DB NETZE

The largest rail construction site in Germany

Upgraded and new lines between Nuremberg and Berlin

Deutschlands kurze Wege

German Unity Transport Project 8 Nuremberg–Berlin

Individual projects were co-financed by the **ERDF Federal Transport Operational Programme 2007–2013**

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European Regional
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Bundesministerium
für Verkehr und
digitale Infrastruktur

Co-financed by the European Union
Trans-European Transport Network (TEN-T)

Goal for 2017:

Berlin to Munich in four hours

High-speed trains will soon be travelling on the entire new line – at speeds of up to 300 km/h, carrying passengers between the city centres of Berlin and Munich in record-breaking times. Trains will become a real alternative to travelling by car or plane.

The German Unity Transport Project 8 (VDE 8), which will link Nuremberg and Berlin, is nearing completion. The new line Erfurt–Leipzig/Halle was inaugurated at the end of 2015, with all new routes between Nuremberg and Berlin due to be complete in 2017.

The ten-billion euro project was approved by the federal government in 1991 to improve the transport links between East and West and between North and South. It will also close the gaps in the German high-speed rail network. Freight trains will also travel on the route. The line will open many opportunities for implementing state-of-the-art transport concepts – heralding the dawn of a new era in rail travel.

The new line Erfurt–Leipzig/Halle (VDE 8.2) entered into service in December 2015, making journeys between East and West much faster - cutting an hour off the journey time between Dresden and Frankfurt. The upgraded and new line Nuremberg–Erfurt (VDE 8.1) through the Thuringian Forest shortens the journey time between southern and northern major cities significantly – by up to two hours. When service started on the upgraded line (VDE 8.3) in 2006, the journey time between Leipzig/Halle and Berlin was already halved to approximately one hour and fifteen minutes.

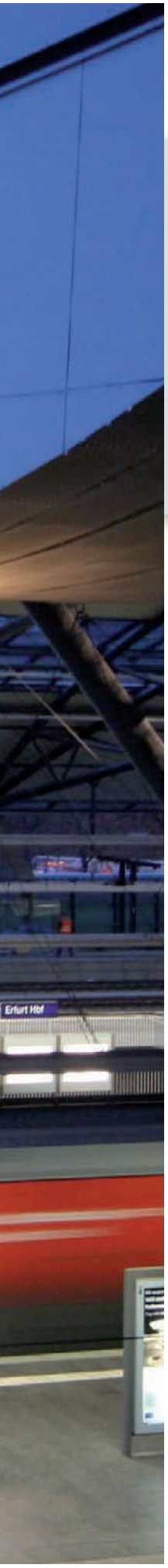
New line Ebensfeld-Erfurt (VDE 8.1) through the Thuringian Forest 2012

Journey times: VDE 8 (January 2016)

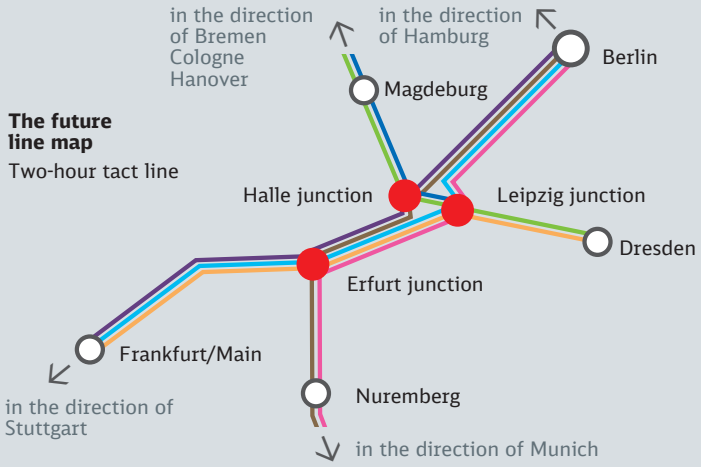
since 2006	So far	Today	Saving
Leipzig – Berlin	≈ 2:25 h	≈ 1:15 h	– 1:10 h
since December 2015			
Leipzig – Erfurt	≈ 1:15 h	≈ 45 min	– 30 min
Leipzig – Frankfurt	≈ 3:26 h	≈ 3:06 h	– 20 min
Halle – Frankfurt	≈ 3:40 h	≈ 2:45 h	– 55 min
Halle – Erfurt	≈ 1:20 h	≈ 35 min	– 45 min
Erfurt – Dresden	≈ 3:00 h	≈ 2:00 h	– 1:00 h
Erfurt – Berlin	≈ 2:40 h	≈ 1:50 h	– 50 min
Dresden – Frankfurt	≈ 5:15 h	≈ 4:15 h	– 1:00 h
from December 2017	Today	Future	Saving
Munich – Berlin	≈ 6:00 h	≈ 3:55 h*	– 2:05 h
Halle – Munich	≈ 4:50 h	≈ 2:45 h*	– 2:05 h
Erfurt – Munich	≈ 4:30 h	≈ 2:30 h	– 2:00 h
Nuremberg – Berlin	≈ 4:45 h	≈ 2:50 h*	– 1:55 h
Nuremberg – Erfurt	≈ 3:10 h	≈ 1:20 h	– 1:50 h
Leipzig – Munich	≈ 4:40 h	≈ 3:15 h	– 1:35 h
Dresden – Munich	≈ 6:20 h	≈ 4:45 h	– 1:35 h

* sprinter trains

The modernised Erfurt main station 2008
Image on the right: new platforms at Leipzig main station 2015



Well-interlinked:



