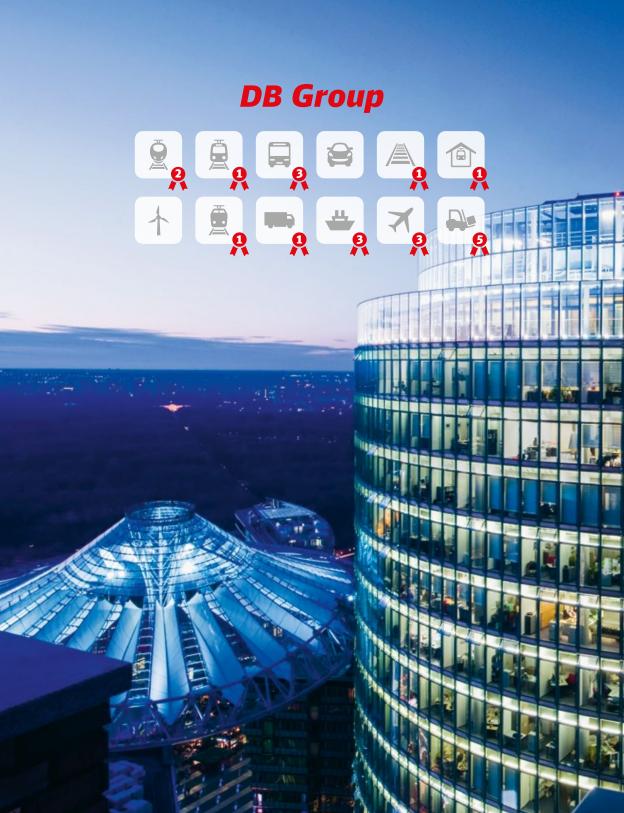


# DB Group Our fleets and networks 2017





- International provider of mobility and logistics services
- Integrated Group
- Active in over 130 countries worldwide
- More than 320,000 employees worldwide, almost 40% thereof outside of Germany
- Leading market positions in all relevant markets

# **Worldwide presence**



# New in 2017

DB Schenker: Africa: Cameroon, Malawi, Chad Asia/Pacific: Afghanistan, Brunei, Mongolia



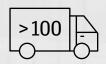
billion passengers on our trains and buses



million tons of freight carried in rail freight transport



km-long rail network



million shipments in European land transport



million tons of air freight volume



billion passengers on our trains in Germany



- Long-distance rail passenger transport operated on a purely commercial basis with the ICE/IC/EC fleet forms the backbone of DB Long-Distance in Germany.
- IC Bus offers a supplement to rail transport services for certain domestic and international journeys.
- DB Regional provides regional rail passenger transport and bus services with an extensive network of regional express, regional

- train, S-Bahn (metro) and regional bus lines, thus offering passengers connections in metropolitan areas and across Germany.
- DB Arriva is our European growth platform in passenger transport. With our buses, trains, trams, water buses and car and bike sharing systems, we offer a broad range of transport services in 14 European countries.



countries



billion passengers across Europe



buses in use



ICE trains



billion passengers on our trains in Germany



billion passengers outside of Germany



# Autokraft takes over bus operations in the Greater Ratzeburg area

Eight new MAN articulated buses have been in service in the Greater Ratzeburg area since December 2017. The buses are being operated by Autokraft, which took over bus transport in the Greater Ratzeburg area with the timetable change. One of the articulated buses is 18.75 m long, 0.75 m longer than normal articulated buses. The transport services were put out to tender throughout Europe and awarded to Autokraft for a period of ten years. A total of 21 new buses were purchased.

MANUFACTURER: MAN COMMISSIONING: 2017 POWER: 265kW

MAXIMUM SPEED: 85 km/h

SEATS: 57 ADDITIONS IN 2017: 8 NUMBER AS OF DEC 31, 2017: 8

# **Additional electric buses in the Czech Republic**

DB Arriva has put ten Škoda Perun electric buses into operation in the eastern Czech city of Třinec. The 12-m-long buses are air-conditioned and have space for 75 passengers. The vehicles are also equipped with a low-floor entrance and a wheelchair lift. The buses are charged overnight at the depot within five hours. Electric buses are also in use in Krnov and Prague. DB Arriva operates the largest fleet of local public electric buses in the Czech Republic.

