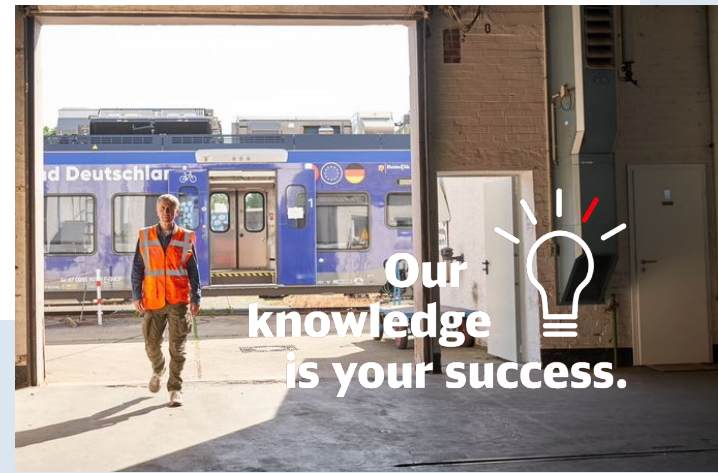
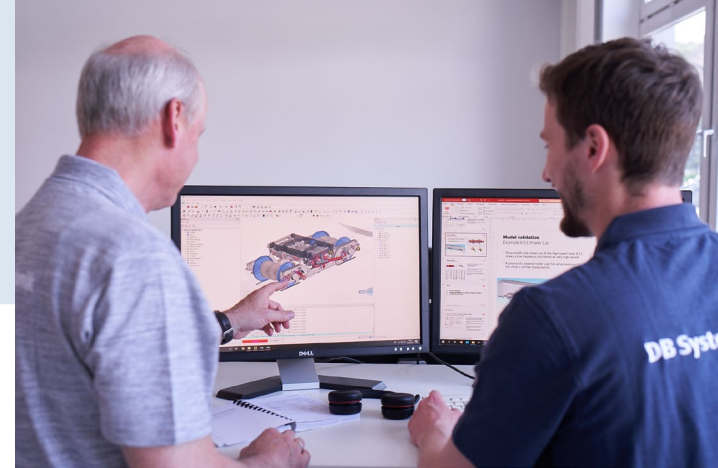




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Facts & figures

Source: Patrick Kuschfeld, DB Systemtechnik



Our
knowledge
is your success.

We are Deutsche Bahn's technical services provider.

We operate on the global rail market.



Our
knowledge
is your success.



Hans Peter Lang
Chairman of the
Board of Managing
Directors



**Christoph
Kirschinger**
Managing Director
for Sales



Stefan Schneider
Managing Director for
Finance / Controlling,
Human Resources

We offer our customers tailored services for **vehicles, components, infrastructure** and **interfaces**: We guarantee

- independence,
- neutrality, and
- confidentiality

With our subsidiary **DB ESG**, we have a strong presence in Great Britain (GB).

Railway Approvals Germany and **Railway Approvals** in GB are on hand to assist with the approvals process.

Systemtechnik

Fact check.

A look behind the scenes at the DB Systemtechnik Group.



Members

DB Systemtechnik, DB ESG,
Railway Approvals, Railway
Approvals Germany



EUR 140 million
revenues in 2020



1,100
employees



Locations
in Germany, France,
England, Poland
and China

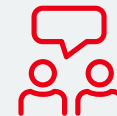


Our USP

We know the entire railway
system: every vehicle, every
piece of infrastructure, every
component, worldwide



13
accredited
test laboratories



>50
competence
centres



Own
vehicle fleet

Systemtechnik

Europe's largest centre of expertise for railway technology.

We are there for you.