Connecting the region to the fast network

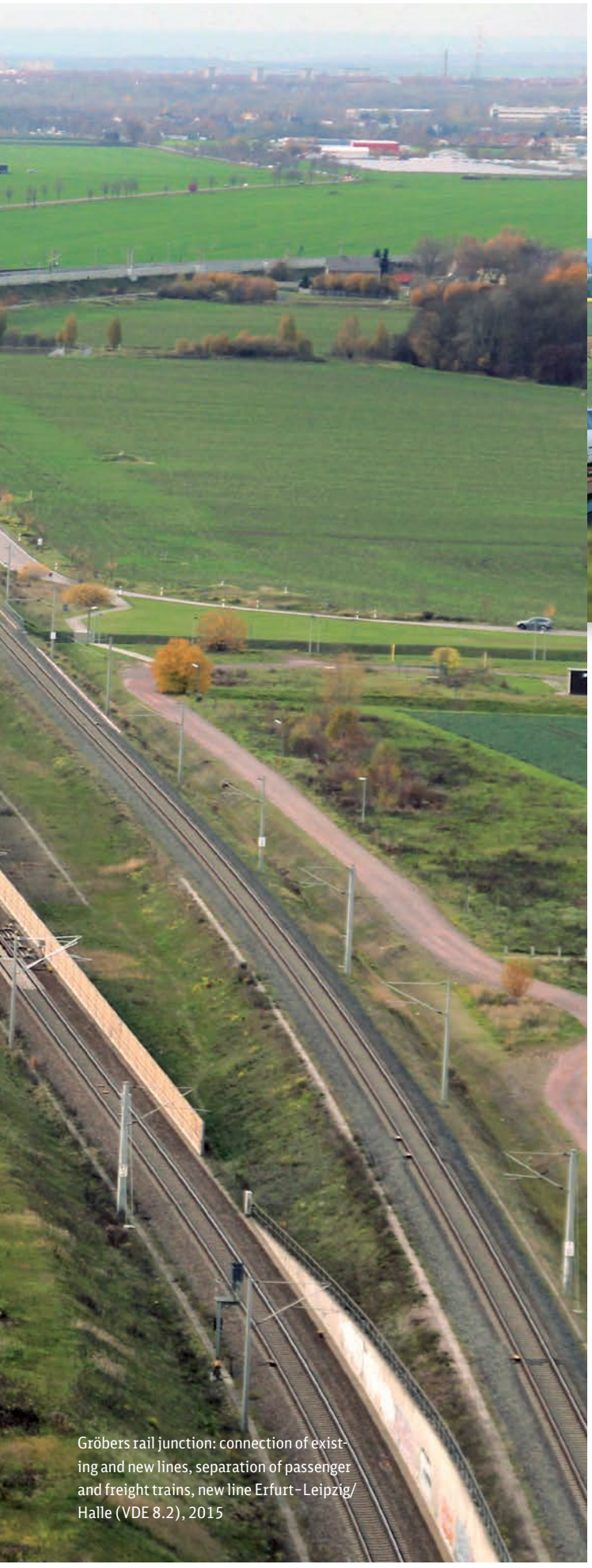
The new line enables faster journey times and excellent connections between cities. And much more: the Erfurt, Halle and Leipzig junctions are the central interchange stations to the region.
Example scenario for Erfurt: the express trains arrive hourly in a time frame of approximately 10 minutes. Passengers can change trains between the fast lines – for example, leave the Dresden–Frankfurt express train and board the Berlin–Munich train.
Or they can continue travelling to the region. For only a few minutes after the express trains have departed, trains to the surrounding region start their journey. The best possible options to change between fast and regional trains bring a new quality to travelling.

The junctions are being completely modernised. Outdated track systems in Erfurt, Halle and Leipzig, some of which have been operating since the beginning of the 20th century, are being upgraded: this will ensure that trains reach stations quickly, take away any journey time saved and pass this on to the regional transport. Around a billion euros is being invested in railway stations, platforms, tracks and technology at the three junctions: to establish the most modern railway infrastructure that has ever existed and achieve new mobility in long-distance and regional transport.

New construction at Erfurt junction	
Rail network covering	7 km
Track length	75 km
Switches	110
Bridges	8
Electronic signal boxes	1
Railway stations	1
Number of platforms	12
Arrival and departure speed	100-160 km/h
Integration of VDE 8.1	2017

New construction at Halle junction	
Rail network covering	9 km
Track length	50 km
Switches	200
Bridges (including reconstruction)	9
Electronic signal boxes	2
Number of platforms	12
TFY (train formation yard facility)	1
Arrival and departure speed	80-160 km/h
Integration of VDE 8	2017
Overall construction period	2014–2020

New construction at Leipzig junction	
Rail network covering	16 km
Track length	25 km
Switches	154
Bridges	2
Electronic signal boxes	1
Number of platforms	8
Arrival and departure speed	80-160 km/h
Integration of VDE 8	2017
Overall construction period	2012–2020



Gröbers rail junction: connection of existing and new lines, separation of passenger and freight trains, new line Erfurt–Leipzig/Halle (VDE 8.2), 2015

One route if possible; separate routes if necessary:

Freight and passenger trains on one route – with purposeful branches

High-speed trains and slower freight trains on the same line? A good idea? Passenger trains have different railway line requirements than freight trains. For fast trains, speed should be reduced at as few curves as possible. In contrast, if large loads are being transported, the gradient should be as low as possible. This has been taken into account in the new line constructed.

And what if a slow freight train is in the way of a fast express train? Then it overtakes the freight train. There is an overtaking station every 20 kilometres. A train can drive on to the holding track there and let the faster train pass. If space is tight, e.g. around Nuremberg, or necessary, e.g. around Leipzig, freight traffic branches off. From the Gröbers junction, shipments roll directly into the container terminal in Leipzig, the freight traffic centre or the air freight transfer station.