MANUFACTURER: Škoda COMMISSIONING: 2017 POWER: 160 kW MAXIMUM SPEED: 80 km/h RANGE: 110-130 km SEATS: 38 ADDITIONS IN 2017: 10 NUMBER AS OF DEC 31, 2017: 10



# New eco-friendly buses in Denmark

DB Arriva has received 41 new MAN Lion's City GL A40 buses for transport services in Denmark. The articulated buses will be used on the new BRT line from Herley, in the north of Copenhagen, through the city center to the airport. The 18.75-m-long city buses have double-leaf swinging sliding doors 1,250 mm wide with an optimized electric drive. Run on biogas, these articulated buses are virtually CO2-neutral and thus equivalent to all-electric vehicles, and are in compliance with the Euro VI standard.

MANUFACTURER: MAN COMMISSIONING: 2017 POWER: 228kW

MAXIMUM SPEED: 80 km/h

SEATS: 36 ADDITIONS IN 2017: 41 NUMBER AS OF DEC 31, 2017: 41

# **Expansion of hybrid bus fleet**

DB Arriva has put 228 new Volvo B5LH hybrid buses into service. 177 buses are in operation in London, the remaining 51 in region North West. The Wrightbus Gemini 3 HEV buses are designed as double-deck buses. The highly efficient Euro VI buses can achieve fuel savings of up to 30 % in mixed traffic. This significantly reduces the CO2 output.

MANUFACTURER: Volvo COMMISSIONING: 2017 POWER: Combustion engine 180 kW/electric motor 110 kW

MAXIMUM SPEED: 70 km/h SEATS: 66 ADDITIONS IN 2017: 228 NUMBER AS OF DEC 31, 2017: 228





# New multipurpose locomotives for DB Regional

The 147 series is a series of multipurpose locomotives manufactured by Bombardier (Bombardier Traxx AC3). The 20 locomotives from this series ordered by DB Regional Baden-Württemberg were delivered in 2017. The vehicles are used for traffic on the Franconia Railway and the Gäu Railway as well as for the connections Stuttgart–Karlsruhe and Stuttgart–Heidelberg. Another 25 locomotives were ordered for DB Long-Distance at the end of March 2017 and are scheduled for delivery from 2019.

MANUFACTURER: Bombardier COMMISSIONING: 2017 POWER: 5,600kW MAXIMUM SPEED: 160 km/h ADDITIONS IN 2017: 20 NUMBER AS OF DEC 31, 2017: 20

# New double-deck multiple units

DB Regional has procured Twindexx Vario double-deck multiple units for routes with high passenger volumes and short platforms. The train is driven by the two end cars, which in addition to the passenger compartments also have driver's cabins and traction motors. Up to four middle carriages can be coupled between them. The passenger compartments are equipped with power sockets, passenger information, video surveillance, exterior loudspeakers, mobile radio repeaters and seat reservations, depending on requirements.

MANUFACTURER: Bombardier COMMISSIONING: 2017 POWER: 4,600 kW MAXIMUM SPEED: 160 km/h SEATS: 350 ADDITIONS IN 2017: 10 NUMBER AS OF DEC 31, 2017: 10



# ICE DE ICE BR 4172

# Training sessions in the new ICE 4 simulator

The regular training sessions for drivers take place in two simulators on the new ICE4 simulator. The simulators, which weigh several tons, are manufactured by Airbus and were delivered to Fulda and Karlsruhe by heavy-duty transporters. At 12 locations in Germany, there are simulators of different ICE series, where drivers can practice driving even in extreme weather conditions such as snowfall, fog, heavy rain or in the event of operational malfunctions. This is an important part of the training and further education of the approximately 20,000 locomotive drivers.

