S.R.L., Bergamo/Italy	EUR	47,006	100.00
S.I.A. Società Italiana Autoservizi S.P.A., Brescia/Italy	EUR	56,892	100.00
SAB Piemonte S.r.l. a socio unico, Grugliasco (TO)/Italy	EUR	19,294	100.00
SAD INVEST, s.r.o., Trnava/Slovakia	EUR	1,026	60.50
SADEM – SOCIETÀ PER AZIONI, Turin/Italy	EUR	18,265	100.00
SAVDA Autoservizi Valle d'Aosta S.p.A., Aosta/Italy	EUR	18,542	100.00
Stevensons of Uttoxeter Limited, Sunderland/Great Britain	GBP	1	100.00
Teamdeck Limited, Sunderland/Great Britain	GBP	0	100.00
TGM (Holdings) Limited, Sunderland/Great Britain	GBP	0	100.00
TGM Operations Limited, Sunderland/Great Britain	GBP	0	100.00
TGM Services Limited, Sunderland/Great Britain	GBP	0	100.00
TGM Group Limited, Sunderland/Great Britain	GBP	16,577	100.00
The Chiltern Railway Company Limited, Sunderland/Great Britain	GBP	51,888	100.00
Transcare Solutions Limited, Sunderland/Great Britain	GBP	599	100.00
Transportes Sul do Tejo S.A., Almada/Portugal	EUR	2,008	100.00
TRANSURBANOS DE GUIMARAES TP, LDA, Guimaraes/Portugal	EUR	-558	100.00
Trasporti Brescia Nord S.c.a.r.l., Brescia/Italy	EUR	100	92.00
Trasporti Brescia Sud S.c.a.r.l., Brescia/Italy	EUR	100	93.00
TUF-TRANSPORTES URBANOS DE FAMALICAO, LDA, Vila Nova de Famalicao/Portugal	EUR	-55	66.67
UCPLUS A/S, Kastrup/Denmark	DKK	15,458	100.00
Velebit Turist d.o.o., Gospić/Croatia	HRK	-518	78.35
VT-ARRIVA Személyszállító és Szolgáltató Kft., Székesfehérvár/Hungary	HUF	39,154,598	100.00
White Rose Bus Company Limited, Sunderland/Great Britain	GBP	0	100.00
XC Trains Limited, Sunderland/Great Britain	GBP	29,470	100.00
Yorkshire Tiger Limited, Sunderland/Great Britain	GBP	5,072	100.00
Zeta Automotive Limited, Bicester/Great Britain	GBP	-1,042	51.00

Subsidiary Name and registered offices	Currency	Share-holders' equity (TLC) 1)	Owner-ship (%)
AT EQUITY			
Aquabus BV, Heerenveen/the Netherlands 2), 6)	EUR	6,040	50.00
ATOC Limited, London/Great Britain 2)	GBP	-13,646	23.81
Autopromet d.d. Slunj, Slunj/Croatia 2), 3)	HRK	9,995	21.81
Barraqueiro SGPS SA, Lisbon/Portugal 6)	EUR	92,096	31.50
Bergamo Trasporti Ovest S.c.a.r.l., Bergamo/Italy 3)	EUR	10	65.76
Bergamo Trasporti Sud Scarl, Bergamo/Italy 3)	EUR	10	25.57
Estacion Autobuses de Pobra, Ferrol/Spain 2), 3)	EUR	3	33.33
Explotacion Gasoleos de la Coruña, s.l., Ferrol/Spain 2), 3)	EUR	135	40.00
EXTRA.TO S.c.a.r.l., Turin/Italy 2), 3)	EUR	114	30.01
Intercambiador de Transportes Principe PIO S.A., Madrid/Spain 2), 3)	EUR	8,903	30.00
Lecco Trasporti S.c.a.r.l., Lecco/Italy 3)	EUR	10	56.94
London Overground Rail Operations Limited, London/Great Britain 2), 6)	GBP	736	50.00
NRES Limited, London/Great Britain 2)	GBP	71	25.00
Omnibus partecipazioni S.R.L., Mailand/Italy 2), 3)	EUR	8,567	50.00
Prometro S.A., Porto/Portugal 2), 3)	EUR	6,115	20.00
Rail Settlement Plan Limited, London/Great Britain 2)	GBP	621	25.00
Rail Staff Travel Limited, London/Great Britain 2)	GBP	-2,605	25.00
Rodinform – Informatica Aplicada aos Transportes, SA, Lisbon/Portugal 2), 4)	EUR	-2	20.00
S.I.T. VALLEE SOC. CONS. AR.L., CHARVENSOD (AO)/Italy 2), 3)	EUR	75	25.00
S.T.I. Servizi Trasporti Interregionali SpA, Cordenons PN/Italy 2), 3)	EUR	1,248	9.81
TPL FVG Scarl s.r.l., Gorizia/Italy 2), 3)	EUR	111	15.00
Train Information Services Limited, London/Great Britain 2)	GBP	-36	25.00
Trieste Trasporti S.P.A., Trieste/Italy 3)	EUR	55,447	39.94
Viajeros del Eo, Ferrol/Spain 2), 3)	EUR	10	50.00
West Yorkshire Ticketing Company Limited, Altrincham/Great Britain 2)	GBP	0	42.47
WSMR (Holdings) Limited, London/Great Britain 2), 4)	GBP	0	50.00
DB CARGO			
FULLY CONSOLIDATED			
ATG Autotransportlogistic Sp. z o.o., Malaszewicze/Poland	PLN	5,196	100.00
Compañía Aragonesa de Portacoches S.A., Saragossa/Spain	EUR	7,394	65.28
Container-Terminal Púchov s. r. o., Púchov/Slovakia	EUR	131	100.00
Corridor Operations DB Cargo B Logistics N.V. i.L., Brussels/Belgium	EUR	1,677	51.00
DB Cargo (UK) Holdings Limited, Doncaster/Great Britain	GBP	178,146	100.00
DB Cargo (UK) Limited, Doncaster/Great Britain	GBP	-41,264	100.00
DB Cargo Aktiengesellschaft, Mainz	EUR	351,941	100.00
DB Cargo BTT GmbH, Mainz	EUR	2,130	100.00
DB Cargo Bulgaria EOOD, Sofia/Bulgaria	BGN	15,053	100.00
DB Cargo Components Limited, Doncaster/Great Britain	GBP	8,880	100.00
DB Cargo Czechia s.r.o., Ostrava/Czech Republic	CZK	22,186	100.00
DB Cargo Danmark Services A/S, Taastrup/Denmark	DKK	9,109	100.00
DB Cargo Eurasia GmbH, Berlin	EUR	6,526	90.00

Subsidiary Name and registered offices	Currency	Shareholders' equity (TLC) 1)	Ownership (%)
DB Cargo Hungaria Kft., Györ/Hungary	HUF	2,156,097	100.00
DB Cargo Information Services Limited, Doncaster/Great Britain	GBP	2,052	100.00
DB Cargo International Limited, Doncaster/Great Britain	GBP	24,636	100.00
DB Cargo Italia S.r.l., Milan/Italy	EUR	16,510	60.00
DB Cargo Italia Services S.r.l., Milan/Italy	EUR	1,564	100.00
DB Cargo Italy S.r.l., Novate Milanese/Italy	EUR	10,109	100.00
DB Cargo Logistics GmbH, Kelsterbach	EUR	56,362	100.00
DB Cargo Maintenance Limited, Doncaster/Great Britain	GBP	1,154	100.00
DB Cargo Nederland N.V., Utrecht/the Netherlands	EUR	2,644	100.00
DB Cargo Polska S.A., Zabrze/Poland	PLN	326,013	100.00
DB Cargo Scandinavia A/S, Taastrup/Denmark	DKK	281,915	100.00
DB Cargo Schweiz GmbH, Glattbrugg/Switzerland	CHF	-4,992	100.00
DB Cargo Services Limited, Doncaster/Great Britain	GBP	709	100.00
DB Cargo Spedkol Sp. z o.o., Kędzierzyn-Koźle/Poland	PLN	17,944	100.00
DB Cargo Vermögensverwaltungs-Aktiengesellschaft, Mainz	EUR	50	100.00
DB Hungaria Holding Kft., Budapest/Hungary	HUF	7,845,629	100.00
DB Intermodal Services GmbH, Mainz	EUR	10,016	100.00
DB PORT SZCZECIN Sp. z o.o., Szczecin/Poland	PLN	32,673	96.82
Deutsche Bahn Cargo Romania S.R.L., Timişoara/Romania	RON	-16,112	100.00
Deutsche Bahn Iberica Holding, S.L., Barcelona/Spain	EUR	95,620	100.00
Deutsche TRANSFESA GmbH Internationale Eisenbahn-Spezial-Transporte, Kehl/Rhein	EUR	2,382	77.33
Doker-Port Sp. z o.o., Szczecin/Poland	PLN	1,440	96.82
DUSS Italia Terminal s.r.l., Verona/Italy	EUR	54	80.00
Euro Cargo Rail SAS, Paris/France	EUR	32,548	100.00
Infra Silesia S.A., Rybnik/Poland	PLN	4,752	100.00
KombiTerminal Burghausen GmbH, Mainz	EUR	1,375	67.62
Locomotive 6667 Ltd, Doncaster/Great Britain	GBP	140,751	100.00
Locomotive Operating Leasing Partnership, Doncaster/Great Britain	GBP	156,272	100.00
MDL Distribución y Logistica S.A., Madrid/Spain	EUR	2,433	77.33
Mitteldeutsche Eisenbahn GmbH, Schkopau	EUR	1,068	80.00
New Locomotive Finance Ltd, Doncaster/Great Britain	GBP	0	100.00
OOO DB Cargo Russija, Moscow/Russia	RUB	103,845	100.00
OOO Trans-Eurasia Logistics Vostok, Moscow/Russia	RUB	576	90.00
Rail Express Systems Ltd, Doncaster/Great Britain	GBP	33,440	100.00
Rail Service Center Rotterdam B.V., Rotterdam/the Netherlands	EUR	3,734	51.00
Rail Terminal Services Limited, Doncaster/Great Britain	GBP	-3,901	100.00
RBH Logistics GmbH, Gladbeck	EUR	3,954	100.00
TFG Transfracht Internationale Gesellschaft für kombinierten Güterverkehr mbH, Mainz	EUR	7,195	100.00
Transervi S.A., Madrid/Spain	EUR	1,898	77.33
Transfesa France SAS, Gennevilliers Cedex/France	EUR	2,423	77.33
Transfesa Portugal Lda., Lisbon/Portugal	EUR	346	77.33
Transfesa UK Ltd., Rainham (Essex)/Great Britain	GBP	421	77.33
Transportes Ferroviarios Especiales S.A., Madrid/Spain	EUR	81,682	77.33
AT EQUITY			
ATN Auto Terminal Neuss GmbH & Co. KG, Neuss 2), 3)	EUR	6,823	50.00
Autotrax Limited, Fanham/Surrey/Great Britain 2)	GBP	506	24.00
baymodal Bamberg GmbH, Bamberg 2), 4)	EUR	311	25.10
CD-DUSS Terminal, a.s., Lovosice/Czech Republic 2), 4)	CZK	8,702	49.00
Container Terminal Dortmund GmbH, Dortmund 2), 3)	EUR	4,861	30.88
Container Terminal Enns GmbH, Enns/Austria 2)	EUR	10,322	49.00
CTS Container-Terminal GmbH Rhein-See-Land-Service, Cologne 2), 3)	EUR	1,150	22.50
DCH Düsseldorfer Container-Hafen GmbH, Düsseldorf 2), 3)	EUR	1,178	51.00
Dörpener Umschlaggesellschaft für den kombinierten Verkehr mbH (DUK), Dörpen 2), 3)	EUR	5,410	35.00
Hispanauto-Empresas Agrupadas A.E.I.E.©, Madrid/Spain 3)	EUR	2,076	58.05
INTERCONTAINER – INTERFRIGO SA i.L., Brussels/Belgium 2), 7)	EUR	-21,433	36.77
Kombiverkehr Deutsche Gesellschaft für kombinierten Güterverkehr mbH & Co. Kommanditgesellschaft, Frankfurt am Main 2), 3)	EUR	18,525	50.00
Lokomotion Gesellschaft für Schienentraktion mbH, Munich 2), 3)	EUR	12,081	30.00
Mediterranean Hub Monfalcone S.r.l., Monfalcone/Italy	EUR	–	49.00
OFP ATLANTIQUE SAS, La Rochelle/France 2), 4)	EUR	756	24.90
OPTIMODAL NEDERLAND B.V., Rotterdam/the Netherlands 2), 3)	EUR	740	24.34
PKV Planungsgesellschaft kombinierter Verkehr Duisburg mbH, Duisburg 2), 3)	EUR	1,833	50.00
Pool Ibérico Ferroviario A.I.E., Madrid/Spain 3)	EUR	-852	9.02
SLASKIE CENTRUM LOGISTYKI S.A., Gliwice/Poland 2), 3)	PLN	51,023	20.55
Sociedad de Estudios y Explotacion de Material Auxiliar de Transportes, S.A. ("SEMAT"), Madrid/Spain 3)	EUR	7,321	48.56
Stifa S.A. i.L., Malveira/Portugal 3)	EUR	-85	38.67
Terminal Singen TSG GmbH, Singen 2), 3)	EUR	714	50.00
Xrail AG, Basel-Stadt/Switzerland 2), 3)	CHF	420	36.80
DB SCHENKER			
FULLY CONSOLIDATED			
Air Terminal Handling S.A., Tremblay en France/France	EUR	2,618	100.00
Almoayed Schenker W.L.L., Manama/Bahrain	BHD	897	51.00
Anterist + Schneider Zeebrugge B.V., Zeebrugge/Belgium	EUR	1,245	100.00
AO Schenker, Moscow/Russia	RUB	173,157	100.00
AS Schenker, Tallinn/Estonia	EUR	8,233	100.00
ASIMEX Anterist + Schneider Import-Export SAS, Stiring-Wendel/France	EUR	1,641	100.00
ATLANTIQUE EXPRESS SAS, Montaigu Cedex/France	EUR	804	100.00
BAX Global (Malaysia) Sdn. Bhd., Petaling Jaya/Malaysia	MYR	231	100.00
BAX Global (Pty.) Ltd., Johannesburg/South Africa	ZAR	968	86.75