A railway with no boundaries:

Closing gaps in the European high-speed rail network

Individual projects were co-financed by the European Regional Development Fund

ERDF Federal Transport Operational Programme 2007–2013

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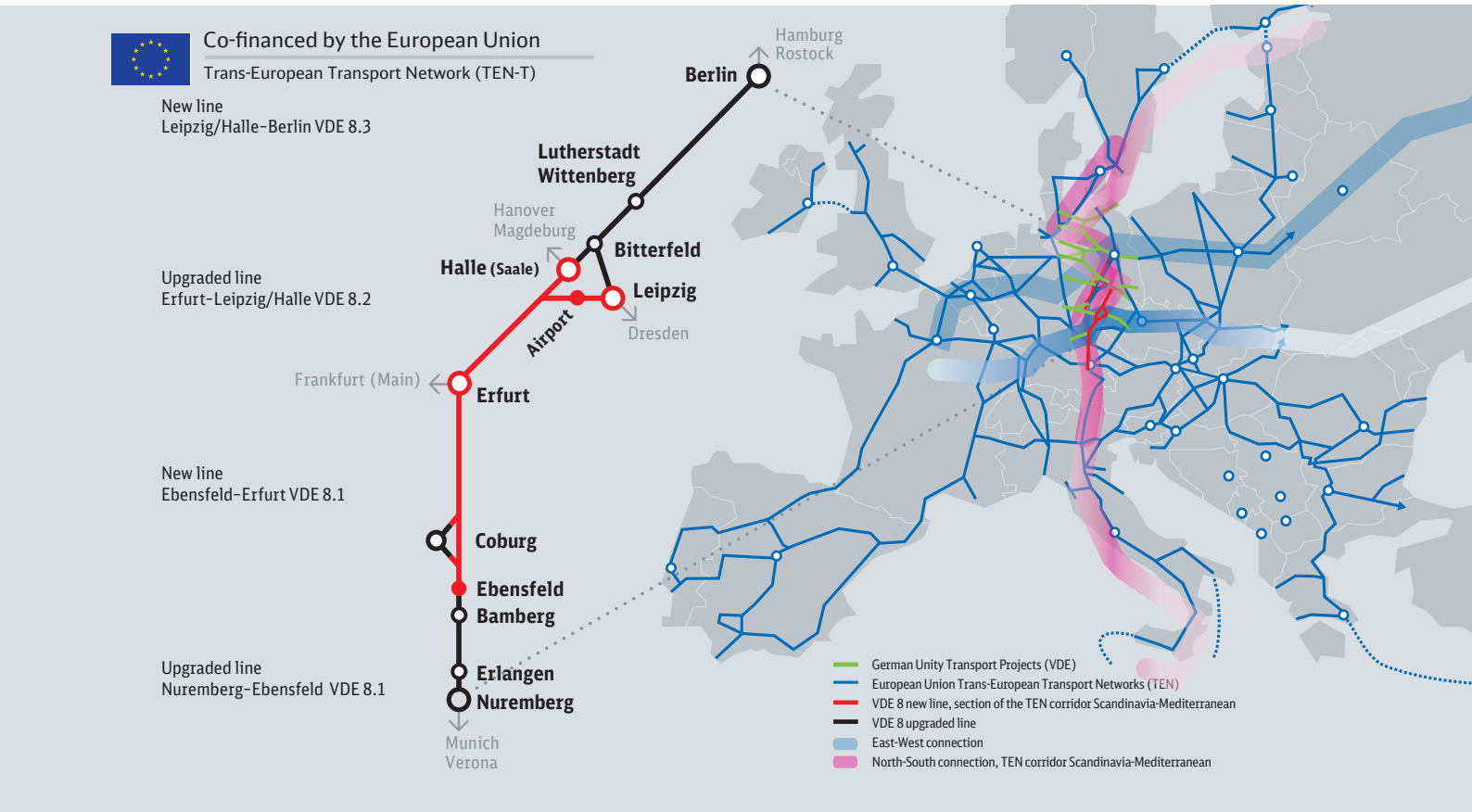
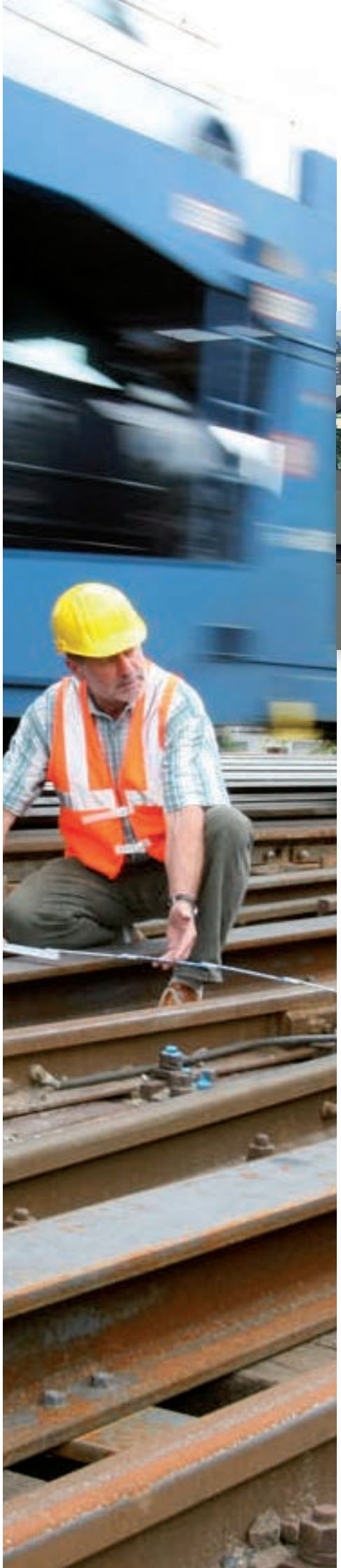
Investing in your future
European Regional Development Fund

The new high-speed route also has a European dimension: the line between Nuremberg and Berlin is an important section of the Trans-European Transport Networks (TEN-T). The line is one of the nine rail transport core network corridors, namely the Scandinavia–Mediterranean corridor, which nuns from the eastern border of Finland down to Sicily. Now that the Nuremberg–Berlin gap is closed, it will in future be possible to travel beyond national borders from southern to northern Europe without switching locomotives, making a stop or changing the train control system. Non-stop journeys and safety are the most important premises for the European rail services of tomorrow. Interoperability is the technical term. It starts with the height of the platform edges and ends with the train control system. On the Nuremberg–Berlin line, all of the required European standards have been realised – right through to disabled access to platforms. This is a significant step towards “a railway with no boundaries”.