# Bike-sharing service started in Slovakia

DB Arriva has launched its first bike-sharing program in Nitra, the fifth-largest city in Slovakia, to promote our commitment to sustainable and responsible transport solutions. The service was developed in cooperation with the municipal authorities in Nitra. The bikes are available to customers from March to November. ArrivaBike is the fourth public transport sharing service that DB Arriva has introduced in recent years. We are thus promoting more eco-friendly and flexible travel options and meeting customers' growing demand for more shared services.



# ICE 4 begins regular operation

On December 10, 2017, the ICE4 (412 series) started regular operation after a one-year trial run. It will initially run on the Hamburg–Munich and Hamburg–Stuttgart lines. The ICE4 fleet will grow to a total of 119 trains by 2023. The new generation of trains will thus form the backbone of long-distance transport. As the most modern ICE in the long-distance fleet, the ICE4 combines travel comfort, innovative technology and energy efficiency.

MANUFACTURER: Siemens, Bombardier COMMISSIONING: from 2016 START OF REGULAR OPERATION: December 2017 POWER: 9,900 kW MAXIMUM SPEED: 250 km/h SEATS: 830 ADDITIONS IN 2017: 6 NUMBER AS OF DEC 31, 2017: 8



# Modernization of the ICE3 fleet begun

Our 403 series ICE3 multiple units are being modernized through 2020. The first modernized train went into service in March. Passengers will benefit from new seats, tables and carpets, and more space for luggage, more information monitors with real-time displays, a newly designed compartment for people with young children and an on-board restaurant with 20 seats. In addition to the renewal of the exterior paintwork, improved instructions using pictograms and inscriptions on the outside and inside of the train will be implemented.

MODERNIZATION CARRIED OUT BY: DB Vehicle Maintenance

POWER: 8,000kW

MAXIMUM SPEED: 330 km/h

SEATS: 450

TRAINS REFITTED IN 2017: 10

# Further expansion of the ICE3 fleet

In 2017, we put two additional new 407 series ICE3 multiple units into service. They excel in terms of service and comfort, and also due to their low energy consumption. Since summer 2015, the ICE3 trains have been in use for high-speed cross-border transport to France.

MANUFACTURER: Siemens
COMMISSIONING: from 2000 (ICE3)

POWER: 8,000kW

MAXIMUM SPEED: 320 km/h

SEATS: 460 ADDITIONS IN 2017: 2 (407 series) NUMBER AS OF DEC 31, 2017: 17 (407 series)





# More new IC2s in use

Since December, the new double-deck Intercity 2 (IC2) has been in service on the Stuttgart–Singen Gäu Railway, which runs every two hours. The IC2 offers legroom like that in the ICE, mobile radio repeaters and sockets on all single and double seats and tables. The trains have room for nine bicycles, two wheelchairs and a compartment for people with young children. From the end of 2019, the IC2 will serve the Stuttgart–Singen–Zurich line hourly, with no change necessary. A further 42 IC2s have been ordered to expand our network. Commissioning is planned between the end of 2018 and 2019.

MANUFACTURER: Bombardier COMMISSIONING: from 2015

POWER: 5,600kW

MAXIMUM SPEED: 160 km/h

SEATS: 465 ADDITIONS IN 2017: 2 NUMBER AS OF DEC 31, 2017: 27

# Network



# **Transport contract awarded in Sweden**

DB Arriva has been awarded again with an eight-year contract to operate the Pågatågen trains in southern Sweden until 2026. The contract extension was won in an open tender and has a volume of € 550 million. DB Arriva has been operating transport services in the Malmö, Helsingborg and Trelleborg area since 2007 with 520 employees. DB Arriva continues its track record with the new contract for Pågatågen. The order consolidates DB Arriva's position on the European mainland.

# Germany's first autonomous bus line started

The first automated scheduled bus transport in Bad Birnbach will initially connect the town center with Rottal Terme and will then travel to Bad Birnbach station in the course of 2018. The vehicle was built by the French company EasyMile. The EZ10 is a driverless electric shuttle. The bus is allowed to carry up to six passengers in Bad Birnbach. Thanks to its extendable ramp, wheelchair users or passengers with strollers can also get in and out of the vehicle without any problems.