Subsidiary Name and registered offices	Currency	Shareholders' equity (TLC) [1]	Ownership (%)
Bischof Gesellschaft mbH., Vienna/Austria	EUR	72	100.00
BTL Reinsurance S.A., Luxembourg/Luxembourg	SEK	39,860	100.00
Cartrend GmbH, Karlsruhe	EUR	21	69.00
DB France Holding SAS, Gennevilliers Cedex/France	EUR	253,855	100.00
DB Polska Holding Sp. z o.o., Zabrze/Poland	PLN	1,424,434	100.00
DB Schenker (Cambodia) Limited, Phnom Penh/Cambodia	USD	3,186	100.00
DB Schenker FLLC, Minsk/Belarus (Belarus)	BYN	- 88	100.00
DB Schenker GBS Bucharest S.R.L., Bucharest/Romania	RON	9,970	100.00
DB Schenker Global Services Asia Pacific Inc., Taguig City/Philippines	PHP	534,002	100.00
DB Schenker Logistics Campus NMEA (Pty) Ltd., Kempton Park/South Africa	ZAR	12,130	47.00
DP Schenker, Kiev/Ukraine	UAH	1,275	100.00
DVA Marine Re S.A., Luxembourg/Luxembourg	EUR	19,576	65.00
ELAG Emder Lagerhaus und Automotive GmbH, Emden	EUR	1,201	100.00
Engelberg Transportes Internacionales C.A. (Entra), Caracas/Venezuela	VES	1,694,440	100.00
EVAG Emder Verkehrs und Automotive Gesellschaft mbH, Emden	EUR	5,578	100.00
EVB Handelshaus Bour GmbH, Landau in der Pfalz	EUR	25	69.00
Fastighets Aktiebolaget Orbyn, Gothenburg/Sweden	SEK	9,464	100.00
HANGARTNER Terminal AG i.L., Zurich/Switzerland	CHF	0	100.00
HANGARTNER Terminal S.r.l., Verona/Italy	EUR	1,750	100.00
Heck Slovensko s.r.o., Bratislava/Slovakia	EUR	5	100.00
Intertec Asia Limited, Hong Kong/China	HKD	7,079	69.00
Intertec Beteiligungs-GmbH, Landau in der Pfalz	EUR	30,387	69.00
Intertec GmbH, Landau in der Pfalz	EUR	26	69.00
INTERTEC Polska Sp.z o.o., Nardarzyn/Poland	PLN	1,901	69.00
Inter-Union Technohandel Gesellschaft m.b.H., Vienna/Austria	EUR	17	69.00
Inter-Union Technohandel GmbH, Landau in der Pfalz	EUR	26	69.00
Intreprinderea Mixta "S.C. Schenker" S.R.L., Chisinau/Moldova	MDL	617	96.69
Karpeles Flight Services (H.K.) Limited, Hong Kong/China	HKD	13,686	100.00
Karpeles Flight Services GmbH, Frankfurt am Main	EUR	1,598	100.00
Karpeles Freight Services Inc., Delaware/USA	USD	-213	100.00
KB Ädelgasen 1 -Jönköping, Jönköping/Sweden	SEK	95,569	100.00
KB Älghunden Jönköping, Jönköping/Sweden	SEK	20,623	100.00
KB Älghunden 1 -Jönköping, Jönköping/Sweden	SEK	22,410	100.00
KB Anholt 3, Stockholm/Sweden	SEK	9,106	100.00
KB Arbetsbasen 4 -Stockholm, Stockholm/Sweden	SEK	36,714	100.00
KB Ättehögen Östra 1 -Helsingborg, Helsingborg/Sweden	SEK	66,605	100.00
KB Backa 107:3, Göteborg/Sweden	SEK	140,140	100.00
KB Baggböle 2:35 -Umeå, Umeå/Sweden	SEK	25,220	100.00
KB Benkammen 12 -Malmö, Malmö/Sweden	SEK	135,242	100.00
KB Bleket 1 -Karlstad, Karlstad/Sweden	SEK	46,184	100.00
KB Distributören 3 och 4 -Örebro, Örebro/Sweden	SEK	83,934	100.00
KB Forsmark 2 -Stockholm, Stockholm/Sweden	SEK	58,233	100.00
KB Forsmark 3 -Stockholm, Stockholm/Sweden	SEK	180,501	100.00
KB Forsmark 5 Stockholm, Gothenburg/Sweden	SEK	449	100.00
KB Frysen 1 Visby, Visby/Sweden	SEK	13,272	100.00
KB Fryshuset 3 -Visby, Visby/Sweden	SEK	1,029	100.00
KB Köpmannen 10 -Västerås, Västerås/Sweden	SEK	35,201	100.00
KB Kungsängen 28:1 -Uppsala, Uppsala/Sweden	SEK	11,356	100.00
KB Langtradaren 2 Borlänge, Borlänge/Sweden	SEK	34,505	100.00
KB Lertaget 1, Skara, Skara/Sweden	SEK	46,921	100.00
KB Malmö Hamnen 22 Malmö, Malmö/Sweden	SEK	62,240	100.00
KB Maskinen 3 -Linköping, Linköping/Sweden	SEK	62,610	100.00
KB Önnestad 108:4 -Kristianstad, Kristianstad/Sweden	SEK	42,520	100.00
KB Överön 1:66 -Örnsköldsvik, Örnsköldsvik/Sweden	SEK	10,341	100.00
KB Pantern 1 -Växjö, Växjö/Sweden	SEK	37,139	100.00
KB Reläet 8 -Norrköping, Norrköping/Sweden	SEK	25,471	100.00
KB Sörby 24:3 -Gävle, Gävle/Sweden	SEK	39,319	100.00
KB Storheden 1:8 -Luleå, Luleå/Sweden	SEK	30,736	100.00
KB Tingstadsvassen 31:3 -Göteborg, Gothenburg/Sweden	SEK	20,344	100.00
KB Transporten 1 -Hultsfred, Hultsfred/Sweden	SEK	19,048	100.00
KB Transportören 1 -Värnamo, Värnamo/Sweden	SEK	87,453	100.00
KB Viken 3 -Karlshamn, Karlshamn/Sweden	SEK	11,279	100.00
KB Vindtrycket 1 -Borås, Borås/Sweden	SEK	67,554	100.00
KB Vivstamon 1:13 -Timrå, Timrå/Sweden	SEK	49,550	100.00
Kiinteistö Oy Porin Kiitolinja, Pori/Finland	EUR	113	100.00
Kiinteistö Oy Seinäjoen Kiitolinja-asema, Seinäjoki/Finland	EUR	467	100.00
Kiinteistö Oy Tampereen Rahtiasema, Tampere/Finland	EUR	1,164	100.00
Kiinteistö Oy Tir-Trans, Joentaustankatu/Finnland	EUR	898	100.00
Kiinteistö Oy Turun Nosturinkatu 6, Turku/Finnland	EUR	1,051	100.00
Kiinteistömaaliikenne Oy, Helsinki/Finland	EUR	2,529	54.70
Langtradaren i Jämtland AB, Gothenburg/Sweden	SEK	8,160	100.00
LogCap Immorent Uno s.r.o., Bratislava/Slovakia	EUR	2,264	100.00
LogCap-IR Grundverwertungsgesellschaft m.b.H., Vienna/Austria	EUR	5,845	100.00
Luxemburger Transport Logistik Diekirch S.A., Wilwerdange/Luxembourg	EUR	1,522	100.00
MTS HandelService GmbH, Landau in der Pfalz	EUR	26	69.00
MTS MarkenTechnikService GmbH & Co. KG, Karlsruhe	EUR	57,846	69.00
MTS MarkenTechnikService Verwaltungs-GmbH, Karlsruhe	EUR	127	69.00
PT. Schenker Petrolog Utama, Jakarta/Indonesia	USD	26,548	71.00
Redhead Freight Limited, Bradford/Great Britain	GBP	11,158	100.00

Subsidiary Name and registered offices	**Currency**	**Shareholders' equity (TLC) 1)**	**Ownership (%)**
Redhead Holdings Limited, Bradford/Great Britain	GBP	-202	100.00
Rengaslinja Oy, Helsinki/Finland	EUR	587	100.00
S.B. International Freight Limited, Christchurch/New Zealand	NZD	0	100.00
SCHENKER&CO AG, Vienna/Austria	EUR	123,397	100.00
Schenker (Asia Pacific) Pte. Ltd., Singapore/Singapore	SGD	775,226	100.00
Schenker (H.K.) Ltd., Hong Kong/China	HKD	124,909	100.00
Schenker (Ireland) Ltd., Shannon/Ireland	EUR	18,186	100.00
Schenker (L.L.C), Dubai/United Arab Emirates	AED	192,222	100.00
Schenker (Lao) Sole Co., Ltd., Vientiane/Laos	LAK	1,951,596	100.00
Schenker (NZ) Limited, Auckland/New Zealand	NZD	17,956	100.00
Schenker (Thai) Holdings Ltd., Bangkok/Thailand	THB	448,385	100.00
Schenker (Thai) Ltd., Bangkok/Thailand	THB	1,797,799	100.00
Schenker A.E., Athens/Greece	EUR	-245	100.00
Schenker A/S, Hvidovre/Denmark	DKK	105,379	100.00
Schenker AB, Gothenburg/Sweden	SEK	108,338	100.00
Schenker AG&Co. Beteiligungsverwaltungs OHG, Essen	EUR	172	100.00
Schenker Åkeri AB, Gothenburg/Sweden	SEK	118,936	100.00
Schenker Aktiengesellschaft, Essen	EUR	1,632,775	100.00
Schenker Americas, Inc., Wilmington/USA	USD	175,124	100.00
Schenker Angola, Limitada, Luanda/Angola	AOA	196,871	99.90
Schenker Argentina S.A., Buenos Aires/Argentina	ARS	41,405	100.00
Schenker AS, Oslo/Norway	NOK	650,661	100.00
Schenker Australia Pty. Ltd., Alexandria/Australia	AUD	146,800	100.00
Schenker BITCC Customs Broker (Beijing) Co. Ltd., Beijing/China	CNY	728	70.00
Schenker BITCC Logistics (Beijing) Co., Ltd., Beijing/China	CNY	88,174	70.00
Schenker Business Services LLC, Moscow/Russia	RUB	178,932	100.00
Schenker Chile S.A., Santiago/Chile	CLP	4,911,939	100.00
Schenker China Ltd., Pudong/Shanghai/China	CNY	1,823,449	100.00
Schenker Consulting AB, Gothenburg/Sweden	SEK	8,349	100.00
Schenker d.d., Ljubljana/Slovenia	EUR	20,857	100.00
SCHENKER d.o.o., Sarajevo/Bosnia-Herzegovina	BAM	1,184	100.00
Schenker d.o.o., Rugvica/Croatia	HRK	13,435	100.00
Schenker d.o.o., Novi Banovci/Serbia	RSD	150,876	100.00
Schenker Dedicated Services AB, Gothenburg/Sweden	SEK	18,746	100.00
Schenker Dedicated Services Germany GmbH, Essen	EUR	1,345	100.00
Schenker Deutschland AG, Frankfurt am Main	EUR	64	100.00
Schenker Distribution Solutions, Inc., Paranaque City/Philippines	PHP	108,729	98.51
Schenker do Brasil Transportes Internacionais Ltda., São Paulo/Brazil	BRL	23,343	100.00
SCHENKER DOOEL, Skopje/Macedonia	MKD	74,709	100.00
Schenker Egypt Ltd., Cairo/Egypt	EGP	75,203	100.00
SCHENKER EOOD, Sofia/Bulgaria	BGN	32,807	100.00
Schenker Equipment AB, Gothenburg/Sweden	EUR	8,462	100.00
Schenker Europe GmbH, Frankfurt am Main	EUR	25	100.00
Schenker Filen 8 Aktiebolag, Gothenburg/Sweden	SEK	17,541	100.00
SCHENKER FRANCE SAS, Montaigu Cedex/France	EUR	184,695	100.00
Schenker Global Management&Services GmbH, Essen	EUR	-11,146	100.00
Schenker Global Management&Services PTE LTD., Singapore/Singapore	SGD	-7	100.00
Schenker Global Management&Technology Center Americas Inc., Wilmington/USA	USD	173	100.00
Schenker GmbH für Beteiligungen, Essen	EUR	65	100.00
SCHENKER INDIA PRIVATE LIMITED, New Delhi/India	INR	3,001,683	100.00
Schenker International (HK) Ltd., Hong Kong/China	HKD	1,654,839	100.00
Schenker International (Macau) Ltd., Macau/Macau	HKD	32,171	100.00
Schenker International S.A. de C.V., Mexico City/Mexico	MXN	708,298	100.00
Schenker Italiana S.p.A., Peschiera Borromeo (MI)/Italy	EUR	65,954	100.00
Schenker Jinbei Logistics (Shenyang) Co. Ltd., Shenyang/China	CNY	170,253	50.00
Schenker Khimji's LLC, Maskat/Sultanate of Oman	OMR	1,176	60.00
Schenker Korea Ltd., Seoul/Republic of Korea	KRW	38,740,725	100.00
Schenker Limited, London/Great Britain	GBP	27,941	100.00
Schenker Limited, Nairobi/Kenya	KES	206,255	100.00
Schenker Logistics (Chengdu) Co., Ltd., Chengdu/China	CNY	-1,988	100.00
Schenker Logistics (Chongqing) Co. Ltd, Chongqing/China	CNY	25,435	100.00
Schenker Logistics (Guangzhou) Company Ltd., Guangzhou/China	CNY	88,228	100.00
Schenker Logistics (Kunshan) Co., Ltd., Kunshan/China	CNY	31,492	100.00
Schenker Logistics (Malaysia) Sdn Bhd., Kuala Lumpur/Malaysia	MYR	273,247	100.00
Schenker Logistics (Shanghai) Co., Ltd., Shanghai/China	CNY	113,868	100.00
Schenker Logistics (Shenzhen) Co. Ltd., Shenzhen/China	CNY	28,734	100.00
Schenker Logistics (Suzhou) Company Ltd., Suzhou/China	CNY	101,882	100.00
Schenker Logistics (Thai) Ltd., Bangkok/Thailand	THB	6,982	100.00
Schenker Logistics (Xiamen) Co. Ltd., Xiamen/China	CNY	65,082	100.00
Schenker Logistics AB, Gothenburg/Sweden	SEK	-15,967	100.00
Schenker Logistics Inc., Calamba City/Philippines	PHP	7,034	100.00
Schenker Logistics L.L.C., Abu Dhabi/United Arab Emirates	AED	52,115	100.00
Schenker Logistics Nederland B.V., Rotterdam/the Netherlands	EUR	62,277	100.00
Schenker Logistics Romania S.A., Bucharest/Romania	RON	334,202	99.47
Schenker Logistics S.A., Barcelona/Spain	EUR	125,166	100.00
Schenker Logistics Vietnam Co., Ltd., Ho Chi Minh City/Vietnam	VND	62,203,839	100.00
Schenker Logistics W.L.L., Doha/Qatar	QAR	-1,696	60.00
SCHENKER LUXEMBURG GMBH, Leudelange/Luxembourg	EUR	2,392	100.00
Schenker Manila Administrative Competence Center Inc., Taguig City/Philippines	PHP	34,723	100.00

Subsidiary Name and registered offices	Currency	Shareholders' equity (TLC)[1]	Ownership (%)
Schenker Maroc S.A.S, Casablanca/Morocco	MAD	21,247	100.00
Schenker Middle East FZE, Dubai/United Arab Emirates	AED	363,056	100.00
Schenker Myanmar Co., Ltd., Yangon/Myanmar	MMK	1,809,390	100.00
Schenker Namibia (Pty) Ltd., Windhoek/Namibia	NAD	7,781	100.00
Schenker Nederland B.V., Tilburg/the Netherlands	EUR	15,483	100.00
Schenker Nemzetközi Szállítmányozási és Logisztikai Kft., Szigetszentmiklos/Hungary	HUF	6,661,574	100.00
Schenker NV, Antwerp/Belgium	EUR	25,099	100.00
Schenker of Canada Ltd., Toronto/Canada	CAD	65,781	100.00
Schenker OY, Helsinki/Finland	EUR	86,058	100.00
Schenker Panama S.A., Panama City/Panama	USD	1,658	100.00
Schenker Peru S.R.L., Lima/Peru	PEN	1,729	100.00
Schenker Philippines, Inc., Makati City/Philippines	PHP	758,170	100.00
Schenker Property Sweden AB, Gothenburg/Sweden	SEK	107,913	100.00
SCHENKER RE DESIGNATED ACTIVITY COMPANY, Dublin/Ireland	EUR	42,080	100.00
Schenker S.A., Guatemala City/Guatemala	GTQ	-20,499	100.00
SCHENKER s.r.o., Bratislava/Slovakia	EUR	4,641	100.00
Schenker Saudi Arabia LLC, Riyadh/Saudi Arabia	SAR	32,721	100.00
Schenker Schweiz AG, Zurich/Switzerland	CHF	53,006	100.00
Schenker Shared Services (Nanjing) Co. Ltd., Nanjing/China	CNY	29,516	100.00
Schenker Singapore (PTE) Ltd., Singapore/Singapore	SGD	275,097	100.00
Schenker South Africa (Pty) Ltd., Isando/South Africa	ZAR	218,799	86.75
Schenker Sp. z o.o., Warsaw/Poland	PLN	283,741	99.67
SCHENKER spol. s r.o., Prague/Czech Republic	CZK	712,365	100.00
Schenker Technik GmbH, Essen	EUR	5,025	100.00
Schenker Technology Center (Warsaw) sp. z o.o., Warsaw/Poland	PLN	4,182	100.00
Schenker Transitarios, S.A., Loures/Portugal	EUR	12,401	100.00
Schenker Transport Aktiebolag, Gothenburg/Sweden	SEK	71,072	100.00
Schenker Transport Groep B.V., Tilburg/the Netherlands	EUR	4,737	100.00
Schenker Vietnam Co., Ltd., Ho Chi Minh City/Vietnam	VND	549,174,310	100.00
Schenker, Inc., New York/USA	USD	116,246	100.00
Schenker-Arkas Nakliyat Ve Tic. A.S., Zincirlikuyu/Turkey	TRY	108,273	55.00
Schenker-BTL Ltd., London/Great Britain	GBP	0	100.00
Schenkerocean Ltd, Wanchai/China	HKD	5,998	100.00
Schenker-Seino Co. Ltd., Tokyo/Japan	JPY	5,989,010	80.00
SIA Schenker, Riga/Latvia	EUR	6,188	100.00
Sky Partners OÜ, Tallinn/Estonia	EUR	133	100.00
SPA Systems s.r.o. i.L., Prague/Czech Republic	CZK	2,022	69.00
SW Zoll-Beratung GmbH, Furth im Wald	EUR	3,601	100.00
TEGRO AG, Schwerzenbach/Switzerland	CHF	9,220	62.10
Trafikaktiebolaget NP Kagström, Gothenburg/Sweden	SEK	1,410	100.00
TRANSA Spedition GmbH, Offenbach am Main	EUR	13,763	100.00
Transport-Gesellschaft mit beschränkter Haftung (vormals J. Hevecke TRG), Hamburg	EUR	496	96.70
Transworld Asig - Broker de Asigurare SRL, Bucharest/Romania	RON	639	99.47
UAB "Schenker," Vilnius/Lithuania	EUR	699	100.00
Viktor E. Kern Gesellschaft m.b.H., Vienna/Austria	EUR	1,543	69.00
AT EQUITY			
ADRIA KOMBI d.o.o., Ljubljana, Ljubljana/Slovenia[2),3)]	EUR	10,898	33.72
ATS Air Transport Service AG, Zurich/Switzerland[2),3)]	CHF	2,685	26.00
Autoport Emden GmbH, Emden[2),3)]	EUR	188	33.30
Bäckebols Åkeri AB, Gothenburg/Sweden[2),3)]	SEK	49,597	35.00
BTU - Bilspedition Transportörer Utvecklings AB, Solna/Sweden[2),3)]	SEK	6,368	50.00
Elevator-Gesellschaft mit beschränkter Haftung, Hanover[2)]	EUR	111	50.00
Express Air Systems GmbH (EASY), Kriftel[2),3)]	EUR	4,415	50.00
Gardermoen Perishables Center AS, Gardermoen/Norway[2),3)]	NOK	10,914	33.30
Germans Corbalan & Alvarez, S.L., Manresa (Barcelona)/Spain[2),3)]	EUR	954	20.00
I.M. "Moldromukrtrans" S.R.L., Chisinau/Moldova[2),3)]	MDL	14,153	33.15
Intermodal Sea Solutions, S.L., Orejo-Cantabria/Spain[3)]	EUR	-307	24.75
Trans Jelabel S.L., Aldeamayor de San Martin/Spain[2),3)]	EUR	830	20.00
Transatlantic Shipping and Trading SRL, Bucharest/Romania[2),3)]	RON	5,176	49.73
Värnamo Åkeri AB, Värnamo/Sweden[2),3)]	SEK	18,397	50.00
Volla Eiendom AS, Oslo/Norway[2),3)]	NOK	13,858	50.00
DB NETZE TRACK			
FULLY CONSOLIDATED			
DB Fahrwegdienste GmbH, Berlin	EUR	2,765	100.00
DB Netz Aktiengesellschaft, Frankfurt am Main	EUR	8,628,426	100.00
DB RegioNetz Infrastruktur GmbH, Frankfurt am Main	EUR	3,571	100.00
Deutsche Umschlaggesellschaft Schiene - Straße (DUSS) mbH, Bodenheim am Rhein	EUR	1,653	87.50
MegaHub Lehrte Betreibergesellschaft mbH, Hanover	EUR	262	65.62
AT EQUITY			
EEIG Corridor Rhine - Alpine EWIV, Frankfurt am Main[2),4)]	EUR	0	25.00
EWIV Atlantic Corridor, Paris/France[2),3)]	EUR	0	25.00
Güterverkehrszentrum Entwicklungsgesellschaft Dresden mbH, Dresden[2),4)]	EUR	3,475	24.53
TIA GmbH, Augsburg[2),4)]	EUR	289	42.88
TKN Terminal Köln-Nord GmbH, Cologne[2),8)]	EUR	6	42.88
TriCon Container-Terminal Nürnberg GmbH, Nuremberg[2),3)]	EUR	2,196	21.88
DB NETZE STATIONS			
FULLY CONSOLIDATED			
DB BahnPark GmbH, Berlin	EUR	6,473	51.00
DB Station & Service Aktiengesellschaft, Berlin	EUR	1,486,225	100.00
MEKB GmbH, Berlin	EUR	32	100.00
Station Food GmbH, Berlin	EUR	1,835	51.00
AT EQUITY			
Clever Order Services GmbH, Berlin[2),6)]	EUR	200	25.00