Eliminating bottlenecks:

Visualisation: freight traffic tunnel cuts underneath the Pegnitz in Nuremberg

New routes for freight traffic

Freight traffic is to be reduced around the Nuremberg bottleneck. A 13-kilometre train path for freight trains is being built – the core part is a tunnel under Nuremberg and Fürth that is about seven kilometres long. This is the right move and important for two reasons: one of Germany's largest freight stations is in the Franconian metropolis. Furthermore, the path now used between Nuremberg and Fürth is one of the busiest in Germany. The train path for freight trains will eliminate a bottleneck.

A role that also the entire north-south axis is to exercise. It can accommodate freight traffic from very busy corridors in the West. The order of the day: the German Ministry of Transport predicts that in 2025 approximately 60 percent more goods than today will be transported by rail.

Facts and figures

Line length:	83 km
Long-distance traffic speed up to	230/160 km/h
S-Bahn speed up to	160/140 km/h
Upgraded and new S-Bahn stations	19
Tunnels	2 (total length 7.5 km)
Bridges	2 (total length 400 m)
Electronic signal boxes	3
In service	as of 2012

New tracks for freight, high-speed and S-Bahn trains:

Upgraded line Nuremberg–Ebensfeld VDE 8.1

The entire length of the line is being upgraded in several stages to four tracks, for speeds of up to 230 km/h. Between Nuremberg and Forchheim there will be an S-Bahn connection, which will run through to Bamberg as a regional train. This poses a great challenge for the engineers: construction on this line is taking place predominantly “under rolling wheels”, which means rail traffic is still operating during construction.
Sections of the line need to be closed at times. The full closure of Hallstadt–Bad Staffelstein in 2016 is the longest such closure, covering 20 kilometres and lasting 34 weeks.
The line upgrade has eliminated all existing level crossings; the connecting footpaths have been rerouted using road bridges and underpasses. Before the upgraded line is transferred to the new line, the tracks will be rearranged using a fly-over – creating two independent double-track railway lines. In the vicinity of Ebensfeld the upgraded line will be linked with the new line in 2016.

Siebenbogen Bridge in Fürth 2010: two new tracks will be added
Four-track line between Nuremberg and Fürth

Facts and figures

Line length:	107 km
Speed up to	300 km/h
Superstructure	Slab track
Tunnels	22 (total length 41 km)
Viaducts	29 (total length 12 km)
Electronic signal boxes	2
Commissioning	2017

Through the Thuringian Forest:

New line Ebensfeld–Erfurt VDE 8.1

The new line will establish the first ever direct connection between Nuremberg and Erfurt – double-tracked and electrified. Journey time: approximately one hour. Almost half of the line is routed on bridges or in tunnels – 53 out of 107 kilometres. A series of 22 tunnels – 41 kilometres long in total – and 29 bridges – twelve kilometres long in total – punctuates the line through the Thuringian Forest and through Upper Franconia.

The route, which allows speeds up to 300 km/h, ascends from the Maintal and reaches its peak of 603 metres at Goldisthal, close to the Rennsteig. It then descends towards Ilmtal and reaches the Erfurt junction. Service on the new line will start in 2017.

Interior construction of the Blessberg Tunnel 2012

Image on the right: Weissenbrunn am Forst Viaduct 2011

Sprint route in Central Germany:

New line Erfurt–Leipzig/Halle VDE 8.2

Approximately half an hour from Erfurt to Halle, three-quarters of an hour from Erfurt to Leipzig – all possible since December 2015. The double-track new line, 123 kilometres long and designed for speeds of 300 km/h, initially runs through the Thuringian Basin. It then cuts through the Finne mountain range in three tunnels with a length of 15.4 kilometres in total. On the far side of the Querfurt Plateau, the route splits towards Halle and Leipzig. The branch towards Halle lies uniquely on the Elster-Saale Viaduct. This 8.6 kilometre long structure is the longest railway bridge in Germany. Five additional bridges, all constructed according to state-of-the-art engineering standards, complete the route.

Facts and figures

Line length:	123 km
Speed up to	300 km/h
Superstructure	Slab track
Tunnels	3 (total length 15.4 km)
Bridges	6 (total length 14.4 km)
Traction current line	84 km
Electronic signal boxes	4
Commissioning Erfurt–Gröbers	2015
Gröbers–Leipzig (23 km)	2003

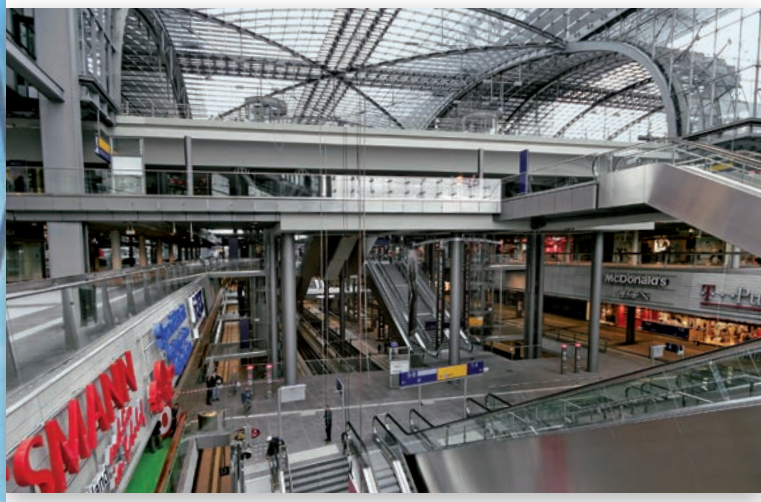
Unstruttal Bridge before the last tact 2012

Image on the right: tunnel boring machine after driving a section of the Finne Tunnel 2009

The new Erfurt–Leipzig/Halle line, VDE 8.2, was officially inaugurated on 9 December 2015. Special trains connected Halle, Erfurt and Leipzig.