# **Acquisition strengthens position in Croatian bus market**

DB Arriva's acquisition of the Croatian Autotrans Group solidifies its position as one of the largest transport service providers in Europe. Under the agreement, DB Arriva will acquire a 78.34% stake in the bus company. This makes DB Arriva the number one private bus operator in Croatia that is responsible for long-distance and local transport throughout the country. The investment in Croatia is part of Arriva's continuous expansion strategy throughout Europe.

# **Continued operation of the Northern Lines**

DB Arriva continues to operate regional rail transport in the north of the Netherlands. The new 15-year Northern Lines contract has a volume of € 1.6 billion and also includes cross-border connections to Lower Saxony. DB Arriva has operated the Northern Lines since 2005. The new contract runs from 2020 to 2035. It comprises the regional railway lines around the provincial towns of Groningen and Leeuwarden (Friesland) with a connection from Groningen to Leer in East Friesland in Lower Saxony.



# Contract for the S-Bahn (metro) Rhine-Neckar received

DB Regional has been awarded the contract to operate the 6b S-Bahn (metro) Rhein-Neckar network by the public transport authority. Operation will start in two stages from December 2020. The transport contract, which runs until the end of 2034, covers a total volume of about six million train kilometers per year. DB Regional is procuring 57 new Mireo vehicles from Siemens for use in the 6b network. Once the vehicles have been delivered, they become the property of a company operating at country level belonging to the public transport authority and are leased by DB Regional for the duration of the 14-year transport contract.

# Infrastructure

# **Commissioning of the DB Regional works in Munich-Pasing**

With the symbolic entrance of the first train, the new DB Regional workshop for regional trains in Munich-Pasing was officially opened on October 4, 2017. The 207-m-long hall with five tracks replaces the more than 70-year-old railway depot. The new building cost € 50 million. The work has 4-m-high roof working platforms, which are used to maintain trains on several levels at the same time. A lifting jack is also being installed that can lift an entire 436 t train. Energy is generated from geothermal sources, and the output of CO₂ is reduced by up to 80%. LED lighting produces savings of up to 30%. A semi-automated warehouse with a new warehouse management system is part of the digital equipment.



# New workshop in the DB Regional works in Münster begins operations

On the site of the existing works in Münster, we have opened a workshop 110 m long and 12.5 m wide for the maintenance of vehicles up to 90 m long. The workshop area is directly connected to the Münster–Dortmund 2200 line via a new feeder track, and is located about 2 km south of Münster central station in an industrial area. The working platform is equipped with a working pit and a roof working platform along its entire length. The southern end of the building is formed by a two-story administration and technical building with foremen's offices and technical rooms. DB Regional will maintain 20 National Express trains that operate between Münster and the Rhineland.

# 90th anniversary of the Schöneweide works

In October, we celebrated the opening of the Berlin-Schöneweide S-Bahn (metro) works 90 years ago. When it opened in 1927, the works was the most modern repair works in the German railway system. Training has been carried out in the facility since 1934. The building complex, with its large halls, is still impressive today. The works is currently working intensively on upgrading the 480 and 485 series S-Bahn (metro) trains for continued operation. Over the next several years, 500 quarter trains from the 481 series will also be overhauled as part of the "Longevity" project in Schöneweide for continued use.





# Europe's most modern ICE maintenance facility in Cologne-Nippes

The new CO₂-neutral ICE facility in Cologne-Nippes cost about € 220 million. The entire workshop site is 2.6 km long and 100 m wide. A total of four maintenance tracks with a length of 410 m have been built. Starting in 2018, new ICE4 trains will be put into operation in the new facility and taken over by Siemens. The entire ICE fleet is regularly serviced, checked and repaired in Cologne. The removal of vandalism damage as well as internal and external cleaning will also take place in the hall. In addition, components such as wheel sets, bogies and traction motors are to be replaced. Heat from geothermal sources and electricity from solar energy are used to operate the facility on a CO₂-neutral basis.