Subsidiary Name and registered offices	Currency	Share-holders' equity (TLC) [1]	Owner-ship (%)
DB NETZE ENERGY			
FULLY CONSOLIDATED			
DB Energie GmbH, Frankfurt am Main	EUR	423,215	100.00
AT EQUITY			
inno2grid GmbH, Berlin [2], [3]	EUR	134	50.00
OTHER SUBSIDIARIES			
FULLY CONSOLIDATED			
BAX Global Inc., Norfolk/USA	USD	82,288	100.00
DB (UK) Investments Limited, Sunderland/Great Britain	GBP	816,538	100.00
DB Bahnbau Gruppe GmbH, Berlin	EUR	28,654	100.00
DB Barnsdale AG, Berlin	EUR	12,079	100.00
DB Cargo Belgium BVBA, Antwerp/Belgium	EUR	5,743	100.00
DB Competition Claims GmbH, Berlin	EUR	18,125	100.00
DB Czech Holding s.r.o., Rudná/Czech Republic	CZK	439,126	100.00
DB Danmark Holding ApS, Hvidovre/Denmark	DKK	380,198	100.00
DB Dialog GmbH, Berlin	EUR	1,125	100.00
DB Engineering & Consulting GmbH, Berlin	EUR	90,297	100.00
DB Engineering & Consulting USA Inc., Delaware/USA	USD	- 406	100.00
DB Fahrzeuginstandhaltung GmbH, Frankfurt am Main	EUR	244,439	100.00
DB FuhrparkService GmbH, Frankfurt am Main	EUR	78,456	100.00
DB Gastronomie GmbH, Frankfurt am Main	EUR	17,139	100.00
DB International (Beijing) Co., Ltd., Beijing/China	CNY	3,909	100.00
DB International Brasil Servicos de Consultoria Ltda., Rio de Janeiro/Brazil	BRL	234	100.00
DB JobService GmbH, Berlin	EUR	- 4,444	100.00
DB Kommunikationstechnik GmbH, Berlin	EUR	3,935	100.00
DB Media & Buch GmbH, Kassel	EUR	26	100.00
DB Mobility Services Austria GmbH i.L., Vienna/Austria	EUR	560	100.00
DB Projekt Stuttgart-Ulm GmbH, Stuttgart	EUR	2,287	100.00
DB Schweiz Holding AG, Zug/Switzerland	CHF	126,516	100.00
DB Services GmbH, Berlin	EUR	13,277	100.00
DB Sicherheit GmbH, Berlin	EUR	2,162	100.00
DB Systel GmbH, Frankfurt am Main	EUR	79,015	100.00
DB Systel UK Limited, Doncaster/Great Britain	GBP	1,143	100.00
DB Systemtechnik GmbH, Minden	EUR	781	100.00
DB US Corporation, Tarrytown/USA	USD	463,383	100.00
DB US Holding Corporation, Tarrytown/USA	USD	470,344	100.00
DB Vertrieb GmbH, Frankfurt am Main	EUR	79,036	100.00
DB Verwaltungsgesellschaft WBN mbH, Niesky	EUR	-26,239	100.00
DB Zeitarbeit GmbH, Berlin	EUR	28	100.00
Deutsche Bahn Connect GmbH, Frankfurt am Main	EUR	8,032	100.00
Deutsche Bahn Digital Ventures GmbH, Berlin	EUR	25,933	100.00
Deutsche Bahn Finance GmbH, Berlin	EUR	67,789	100.00
Deutsche Bahn International Operations GmbH, Berlin	EUR	2,705	100.00
Deutsche Bahn Stiftung gGmbH, Berlin	EUR	3,784	100.00
DVA Deutsche Verkehrs-Assekuranz-Vermittlungs-GmbH, Bad Homburg v. d. Höhe	EUR	2,001	65.00
DVA REINSURANCE DESIGNATED ACTIVITY COMPANY, Dublin/Ireland	EUR	4,862	65.00
Engineering Support Group Ltd., Doncaster/Great Britain	GBP	- 965	100.00
infraView GmbH, Mainz	EUR	4,601	100.00
Innovationszentrum für Mobilität und gesellschaftlichen Wandel (InnoZ) GmbH, Berlin	EUR	-1,413	76.99
ioki GmbH, Frankfurt am Main	EUR	4,025	100.00
Mobimeo GmbH, Berlin	EUR	10,025	100.00
Precision National Plating Services, Inc., Delaware/USA	USD	-26,459	100.00
QT Mobilitätsservice GmbH, Berlin	EUR	2,744	85.00
Railway Approvals Germany GmbH, Minden	EUR	50	100.00
Railway Approvals Ltd, Doncaster/Great Britain	GBP	288	100.00
Schenker (BAX) Holding Corp., Delaware/USA	USD	92,244	100.00
UBB Polska Sp.z o.o., Swinemünde/Poland	PLN	1,065	100.00
UBB Usedomer Bäderbahn GmbH, Heringsdorf	EUR	7,716	100.00
Unterstützungskasse der Firma H.M. Gehrckens Gesellschaft mit beschränkter Haftung i.L., Berlin	EUR	6	100.00
PRO RATA			
Etihad Rail DB Operations LLC, Abu Dhabi/United Arab Emirates	AED	147	49.00
AT EQUITY			
BahnflächenEntwicklungsGesellschaft NRW mbH, Essen [2], [3]	EUR	441	49.90
Beijing HuaJing DeBe International Engineering Consulting Co., Ltd, Beijing/China [2], [6]	CNY	6,084	25.00
BwFuhrparkService GmbH, Troisdorf [2], [3]	EUR	433,071	24.90
EUROFIMA Europäische Gesellschaft für die Finanzierung von Eisenbahnmaterial, Basel/Switzerland [6]	CHF	1,646,490	22.60
Rail Technology Company Limited, Jeddah/Saudi Arabia [2], [3]	SAR	7,892	24.90
SSG Saar-Service GmbH, Saarbrücken [2], [4]	EUR	1,375	25.50
Stinnes Holz GmbH, Berlin [2], [4]	EUR	79	53.00
FAIR VALUE			
GHT Mobility GmbH, Berlin [2], [3]	EUR	390	83.87
TREMA Grundstücks-Vermietungsgesellschaft mbH & Co. Objekt Bahnhöfe West KG, Berlin [2], [3]	EUR	4,199	94.00
TRENTO Grundstücks-Vermietungsgesellschaft mbH & Co. Objekt Bahnhöfe Ost KG i.L., Düsseldorf [2], [3]	EUR	-1	100.00

[1] IFRS data.

[2] Figures reflect accounting according to local accounting principles (in the case of companies governed by profit and loss transfer agreements, only in relation to net profit/net loss).

[3] Data: 2017 financial year.

[4] Data: 2016 financial year.

[5] Data: 2015 financial year.

[6] Preliminary data.

[7] Data: 2014 financial year.

[8] Data from liquidation balance sheet as of July 1, 2018.

(43) Management Board and Supervisory Board

Details of the names and memberships in (a) other supervisory boards which are legally required to be created and (b) equivalent domestic and international control bodies of economic enterprises of members of the Management Board and the Supervisory Board of DB AG are set out in the following.

Management Board

Dr. Richard Lutz
Chief Executive Officer and Chairman of the Management Board,
Berlin

a) ▶ Schenker AG (until March 31, 2018; Chairman)
▶ DEVK Deutsche Eisenbahn Versicherung Lebensversicherungsverein a. G. Betriebliche Sozialeinrichtung der Deutschen Bahn
▶ DEVK Deutsche Eisenbahn Versicherung Sach- und HUK-Versicherungsverein a. G. Betriebliche Sozialeinrichtung der Deutschen Bahn
▶ Deutsche Bahn Digital Ventures GmbH (until April 12, 2018; Chairman)
b) ▶ DB Stiftung gGmbH (Advisory Board; Chairman)

Alexander Doll (since April 1, 2018)
Finance, Freight Transport and Logistics,
Bad Homburg

a) ▶ Schenker AG (since April 1, 2018; Chairman)
▶ DB Cargo AG (since April 1, 2018; Chairman since April 15, 2018)
b) ▶ Arriva Plc, Sunderland/Great Britain (since April 1, 2018, non-executive Director)

Berthold Huber
Passenger Transport,
Weilheim

a) ▶ DB Vertrieb GmbH (Chairman)
▶ DB Fernverkehr AG (Chairman)
▶ DB Regio AG (Chairman)
▶ DB Cargo AG (Chairman until March 31, 2018)
▶ DB Fahrzeuginstandhaltung GmbH (Chairman)
▶ Arriva Plc, Sunderland/Great Britain (Chairman of the Board of Directors)
▶ DEVK Allgemeine Lebensversicherungs AG

Prof. Dr. Sabina Jeschke
Digitalization and Technology,
Berlin

a) ▶ Schenker AG (since January 1, 2018)
▶ DB Systemtechnik GmbH (since May 1, 2018; Chairwoman since May 4, 2018)
▶ DB Systel GmbH (since February 5, 2018; Chairwoman since July 4, 2018)
▶ Körber AG

Ronald Pofalla
Infrastructure,
Mülheim an der Ruhr

a) ▶ DB Netz AG (since January 1, 2018; Chairman)
▶ Deutsche Bahn Digital Ventures GmbH (until April 13, 2018; Deputy Chairman)
▶ DEVK Rückversicherungs- und Beteiligungs-AG
b) ▶ Verband der Sparda-Banken e. V. (Advisory Board)
▶ Initiativkreis Ruhr GmbH (since April 14, 2018; Advisory Board)

Martin Seiler (since January 1, 2018)
Human Resources and Legal Affairs,
Unkel

a) ▶ Schenker AG
▶ DB Cargo AG (since January 8, 2018)
▶ DB Gastronomie GmbH (since January 9, 2018; Chairman)
▶ DB JobService GmbH (since January 9, 2018; Chairman)
▶ DB Zeitarbeit GmbH (since January 9, 2018; Chairman)
▶ DB Station&Service AG (since January 8, 2018; Chairman)
▶ DB Energie GmbH (since January 25, 2018; Chairman)
▶ DEVK Deutsche Eisenbahn Versicherung Lebensversicherungsverein a. G. Betriebliche Sozialeinrichtung der Deutschen Bahn (since May 30, 2018)
▶ DEVK Deutsche Eisenbahn Versicherung Sach- und HUK-Versicherungsverein a. G. Betriebliche Sozialeinrichtung der Deutschen Bahn (since May 30, 2018)
b) ▶ DB Stiftung gGmbH (since January 16, 2018; Advisory Board)
▶ Enquete-Kommission Berufliche Bildung

Supervisory Board

Michael Odenwald
Secretary of State (retired)
Chairman of the Supervisory Board (since April 17, 2018),
Kleinmachnow

a) ▶ Fraport AG

Alexander Kirchner*
Deputy Chairman of the Supervisory Board,
Chairman of Eisenbahn- und Verkehrsgewerkschaft (EVG),
Runkel

a) ▶ DEVK Deutsche Eisenbahn Versicherung Lebensversicherungsverein a. G. Betriebliche Sozialeinrichtung der Deutschen Bahn (Chairman)
▶ DEVK Deutsche Eisenbahn Versicherung Sach- und HUK-Versicherungsverein a. G. Betriebliche Sozialeinrichtung der Deutschen Bahn (Chairman)
▶ DEVK Rückversicherungs- und Beteiligungs-AG (Chairman)
b) ▶ DB Stiftung gGmbH (Advisory Board)

Uwe Beckmeyer (until April 30, 2018)
Parliamentary Secretary of State in the Federal Ministry
of Economics and Energy,
Bremerhaven

Guido Beermann (since April 11, 2018)
Secretary of State in the Federal Ministry of Transport
and Digital Infrastructure,
Kleinmachnow
a) ▶ Flughafen München GmbH (since August 29, 2018)

Jürgen Beuttler*
Head of Purchasing, Real Estate, Compliance of DB Fernverkehr AG,
Wiesbaden

Prof. Dr. Dr. Utz-Hellmuth Felcht (until March 31, 2018)
Chairman of the Supervisory Board,
Munich
a) ▶ KMW + NEXTER Defense Systems N.V.
(Independent non-executive Director)
b) ▶ DB Stiftung gGmbH (until March 5, 2018; Advisory Board)

Dr. Michael Frenzel (until July 18, 2018)
President of the Bundesverband der Deutschen Tourismuswirtschaft e. V.,
Burgdorf
b) ▶ AMEX GBT III B.V. (Board of Directors)

Dr.-Ing. Jürgen Großmann (until July 18, 2018)
Shareholder Georgsmarienhütte Holding GmbH,
Hamburg
a) ▶ SURTECO SE (Chairman)
b) ▶ Hanover Acceptances Limited, London/Great Britain
RAG Stiftung (Chairman of Board of Trustees)

Dr. Ingrid Hengster
Member of the Management Board of KfW Bank Group,
Frankfurt am Main
a) ▶ Thyssen Krupp AG
▶ KfW Capital GmbH&Co. KG
(since October 23, 2018; Chairwoman)
b) ▶ Europäische Investitionsbank (EIB), Luxembourg
(expert of the Administrative Board)

Jörg Hensel*
Chairman of the Central Works Council of DB Cargo AG,
Chairman of the Business Unit Works Council of DB Cargo AG,
Chairman of the European Works Council of DB AG,
Hamm
a) ▶ DB Cargo AG
▶ DEVK Deutsche Eisenbahn Versicherung
Sach- und HUK-Versicherungsverein a. G.
Betriebliche Sozialeinrichtung der Deutschen Bahn
b) ▶ DEVK Pensionsfonds-AG (Advisory Board)
▶ DEVK Deutsche Eisenbahn Versicherung
Lebensversicherungsverein a. G.
Betriebliche Sozialeinrichtung der Deutschen Bahn
(members' representative)

Dr. Levin Holle (since January 16, 2018)
Head of Department VII in the Federal Ministry of Finance,
Berlin
a) ▶ KfW Capital GmbH&Co. KG (since November 29, 2018)
b) ▶ Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin)
(Verwaltungsrat; stellvertretender Vorsitz)
▶ BwConsulting GmbH (Beirat)

Klaus-Dieter Hommel*
Deputy Chairman of the Eisenbahn- und Verkehrsgewerkschaft (EVG),
Großefehn-Felde
a) ▶ DEVK Deutsche Eisenbahn Versicherung
Lebensversicherungsverein a. G.
Betriebliche Sozialeinrichtung der Deutschen Bahn
▶ DEVK Deutsche Eisenbahn Versicherung
Sach- und HUK-Versicherungsverein a. G.
Betriebliche Sozialeinrichtung der Deutschen Bahn
▶ DEVK Pensionsfonds-AG
▶ DEVK Rechtsschutz-Versicherungs-AG
▶ DB Fernverkehr AG
▶ DB Regio AG
▶ DB Vertrieb GmbH

Prof. Dr. Susanne Knorre
Management consultant,
Hanover
a) ▶ Salzgitter AG (since May 24, 2018)
▶ RÜTGERS Germany GmbH
▶ Norddeutsche Landesbank
▶ STEAG GmbH

Jürgen Knörzer* (since September 11, 2018)
Chairman of the Central Works Council of DB Regio AG,
Schwarzach
a) ▶ DB Regio AG
▶ DEVK Allgemeine Versicherungs-AG (Advisory Board)

Ludwig Koller* (until July 31, 2018)
Chairman of the Central Works Council of DB Fernverkehr AG,
Karlsruhe
a) ▶ DB Fernverkehr AG
▶ Sparda-Bank Baden-Württemberg eG
b) ▶ DEVK Deutsche Eisenbahn Versicherung
Lebensversicherungsverein a. G.
Betriebliche Sozialeinrichtung der Deutschen Bahn
(Advisory Board)

Dr. Jürgen Krumnow
Self-employed entrepreneur,
Wiesbaden

- **b)** Peek&Cloppenburg KG (Advisory Board)

Kirsten Lühmann
Member of the German Parliament,
Hermannsburg

- **a)** Nürnberger Beamten-Lebensversicherung AG
- BTA Betriebs- und Anlagengesellschaft mbH (until May 31, 2018)
- Nürnberger Beamten Allgemeine Versicherung AG (since May 1, 2018)

Heike Moll*
Chairwoman of the Central Works Council of DB Station&Service AG,
Munich

- **a)** DB Station&Service AG
- **b)** DEVK Deutsche Eisenbahn Versicherung Sach- und HUK-Versicherungsverein a.G. Betriebliche Sozialeinrichtung der Deutschen Bahn (Advisory Board)

Stefan Müller (since November 20, 2018)
Member of the German Parliament,
Großenseebach

Eckhardt Rehberg (since September 20, 2018)
Member of the German Parliament,
Marlow

- **a)** DB Station&Service AG (until October 26, 2018)
- **b)** KfW Bankengruppe (Administrative Board)

Mario Reiß*
Chairman of the Works Council of DB Cargo AG, South East branch,
Süptitz

- **a)** DB Cargo AG
- **b)** DEVK Deutsche Eisenbahn Versicherung Lebensversicherungsverein a.G. Betriebliche Sozialeinrichtung der Deutschen Bahn (Advisory Board)

Regina Rusch-Ziemba*
Deputy Chairwoman of the Eisenbahn- und Verkehrsgewerkschaft (EVG),
Hamburg