Scheduled services got underway on 13 December 2015.

Comfort route well connected:



Upgraded line Leipzig/Halle–Berlin VDE 8.3

High-speed trains in a fixed tact: that is the recipe for success for the route section that has been in service since 2006. The connection, designed for speeds of up to 200 km/h, has made rail competitive compared with road travel. Journey times between Berlin and Halle/Leipzig have been reduced – to approximately one hour and fifteen minutes.

Fifty-one level crossings have been replaced with railway or road bridges. This improves the flow of traffic and increases safety for rail passengers and other road users. With the connection to the other upgraded and new lines, the established route can realise its full potential.

Facts and figures

Line length:	187 km
Speed up to	200 km/h
Superstructure	Slab/ballast track
Bridges	2 (total length 885 m)
Electronic signal boxes	4
Line commissioning	2006

Elbe Bridge in Wittenberg 2010

Image middle: Berlin Central 2006

Setting new standards: Innovation along the entire route

New bridge constructions, a modern safety concept in the tunnels, a train control system without signals on the line, upgraded platforms with disabled access, noise protection measures for residents and compensation for encroachments in nature: new benchmarks have been set during the overall project.

Arched bridges in the Thuringian Forest with record span widths to conserve the valley floor, Froschgrundsee Viaduct 2009, new line Ebensfeld–Erfurt (VDE 8.1)

Bedded in the landscape: Bridges as if built from one piece

The German Bridge Engineering Prize 2012 and 2014 was awarded to structures on the new Erfurt–Leipzig/Halle line: the Scherkondetal and Gänsebachtal Railway Bridges. The aesthetically convincing design of both bridges was praised, which was made possible by their integral construction. The road surface of a railway bridge, the superstructure, was previously joined to the pillars by means of moving bearings. Now, the engineers have abstained from using the high-maintenance and wear-susceptible bearings and joints – for the first time in railway bridge engineering in Germany. The bridges seem to be made of one piece. They appear slimmer, fit better into the landscape, require less maintenance in the long term and are therefore less expensive to maintain than conventional bridges. A total of six integral and semi-integral bridges have been built on the new lines.

Gänsebachtal Railway Bridge during a load test run, new line Erfurt–Leipzig/Halle (VDE 8.2) 2014

Tunnel that can be used by road vehicles, Osterberg Tunnel 2014, new line Erfurt–Leipzig/Halle (VDE 8.2)

Rescue tunnels branching from the main tunnel, Baumleite Tunnel 2010, new line Ebensfeld–Erfurt (VDE 8.1)

Safety and noise protection: Sophisticated tunnel construction

One tube for each direction of travel: the design principle for the tunnels on the new line between Erfurt and Leipzig/Halle. Every 500 metres there is an escape corridor, a cross-connection. In emergencies, rescue vehicles can drive directly into the tunnel tubes. This is the most advanced safety concept in German tunnel construction. For the tunnels in the Thuringian Forest, which were built based on proven construction methods with a double-track tube, safety is particularly important. They have emergency exits that can be reached through rescue shafts and tunnels. Fire-resistant and smoke-shielding airlocks separate the tunnel from the rescue routes.

Rescue areas that support helicopter landing are located at the exits.

Since the tubes allow speeds of 300 km/h, the engineers had a special idea for the five tunnel portals and installed the very latest noise protection. As a train passes through the tunnel at high speed, the air masses are pushed ahead of it, constantly accumulating before discharging at the tunnel exit with a boom. The hood structures at the portals prevent tunnel boom by allowing the pressure waves to swirl around and propagate without a boom.

Hood structures as noise protection measure and extinguishing system, Bibra Tunnel 2012/2014

Domino principle:
Slab for slab for a ballast-less track

The tracks on the new lines are placed on concrete slabs – no longer on ballast. This is called a slab track system and has many advantages. The tracks can be laid on the slabs to the exact millimetre. The slab track system is low maintenance and offers excellent travelling comfort over decades, which is a key quality characteristic for high-speed traffic.
How do the individual slabs now form a railway line? The answer is simple: the track support plates are laid one after another like domino pieces – even on bridges and in tunnels. Track construction can advance much faster in this way than with the conventional ballast method. Each slab weighs about five tonnes and is manufactured precisely to specifications at a concrete factory in Thuringia – 160,000 pieces in total.