# **Digital services**

# DB Trip turns smartphone into a travel guide

DB Regional provides exclusive tips on quick trips with its new DB Trip (DB Ausflug) app. The app is aimed at everyone who likes to be on the go without having to do a lot of research in advance – whether for a hike or city tour, bike ride, fun on the water or wellness day, whether for a day or for a few hours. It allows the user to filter by specific activities, duration, travel region or starting point, or to get inspiration from the illustrated tour recommendations. There are also tours that are accessible for people with disabilities and family excursions. The app is linked to the Mitfahrer (ride sharing) app and DB Navigator.



The 

☐ DB AUSFLUG APP can be downloaded free of charge from the Google Play Store or the Apple App Store.

# DB Route Agent provides assistance in the event of malfunctions

DB Route Agent (DB Streckenagent) is an app that informs railway customers nationwide via push message about the current situation and possible alternatives in the event service is disrupted. Customers can subscribe to the personal connections that they want the DB Route Agent to monitor. In the event of a disruption on one of their lines, users receive up-to-date push notifications on their smartphone or tablet. The customer will receive updates either until the disruption has been rectified or until a travel alternative has been offered.

The  $\square$  DB ROUTE AGENT APP can be downloaded free of charge from the Google Play Store or the Apple App Store.

# Rail travel can now be booked online further in advance

We have improved the service for customers booking tickets online: passengers who plan travel earlier can book train tickets on bahn.de and in DB Navigator up to 180 days in advance. This means that tickets for summer holidays, for example, can also be purchased online much earlier. Previously, this was only possible in DB Travel Centers, in DB agencies and via the telephone travel service. The new advance booking period also applies to services related to the planned trip, such as seat reservations and baggage service.



# ARRIVACLICK Personal by V/Q H. Weite Arrivacual day and personal personal day and d

# **DB Arriva starts on-demand minibus service**

DB Arriva started an innovative on-demand minibus service in March. Customers can order a minibus using the ArrivaClick app. The bus stops at a nearby street corner without the need for a timetable or bus stop. The app automatically compares the data with that of other users whose destination is in the same direction. The buses can accommodate up to 12 people and are equipped with leather seats, tables, USB connections, free WiFi and electric charging stations. Currently the ArrivaClick service is offered around Sittingbourne and the Kent Science Park.

The 

ARRIVACLICK APP can be downloaded free of charge from the Google Play Store and the Apple App Store.



- 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.
- Nowhere else in the world is there such a dense rail network as in Central Europe.
   DB Cargo - Europe's largest and most efficient freight railway - operates from the heart of this network.
- DB Schenker is the world's leading provider of global logistics services, supporting industry and trade in global goods exchange

- through land transport, global air and ocean freight, contract logistics and supply chain management.
- Top positions in the automotive, technology, consumer goods, trade fair forwarding, special transport and services sectors for major sporting events.
- DB Schenker serves established markets and emerging national economies with a global network as an integrated transport and logistics service provider.



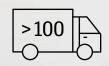
million tons of freight carried in rail freight transport



countries – worldwide presence of DB Schenker



million m<sup>2</sup> of warehouse space in contract logistics



million shipments in European land transport



million TEU by ocean freight



million tons of air freight volume



# The newest generation of e-locomotives for DB Cargo Germany

The first 187 series TRAXX AC3 electric locomotives were delivered at the end of 2016. In 2017, further locomotives were put into operation and their use is steadily growing throughout Germany. A total of 110 of the locomotives were ordered, ten of which will also be delivered for use in heavy ore trains with automatic coupling. The new locomotives will replace older and less economical 151 series and 155 series locomotives.