- **a)** DB Station&Service AG
- DB Fahrwegdienste GmbH
- DB Engineering&Consulting GmbH
- DB JobService GmbH
- DB Bahnbau Gruppe GmbH
- DEVK Allgemeine Lebensversicherungs-AG (Chairwoman)
- DEVK Allgemeine Versicherungs-AG
- DEVK Pensionsfonds-AG

Jens Schwarz*
Chairman of the Group Works Council of Deutsche Bahn AG,
Chemnitz

- **a)** DEVK Deutsche Eisenbahn Versicherung Lebensversicherungsverein a.G. Betriebliche Sozialeinrichtung der Deutschen Bahn (Deputy Chairman of the Supervisory Board)
- DEVK Rechtsschutz-Versicherungs-AG
- **b)** DEVK Deutsche Eisenbahn Versicherung Sach- und HUK-Versicherungsverein a.G. Betriebliche Sozialeinrichtung der Deutschen Bahn (Advisory Board)

Veit Sobek*
Chairman of the Central Works Council of DB Netz AG,
Halberstadt

- **a)** Bundesbahn-Wohnungsbaugesellschaft Kassel GmbH
- **b)** DEVK Deutsche Eisenbahn Versicherung Lebensversicherungsverein a.G. Betriebliche Sozialeinrichtung der Deutschen Bahn (Advisory Board)

Oliver Wittke (since July 31, 2018)
Parliamentary Secretary of State in the Federal Ministry of Economics and Energy,
Gelsenkirchen

* Employees' representative on the Supervisory Board

Supervisory Board committees

Members of the Executive Committee

- Michael Odenwald (Chairman)
- Alexander Kirchner
- Guido Beermann (Secretary of state)
- Jens Schwarz

Members of the Audit and Compliance Committee

- Dr. Jürgen Krumnow (Chairman)
- Guido Beermann (Secretary of state)
- Jörg Hensel
- Regina Rusch-Ziemba

Members of the Personnel Committee

- Michael Odenwald (Chairman)
- Alexander Kirchner
- Guido Beermann (Secretary of state)
- Jens Schwarz

Members of the Mediation Committee

- Michael Odenwald (Chairman)
- Alexander Kirchner
- Guido Beermann (Secretary of state)
- Jens Schwarz

Berlin, February 28, 2019

Deutsche Bahn Aktiengesellschaft
The Management Board

Independent Auditor's report

To Deutsche Bahn Aktiengesellschaft, Berlin

Audit Opinions

We have audited the consolidated financial statements of Deutsche Bahn Aktiengesellschaft, Berlin, and its subsidiaries (the Group), which comprise the consolidated balance sheet as at 31 December 2018, the consolidated statement of income and the reconciliation of consolidated comprehensive income, the consolidated statement of changes in equity and the consolidated statement of cash flows for the financial year from 1 January to 31 December 2018, and notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of Deutsche Bahn Aktiengesellschaft for the financial year from 1 January to 31 December 2018. We have not audited the content of those parts of the group management report listed in the "Other Information" section of our auditor's report in accordance with the German legal requirements.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to § (Article) 315e Abs. (paragraph) 1 HGB (Handelsgesetzbuch: German Commercial Code) and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group as at 31 December 2018, and of its financial performance for the financial year from 1 January to 31 December 2018, and
- the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our audit opinion on the group management report does not cover the content of those parts of the group management report listed in the "Other Information" section of our auditor's report.

Pursuant to § 322 Abs. 3 Satz (sentence) 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

Basis for the Audit Opinions

We conducted our audit of the consolidated financial statements and of the group management report in accordance with § 317 HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany) (IDW). We performed the audit of the consolidated financial statements in supplementary compliance with the International Standards on Auditing (ISAs). Our responsibilities under those requirements, principles and standards are further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report" section of our auditor's report. We are independent of the group entities in accordance with the requirements of German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the consolidated financial statements and on the group management report.

Other Information

The executive directors are responsible for the other information. The other information comprises the following non-audited parts of the group management report:

- the corporate governance report pursuant to No. 6.1 of the German Federal Public Corporate Governance Code
- the Non-financial group statement pursuant to § 315b Abs. 1 HGB included in section "Fundamentals" of the group management report.

The other information comprises further the remaining parts of the "2018 Integrated Report" – excluding cross-references to external information – with the exception of the audited consolidated financial statements, the audited group management report and our auditor's report.

Our audit opinions on the consolidated financial statements and on the group management report do not cover the other information, and consequently we do not express an audit opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the group management report or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Executive Directors and the Supervisory Board for the Consolidated Financial Statements and the Group Management Report

The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to §315e Abs. 1 HGB and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position, and financial performance of the Group. In addition the executive directors are responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the executive directors are responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

The supervisory board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the group management report.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our audit opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with §317 HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) and supplementary compliance with the ISAs will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this group management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls.
- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems.
- Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.

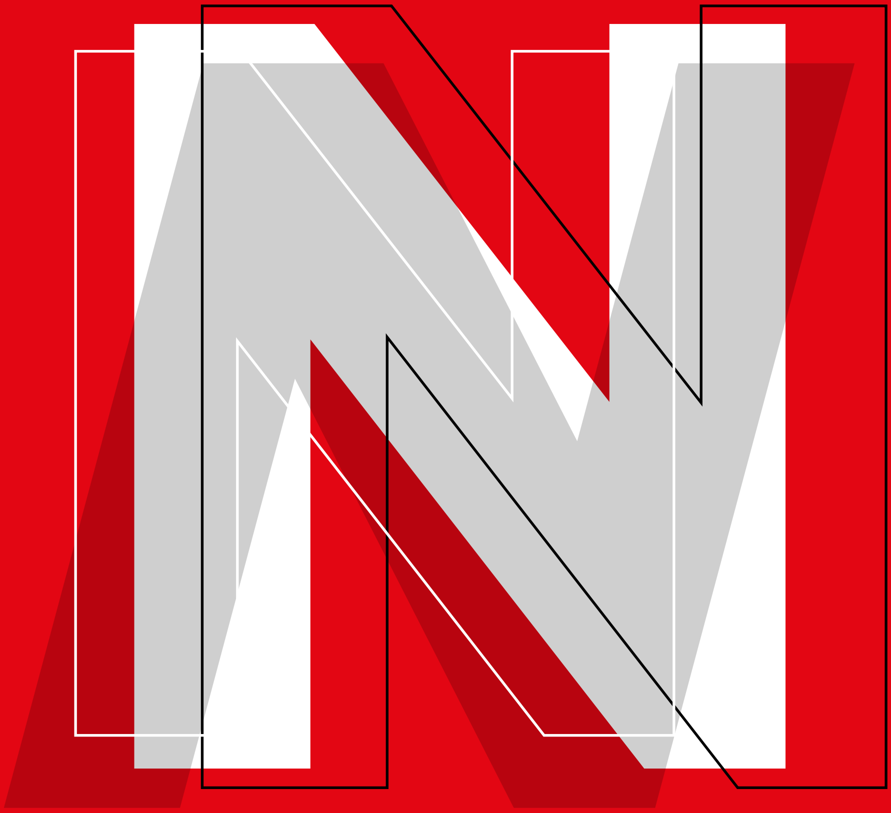
- Conclude on the appropriateness of the executive directors’ use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group’s ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor’s report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective audit opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor’s report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to §315e Abs. 1 HGB.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express audit opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.
- Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with German law, and the view of the Group’s position it provides.
- Perform audit procedures on the prospective information presented by the executive directors in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate audit opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Berlin, 28 February 2019

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

Thomas Kieper Wirtschaftsprüfer (German Public Auditor)	Philipp Medrow Wirtschaftsprüfer (German Public Auditor)



Notes to sustainability

Sustainability reporting

GRI
102-50
102-51
102-52
102-54
102-56

The 2018 Integrated Report refers to the year under review, this being calendar year 2018. For the purpose of comparison, most of the key figures are also presented for 2017 and 2016. The Integrated Report is published on an annual basis. This report was published on March 28, 2019 (2017 Integrated Report: March 22, 2018). The 2018 Integrated Report addresses the material **stakeholder groups 46** of Deutsche Bahn Group (DB Group). The reporting covers all material economic, social and environmental aspects. All of the fully consolidated companies of DB Group are included in the report. Deviations from this reporting scope are noted as such.

The data collection methods and bases of calculation used for the data in the 2018 Integrated Report are oriented toward applicable standards.

The Integrated Report was prepared in agreement with the GRI standards in the core option. Content regarding general and specific standards information is referenced in the **GRI content index 268.** At the same time, the information in the 2018 Integrated Report serves as a Communication on Progress regarding the implementation of the **UN Global Compact's Ten Principles 269.** Moreover, material contents, indicators and passages of text were audited by an independent third party, PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (PwC), with limited assurance.

Compliance

Compliance is an integral element of the corporate culture at DB Group. The compliance management system is based on national and international legal requirements and established standards, such as the Institute of Public Auditors in Germany PS 980 auditing standard. DB Group also applies the directive of the Federal Government on corruption prevention in the German Federal administration.

The compliance management system aims to ensure that compliance risks are identified quickly and that appropriate countermeasures are implemented. We continuously monitor the effectiveness of our compliance management system and make any necessary adjustments. Compliance is a key area of internal control system monitoring. Intra-Group auditors therefore review the compliance management systems within DB Group as part of the internal control system audits under the Accounting Law Modernization Act (Bilanzrechtsmodernisierungsgesetz; BilMoG).

DB Group compliance management is typified by a combination of centralized and decentralized units at the operational and organizational levels. Group management focuses its compliance work on centralized governance activities in particular, while business units exercise greater operating responsibility. In the year under review, various events took place, such as the Compliance Network Meeting, that aimed to share the experiences of centralized and decentralized compliance officers.

Our compliance activities in DB Group focus on preventing corruption and corporate crime in the form of fraud and embezzlement, as well as consistently combating it.

Compliance instruments

Specific compliance instruments have been developed to protect the company, employees and executives. This includes binding directives, risk and process analyses, special communication measures and consulting.

Binding directives provide the framework that is anchored in continuous communication and training at DB Group. Revised directives on export checks, sanctions, embargoes and risk minimization came into effect in the year under review.

GRI
205-1

Compliance risk analyses are part of DB Group risk management and are conducted by the business units and service units. A Group-wide survey to evaluate compliance risks is conducted in accordance with governance requirements stipulated by Group management. The compulsory framework concept includes minimum requirements for planning, conducting, reporting and follow-up.

A compact compliance annual report once again provided the Group's Management Board with information on compliance risks related to DB Group's business activities. The report separately sets out the risk exposure of DB Group business units, service units and Group management functions and highlights existing risk-reducing factors and countermeasures.

To achieve our compliance goals in the long term, we are continually optimizing our instruments and are digitalizing our prevention and analysis activities.

External audit of the compliance management system

An auditing and consulting company conducted an independent Group-wide review of the DB Group compliance management system regarding corruption and corporate crimes in terms of fraud and embezzlement. The first audit was conducted at the Group management level in accordance with audit standard IDW PS 980 and an unqualified opinion was issued upon completion. The subsequent audits conducted within the business units were also in line with ISO 19600 requirements and resulted in unqualified opinions which were then issued during the year under review.

Business partner compliance

GRI 205-2 ↓

Successful long-term business operations require the careful selection of business partners and suppliers who must then be informed of the DB Group values and commit to collaboration based on shared values. DB Group has developed different formats to increase awareness among its business partners and incorporate sustainable business practices more firmly in the supply chain. The core topics in this respect are integrity, legal standards and ethical issues. In addition to corruption prevention, this also includes anti-trust compliance and human rights. Compliance e-learning for business partners is accessible at no cost online and provides information about integrity, binding legal standards and ethical matters. DB Group also offers a special compliance dialog program for its medium-sized business partners to discuss mutual understanding of compliance and how it is organized.

Integrity and human rights training programs

GRI 205-2 ↓

There are four different e-learning courses available for our employees and executives to take: “DB Code of Conduct”, two special e-learning courses on anti-corruption issues (“DB Corruption Prevention” and “DB Refresher Course on Corruption Prevention”) and a course that addresses trade compliance (export control laws, sanctions lists, etc.). E-learning on the DB Code of Conduct includes the topics of integrity (anti-corruption) and human rights. Executives are required to complete e-learning. In selected companies and divisions, participation in e-learning is also mandatory for all other employees due to risk. DB employees have free access to e-learning in several languages.

As in previous years, Group-wide on-site training was also conducted during the year under review.

Training sessions for executives and employees	**2018**	2017	2016
Participants	29,700	14,408	13,095

Risk-based selection of participants, especially from typical risk areas (for example sales and distribution, procurement, construction supervision).

Increased training activities in business units dealing with freight transport, logistics and infrastructure were among the main reasons why the number of participants increased. In the previous year, the heads of Compliance, Audit and Legal began a series of dialogs on increasing awareness of compliance risks among top management executives. These discussions continued in the year under review.

Whistle-blowing management in DB Group

In DB Group, the Works Council Agreement “Whistle-blowing management” and the “Group speaker committee agreement” (Konzernsprecherausschussvereinbarung) govern how to handle whistle-blowing tip-offs that are received. The processes implemented protect whistle-blowers. Clearly defined requirements regarding the rigor and relevance of whistle-blowing tip-offs serve to take account of the interests of the persons concerned.

There are various ways of submitting a whistle-blowing tip-off, such as the electronic whistle-blower system. The system was made available in seven more languages and so can now be used in 22 languages. All business units use the electronic whistle-blower system. In the year under review, the whistle-blowing management team expanded to include more criminal law expertise. Three trusted lawyers, who are legally bound to secrecy, and an ombudswoman can also be contacted regarding such matters.

Corruption reporting and mitigation measures

GRI 205-3 ↓

Our central whistle-blowing management received and examined allegations of corruption in the double-digit range in the year under review. Remedial actions were introduced whenever they were necessary.

Compliance with anti-trust laws and preventing anti-trust damages

On-site training courses ensure that executives and employees are kept aware of anti-trust law. The formats of the training courses are individually tailored to the requirements of the business units and the central units. The target group includes all executives and employees who are in contact with competitors or have other roles that are critical with regard to competition. The compliance, audit and legal heads also took up the issue under the awareness campaign. The training courses are supplemented, in particular, by regulations specific to business units and close cooperation with (anti-trust) legal experts.

Anti-trust damage prevention measures are an important component of anti-trust compliance. To this end, DB Group introduced a comprehensive anti-trust damage prevention system in 2014. An important part of the system is to use contractual conditions in markets where anti-trust violations are most likely, which oblige suppliers to introduce or maintain anti-trust compliance programs.

Human rights

Responsibility to society

GRI 102-16 ↓

Protecting and promoting human rights are of the utmost importance to us. DB Group’s regulations reflect these high standards, in particular by applying the DB Code of Conduct and the DB Code of Conduct for Business Partners. Our particular areas of focus include fair labor conditions, respect for workers’ rights, anti-discrimination measures and the prohibition of any and all forms of child or forced labor. We report on forced labor in accordance with the guidelines of the UK Modern Slavery Act.

We have implemented suitable measures for the application of our own standards and we will continue to develop them. A fundamental distinction is made between measures effective within DB Group and measures effective in the **supply chain 🗋258.**

Measures within DB Group

The core of our approach to human rights is identifying relevant risks with respect to our business models and human rights-related country risks.

"Social minimum standards" are applicable to our DB Schenker business unit which operates globally and is therefore exposed to greater geographical risks. This policy specifies the DB Code of Conduct and is based beyond legal requirements on the principles and recommendations of the International Labor Organization (ILO) and the UN Global Compact. Compliance with social minimum standards is regularly audited on site by intra-Group auditors at selected locations as part of an annual audit process.

DB Group also provides a range of instruments for increasing awareness of human rights and reporting suspected human rights violations. Examples of these instruments include the DB Code of Conduct e-learning course and central whistle-blowing management. Central whistle-blowing management and the three lawyers are also available at all times, even to non Group persons. Reports can also be submitted via the electronic whistle-blower system. DB Group employees and executives in particular can personally contact the ombudswoman regarding human rights. A follow-up process is in place to examine alleged violations of human rights.

GRI 102-12

The topic of human rights is also an integral part of DB Group's stakeholder dialogs. In addition, DB Group is involved in the German UN Global Compact network and in econsense working groups.

Data protection

Implementation of the EU General Data Protection Regulation

Efforts to implement the EU General Data Protection Regulation (GDPR) were a core part of Group data protection activities in the year under review. Firstly, new standards were implemented, such as more comprehensive obligations to be transparent toward customers and employees. Existing processes and sample contracts then had to be modified to comply with the new regulations and new requirements had to be proactively incorporated into everyday consulting. Finally, awareness of data protection issues was raised among data controllers through various channels.

In addition to usual processes such as recruiting and HR services, initiatives such as DB Digital Ventures, mindbox and beyond1435 are increasingly playing a role in advising and are used by DB Group to drive its digitalization efforts. The use of bodycams by DB Security received a notable response from the media as part of the focus on video surveillance. This was preceded by extensive consultation and discussion with the competent data protection supervisory authorities regarding data protection, including academic support from Prof. Dr. Jürgen Taeger from the University of Oldenburg, who is also a member of the DB Group Privacy Advisory Board.

Group data protection places great importance on communicating openly and proactively with the relevant data protection supervisory authorities for each Group company, particularly through the introduction of innovative procedures and processes.

Technical data protection and audit

The audit department focused on auditing key procedures and processes related to the implementation of GDPR requirements, especially BahnCard procedures (including an audit of the service provider) and central DB HR systems. During the year under review, the department also concentrated on auditing the new DB Group recruiting procedures that are used internationally.

The consulting focused on assessing various newly written order processing agreements in terms of implementing technical and organizational measures, as well as using expertise in data protection to supervise major projects in customer and employee data protection with regard to measures that still need to be taken to comply with GDPR. This includes the new sales system VENDO for passenger transport and procedures that have been developed especially for the occupational health service.

An innovative working group called AG SoNeT conducted research into legal advice on data protection for the use of artificial intelligence (AI) applications with the aim of creating a practical guide for DB Group companies. The DOM survey conducted at the start of the year under review had a record number of participants and its results showed them to have a good level of data protection.