DB ESG



Bydgoszcz office



Paris office



Shanghai office

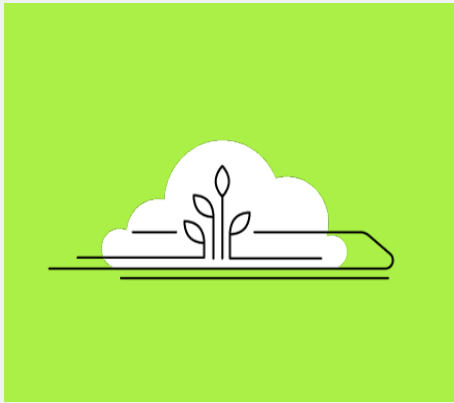
19 locations in Germany



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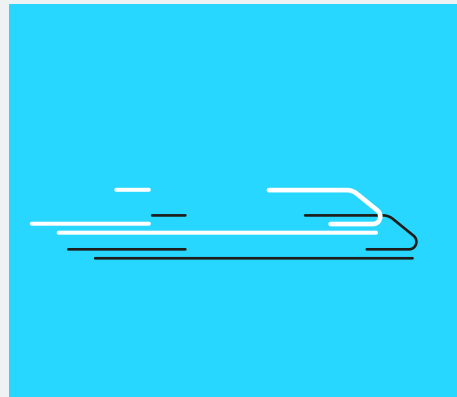
DB Systemtechnik is committed to Strong Rail.

Joining forces for the climate, for rail, for people and for Europe.



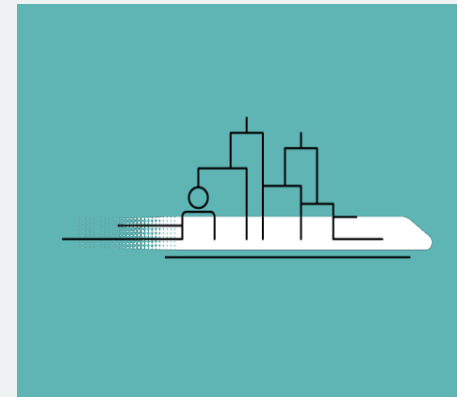
For the climate.

We are getting the rail system ready for the decarbonisation of transport, driving the development of resource-saving, environmentally friendly technologies and using these innovations in our own operations.



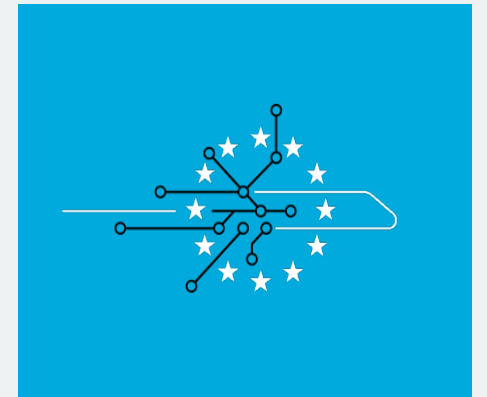
For rail.

DB Systemtechnik is all about safe technology that works well, improving the availability and reliability of infrastructure for the mobility of the future.



For people.

We offer new solutions that make the rail system efficient and competitive.



For Europe.

Active internationally, we have a particular focus on strengthening rail transport in Germany and Europe, expanding our expertise on a daily basis.



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DB Systemtechnik offers rail technology solutions.

For manufacturers, designers, operators, maintenance providers and passenger transport authorities.



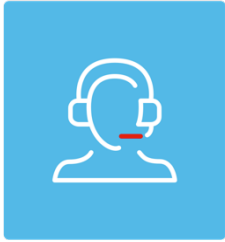
**Our specialists for
engineering, testing, maintenance and digitalisation develop
bespoke solutions for you in the following areas**



Systemtechnik

Need railway engineering expertise?

We have experienced experts.



Experts in technology, operations and maintenance

We advise you on all topics relating to the entire railway system. We analyse your technical problems and design solutions just for you, covering rolling stock, components and infrastructure. What is more, we always consider your bottom line.



Systemtechnik

Source: Dimitra Vassilopoulou, DB Systemtechnik

Need independent testing?

We have the measurement vehicles, laboratories and test rigs.



Tests, trials and simulations

We inspect every part of the rail system for you. Through tests, trials and simulations in our test facilities or on the track, we can draw conclusions about your vehicles, infrastructure and components and examine how different subsystems interact.

The findings offer you greater planning certainty or provide the basis for approvals, series production or commissioning.



Systemtechnik

Source: Patrick Kuschfeld, DB Systemtechnik

Need to convert a vehicle?

Our engineers bring decades of experience to the table.