MANUFACTURER: Bombardier COMMISSIONING: 2016–2019 POWER: 5.600 kW MAXIMUM SPEED: 140 km/h ADDITIONS IN 2017: 39 NUMBER AS OF DEC 31, 2017: 55

# **New multisystem locomotives**

We are focusing on growth in rail freight transport and are purchasing 60 Vectron multisystem locomotives from Siemens. The vehicles, which can be used across borders, are part of a framework contract with Siemens for up to 100 new line locomotives for DB Cargo. The first five locomotives entered into service in December 2017. The other 55 locomotives are scheduled for delivery in the second half of 2018. The locomotives equipped with the European train protection system ETCS will in future run on the Rhine-Alpine corridor in Germany, Austria, Switzerland, Italy, the Netherlands and, from 2020, also in Belgium.

MANUFACTURER: Siemens COMMISSIONING: 2017 POWER: 2,400kW/275kN

POWER: 2,400 kW/2 WEIGHT: 83 t MAXIMUM SPEED: 160 km/h ADDITIONS IN 2017: 5 NUMBER AS OF DEC 31, 2017: 5



# Modified Sggrs 716 freight cars

The 104-foot Sggmrs 715 cars were originally procured for continental swap body transports and are now to be used in container transport due to a change in the load container structure. The efficiency-increasing conversion to Sggrs 716 mainly consists of shortening the car from 104 to 80 feet, increasing the contact height, reconstructing the lateral support in the area of the joints and converting the brakes from gray cast iron to innovative, low-noise composite (K) brake shoes.

MANUFACTURER: Greenbrier/Astra Rail Industries DEADWEIGHT: 28.2 t MAXIMUM LOAD: 104 t LENGTH OVER BUFFERS: 26.8 m MAXIMUM SPEED: 100 km/h ADDITIONS IN 2017: 96 NUMBER AS OF DEC 31, 2017: 96

# Test of all-electric trucks from series production

In December 2017, Daimler officially delivered the first series-produced electric light trucks to the first customers in Europe. DB Schenker has consciously opted for the FUSO eCanter and will test the E-series vehicle for city logistics under real production conditions. Among other things, one of the three vehicles will be used for the delivery and collection of general cargo shipments in central Berlin.

MANUFACTURER: Daimler AG MAXIMUM LOAD: 4,500 kg

DRIVE: 6 batteries, each 420 V/13.8 kWh BATTERY RANGE: > 100 km



# New Saghmmns-ty 488 freight cars

The "Bra-Coil" wagon is an innovative new construction freight car for use in the steel industry. The car has a combined loading frame, which enables the transport of slabs and coils without converting the car. Two different types of car are currently available for transporting slabs (Samms) and coils (Sah). The multifunctionality of the Bra-Coil car minimizes the number of empty cars supplied and better compensates for fluctuations in demand for the individual products. The development costs are partly borne by the BMVI funding initiative "innovative freight cars."

MANUFACTURER: Tatravagonka A.s.

DEADWEIGHT: 34.5t MAXIMUM LOAD: 100.5t LENGTH OVER BUFFERS: 16.4 m MAXIMUM SPEED: 120 km/h ADDITIONS IN 2017: 3 NUMBER AS OF DEC 31, 2017: 3



# Network

# **Logistics hub in Madrid opens**

DB Schenker opened its largest logistics hub in Madrid/Spain on a 60,000 m² site in 2017. Domestic and international land transport and project departments as well as air and ocean transport are bundled here in the Spanish capital. The terminal was built according to the latest energy-saving and sustainable criteria.