GRI 102-44

Further development of professional qualifications and awareness

We increased the already high quality of consultancy provided by the data protection organization by providing tailored professional training opportunities. Increasing awareness of data protection issues among all employees and executives in a targeted way involved publishing the new online training course "fundamentals in the data protection" and regularly updating the latest data protection news at the DB Planet data protection news blog.

International data protection

During the year under review, the digital transformation at DB Group was a common theme for issues relating to international data protection laws. From fleet management systems in international logistics to digital finance solutions and international recruiting software – it is obvious that using innovative digital technologies requires personal data to be handled responsibly and securely.

Another key topic in this area was the implementation of GDPR. In cooperation with the international data protection managers, who serve as points of contact within the decentralized international data protection organization, Group data protection ensured that the new data processing requirements were implemented within EU companies as well as EU companies conducting business with non-EU companies.

In addition to EU legislation, we have also been keeping a close eye on developments in international law. Developments in data protection law that were relevant to us during the year under review included the US CLOUD Act, various domestic legislation on data localization and data protection legislation that used GDPR as an example.

DB Group Data Protection Advisory Board

DB Group Data Protection Advisory Board advises the Group's Management Board on strategic and core data protection issues, and in doing so helps significantly to set an excellent example of data protection at DB Group. The expertise of individual stakeholder groups on the Advisory Board ensures that legitimate data protection-related interests of all stakeholders involved are taken into account, particularly in discussions on the digital transformation. The work that the Advisory Board does is therefore an important contribution to DB Group stakeholder dialog on data protection.

Useful consultation requires early and organized involvement in data protection-related deliberations, planning and projects, as well as applying this approach consistently to ensure exemplary data protection within DB Group. The Advisory Board discusses new, innovative and pragmatic solutions to protect the data protection rights of data subjects, making an important contribution to ensuring digitalization initiatives are compliant with data protection regulations while also being key to the success of these projects. Data-protection-related challenges can be handled in the best possible manner through forward-looking and constructive discussion together with trusted guidance from the Advisory Board. The annual awarding of the Advisory Board's now well-established Data Protection Award helps to ensure that data protection is treated with the necessary care and attention within DB Group.

Security

Security for customers and employees

GRI 103 ↓

Security is an important commodity and a basic requirement of our customers and employees. We have a great deal of responsibility for many people and goods – around the clock. The security units are in an ongoing dialog with security authorities. In the railway joint security center, Group security exchanges status information with the Federal police around the clock. The six operations centers set up during the previous year in DB Security's regional areas successfully coordinate all regional security issues and are available to be contacted by our business units at any time. In total more than 5,000 Federal police officers and about 4,000 security staff from DB Security are deployed across Germany. In the year under review, 160 young people started their training to become protection and security specialists in DB Group, following on from 185 trainees in the previous year. Combined with the trainees from the cohort graduating in 2019, there are over 400 young people undertaking specialist training in safety and security in DB Group.

Security at DB Group

DB Group spends about € 170 million annually on the security of its customers and employees. As part of a law enforcement partnership, over 5,000 Federal police officers and about 4,000 of DB Group's own security staff work together, with technical support, to combat crime and disruptive activity and increase the security of our customers and employees. Security staff on trains and in stations first and foremost work to ensure that all passengers and station visitors feel safe. This has led to a 25% reduction in the number of bag and luggage thefts on trains and in stations in the year under review. The measures applied in the year under review also led to a significantly smaller increase in incidents against our employees on trains and in stations. The measures to protect our employees and our customers coordinated with interest groups are showing initial successes. This includes improved employee training, better equipment, support from security technology, adaptation of personnel concepts and deployment of guard dogs and bodycams. Bodycams were already in regular use during the previous year in Berlin and Cologne and seven more locations began using them in the year under review. The deployment of bodycams reinforces the findings from trials in previous years: employees are not attacked when wearing them. For the first time, all 40,000 customer-facing employees were obliged to undergo regular de-escalation and self-defense training that we provided in the year under review. In addition, we work with security authorities to review more new technologies to increase the safety of our customers and employees and to modernize and expand video technology on trains and in stations.

Development and expansion of video technology

The number of surveillance cameras in stations increased from about 7,000 to 7,400 in the year under review and the number of stations with video technology increased to over 1,000. In the year under review, efforts centered on replacing existing technology at large and middle-sized stations, so the number of cameras did not increase to the same extent as the previous year. We are continuing our video expansion program that was adopted jointly with the Federal Government. The installed cameras record in full HD. This makes more details visible even in poor light. The Federal police, who have exclusive access to the recorded footage, were therefore able to locate offenders in stations much more often. In July, the Federal Ministry of the Interior and the Federal police finished testing the biometric facial recognition software in Berlin Südkreuz station. The software was tested over a period of 12 months with 300 volunteer test subjects to ascertain whether it could reliably match video footage from the station with images from a database. The trial was the sole responsibility of the security authorities. The footage came from the cameras that were already set up in the station.

Increased presence and more easily reachable

The Berlin S-Bahn (metro) developed a new security concept by order of the Berlin and Brandenburg Federal states. Going forward, S-Bahn guards at interchange stations will be contactable regarding service and security at any time of day. In this instance, security staff will be deployed in tandem with guard dogs. They will be present in stations, available to contact regarding service and security responsibilities, actively working to prevent incidents and intervening when they occur on the platform and on S-Bahn (metro) services.

Assaults against DB employees

Security staff are the main targets in the majority of cases where employees are assaulted. In the year under review, DB Group employees had been assaulted more than 2,600 times across Germany (previous year: over 2,500 times; 2016: over 2,300 times). At the same time, the number of serious injuries has declined, showing that the security concept is effective. DB Group has responded with improved training for security staff and train attendants, increased security staff and better equipment.

GRI 102-10

Purchase/procurement

Procurement that is essential to success

Our procurement ensures the cost-efficient, timely and quality supply of material, capital goods and services worldwide, thereby forming the basis for long-term success and capacity for innovation. All procurement initiatives contribute to the "World-Class Procurement" program which we use to assess and further develop our excellence.

While wages continued to increase across the industry in the year under review and pressure on prices remained high, especially in the services sector, we successfully maintained stable conditions. We achieve the best possible results by cooperating across departments, which is commensurate with the process model embedded in the procurement management system. Commodity group strategies and optimal awarding processes were steadily refined within the procurement teams to achieve the projected savings.

Further improvements are planned as part of the procurement digitalization roadmap, which offers more efficient IT support for processes. Procurement is also a major part of our FINANCE4DB project that we launched in the year under review to digitalize our payment processes with the aim of improving efficiency in the procure-to-pay process. The growing digitalization of our work processes creates more value-adding activities within the teams and paves the way for cutting-edge office concepts to deliver services more efficiently.

GRI 102-9

Focus on social responsibility and sustainable business among our suppliers

We consider responsible procurement management to be a major value driver for both DB Group and society. We need strong partners as part of a transparent supply chain to make the largest possible contribution toward sustainable development. Our suppliers take an active role in ensuring mutual business success with their sustainability performance and capacity to innovate. The Code of Conduct for Business Partners is the starting point in forming sustainable supply chains and making definitive procurement decisions. We also place great emphasis on comprehensively assessing the sustainability of our suppliers in terms of their management system, activities and results. We have already assessed over 500 suppliers with a purchasing power of over € 7 billion. About two-thirds of the recently assessed suppliers improved their sustainability performance, enabling us to reduce risks and increase competitiveness together. We also ask our suppliers to be assessed for compliance with Corporate Social Responsibility criteria. For our collaboration with suppliers to be successful, we expect them to take measures to eliminate risks that they have identified, especially in terms of occupational safety and purchasing management systems. As part of an intense dialog with industry associations and **Railsponsible** (our sustainable supply chain initiative for the rail transport sector), we are making sustainable performance a relevant criterion for awarding contracts. Our suppliers can already present their sustainability evaluation in the qualification process. Railsponsible now has 13 international members and one of its key focuses in the year under review was climate protection. Together with members of the initiative, we have set our stance on the matter in our **Position Paper on Climate.**

GRI 102-13

GRI 102-43

Exemplary supplier management

Our supplier manager comprises four essential elements – supplier qualification, development, stabilization and evaluation – and is an ongoing process. This standardized process helps us to ensure high-quality standards together with experienced suppliers. Supplier management applies throughout the Group and is incorporated into our leading IT systems. Supplier qualification remains central to DB Group's requirements to be competitive. The pre-qualification system was expanded to include more product groups for this purpose, for example facility management and security services.

Trusted collaboration with industry associations and initiatives also makes it possible for us to orient our supplier portfolio predominantly toward system providers with proven expertise in the rail transport sector. Strategically we are focusing on a high rate of consolidation and long-term framework agreements. We have concluded contracts with a total of 18,000 suppliers, 622 of which fulfill about 80% of purchasing volumes. Purchasing ensures a high level of operational excellence when carried out in line with processes. The Federal Audit Office (Bundesrechnungshof) commissioned an audit of contracting activities, which found that no provisions governing the awarding of contracts had been violated in the **Performance and Financing Agreement (Leistungs- und Finanzierungsvereinbarung; LuFV) 235 f.**

There is also emphasis on promoting and using our suppliers' innovations. For example, in the year under review, we once again held the Supplier Innovation Award prize-giving at InnoTrans – the leading international trade fair for railway and transport technology – after receiving a large number of submissions. We also rewarded outstanding work in the fields of "General requirements and services," "Infrastructure," "Rolling stock and parts" and "Environment" with the Supplier Awards.

GRI 102-9

Increased internationalization

Even if almost 90% of our prime suppliers are based in Germany, we are procuring more and more from international markets. This is necessary not least of all due to the increasing tendency toward consolidation in the European railway industry. Outside of Europe, we are focusing on developing our supplier base in Asia. With our procurement office in Shanghai, we have identified almost 500 potential suppliers since 2015. In the year under review, Asian suppliers participated in over 20 tender-awarding processes which had a procurement volume of over € 200 million in various product groups. Our activities in the year under review also included qualifying suppliers in Russia and signing contracts in China for the supply of freight cars and very small locomotives. We have reinforced our quality assurance and project management processes accordingly in our Shanghai purchasing office.

Deutsche Bahn Foundation

The Deutsche Bahn Foundation supports charitable projects.

Charitable projects in Germany (number)	2018	2017	2016
Deutsche Bahn Foundation	16 1)	13	20

1) Preliminary figure.

Expenses for charitable projects in Germany (€ thousand)	2018	2017	2016
Deutsche Bahn Foundation	2,194 1)	1,955	2,728

1) Preliminary figure.

In response to donation requests, Deutsche Bahn Foundation has also provided funds from its general response budget.

Donations in Germany (€ thousand)	2018	2017	2016
Deutsche Bahn Foundation	133 1)	81	43

1) Preliminary figure.

No scholarships were funded by the Deutsche Bahn Foundation during the year under review.

Scholarships in Germany (number)	2018	2017	2016
Deutsche Bahn Foundation	–	43	65

The expenses for DB Museum amounted to € 6.1 million in the year under review (previous year: € 5.9 million).

Social

Personnel development

Training and professional development

GRI 404-2

As an intra-Group partner for learning, development and change processes, DB Training conducts training and professional development with about 25,000 events for about 250,000 participants per year. More than 3,000 training sessions are offered, addressing all employee groups and functions within DB Group.

DB Academy is responsible for the qualification of the about 7,900 executives and potential executives of DB Group. The portfolio offers executives training according to their individual career and development stages that enable them to move between strategic areas of action at DB Group. We are constantly evolving our service offering. We are increasingly using elements from digital learning, agile methods and new learning formats and communication.

In the year under review, regional qualification centers were set up as pilot projects for the training and continuing education of our employees abroad. Furthermore, in Singapore the DB Schenker Training Center was further expanded and a program for fixed-term international project and visitation experience for specialists and potential executives was developed.

Training and development costs for employees 1) (€ million)	2018	2017	Change absolute	Change %	2016
Total	188	172	+16	+9.3	169
Per employee (FTE) (€)	942	883	+59	+6.7	872

1) Germany, including trainees and dual degree students, excluding executives.

GRI 404-1

Training and continuing education days in customer-oriented job families (days)	2018	2017	2016
Per employee (FTE)	8.8	7.6	7.1

Germany (companies with about 79% of domestic employees).

Includes only training and development days in customer-oriented job families for permanent employees, excluding vocational trainees and dual-degree students.

The training and continuing education costs per employee increased as did the training days in comparison with the previous year.

Securing new talent

GRI 401-1
404-2

Young professionals hired as permanent staff by type of training (NP)	2018	2017	2016
Vocational trainees	2,358	2,408	2,540
Dual degree students	201	220	252

Germany (companies with about 98% of domestic employees).

Hired after completion of training or dual degree studies.

Young people can complete training in over 50 apprenticeships in DB Group. Vocational training and dual degree studies program are the foundation of DB Group's efforts to secure the recruitment of skilled employees. This is supplemented by the long-term job preparation program "Chance plus" for young people who need support in accessing the labor market. In the year under review, there was particular focus on making qualified jobs and the development of digital learning formats fit for the future. We have also created and expanded services for supervising, supporting and engaging junior staff in different ways.

Diversity

GRI 405-1

In Germany, about 205,000 employees (natural persons) from over 100 nations work for DB Group and about 48,000 of them are women. The share of employees in Germany of foreign birth or citizenship increased to 11.6% (previous year: 10.5%).

Employees by age as of Dec 31 (NP)	2018	2017	2016
<30 years	27,351	25,593	24,732
30–49 years	85,605	82,596	82,078
≥ 50 years	87,936	86,227	84,894
Total	**200,892**	**194,416**	**191,704**

Germany (companies with about 98% of domestic employees).

The share of employees over the age of 50 continues to be high.

Management level by gender as of Dec 31 (NP)	**2018**	2017	2016
Supervisory Board	20	20	20
Share of women (%)	25.0	30.0	30.0
Senior executives	222	217	214
Share of women (%)	14.4	12.9	12.6
Upper management	959	920	901
Share of women (%)	17.7	16.6	16.2
Middle management	2,187	2,160	2,187
Share of women (%)	21.8	21.0	20.4
Executives (excluding the Supervisory Board) in total	**3,368**	**3,297**	**3,302**
Share of women (%)	20.1	19.2	18.7

Germany (companies with about 98% of domestic employees).

The share of women in management positions has increased steadily in recent years.

Employees with severe disabilities by age as of Dec 31 (NP)	**2018**	2017	2016
<30 years	276	250	257
30–49 years	2,768	2,831	2,892
≥ 50 years	9,751	9,590	9,607
Total	**12,795**	**12,671**	**12,756**

Germany (companies with about 98% of domestic employees).

Includes employees and vocational trainees with severe disabilities or similar.

The employment rate of severely disabled employees in Germany is about 6%. In terms of the Group companies, about half are above the statutory quota of 5%, even in numerous areas that might not seem particularly suitable for employees with severe disabilities at first glance.

Employment conditions

Collective agreements

GRI 102-8 102-41 ↓

Employees by employee type as of Dec 31 (NP)	**2018**	2017	2016
Employees subject to collective bargaining agreements	169,494	161,609	157,545
Civil servants	21,113	22,982	24,423
Employees on individual contracts [1]	10,285	9,825	9,736
Total	**200,892**	**194,416**	**191,704**

Germany (companies with about 98% of domestic employees).

[1] The figures for employees on individual contracts primarily include executive employees (managers), employees paid above the wage agreement level (known as non-tariff employees) and employees with individual contractual agreements.

The working conditions for DB Group employees are oriented, in addition to country-specific regulations, primarily on collective bargaining agreements that have been concluded with the trade unions in the respective countries.

In principle the collective wage agreements apply to employees in Germany. The activities of civil servants in DB Group are based on statutory allocation under Art. 2 (12) of the Rail Restructuring Act (Eisenbahnneuordnungsgesetz). The same wage agreement provisions within DB Group therefore apply on this basis to civil servants, insofar as the legal regulations governing civil servants do not conflict with this.

Employees with collective agreements as of Dec 31 (NP)	**2018**	2017	Change absolute	Change %	2016
Employees with collective wage agreements	190,556	184,533	+6,023	+3.3	181,915
Share (%)	94.9	94.9	–	–	94.9

Germany (companies with about 98% of domestic employees).

The share of employees subject to collective bargaining agreements remains at a high level.

Further improvements of employment conditions

GRI 404-2 ↓

Further developments of the employment conditions for executives and employees not subject to collective wage agreements 🗋 **85** are being made continuously. DB Group's strategy is based on the remuneration policy and the structure of ancillary services.

The variable compensation is consistent with the objectives of strategy DB2020+.

To improve compatibility of work and private life, executives and employees not subject to collective wage agreements are able to negotiate a sabbatical of up to six months. We also support the provision of part-time executive employment and interim management.

DB Group has launched the "partial retirement for older employees and executives in DB Group" program. The purpose of the program is to reduce the individual workload and, simultaneously, maintain the employability of older executives until the statutory retirement age.

Social and fringe benefits

In addition to payment that is fair and commensurate with performance, DB Group also offers a wide range of social and fringe benefits. The five major social partners – BSW, Bahn-Betriebskrankenkasse, Verband Deutscher Eisenbahner Sportvereine, DEVK-Versicherungen and Sparda-Banken – offer benefits packages for our employees. In cooperation with BSW and awo lifebalance, DB Group offers its employees various options for childcare. Up to 90 childcare places are available in the DB-owned facility Bahnbini in Frankfurt am Main and 192 places are available in childcare facilities not owned by DB Group. During the summer vacation, the children of employees are able to take part in DB RasselBAHNde program at various DB sites. Parents also receive support from awo lifebalance in their search for childcare options, emergency and vacation care services, as well as with the placing of au pairs and day care staff. Through awo lifebalance, we also offer our employees extensive support in caring for relatives.

Balancing of a career and private life

GRI 102-8 ↓

Employees by working hours and gender as of Dec 31 (NP)	**2018**	2017	2016
Full-time	180,163	175,091	173,679
thereof women	34,078	32,665	32,360
Part-time	20,729	19,325	18,025
thereof women	12,340	11,827	11,465
Total	**200,892**	**194,416**	**191,704**

Germany (companies with about 98% of domestic employees).