Series production at the concrete factory: track support plates for the slab track system

Power from own grid:
New transformers and high-power overhead lines

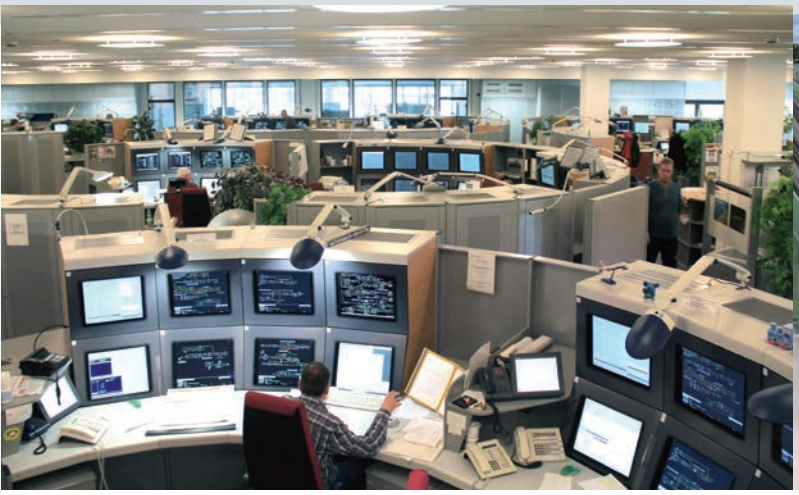
Traction current from the overhead line: the trains on the upgraded and new lines will be powered from the approximately 7,800 kilometre long traction network (110 kV high voltage), which has been upgraded to this end. Newly designed substations, similar to substations in the standard power grid, transform the mains current to the overhead line voltage of 15 kV (kilovolts). New rail power lines stretching 106 kilometres have been installed on the entire upgraded and new lines – 85 kilometres alone on the new line Erfurt–Leipzig/Halle (VDE 8.2).High-power overhead lines are being used for the main tracks on the new lines; these overhead lines meet the requirements of express traffic up to 300 km/h. To install the catenary masts in populated areas while minimising vibration, the “large diameter bored foundation method” was developed. Concrete masts have been installed on open track, while steel masts were used on bridges. In the tunnels, the overhead lines are mounted on special king posts with anchor rails on the tunnel ceilings.

Traction substation on the new Erfurt–Leipzig/Halle line in the Saubachtal in the Burgenlandkreis district

Goodbye to track-side signals:
High-tech control systems of the future

The latest technical standards: signals will no longer be used on the new line. With the European Train Control System, ETCS for short, and the GSM-R radio system, trains can be routed safely without track-side signals. The important data is transmitted by radio between train, radio block centre and track-embedded transponders. The new train control system is mandatory for all new lines in Europe. ETCS is to fully replace around 20 safety systems that are still valid, which currently still prevent cross-border intra-European traffic.

The upgraded and new line will be fully controlled by electronic signal boxes. A total of 17 electronic signal box control substations (12 on the line, five at the Erfurt, Leipzig and Halle railway hubs) are connected directly to the control centres in Leipzig and Munich, from where the traffic controllers lay down the routes using computers.



Electronic signalling technology, control centre in Leipzig 2013

Noise protection walls on the upgraded line Nuremberg–Ebensfeld (VDE 8.1) (visualisation)

More railway, less noise:
As much noise protection as needed

What level of noise is caused by rail traffic? Specialists have calculated the exact amount for every home on the upgraded line between Hallstadt and Ebensfeld. Extending the railway line always requires noise protection measures. Active noise protection measures such as walls and barriers reduce noise pollution for residents. If statutory thresholds are exceeded, passive noise protection measures, such as sound-proof windows, are also used. Ten kilometres of noise protection walls and barriers will be installed along the 22-kilometre section of line.

The effects of sound and vibrations have also been analysed along the entire line between Hallstadt and Ebensfeld. The basis is legal provisions that apply to railway facilities – particularly the Federal Pollution Control Act (BImSchG) and the resulting Traffic Noise Ordinance. The new lines will also have the latest noise protection, of course. The Unstruttal Bridge in Karsdorf is one example: a noise-protection wall that spans the entire length of the bridge protects local residents.

Archaeologists working around the clock: Sensational finds along the line

Even 1,500 years before Christ, there were trade routes in the area between Halle and Erfurt. Before railway construction began on the Querfurt Plateau, archaeologists uncovered the remains of a route from the Bronze Age and finds from 7,500 years of human history. The most valuable of the approximately 400,000 finds are now on show at the Halle State Museum of Prehistory.

At the northern exit of the Eierberge Tunnel, south of Coburg, a team of archaeologists discovered the remnants of a settlement from the Linear Pottery era. About 7,000 years ago, this was the time in which people settled down. The discovery of the settlement and almost 20,000 artefacts was an astonishing scientific discovery – the archaeologists had presumed only a few houses had been in this area.

Fossil finds from the Jurassic period (around 150–200 million years ago) that came to light in the Eierberge Tunnel were also subjected to scientific testing.

Archaeological excavations in Saxony-Anhalt 2008

Close to the Rennsteig in Thuringia, tunnel workers came across a unique, previously undiscovered karst cave while constructing the Blessberg Tunnel. The tunnel was secured for future railway operations, the cave sealed and its beauty preserved.

Stalactite cave discovered under the Blessberg Tunnel during tunnelling work 2008
New line Ebensfeld–Erfurt

Trains have been running on the new line between Gröbers and Leipzig main station since 2003

New tracks on old routes: Trade routes, railway lines and European milestones

The route on which the new railway route is now being constructed was previously part of major trade and traffic routes. The Via Imperii ran from the Italian and southern German markets in a south-north direction through to the trading markets of the Hanse at the Baltic and North Sea. It linked cities such as Nuremberg, Leipzig and Berlin (Cölln). The Via Regia enabled the exchange of goods from West to East and ran across Erfurt and Leipzig, where it crossed the Via Imperii.