# State-of-the-art logistics hub in China opens

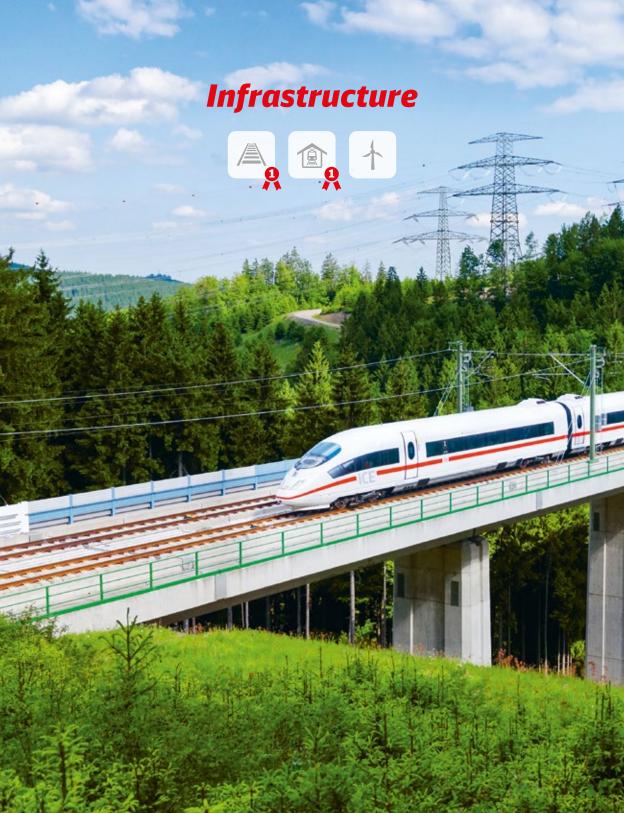
DB Schenker and Jinbei Automotive opened a state-of-the-art logistics hub in Shenyang on December 12, 2017. DB Schenker and Jinbei Automotive launched their joint venture, Schenker Jinbei Logistics, in May 2016 and started construction of the state-of-the-art facility. The Shenyang Logistics Center, at 42,000 m² one of DB Schenker's largest logistics hubs worldwide, is now available to various customers. An initial construction phase of 19,000 m² went into operation at the end of 2016.



# **Digital services**

# Shunting locomotive finds its own way

DB Cargo uses automatic shunting locomotives as part of fully automated marshaling yards. A pilot project is currently underway at the Munich North marshaling yard. So far, locomotives have pushed the cars semi-automatically. Now the locomotives are also automatically controlled during reversing and restarting. This means that the shunting operation is fully automatic for the first time. The test locomotive is equipped with modern sensors and control technology and can detect obstacles and persons and automatically drive up to the freight cars for shunting. Its processes are embedded in the entire control process of a marshaling yard.



- We are creating the conditions to cope with growing traffic flows in Europe.
   To accomplish this, we look after the rail network and passenger stations as well as the energy supply for train operating companies in Germany.
- DB Netze Track is Europe's number one rail infrastructure provider. More than a billion train-path kilometers are traveled each year on the tracks in Germany.
- DB Netze Stations is the largest station operator in Europe. In addition to the core business - the development and operation of stations - it offers a variety of mobility-oriented services in and around stations.
- DB Netze Energy offers all of the conventional industry energy products in Germany in the fields of traction energy and stationary energy.



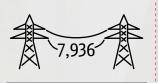
km-long network in Europe



tunnels



railway bridges



km of traction current grid



passenger stations



Group and non-Group customers

## New rescue trains in use

The rescue trains stationed in Würzburg and Fulda were replaced by a train with state-of-the-art technology. The 138-m-long train has two diesel locomotives (714.1 series) and five cars for emergency technology. The cars are equipped with state-of-the-art technology for the rescue of injured persons and medical equipment as well as extinguishing water and foaming agents. The emergency vehicle even has its own oxygen supply with air locks. Two locomotive drivers, professional firefighters, emergency doctors and rescue forces form the crew. By summer 2019, we will update six rescue trains and one replacement train.

MANUFACTURER: Dräger/Tatra-Waggonbau COMMISSIONING: 2017 WEIGHT: 441t MAXIMUM SPEED: 100 km/h ADDITIONS IN 2017: 2 NUMBER AS OF DEC 31, 2017: 2



# Infrastructure

# New concourse building for Münster central station

On June 24, 2017, the new concourse building was opened at Münster central station. The concourse hall offers three floors and 8,000 m² of services and shopping, as well as office and administrative space. Including the work carried out in 2013, capital expenditures totaled about € 76 million. Münster central station is now open around the clock. In the future, passengers will not only be informed about train departures but also about bus departures at a large information board in the main hall.