DB Group offers various part-time models. This supports a better balance between career and family.

Employees by contract type as of Dec 31 (NP)	2018	2017	2016
Permanent	190,770	185,149	183,339
thereof women	43,549	41,784	41,212
Temporary	10,122	9,267	8,365
thereof women	2,869	2,744	2,613
Total	**200,892**	**194,416**	**191,704**

Germany (companies with about 98% of domestic employees).

The share of employees with permanent employment contracts in Germany remained very high at 95%.

Agency staff as of Dec 31 (NP)	2018	2017	2016
Total	3,751	2,893	2,651

Germany (companies with about 99% of domestic employees).

The increase compared with the previous year was a result of a change in how data is collected at DB Schenker.

Measures against discrimination

DB Group is working hard to create a working environment without discrimination or harassment. Capable assistance for clarifying and processing conflict situations is available from the internal office of the ombudsman for all employees as well as executives and HR staff, along with the rules in the Group Employer/Works Council Agreements (Konzernbetriebsvereinbarung; KBV), such as the KBV for equal treatment and protection against discrimination or the KBV for balancing work, family and background, as well as guidelines such as those of the Federal General Act on Equal Treatment (Allgemeines Gleichheitsbehandlungsgesetz), for operational integration management or compliance guidelines. The focus in all this is on non-bureaucratic and independent extrajudicial settlement of conflicts. The ombudsman also coordinates the internal pool of mediators, with over 100 mediators actively contributing. Actively engaging in preventive efforts and when conflicts arise helps to continue building a constructive conflict culture and consequently a cooperative and positive corporate culture.

Occupational safety and health management

Health rate

GRI 403-3 403-4 ↓

Health rate (% based on hours)	2018	2017	2016
DB Long-Distance	93.2	93.4	93.4
DB Regional	92.0	92.2	92.4
DB Cargo	92.6	92.7	92.8
DB Schenker	93.4	93.3	94.6
DB Netze Track	94.3	94.5	94.5
DB Netze Stations	93.2	93.4	93.0
DB Netze Energy	95.7	95.6	95.7
Other	93.6	93.6	93.5
DB Group	**93.3**	**93.4**	**93.5**

Germany (companies with about 97% of domestic employees).

The health rate remained nearly unchanged.

Health management

Our workplace safety policy is designed to continuously decrease the number of accidents and the severity of accidents. A special focus of these efforts is on serious accidents at work – including accidents involving contractors and, in particular, when working in the vicinity of tracks. We systematically record employee exposure to potentially carcinogenic hazardous substances. Particular attention is paid to preventing post-traumatic stress disorders among train drivers and other employee groups. DB Group is very well positioned here. In conjunction with Group security and the trade unions, we are also addressing new health challenges, such as the change in the working environment caused by digitalization and employee concerns about attacks and assault.

Occupational accidents

GRI 403-2 403-4 ↓

Occupational accidents and LTIF	2018	2017	2016
Fatal accidents worldwide [1]	6	8	7
thereof in Germany [2]	4	7	7
Lost time injury frequency (LTIF) in Germany [2], [3]	24.4	25.2	25.0

[1] Worldwide (companies with about 98% of employees). 2016 only in Germany.

[2] Germany (companies with about 97% of domestic employees).

[3] Non-attendance days due to occupational accidents per 1,000,000 insured work hours. LTIF-related absences of more than one calendar day.

DB Group is aware of its responsibility with regard to occupational health and safety. Compliance with internal standards and national laws serve to protect employees. A safe work environment as well as healthy and motivated employees contribute to the economic success. Various qualification measures were introduced with the aim of further improving safety and awareness among executives and employees.

The LTIF workplace safety key figure fell slightly in Germany in the year under review. Preparations for reporting worldwide LTIF were also further promoted.

We have introduced further campaign “Wahlbetrieb” for works council election purposes for reducing fatal occupational accidents. The focus is on safety-related behavior when working in the vicinity of tracks.

Representation of employees in occupational health and safety committees

GRI 403-1 ↓

In Germany, companies with more than 20 employees are legally required to have an Occupational Health and Safety Committee (Arbeitsschutzausschuss) (section 11 of the Occupational Safety Act; Arbeitssicherheitsgesetz). The key here is how the operation is defined (production facility, branch, “Wahlbetrieb” for works council election purposes). The majority of DB Group companies in Germany fall under this category with more than 20 employees, so the majority of all employees (more than 75%) are represented in occupational health and safety committees.

GRI 403

Occupational and health protection within DB Group

Systematic occupational and health protection makes a vital contribution to the physical and mental health of employees, as well as the long-term success of the business.

In addition to occupational safety, holistic health promotion, ergonomic workplace design and employee counseling are the core responsibilities of occupational health management. This is based on risk assessments as a core element of operational workplace safety. From these workplace risk assessments, including mental stress, measures are drawn up to avoid or reduce risks, employee instructions are coordinated and preventive occupational medical care is given.

In addition, there are counseling services offered by occupational welfare organizations (BSW and Verband Deutscher Eisenbahner Sportvereine) and social insurance companies affiliated with DB Group – railway company health insurance fund (Bahn-Betriebskrankenkasse), accident insurance for Federal agency and railway staff (Unfallversicherung Bund und Bahn) and German pension fund (Knappschaft-Bahn-See; KBS).

GRI 401-1

Development of the number of employees

Employees as of Dec 31 (NP)	2018	2017	Change absolute	Change %	2016
DB Long-Distance	17,626	17,058	+ 568	+ 3.3	17,400
DB Regional	37,879	37,519	+ 360	+ 1.0	37,853
DB Arriva	55,327	56,848	– 1,521	– 2.7	56,564
DB Cargo	29,311	28,771	+ 540	+ 1.9	30,084
DB Schenker	78,780	74,628	+ 4,152	+ 5.6	70,805
DB Netze Track	48,143	46,489	+ 1,654	+ 3.6	44,957
DB Netze Stations	6,187	5,769	+ 418	+ 7.2	5,396
DB Netze Energy	1,789	1,768	+ 21	+ 1.2	1,777
Other	56,526	54,531	+ 1,995	+ 3.7	53,496
DB Group	**331,568**	**323,381**	**+ 8,187**	**+ 2.5**	**318,332**

The number of employees was up on the previous year as of December 31, 2018. At the business unit level, the number of employees increased notably at DB Schenker due to the continued growth path in the contract logistics division as well as in the maintenance and construction divisions at DB Netze Track. In addition, the number of employees at DB Long-Distance, DB Cargo and DB Netze stations also increased significantly. A decline was recorded at DB Arriva as a result of the cessation of a transport contract.

Employees by regions as of Dec 31 (NP)	2018	2017	Change absolute	Change %	2016
Germany	205,041	197,985	+ 7,056	+ 3.6	195,692
Europe (excluding Germany)	96,465	97,307	– 842	– 0.9	96,119
Asia/Pacific	16,885	16,046	+ 839	+ 5.2	15,084
North America	9,798	9,055	+ 743	+ 8.2	8,730
Rest of world	3,379	2,988	+ 391	+ 13.1	2,707
DB Group	**331,568**	**323,381**	**+ 8,187**	**+ 2.5**	**318,332**

Germany recorded the largest absolute growth year on year. This was mainly a result of the development at DB Netze Track and DB Schenker. The percentage of employees outside of Germany was unchanged at about 38%.

New hires

New hires by gender as of Dec 31 (NP)	2018	2017	2016
<30 years	8,085	6,501	5,767
Share of women (%)	31.4	32.1	30.4
30 – 49 years	9,909	7,318	5,515
Share of women (%)	23.2	23.6	26.6
≥ 50 years	2,821	2,245	1,757
Share of women (%)	22.0	20.7	27.2
DB Group	**20,815**	**16,064**	**13,039**

Germany (companies with about 98% of domestic employees).

This does not include the acceptance or hiring of vocational trainees and dual degree students.

The number of newly hired employees in Germany rose significantly once again. It is still important to develop and retain existing employees in the long term.

GRI 401-1

Employee turnover

Employee turnover (NP)	2018	2017	2016
Retirement-related turnover	2,883	3,141	2,960
thereof women	570	650	592
Other employee turnover	8,524	7,144	7,204
thereof women	1,732	1,711	1,667
Total	**11,407**	**10,285**	**10,164**

Germany (companies with about 98% of domestic employees).

The figures indicate non-restructuring-related turnover of permanent employees. Part-time working in the lead-up to retirement is also included in retirement-related employee turnover.

Employee turnover (%)	2018	2017	2016
Retirement-related turnover	1.4	1.6	1.6
thereof women	1.2	1.5	1.4
Other employee turnover	4.2	3.7	3.8
thereof women	3.8	3.9	3.9
Total	**5.7**	**5.3**	**5.4**

Germany (companies with about 98% of domestic employees).

The figures indicate non-restructuring-related turnover of permanent employees. Part-time working in the lead-up to retirement is also included in retirement-related employee turnover.

Turnover increased at a low level.

Environmental

Employees for environmental protection

Through **training** green. **no. 90,** professional development programs and various campaigns, we bring environmental protection to life for our employees. In the year under review, more than 70 courses were held with a total of 850 participants in Germany. DB Schenker uses an updated e-learning eco-movie to present environmental measures and products in its national organizations, which is also suitable for sales and customers.

Climate protection

GRI
305-1
305-2
305-3
↓

Greenhouse gas footprint in overview

Absolute CO_2e emissions by journeys, transports and stationary facilities (million t)	**2018**	2017	2016
Regional rail passenger transport	2.91	3.17	3.10
thereof in Germany	2.15	2.38	2.38
Long-distance rail passenger transport	0.05	0.52	0.52
Bus transport	1.72	1.76	1.78
thereof in Germany	0.60	0.63	0.67
Rail freight transport	1.83	1.98	2.05
Road freight transport [1]	3.67	3.90	3.89
Air freight [1]	6.78	6.76	6.16
Ocean freight [1]	2.27	2.27	2.07
Other transport [2]	0.11	0.11	0.11
Stationary facilities	1.47	1.50	1.51
Total	**20.81**	**21.97**	**21.19**

Well-to-wheel (WTW), scope 1-3.

[1] With pre- and onward carriage.

[2] Including DB Connect, internal traffic.

Absolute CO_2e emissions in line with scopes 1-3 (million t)	**2018**	2017	2016
Total	20.8	22.0	21.2
Share of scope 1 (%)	18.4	17.8	18.3
Share of scope 2 (%)	20.5	23.3	24.3
Share of scope 3 (%)	61.1	58.9	57.5

Previous years' figures adjusted.

Our adjusted greenhouse gas footprint shows the amount of greenhouse gases that we emitted in one year. It consists of the emissions from all journeys and transports of DB Group by rail, road, air transport and shipping and the emissions of stationary facilities such as stations or workshops and of the fleet, which includes, for example, company cars. These figures provide the basis for calculating specific greenhouse gas emissions and determining the results of our climate target within the limits set. They also act as a benchmark for our efficiency improvement measures and provide a basis for comparison with other companies. The scope 2 emissions of 4.27 million tons of CO_2e take into account market-based mechanisms, meaning that this figure includes all contractually regulated instruments for generating and trading electricity from renewable energies. In accordance with the scope 2 guidelines of the Greenhouse Gas Protocol on dual reporting, we also report location-based scope 2 emissions. Based on the respective national energy mixes, the scope 2 emissions total 5.71 million tons of CO_2e. The majority of our greenhouse gas emissions are scope 3 emissions from our subcontractors. We are therefore set to agree on binding reduction targets with our largest carriers to reduce total greenhouse gas emissions.

Noise reduction

Noise remediation continues as scheduled

Noise remediation in Germany as of Dec 31	**2018**	2017	2016
Track kilometers noise remediated in total (km)	1,785	1,703	1,605

Accumulated length of noise remediated sections of track in accordance with Annex 1 of the German Federal Government's 2013 overall noise remediation program, including partial completion of junction projects and sections that have partially undergone noise prevention.

We have revised the **key figure for noise remediation** 🗎 **92** in the year under review. For better comparability with previous years, we also present the key figure as per the old definition.

Implementation of passive noise prevention measures

Noise prevention (new construction and expansion lines) in Germany as of Dec 31	**2018**	2017	2016
Homes with passive measures	1,571	1,410	1,491

Previous year's figures adjusted.

When constructing new lines and expanding lines, we are legally obligated to implement noise protection measures for residents who live in the immediate vicinity of rail tracks and for whom the noise exceeds the 49 dBA limit. These measures include **sound-insulating windows** green. **no. 101** and ventilators as well as noise reduction wall and roof insulation. In the year under review, we pressed ahead with implementing these measures as part of our new construction and expansion projects, including in Westphalia and Rhineland-Palatinate. The "Homes with passive measures" key indicator represents the number of households affected that have submitted feedback on the noise protection measures in place with implementation of these measures being initiated at least once for each section of track affected.

Resource efficiency

GRI
301-1
301-2
↓

Recycling of ballast and concrete sleepers

For maintenance of the ballast bed, we have set up a materials cycle for ballast, **concrete ties** green. **no. 73** and tracks. About 4 to 5 million tons of old material are removed from the network annually and then almost the same volume is rebuilt into the network. About 1.6 million tons of ballast are mechanically removed every year on-site by track-bound ballast cleaning machines or mobile processing plants and immediately reused. This significantly reduces the amount needed for new ballast, in addition to reducing its transport costs and greenhouse gas emissions. For the most part, the rest of the material is processed into **recycled ballast** green. **no. 51** in an external certified disposal facility for DB Group or prepared as gravel or crushed sand for road building. A total of 3.5 million tons of ballast were used in the year under review, about 0.7 million tons of which were recycled ballast.

Air quality control

GRI 305-7

Reduction of pollutant emissions

We have set ourselves the objective of reducing the soot particulate emissions of our own rail and road vehicles by 55% by 2020 compared to 2010. These particulate emissions are especially dangerous to health and are caused by burning fuel.

The ongoing modernization of our fleet of vehicles is our main action toward achieving this goal. The high electrification rate of our rail network plays a major role here because the vehicles themselves do not produce local pollutant emissions, except for particles; the generation of traction current only causes decentralized emissions in power plants. By the year under review, we had already reduced soot particles by 47.7% (previous year: 44.5%). The calculation is based on the energy consumption and composition of our fleets by pollutant categories. By mid-2018, we fully implemented the regulation on the use of low-emissions **vehicles and construction machinery** green. **no. 11** in urban construction sites.

DB Group's combustion-related pollutant emissions are also largely influenced by our ocean and air freight activities – for example, these activities emit over 81% of soot particles. We constantly strive to make improvements in this area as well in cooperation with carriers. We are expecting there to be a sharp reduction as a result of gradually switching our truck fleet to electric vehicles. We launched a "low sulfur" program in the ocean freight sector that allows our customers to move their container transport to low-sulfur marine diesel in unregulated ports for a small surcharge.

Additional information

Absolute airborne pollutants from journeys and transports (t)	**2018**	2017	2016
Particulate emissions	6,757	6,846	7,244
Nitrogen oxide (NO_x) emissions	134,619	136,147	136,236
Sulfur dioxide (SO_2) emissions	46,934	50,548	55,120
Hydrocarbon (NMHC) emissions	9,530	9,723	10,550

Combustion-related, well-to-wheel (WTW), scope 1–3.

Previous year's figures adjusted.

Our vehicles comply with stringent emissions standards

Our rail and road vehicles meet high Euro standards and thus ensure a lower level of pollutant emissions:

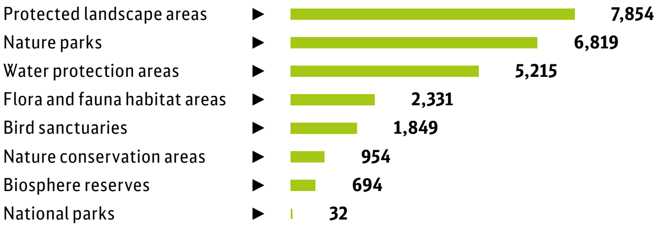
- About 97% of the long-range trucks in use have the highest Euro standards 5 and 6 (previous year: 99%).
- Almost all of our car fleet meets Euro 5 and 6 emissions standards.
- About 18% (previous year: 20%) of the rail vehicle fleet continues to have the lowest pollutant level UIC 0. The share of rolling stock with low-pollutant electro-traction rose slightly to about 61% (previous year: about 59%).
- The share of our buses meeting the Euro 5 and 6 standards increased to about 66% (previous year: about 63%).

Nature conservation

IT systems to document protected areas

We use geographic information systems, which store data about train lines and surrounding land and all digitally available information on protected areas in Germany. This enables us to quickly identify the points of contact between nature and DB Group's tracks and rights of way. These findings are important for our planning. There are different restrictions and conditions in each protected area, which are described in protected area ordinances. These are stored in our system and are taken into account when planning construction and maintenance work.

Points of contact with conservation areas in Germany 2018 (km)



There may be overlaps between conservation areas.

Mitigation and compensation measures

We take nature conservation into account during the construction, expansion or maintenance of rail infrastructure. Our aim is to avoid interfering with nature and the landscape as much as possible. If adverse effects nevertheless occur, we try to compensate for the loss or replace it. We document all **data** green. **no. 59** on these compensation obligations in the online specialist nature protection and compensation information system (Fachinformationssystem Naturschutz und Kompensation; FINK). This enables us to comply with the reporting requirements set forth by the EBA in accordance with the Federal Nature Conservation Act (Bundesnaturschutzgesetz). In the year under review, we recorded 3,997 compensation projects in the system, with a total of almost 25,187 measures, including some 7,291 measures on species protection.

Vegetation control as a means of ensuring safe railway operations

We generally apply manual methods to control vegetation. We coordinate closely with the responsible authorities and only use herbicides where no herbicide-free procedures are available, which is currently just in the immediate vicinity of the tracks. We have described this procedure in our guidelines on integrated plant protection. In the year under review, these guidelines had also been incorporated into the Federal Government's national action plan for the sustainable use of plant protection products.