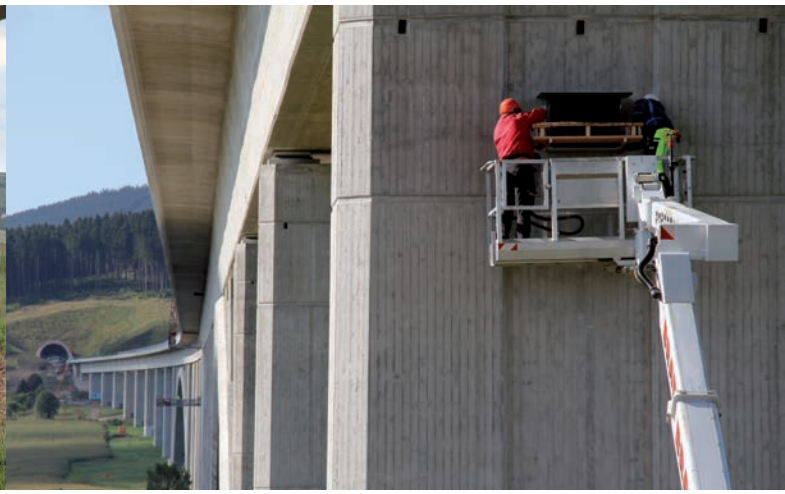
In the past two centuries, the German railway network emerged on the basis of the old trade routes. The expansion of the infrastructure and thus the associated industrial revolution, in turn, contributed to the economic upturn in the interlinked cities and regions in Franconia, Thuringia, Prussia and Saxony. The Nuremberg–Fürth rail connection was the cradle of the German railway in 1835. Germany's first long-distance stretch of railway opened in 1839 between Dresden and Leipzig. Operations on the Erfurt–Halle line started in 1847. A direct connection between Erfurt and Würzburg was established in 1884 through the Thuringian Forest with the steep section via Suhl. One year later, the Franconian Forest railway opened between Probstzella and Lichtenfels. Until service starts on the new Ebensfeld–Erfurt line, the Intercity traffic will still continue to wind its way through the Thuringian Forest on this line, at less than 50 km/h on some sections.

The fast connection between Nuremberg and Berlin on the new track will therefore open up great opportunities for the future – for people and markets in the context of European integration.

Return of white-tailed eagles and beavers: Railway and nature in harmony

Build as carefully as possible – the countryside has been preserved on many occasions by selecting the best possible routes. Even during construction work itself: the Saale-Elster Viaduct was partly built based on the advancing-head construction method. The piers were set in the ground from suspended scaffolding. Construction was suspended for several months every year, to avoid disturbing rare nesting birds. These are measures that prevent disturbing the ecosystem. Although nature and the landscape will inevitably be disturbed when building railway lines, such disturbances can be mitigated or offset. If it is not possible to compensate for loss of animal and plant habitats on site, alternative equivalents are provided at a different location: many stretches of water have been re-naturalised, thousands of new trees and bushes have been planted, sheep cultivate orchid meadows in Unstruttal and wild horses graze valuable rough grazing land near Erlangen, to preserve biodiversity.

Cultivation of orchid meadows at the Unstruttal Bridge



Nesting houses for peregrine falcons at the Ilmtal Bridge in Langewiesen

All measures – for reducing and for offsetting – are part of the landscaping plan accompanying the project. It affects a total area of around 3,000 hectares.

Landscape conservationists must thereby take into account various protected resources:

- People, including their home and working environment
- Nature: animals and the biodiversity, plants, soil, water, climate and air
- Landscape and recreational space
- Cultural assets and other material assets

How the protected resources interact must also be taken into account. A demanding weighing-up process that experts at the Federal Office for Nature Conservation, state conservation authorities and lower-level regional environmental authorities have to perform.

Many measures, such as the expansion of habitats, started even before construction.
This gave nature the time to find suitable possibilities for retreating. It already appears that these measures are working in many areas. For example, the white-tailed eagle and beaver have advanced to the partly re-naturalised Saale-Elster floodplain.

Upgraded and new lines VDE 8
Facts and figures

4 hours
journey time between Munich and Berlin, minus two hours

27
tunnel constructions

37
viaducts

230 kilometres
of new line

€

10 billion
investment costs

3-month construction stop planned per year in Saale-Elster floodplain due to nesting birds

8,314 metres
long: longest tunnel, Blessberg Tunnel

8,600 metres:
longest railway bridge in Germany, Saale-Elster Viaduct

270 kilometres
of upgraded line (included junctions)

VDE 8

2017
Start of service along entire connection

770,000
plans and documents

63,810 metres
Total length of tunnels

3
bridge building awards

3,500 years old:
trade route on the line (excavated)

km/h

300
top speed

4,500
employees building the track/same number at subcontractors

12.6 million
cubic metres of excavation in the tunnels

156,000
concrete slabs
Slab track

134
kilometres of new traction-current track

§

800 contracts
300 legally required planning procedures

100,000
visitors to the information points

3,000
hectares of compensation area for environmental measures

4,000,000
tonnes of concrete laid on the track

‰

12.5
metres in height over 1,000 metres in length – steepest incline on the line

Signalling

17
electronic signal boxes

1991 In April, the federal government commissioned 17 German Unity Transport Projects (VDE), including German Unity Transport Project 8 (VDE 8), the upgraded and new lines Nuremberg–Berlin **1994–97** Line determination, planning permission hearings and planning approval decisions **1996** First construction begins **1997** Conclusion of financing agreement for the new line Ebensfeld–Erfurt (VDE 8.1) and financing agreement for the section Gröbers–Leipzig (VDE 8.2) **2003** Service starts on the 23-kilometre section Gröbers–Leipzig Airport/Halle station–Leipzig Messe stop (VDE 8.2) **2006** Service starts on Leipzig/Halle–Berlin (VDE 8.3) line **2008** Erfurt main station opens after refurbishment **2012** All tunnels of new lines between Nuremberg and Berlin bored **2015** Service starts on new line Erfurt–Leipzig/Halle (VDE 8.2) **2017** Service starts on upgraded and new lines Nuremberg–Erfurt (VDE 8.1) and the entire project Nuremberg–Berlin (VDE 8)

Figures from fiscal year 2012

Questions and answers
Official from start to finish

What does VDE 8 mean ?

VDE is the abbreviation for the German Unity Transport Project. In 1991, the federal government commissioned 17 projects on improving transport links between East and West on rail, road and waterways. The upgraded and new lines Nuremberg-Berlin is the German Unity Transport Project 8, in short VDE 8.