# Lutherstadt Wittenberg station is "station of the year"

Lutherstadt Wittenberg station is "station of the year" for 2017. The Pro-Rail Alliance jury was particularly impressed by the simplicity and suitability for everyday use of the new building, which was completed in 2016. It is – after Horrem in North Rhine-Westphalia – the second green station in Germany. Its photovoltaic system, rainwater treatment and geothermal energy make it a CO<sub>2</sub>-neutral station. In the concourse building, passengers can enjoy a station bookshop, a bakery and an open waiting area with seating. There are also charging facilities for electrical devices and a WiFi hotspot. The Bayerisch Eisenstein station also received an award.



# Modernization of S-Bahn (metro) tunnel stations

With a comprehensive revitalization program, we continue to improve the appearance of the S-Bahn (metro) tunnel stations in Frankfurt am Main, Munich, Hamburg and Stuttgart, which are used daily by about two million passengers. We are fundamentally modernizing the stations and equipping them with tactile guidance systems for the visually impaired and improved guidance for all passengers. The aim is to create a more pleasant atmosphere for our customers.

# Networks

# Berlin-Munich opened on time for the timetable change

With a run by two special trains and a large ceremonial opening in Berlin, Germany's most modern railway line went into operation in December. The completion of the new construction line from Erfurt to Ebensfeld (near Bamberg) closes the last gap in the German unification transport projects. Since the timetable change on December 10, 2017, 35 ICE trains have been running on the new line every day. With the opening of the Berlin–Munich line, the biggest change in the timetable since DB AG was founded is associated with numerous improvements to its services. Fourty-five stations throughout Germany can be reached directly by ICE train via the new high-speed line through the Thuringian Forest. Seventeen million people in Germany benefit from shorter travel times, new direct connections and better connections.



# **Berlin-Dresden back in operation**

After 16 months of closures, the Berlin-Dresden route is back on line in time for the timetable change. Regional and long-distance trains are again running on the connection via Elsterwerda. Construction on 73 km in the state of Brandenburg began in August 2016. About 840,000  $\rm m^3$  of earth was moved. A total of 112,000 railway sleepers, 134 km of rails and 100 km of cable had to be laid, and 1,800 new catenary masts had to be installed. Platforms and platform entrances as well as seven railway bridges and 19 passages were renewed. Six new interlocking were built for the modern, computer-controlled command and control technology. The 4 km section in Großenhain in Saxony was also rebuilt. The tracks, seven bridges and the track equipment were renewed. In addition, around 1.2 km of noise protection walls were erected.

# **Digital services**

# DB LiveMaps provides train radar

With DB LiveMaps, we have developed an innovative solution for the realtime, map-based representation of German rail transport. DB LiveMaps processes timetable data and operational data on train movements as they are available in the operations centers and transfers the respective train positions to an interactive map. A client system makes it possible to manage users and allows the display of train numbers. DB LiveMaps is available in basic, comfort and professional versions. The application is generally available via a browser on the Internet and as an app for iPhone/iPad and Android.



# **Imprint**

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Cover page Max Lautenschläger \$2-3 Max Lautenschläger \$4-5 Max Lautenschläger \$6-7 MAN, Andrew Davidson, DB AG, DB AG/Uwe Miethe, Peter Letko \$8-9 Max Lautenschläger, DB AG, Max Lautenschläger, DB AG/Volker Emersleben, DB AG, DB AG/Uwe Miethe, Davor Zunic, DB AG, Siemens AG \$10-11 Simon Koy, DB AG, Christiane Flechtner, Max Lautenschläger, DB AG \$12-13 Max Lautenschläger \$14-15 DB AG/Wolfgang Klee, Siemens AG, DB AG, Daimler AG, DB AG \$16-17 DB AG/Barteld Redaktion & Verlag \$18-19 DB AG/Anton Knapp, Max Lautenschläger, Stephan Roehl, DB AG/Christian Bedeschinski, Oliver Lang, DB AG, Sascha Müller-Harmsen

As of: December 31, 2017