The use and quantity of herbicides is dependent on weather conditions and vegetation growth. As a result of the extremely dry summer in the year under review, an absolute quantity of 56 t of herbicide was used. The amount of herbicide applied corresponds to 1.0 kg per km of track (previous year: 67 t herbicide; 1.2 kg/km of track). At a track length of about 61,000 km, this means that about 92% of the tracks (previous year: 93%) were treated with the substances flazasulfuron, flumioxazin and glyphosate in the year under review. These substances have been approved by the Federal Office of Consumer Protection and Food Safety

(Bundesamt für Verbraucherschutz und Lebensmittelsicherheit; BVL) especially for use in the vicinity of tracks. In November 2017, the EU Commission extended the approval of glyphosate to the end of 2022. As part of a project headed by DB Group, the International Union of Railways (UIC) is examining future alternatives for glyphosate.

We are conducting two studies to help develop eco-friendly vegetation maintenance along our train paths and under energy supply lines in the future: one examining the possibilities for environmental vegetation maintenance along rail lines; and one as part of a Federal research project, involving Deutsche Umwelthilfe e. V. (German environmental aid), DB Netze Energy and other operators of electrical networks, to investigate the possibilities of habitat-linked vegetation maintenance under energy supply lines.

Responsibility for the plant and animal world

Tracks, buildings and land held by DB Group often provide a habitat for protected species. We develop eco-friendly solutions to offset any impact that our work has on the natural world.

Protecting birds from catenary systems

We set up new overhead catenary systems so that **birds** green. **no. 33** are protected against electrocution. This is achieved in part by using longer insulators. We documented about 3,300 short-circuit events caused by animals in the year under review. About 93% of them were caused by birds and about 7% by small mammals. Since the year under review, isolators on existing systems have been fitted with bird deterrents as part of the full overhead line inspection, providing birds with greater protection from electrocution. These measures may be the reason short-circuit events have fallen by about 400 in comparison with the previous year. Traction current lines in areas that have a high risk of bird collisions are also being made safe, for example by fitting special **bird diverters** green. **no. 140.**

Water consumption reduced

Water consumption refers to the water taken from the public supply. Water consumption reduced in the year under review primarily as a result of improved methods of calculating consumption at DB Schenker.

Water consumed (million m³)

Group-wide environmental management system

GRI 307-1 ↓

Share of DB Group companies with certified environmental management systems in accordance with ISO 14001 as of Nov 30 (%)	**2018**	2017	2016
DB Group	45	45	55
in Germany	22	56	57
in Europe (excluding Germany)	52	34	49
worldwide (excluding Europe and Germany)	61	59	77

The “Environmentally relevant companies” have formed the basis for determining the percentage of certified companies since 2016.

Our environmental targets are supported by a Group-wide **environmental management system** green. **no. 131** that is in accordance with DIN ISO 14001. The system’s compliant integration into our Group regulations has been verified by an independent institute. On this basis, 65% of our 273 environmentally relevant Group companies used an environmental management system in accordance with DIN ISO 14001 in the year under review. The share of environmentally relevant Group companies that use a certified environmental management system is shown by regions. Most of the decline in Germany in the year under review is due to certificates in bus companies expiring. The Group Environmental divisions ensures compliance with and further development of Group-wide environmental management standards. No significant fines or other penalties for environmental offenses were levied against DB Group companies in the year under review.

Destination nature

Since 2001, **destination nature** green. **no. 37** (Fahrtziel Natur) has promoted the networking of sustainable tourism and eco-friendly mobility. The Kellerwald-Edersee national park in Hesse is the 23rd **destination nature** and wants to give greater support to promote eco-friendly tourism.

Adjusting to the impacts of climate change

As a “critical infrastructure” in Germany, DB Group is particularly affected by the short and long-term impacts of climate change. This was acknowledged in a study by the Potsdam Institute for Climate Impact Research titled “Klimawandel – Auswirkungen auf die Deutsche Bahn AG” (climate change – impacts on Deutsche Bahn AG). The study concludes that it is mainly the seasonal shift of extreme weather events and their subsequent effects that will pose particular challenges for rail infrastructure and will require measures to be taken systematically to adapt to these changes. In response DB Group is drawing up a five-point strategy and implementing short-term measures to ensure safe rail operation and a track infrastructure that can cope with extreme weather events. These measures include preemptively removing trees at risk of breaking from storms and snowfall along the train path, structurally securing slopes that are at risk of slipping, developing track infrastructure as well as command and control technology that are suited to hot and cold weather.

In addition, DB Group is participating in research by the BMVI expert network on “Adjusting transport and infrastructure to climate change and extreme weather events.” As part of this research involving collaboration with the EBA, DB Group regulations were analyzed to identify areas that need to be adjusted and the first hazard maps for rail lines in Germany were created. These hazard maps support prioritization of measures and risk communication when dealing with potential climate and weather-related environmental risks. At the same time, DB Group is also working with the German Institute for Standardization (Deutsches Institut für Normung; DIN) to encourage greater consideration of climate change in national and international standards.

Independent Practitioner's Report on a Limited Assurance Engagement on Sustainability Information[1]

To Deutsche Bahn AG, Berlin

We have performed a limited assurance engagement on the disclosures in the sections "To our stakeholders – Sustainability management", "Group Management Report – chapters Social and Environmental" and "Notes to Sustainability" of the Integrated Report of Deutsche Bahn AG, Berlin (hereinafter: "the Company"), for the period from 1 January to 31 December 2018 (hereinafter: "Report").

Responsibilities of the Executive Directors

The executive directors of the Company are responsible for the preparation of the Report in accordance with the principles stated in the Sustainability Reporting Standards of the Global Reporting Initiative (hereinafter: "GRI-Criteria").

This responsibility of Company's executive directors includes the selection and application of appropriate methods of sustainability reporting as well as making assumptions and estimates related to individual sustainability disclosures, which are reasonable in the circumstances. Furthermore, the executive directors are responsible for such internal control, as they have considered necessary to enable the preparation of a Report that is free from material misstatement whether due to fraud or error.

Independence and Quality Control of the Audit Firm

We have complied with the German professional provisions regarding independence as well as other ethical requirements.

Our 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 Standard on Quality Control 1 published by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany; IDW): Requirements to quality control for audit firms (IDW Qualitätssicherungsstandard 1: Anforderungen an die Qualitätssicherung in der Wirtschaftsprüferpraxis – 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.

Practitioner´s Responsibility

Our responsibility is to express a limited assurance conclusion on the disclosures in the Report based on the assurance engagement we have performed.

Within the scope of our engagement, we did not perform an audit on external sources of information or expert opinions, referred to in the Report.

We conducted our assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): Assurance Engagements other than Audits or Reviews of Historical Financial Information, issued by the IAASB. This Standard requires that we plan and perform the assurance engagement to allow us to conclude with limited assurance that nothing has come to our attention that causes us to believe that the disclosures in the Company's Report for the period from 1 January 2018 to 31 December 2018 has not been prepared, in all material aspects, in accordance with the relevant GRI-Criteria.

In a limited assurance engagement the assurance procedures are less in extent than for a reasonable assurance engagement and therefore a substantially lower level of assurance is obtained. The assurance procedures selected depend on the practitioner's judgment.

Within the scope of our assurance engagement, we performed amongst others the following assurance procedures and further activities:

- Obtaining an understanding of the structure of the sustainability organization and of the stakeholder engagement
- Inquiries of personnel involved in the preparation of the Report regarding the preparation process, the internal control system relating to this process and selected disclosures in the Report
- Identification of the likely risks of material misstatement of the Report under consideration of the GRI-Criteria
- Site visits and interviews regarding the following business units/sites
  - Schenker AG, Essen
  - DB Energie GmbH, Frankfurt am Main
  - Central units on group level, Berlin/Frankfurt am Main
- Analytical evaluation of selected disclosures in the Report
- Comparison of selected disclosures with corresponding data in the consolidated financial statements and in the group management report
- Evaluation of the presentation of the selected disclosures regarding sustainability performance

Assurance Conclusion

Based on the assurance procedures performed and assurance evidence obtained, nothing has come to our attention that causes us to believe that the disclosures in the Company's Report for the period from 1 January 2018 to 31 December 2018 have not been prepared, in all material aspects, in accordance with the relevant GRI-Criteria.

Intended Use of the Assurance Report

We issue this report on the basis of the engagement agreed with the Company. The assurance engagement has been performed for purposes of the Company and the report is solely intended to inform the Company as to the results of the assurance engagement. The report is not intended to provide third parties with support in making (financial) decisions. Our responsibility lies solely toward the Company. We do not assume any responsibility towards third parties.

Berlin, February 28, 2019

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

Hendrik Fink p.p. Robert Prengel
Wirtschaftsprüfer
(German Public Auditor)

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[1] PricewaterhouseCoopers GmbH has performed a limited assurance engagement on the German version of the sections "To our stakeholders – Sustainability management", "Group Management Report – chapters Social and Environmental" and "Notes to Sustainability" of the Integrated Report and issued an independent assurance report in German language, which is authoritative. The following text is a translation of the independent assurance report.

Additional information

GRI Content Index

102-54
102-55
↓

This Integrated Report was prepared in agreement with the GRI standards in the core option.

GRI standards (core option)		**Degree of fulfillment (fulfilled, partially fulfilled, not fulfilled)**	**Page**
GRI 102: GENERAL DISCLOSURES			
1. ORGANIZATIONAL PROFILE			
▶ 102-1	Name of the organization	Fulfilled	50
▶ 102-2	Activities, brands, products and services	Fulfilled	56 ff.
▶ 102-3	Location of headquarters	Fulfilled	50
▶ 102-4	Location of operations	Fulfilled	50, 56 ff.
▶ 102-5	Ownership and legal form	Fulfilled	50
▶ 102-6	Markets served	Fulfilled	58 ff.
▶ 102-7	Scale of the organization	Fulfilled	50, 56 ff., 96 f., 110
▶ 102-8	Information on employees and other workers	Partially fulfilled	87, 260 f.
▶ 102-9	Supply chain	Fulfilled	111, 258
▶ 102-10	Significant changes to the organization and its supply chain	Fulfilled	51, 66, 258
▶ 102-11	Precautionary principle or approach	Fulfilled	168 ff.
▶ 102-12	External initiatives	Fulfilled	44 f., 47 f., 256
▶ 102-13	Membership of associations	Fulfilled	45, 258
2. STRATEGY			
▶ 102-14	Statement from senior decision maker	Fulfilled	29 ff.
3. ETHICS AND INTEGRITY			
▶ 102-16	Values, principles, standards and norms of behavior	Fulfilled	36 ff., 44, 47 f., 55, 255 f.
4. GOVERNANCE			
▶ 102-18	Governance structure	Fulfilled	33 ff., 36 ff.
5. STAKEHOLDER ENGAGEMENT			
▶ 102-40	List of stakeholder groups	Fulfilled	45 f.
▶ 102-41	Collective bargaining agreements	Fulfilled	85, 86, 260
▶ 102-42	Identifying and selecting stakeholders	Fulfilled	45 f.
▶ 102-43	Approach to stakeholder engagement	Fulfilled	43, 45 f., 74 f., 85, 258
▶ 102-44	Key topics and concerns raised	Fulfilled	43, 46, 256
6. REPORTING PRACTICE			
▶ 102-45	Entities included in the consolidated financial statements	Fulfilled	238 ff.
▶ 102-46	Defining report content and topic boundaries	Fulfilled	43 f.
▶ 102-47	List of material topics	Fulfilled	43 f.
▶ 102-48	Restatements of information	Fulfilled	66, 189
▶ 102-49	Changes in reporting	Fulfilled	43 f.
▶ 102-50	Reporting period	Fulfilled	254
▶ 102-51	Date of most recent report	Fulfilled	254
▶ 102-52	Reporting cycle	Fulfilled	254
▶ 102-53	Contact point for questions regarding the report	Fulfilled	Cover U5
▶ 102-54	Claims of reporting in accordance with the GRI standards	Fulfilled	254, 268 f.
▶ 102-55	GRI Content Index	Fulfilled	268 f.
▶ 102-56	External assurance	Fulfilled	254
GRI 103: MANAGEMENT APPROACH			
▶ 103-1-3	General requirements for reporting the management approach	Fulfilled	74, 77 f., 82 f., 89, 257
GRI 201: ECONOMIC PERFORMANCE			
▶ 201-1	Direct economic value generated and distributed	Fulfilled	96 ff., 185
GRI 203: INDIRECT ECONOMIC IMPACTS			
▶ 203-1	Infrastructure investments and services supported	Fulfilled	108 f.
GRI 205: ANTI-CORRUPTION			
▶ 205-1	Operations assessed for risks related to corruption	Fulfilled	254
▶ 205-2	Communication and training about anti-corruption policies and procedures	Fulfilled	255
▶ 205-3	Confirmed incidents of corruption and actions taken	Fulfilled	255
GRI 301: MATERIALS			
▶ 301-1	Materials used by weight or volume	Fulfilled	263
▶ 301-2	Recycled input materials used	Fulfilled	263

GRI standards (core option)		**Degree of fulfillment (fulfilled, partially fulfilled, not fulfilled)**	**Page**
GRI 302: ENERGY			
▶ 302-1	Energy consumption within the organization	Partially fulfilled	91
▶ 302-3	Energy intensity	Fulfilled	91
▶ 302-4	Reduction of energy consumption	Fulfilled	91
▶ 302-5	Reductions in energy requirements of products and services	Partially fulfilled	91
GRI 305: EMISSIONS			
▶ 305-1	Direct (scope 1) GHG emissions	Fulfilled	263
▶ 305-2	Energy indirect (scope 2) GHG emissions	Fulfilled	263
▶ 305-3	Other indirect (scope 3) GHG emissions	Fulfilled	263
▶ 305-4	GHG emissions intensity	Fulfilled	90 f.
▶ 305-5	Reduction of GHG emissions	Fulfilled	90
▶ 305-7	Nitrogen oxides (NOx), sulfur oxides (SOx) and other significant air emissions	Fulfilled	264
GRI 306: EFFLUENTS AND WASTE			
▶ 306-2	Waste by type and disposal method	Fulfilled	93
GRI 307: ENVIRONMENTAL COMPLIANCE			
▶ 307-1	Non-compliance with environmental laws and regulations	Fulfilled	265
GRI 401: EMPLOYMENT			
▶ 401-1	New employee hires and employee turnover	Partially fulfilled	84, 87, 259, 262 f.
GRI 403: OCCUPATIONAL HEALTH AND SAFETY			
▶ 403-1	Workers representation in formal joint management worker health and safety committees	Fulfilled	261 f.
▶ 403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	Fulfilled	261
▶ 403-3	Workers with high incidence or high risk of diseases related to their occupation	Fulfilled	261
▶ 403-4	Health and safety topics covered in formal agreements with trade unions	Fulfilled	261
GRI 404: TRAINING AND EDUCATION			
▶ 404-1	Average hours of training per year per employee	Partially fulfilled	259
▶ 404-2	Programs for upgrading employee skills and transition assistance programs	Fulfilled	84 ff., 86, 259 f.
▶ 404-3	Percentage of employees receiving regular performance and career development reviews	Fulfilled	85 f.
GRI 405: DIVERSITY AND EQUAL OPPORTUNITY			
▶ 405-1	Diversity of governance bodies and employees	Fulfilled	38, 87, 259

UN Global Compact Index

Upon joining the UN Global Compact in 2009, DB Group made a commitment to support its ten principles, and regularly reports on its activities and services in a Communication on Progress.

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HUMAN RIGHTS		
▶ Principle 1	Support and respect for international human rights	43 ff., 255 f., 258
▶ Principle 2	Exclusion of human rights abuses	255 f., 258
LABOR		
▶ Principle 3	Preserving freedom of association and law on collective bargaining	85, 254 ff., 260 f.
▶ Principle 4	Elimination of all forms of forced labor	254 ff., 258
▶ Principle 5	Elimination of child labor	254 ff., 258
▶ Principle 6	Elimination of discrimination	47 f., 86 f., 261
ENVIRONMENTAL		
▶ Principle 7	Preventive environmental protection	43 ff., 67, 88 ff., 263 ff.
▶ Principle 8	Initiative for greater environmental awareness	43 ff., 88 f., 115 f., 120 ff., 127 f., 135 ff., 142 f., 153 ff., 158, 161 ff., 263 ff.
▶ Principle 9	Development and dissemination of eco-friendly technologies	43 ff., 71 f., 80 f., 88 ff., 136 f., 142 f., 263 ff.
ANTI-CORRUPTION		
▶ Principle 10	Measures against corruption	38, 46, 254 f.

Glossary

A **Airborne pollutants**
Air pollution that can have a detrimental effect on the environment. An airborne pollutant can be caused naturally or by people, for example NOx or SO_2.

B **Bond**
Interest-bearing security which is used to borrow funds on the capital market. Helps mid- to long-term debt financing by companies.

Bus kilometers (bus km)
The journey of a bus over a distance of 1 km.

C **Capacity utilization**
How much of possible capacity is actually used.

Capital employed
Includes property, plant and equipment (including intangible assets) and the net current assets.

Carbon Disclosure Project (CDP)
An international organization which runs the global disclosure system for investors, companies, cities, countries and regions to measure and control their environmental impacts. It is now the world's largest emissions register for business-related greenhouse gas emissions.

Climate
Not only weather, but also a snapshot of climate factors (altitude, relief, vegetation, etc.) and climate elements (rain, sunlight, etc.) at a location.

CO_2 equivalents
Gases that affect climate change, such as methane and nitrous oxide, which are converted to CO_2 based on their equivalent climate impact.

Combined transport
Combined transport of containers or entire trucks on rail and road.

Commercial paper program (CP program)
Contractual framework or model documentation for the issue of commercial papers.

Compliance
An important component of corporate governance. This is understood as compliance with laws and directives, as well as voluntary codes of conduct in the company.

Contract logistics
Service packages comprising multiple logistics activities. The service provider not only organizes transport orders, but also independently undertakes parts of the value-added chain.

Contracting organization
In general, the Federal states that, as public transport authorities, order regional rail passenger transport services from transport companies.