Scherkonde Viaduct

Why was the line not completed sooner ?

The project is being implemented section by section. Service started on the first section of the new line in 2003: 23 kilometres from Gröbers in Saalkreis to Leipzig. In 2006, the project was given a further boost – with completion of the upgraded line Leipzig/Halle-Berlin (VDE 8.3).
With secured funding, the date December 2015 was fixed and met for the opening of the new line Erfurt-Leipzig/Halle (VDE 8.2). The date for the start of service on the upgraded and new lines Nuremberg-Erfurt (VDE 8.1) has been set for December 2017.


Test train on the line

Which trains use the new route ?

Deutsche Bahn ICE trains have been using the new line Erfurt-Leipzig/Halle since December 2015. Basically passenger and freight trains run by all 370 German rail companies - and also foreign operating companies - will be able to use the new route. The trains will need to have an ETCS train protection system. The same applies to the upgraded and new lines Nuremberg-Erfurt.


Kulch Tunnel

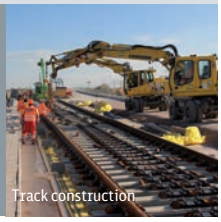
Would upgrading the old lines not have been sufficient ?

The goal of reducing the journey times considerably on a high-speed line could not have been achieved by upgrading the existing lines. The new route can also be used by freight traffic. The climbs, drops and curve radiuses on the existing lines would not have enabled modern rail freight services. In the selection of alternative routes, there were also many other concerns – including environmental issues.


Saale-Elster Viaduct: Germany's longest bridge structure.

Do only the major cities along the route benefit from the new line ?

At the same time as the Nuremberg-Berlin project, all joining and connecting lines are being made fit for faster-moving traffic. Through optimum connections at the Nuremberg, Erfurt, Leipzig and Halle rail junctions, the journey time saved is also carried through to the region, for example, to Weimar and Jena. At European level, the line is part of the trans-European high-speed rail network (TEN-T). This network has realised a large section of the connection between Scandinavia and the Mediterranean (follow-up project is the Brenner Pass). For rapid passenger and freight traffic, the line opens a new age in the German and European railway industry.


Track construction

Residents and visitors
Welcome


Information boards at the Froschgundsee in Bavaria


Information point at Halle (Saale) main station


Information point at Leipzig main station

Preliminary planning, determination of alternatives, planning permission, construction: in every phase of the project, Deutsche Bahn representatives have talked to the people along the line. Wherever the construction work is still ongoing, they will continue to do so – until the project is completed. At town meetings, details of each construction section are presented and discussed openly. At information points directly along the line, anyone interested will also find graphics, films, information boards, multimedia presentations, rock samples, models and archaeological finds.

On the internet, we also provide complex information on every part of the entire project Nuremberg–Berlin (VDE 8), including animations, videos and downloads. There are also live web-cams or animated graphics at several construction sites to provide information on the progress of all phases of construction. The YouTube channel includes videos of the route sections in all phases of construction through to the opening of the new line Erfurt–Leipzig/Halle (VDE 8.2):
www.youtube.de/vde8
www.vde8.de

DB Info-points on the line VDE 8:

Forchheim: upgraded line Nuremberg–Ebensfeld (VDE 8.1)
Opening hours: Wed. – Sun., 12:00 to 19:00
Bahnhofplatz 10, 91301 Forchheim
Tel.: +49 (0)9191 - 6986223
E-mail: infopunkt-vde8.1abs@t-online.de

Breitengüssbach: integration of the upgraded line into the new line Nuremberg–Erfurt (VDE 8.1)
Opening hours: Wed. – Sun., 12:00 to 19:00
96149 Breitengüssbach / Tel.: +49 (0)9544 - 9838414
E-mail: infopunkt-vde8.1@t-online.de

Goldisthal: New line Ebensfeld–Erfurt (VDE 8.1) Opening hours: Nov.–Mar.: Wed.–Sun. 11:00 to 18:00/Apr.–Oct.: Wed.–Sun. 12:00 to 19:00 · Tel.: +49 (0)361- 4287153, Goldberg 1, 98746 Goldisthal with observation platforms and hiking trails
E-mail: infopunkt-vde8.1nbs@t-online.de

Erfurt: Erfurt junction
Erfurt main station next to the Travel Centre

Information boards:
at publicly accessible constructions along the line

Kalzendorf: new line Erfurt–Leipzig/Halle (VDE 8.2)
Opening hours: Wed.–Sun. 12:00 to 19:00
Hausplanweg 5, 06268 Kalzendorf/Steigra
Tel.: +49 (0)34461 - 561862
E-mail: infozentrum-vde8.2@vde8.de

Leipzig: Leipzig junction
Opening hours: Wed.–Sun. 12:00 to 19:00
Museumsgleis 24, Willy-Brandt-Platz 5, 04109 Leipzig
Tel.: +49 (0)341 - 266 990 95
E-mail: infopunkt-knoten-leipzig@t-online.de

Halle (Saale): Halle junction
Opening hours: Wed.–Sun. 12:00 to 19:00
Halle main station, Ernst-Kamieth-Strasse 6 exit, 06112 Halle
Tel.: +49 (0)345 - 67847174
E-mail: infopunkt-knoten-halle@t-online.de

Archaeological finds:
Permanent exhibition at State Museum for Prehistory in Saxony-Anhalt, Richard-Wagner-Strasse 9, 06114 Halle/Saale
Opening hours: Thu.–Fri. 9:00 to 17:00; Sat., Sun. and public holidays: 10:00 to 18:00

New line Erfurt–Leipzig/Halle (VDE8.2): two ICE trains run in parallel for the route opening on 9 December 2015
Title: Froschgrundsee Viaduct, new line Ebensfeld–Erfurt (VDE 8.1) 2016

Legal

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