Costs of capital
Based on market values as a weighted average of risk-adequate market returns for the minimum return requirement calculated for debt and equity capital.

Credit facilities
Credit facilities granted by banks which can be utilized if necessary. These are firmly committed credit lines with different maturities, some of which serve as liquidity reserves that are available at all times, while umbrella credit lines are available to foreign subsidiaries in particular for working capital financing and as a guarantee line.

Customer satisfaction index
Index generally rated on a grading scale of 1 (very satisfied) to 6 (very dissatisfied). These grades are converted and shown on a scale of 0 to 100: (0 points = grade 6; 20 points = grade 5; 40 points = grade 4; 60 points = grade 3; 80 points = grade 2; 100 points = grade 1).

Customer satisfaction
Satisfaction of customers and partners with a product/offer or a service, surveyed on a representative basis and evaluated on behalf of DB Group by independent market research institutes by telephone, in person or online.

D **DBeco plus**
Service for rail freight transport customers to have their goods transported without CO_2 emissions on all electrified lines within Germany and Austria.

DB traction current mix
Electrical traction current that DB Netze Energy uses to supply DB Group's own rail transport companies in Germany.

Debt issuance program
Contractual framework or model documentation for the issuance of bonds. This guarantees a high degree of flexibility in issuing activity.

Derivative financial instruments (derivatives)
Financial instruments, the price or value of which depends on the future rates or prices of other goods, assets or reference values (interest rates, indices). These are contracts in which the contracting parties agree to buy, sell or swap assets at specified conditions in the future, or alternatively make value equalization payments.

Diversity
Refers to variation within the workforce with regard to gender, background, nationality, age, religion, sexual orientation and levels of physical and mental ability. Diversity also encompasses employees' variety of views, values, professional experiences and skills.

E **Earnings before interest and taxes (EBIT)**
Operating profit before interest and taxes.

Earnings before interest, taxes, depreciation and amortization (EBITDA)
Operating profit before interest, taxes, depreciation and amortization.

Ecosystem (digital)
Gears structure and functionality toward organic systems. With ecosystems, a portfolio is developed from in-house developments, affiliated companies and partnerships for a specific subject area. The portfolio is organizationally separate from the core business. A forward-looking digital ecosystem is the smart and flexible nesting of individual independent business models.

Employee satisfaction index
As part of the Group-wide employee survey conducted every two years, the index is calculated using questions about motivation, employee satisfaction and (emotional) connection on a scale of 1 to 5 (top value).

Employer attractiveness
Measured as a weighted average of employer ranking in the main target groups, as determined by trendence – Europe's leading research institute in employer branding, HR marketing and recruiting.

Energy mix
Composition of electricity broken down by type of energy generation (for example coal, renewable energies).

Environment Plus
Special offers for customers in passenger transport to travel CO_2-free.

Equity method/at-equity accounting
Procedures for conducting the accounting of subsidiaries, which are not included in the consolidated financial statements on the basis of full consolidation with all assets and liabilities. The book value of the subsidiary is adjusted by the development of the pro rata equity in the holding.

Equity ratio
Key financial indicator based on the balance sheet structure: proportion of equity in the balance sheet total as a percentage.

Evaluation of facilities quality
To ensure maintenance funds are used according to demand and to assess improvements stemming from implemented measures, the condition of structural and technical facilities undergo a periodic and event-driven evaluation.

Existing network
Existing rail network and therefore core of the infrastructure.

F

Final energy
The energy form for which an end consumer receives an invoice, for example for the quantity of fuel added or the traction current obtained.

Floating rate note (FRN)
Bond with a variable interest rate.

G

Gearing
Key financial indicator which, as a structural indicator, describes the ratio of net financial debt to equity as a percentage.

German Sustainability Code
Provides a framework for reporting non-financial performance which can be used by organizations and companies of any size and legal form.

Global Reporting Initiative (GRI)
An international organization which is committed to the dissemination and improvement of sustainability reporting. The GRI standards are regarded as the most widely used and most internationally recognized reporting standard for sustainability.

Greenhouse Gas (GHG) Protocol
A globally recognized standard for classifying and managing greenhouse gas emissions which is used by many companies, non-governmental organizations (NGOs) and governments.

Gross capital expenditures
Overall capital expenditures in property, plant and equipment and intangible assets – regardless of the type of financing.

Gross profit
Amount of revenues remaining after deduction of the variable costs (= revenue-related) or direct costs (= contract-related).

H

Health rate (according to downtime)
Shows the proportion of lost labor that is not caused by illness in the overall performance (as a percentage and broken down by business units) and therefore only includes employees who are still paid a salary.

Hydrocarbons (NHMC)
These are found in crude oil, natural gas or coal, for example. Their emissions are regarded as harmful to the environment.

I

Interest-free loans
Loans from the Federal Government that have to be repaid, but are not interest-bearing. These result from financing contributions from the Federal Republic of Germany for capital expenditures for track expansion and replacement.

Intermodal competition
Competition between different modes of transport, for example between rail and air transport.

International Financial Reporting Standards (IFRS)
Internationally recognized accounting standard. Since 2002, IFRS has been regarded as the leading approach to standards adopted by the International Accounting Standards Board. Previously adopted standards are still cited as International Accounting Standards (IAS).

Interoperability (multi-system capability)
Ability of rolling stock to adapt to different technical standards (for example track gauges or power systems) and therefore run as seamlessly as possible between different rail networks in individual countries.

Intramodal competition
Competition within a mode of transport, for example within the railway sector.

Investment grants
Financing contributions from third parties in specified capital expenditure projects without future repayment requirements.

K

K brake shoes
Brake shoe made from composite materials (K), see also V brake shoes.

L **LL brake shoe**
Brake shoe made from composites (LL: low noise, low friction), see also V brake shoe.

Local transport
Transport services using the products IRE, RB, RE and S-Bahn (metro).

Long-distance transport
Transport services using the products ICE and IC/EC.

Lost time injury frequency (LTIF)
Describes the relationship between accident frequency and hours actually worked based on one million working hours.

M **Mode of transport**
Transport medium such as road or rail.

N **Net capital expenditures**
Gross capital expenditures less investment grants from third parties, for example for infrastructure capital expenditures.

Net financial debt
Balance of interest-bearing external liabilities and liabilities from finance leases, as well as cash and cash equivalents and interest-bearing external receivables.

Nettable plan assets
Assets that are netted against total pension obligations on the balance sheet.

Noise
Disruptive or harmful noises for persons and the environment.

Noise barrier
Means of active noise abatement on rail lines, usually made from materials such as aluminum, wood and concrete. New noise barriers are walls made from wire baskets filled with stones (gabions).

Noise prevention
Legal claim to noise-protection measures on new construction and expansion lines.

Noise reduction
Reduction of noise by active (for example noise barriers) and passive (for example soundproof windows) noise remediation, as well as noise reduction measures in vehicles.

Noise remediation program
Voluntary program of the Federal Government implemented by DB Group to reduce noise on existing rail lines.

O **On-demand services**
Services that are supplied to customers when they need and request them.

Operating income after interest
Profit figure that includes financing costs to assess profits in the long term (particularly relevant for infrastructure business units). Therefore, in comparison to EBIT, the net operating interest is also taken into account.

Operating leases
Off-balance-sheet financial instruments: leased or rented assets.

Overall punctuality
Covers at DB Netze Track all rail transport on DB Netz AG infrastructure.

P **Particles**
Tiny portions of matter, right down to the smallest traces, such as dust or soot.

Passenger kilometers (pkm)
Unit of measurement for volume sold in passenger transport: product of the number of passengers transported and the average travel distance.

Percentage of staffing needs covered
Represents the number of active staff, including part-time employees, trainees and dual degree students converted in full-time employees, divided by the full-time staffing requirements, including trainees and dual degree students.

Platooning
System that enables two or more vehicles to travel in close proximity using technical driving assistance and control systems.

Primary energy
Energy calculated from the energy source in its natural form, for example including production, transport and conversion.

Punctuality
Share of stops on time in relation to all stops along and at the end of routes in Germany. A stop is considered on time if the stop has not exceeded the planned arrival time by more than 6 minutes in passenger transport or 16 minutes in freight transport.

Purchasing volume
Net total of all order values from individual orders and batches from framework agreements that were concluded by the respective product areas.

R **Rate of people making connections on long-distance transport/long-distance transport**
Percentage of connections in long-distance transport shown in the schedule that are actually made.

Rating
Classification of creditworthiness provided by rating agencies which impacts the refinancing options and expenses of a company.

Redemption coverage
Key financial indicator that describes the ratio between the current financing strength and financial obligations of the company (adjusted net financial debt).

Renewable energies
Energy from renewable sources that are theoretically unlimited in supply, such as water, wind or sunlight.

Requirement plan
New and expansion lines set out in the Federal Transport Infrastructure Plan.

Resource
Aid, fund, reserve, raw material.

Return on capital employed (ROCE)
Key performance indicator for value-based management. Equals the return on capital employed for business operations (capital employed). Percentage ratio of (adjusted) EBIT to the capital employed.

S

Scope 1–3 (in accordance with GHG)
As part of carbon accounting, emissions are divided into three scopes. For DB Group: scope 1 = greenhouse gas emissions from our own vehicles, scope 2 = traction current supply, scope 3 = transport services of our subcontractors. Due to our business model, scope 3 includes only transport-related emissions in accordance with the Greenhouse Gas Protocol.

Scope of consolidation
Group of subsidiaries included in the consolidated financial statements.

Soot particles
Emissions produced during the combustion of diesel fuels. Diesel emissions also include particulate matter.

Specific
Relative, for example based on the volume sold.

Stakeholders
Interest groups and representatives.

Stationary facilities
Buildings and facilities such as plants and train stations.

Station pricing system
Transparent and non-discriminatory pricing system for the use of passenger stations. The level of station prices depends largely on the performance level and level of equipment at the respective station.

Supply chain
The stages of production illustrated as an orderly sequence of activities. These activities add value, consume resources and are interconnected in processes.

Supply reliability
Measure of the reliability of energy supply for rail operations in Germany.

Sustainability
Guiding principle for the compatibility of environmental, social and economic objectives for sustainable and generationally compatible development.

Sustainable development goals (SDGs)
Political targets set by the United Nations with a view to assuring sustainable development at the economic, social and environmental levels. The targets came into force on January 1, 2016 and run until 2030. They apply to all member states.

Swap
The basic concept for financial instruments that involve the exchange of future cash flows. This allows financial risks (interest, currencies, raw materials) to be hedged in a targeted manner.

T

Tank-to-wheel (TTW)
Calculates emissions caused by burning fuel excluding the raw material extraction and production process.

Ton kilometers (tkm)
Unit of measurement for the volume sold in freight transport: product of the amount of freight carried (tons) and the distance (kilometers).

Traction
Drive to move trains. Depending on the energy source, drive unit and power transmission, a distinction is made between electric, diesel-electric, diesel-hydraulic and other types of traction. Traction units that also have diesel-assisted traction in addition to electric traction are also referred to as hybrid vehicles.

Traction current mix
Composition of the traction current of all train operating companies in Germany supplied by DB Netze Energy (in addition to other suppliers) through the traction current grid.

Train kilometers (train km)
Equal to the journey of a train over a distance of 1 km.

Train path
The share of track capacity that is required for a train to travel between two locations in a set time.

Train-path kilometers (train-path km)
See volume produced.

Train-path pricing system (TPS)
Includes the prices for train path utilization by customers (in particular those of train operating companies) depending on the particular market segment and the train-path kilometers traveled.

Transport contract
Agreement between the contracting organization and train operating company to provide regional passenger transport services.

U

United Nations Global Compact
The world's largest and most important initiative for responsible corporate management. On the basis of its ten universal principles, it pursues the vision of an inclusive and sustainable global economy to the benefit of all people, communities and markets, today and in the future.

V

V brake shoes
Brake shoe made from composites (Verbundstoffen; V) which halves the rolling noise of freight cars. Collective term for K and LL brake shoes.

Vegetation control
Checking and cutting/removing vegetation in and on the tracks using mechanical and chemical (only in the immediate vicinity of the tracks) procedures.

Volume produced
Distance traveled by train operating companies on the rail network. Unit of measurement: train-path kilometers (train-path km).

Volume sold
Key indicator to measure the service provided in passenger and freight transport. Units of measurement: passenger kilometers (pkm), ton kilometers (tkm).

W

Well-to-wheel (WTW)
Method of calculating fuel emissions including the entire supply process.

Whisper brake
See K and LL brake shoe.

List of abbreviations

A

ABS expansion line
AEG General Railways Act
Agv MoVe Mobility and Transport Services Association
AktG Stock Corporation Act
ApS Pro-Rail Alliance
AUD Australian dollar

B

bbl Barrel
BEV Federal Railway Fund
BGB Civil Code
BGH Federal Supreme Court
BilMoG Accounting Law Modernization Act
BMF Federal Ministry of Finance
BMVI Federal Ministry of Transport and Digital Infrastructure
BNetzA Federal Network Agency
BR Series (Baureihe)
BSW Railway Social Work Foundation
BSWAG Federal Rail Infrastructure Extension Act
Bund German Federal Government
Bus km Bus kilometers
BUV Requirement Plan Implementation Agreement
BVWP Federal Transport Infrastructure Plan
B2B Business-to-business
B2C Business-to-consumer

C

CEF Connecting Europe Facility
CER Community of European Railway and Infrastructure Companies
CHF Swiss francs
CNY Chinese yuan
CO_2 Carbon dioxide
CO_2e CO_2 equivalent
COSO Committee of Sponsoring Organizations of the Treadway Commission
CSA Credit Support Agreements
CSR Corporate Social Responsibility
CSR-RUG CSR Directive Implementation Act
CTA Contractual Trust Arrangement

D

dB Decibel
DB AG Deutsche Bahn AG
DB E&C DB Engineering&Consulting
DB Finance Deutsche Bahn Finance GmbH
DBGrG Deutsche Bahn Foundation Act
DB Group Deutsche Bahn Group
DGCN German Global Compact Network
DNK German Sustainability Code
DSD Digital Rail for Germany
DSTW Digital interlocking

E

EAV Profit and loss transfer agreement
EBA Federal Railway Authority
EBIT Earnings before interest and taxes
EBITDA Earnings before interest, taxes, depreciation and amortization
ECB European Central Bank
ECJ European Court of Justice
EDIP European debt issuance program
EE Renewable energies
EIU Rail infrastructure company
EnWG Energy Industry Law
ERegG Railway Regulation Act
ESTW Electronic interlocking
ET Electric multiple unit
ETCS European Train Control System
EU European Union
EVG Railway and Transport Workers Union

F

Fed US Federal Reserve
FRN Floating rate note
FS Ferrovie dello Stato (Italian state-owned railway)
FTE Full-time employees

G

GBP British pound sterling
GDL Train Drivers' Union
GDP Gross domestic product
GRI Global Reporting Initiative
GVFG Municipal Transport Financing Act
GWh Gigawatt hour

H

ha Hectare
HGB Commercial Code

I

IC Intercity
ICE Intercity Express
ICS Internal control system
IFRS International Financial Reporting Standards
ISO International Organization for Standardization
IT Information technology

K

KBS Social insurance for railway workers and seafarers (Knappschaft-Bahn-See)
KBV Group Employer/Works Council Agreement
KonTraG Act on Supervision and Transparency in the Corporate Sector
kWh Kilowatt hour

L

LaTPS Noise-based train-path pricing system
LST Command and control technology
LTI Long-term incentive
LTIF Lost time injury frequency
LuFV Performance and Financing Agreement

M

m^2 Square meters
MaRisk Minimum requirements for risk management
MitbestG Co-Determination Act
MJ Megajoule
MRR Minimum required rate of return
MWh Megawatt hour

N

NABU Nature and Biodiversity Conservation Association
NBS New construction line
Nkm Commercial vehicle kilometers
NOK Norwegian krone
NOX Nitrogen oxide emissions
NP Natural persons
NS Nederlandse Spoorwegen (Dutch state-owned railway)

O

OKM Ecosystem management
OPEX Operational excellence
ÖPNV Local public transport
ÖSPV Public road passenger transport

P

P Passengers
PCGK German Public Corporate Governance Code
PFA Plan approval section
Pkm Passenger kilometers
PKP Polskie Koleje Państwowe (Polish state-owned railway)
PwC PricewaterhouseCoopers

R

RENFE Red Nacional de los Ferrocarriles Españoles (Spanish state-owned railway)
RMS Risk management system
ROCE Return on capital employed

S

SBB Swiss Federal Railways
SDGs Sustainable development goals
SGV Rail freight transport
SI Satisfaction index
SNCF Société Nationale des Chemins de fer Français (French state-owned railway)
SO_2 Sulfur dioxide emissions
S&P S&P Global Ratings
SPD Social Democratic Party of Germany
SPNV Regional rail passenger transport
SPS Station pricing system
SPV Rail passenger transport
Sts Secretary of state

T

T Thousand
t Ton
TEN Trans-European Networks
TEU Twenty-foot equivalent unit
tkm Ton kilometers
TOC Train operating company
TPS Train-path pricing system
Train km Train kilometers
Train-path km Train-path kilometers

U

UIC International Union of Railways
UNGC United Nations Global Compact
USD US dollar

V

VDE German unification transport projects
VDV Association of German Transport Companies
V brake shoe Composite brake shoes

W

WACC Weighted average cost of capital
Wi-Fi Wireless local area network
WpHG Securities Trading Act

Z

ZIP Future Capital Expenditures Program

GRI 102-53

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DB service number

Our service number +49-180-6996633 gives you direct access to all of our telephone services. These services include our Group-wide general information phone number, timetable information and booking of train tickets, our customer dialog and our frequent traveler system (BahnCard).

The following charges apply: calls from the German fixed-line network cost 20 ct/call; calls from the German cell phone network cost 60 ct/call at most.

Leisure and business travelers can find **answers to frequently asked questions** and further **contact details** online.

Our passenger transport services on social media

Our passenger transport is available on various social media channels for conversations, discussions and for service and product questions. You can find us on Facebook, Instagram, Twitter and YouTube.

Financial calendar

July 25, 2019

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January–June 2019

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