Design

Our engineers, technicians and technical draughtsmen are at your side with engineering and production services for rail vehicles: for everything from minor technical modifications to extensive redesigns of local and long-distance trainsets.

We repair accident and corrosion damage and support maintenance providers with production technologies.

We reduce maintenance costs and maximise the availability of rolling stock by examining its operating behaviour.



Systemtechnik

Source: Dominic Dupont, Deutsche Bahn

Want to collect your own data?

We have the measuring equipment you need.



Measurement, testing and diagnostic systems

Our measurement, testing and diagnostic systems help you monitor your vehicles and infrastructure along with their components. These high-precision, safe, robust and reliable instruments are available from us individually or as part of projects to optimise approvals, maintenance or operations.

Benefit from our many years of expertise, for example in wear behaviour and damage analysis.

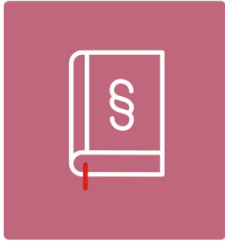


Systemtechnik

Source: Martin Loibl, DB Systemtechnik

Need legally compliant maintenance for your rolling stock?

We develop your rules and regulations.



ECM and maintenance rules

We can help you create and improve your maintenance rules. We ensure clear processes and legal certainty for amending maintenance specifications in line with European regulations and directives.

This naturally includes the safe introduction of new maintenance methods and technologies, such as condition-based or predictive maintenance.



Systemtechnik

Source: Patrick Kuschfeld, DB Systemtechnik

Need an approved product?

We offer the all-round carefree package.



Regulatory approval and safety

We offer appraisals, inspections and expert opinions for vehicles, infrastructure and components. With our experts and recognised assessors, we provide you with all the required assessments and technical certificates, tailored to your needs (e.g. as an assessment body).



Source: Patrick Kuschel, DB Systemtechnik

Need the right infrastructure for your maintenance workshop?



We find the right solution – whether you need a brand-new facility or redesign.



Workshop systems, machinery and equipment

We provide you with the key expertise for rail vehicle preparation and maintenance. Our services range from designing, planning and improving workshop and logistics systems to specifications, acceptances and improvements for plant and equipment.

We take care of new builds, conversions, extensions and improvements.

Our rail-specific experience from a host of workshop projects ensures optimal integration into your operating processes.



Systemtechnik

Source: Deutsche Bahn AG Dominic Dupont

Need fast and innovative solutions?

We combine traditional and digital expertise.



Digital products

We skilfully combine our decades of experience in railway engineering with the use of digital technologies and system solutions. We advise and manage implementation projects in the areas of IoT & automation, data & analytics, and condition-based rules.

By using the latest IT infrastructures and algorithms, we enable you to generate tangible added value from data and continuously enhance your business processes. We support you with innovations to reduce costs and increase availability.



Systemtechnik

Our know-how from A to Z.

Experts in technology, operations and maintenance.

With more than **1,000** railway experts in over **50** technical fields, we have decades of experience handling our customers' projects around the world. From the smallest oil sample to approval of an entire vehicle.

Infrastructure

- Systems engineering
- Battery technology
- Passenger information systems
- Maintenance systems
- Oils and lubricants
- Rail vehicle workshops
- Materials engineering
- Infrastructure monitoring

Interfaces

- Aerodynamics
- Acoustics and vibration
- Electromagnetic fields (EMF)
- Electromagnetic compatibility
- Radio
- Safety
- Transmission systems
- Interaction of
 - pantograph and overhead line
 - vehicle-vehicle
 - vehicle-track
 - vehicle IT with stationary IT
 - wheel-rail

Rolling stock

- Traction technology, battery technology
- Coating systems and corrosion protection
- Service strength
- On-board power supply system
- Fire protection
- Braking systems
- Bus systems (train bus, vehicle bus)
- Diagnostics, power supply
- Passenger information systems
- Running equipment, undercarriages
- Vehicle software
- Heating, ventilation and air conditioning (HVAC) technology
- Adhesive bonding
- Coupling
- Tilting technology
- Oils and lubricants
- Wheelsets
- Welding technology
- Pantographs
- Door and entry systems
- Materials engineering
- Buffing and draw gear
- Train-to-land data communication

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An overview of our large test rigs.

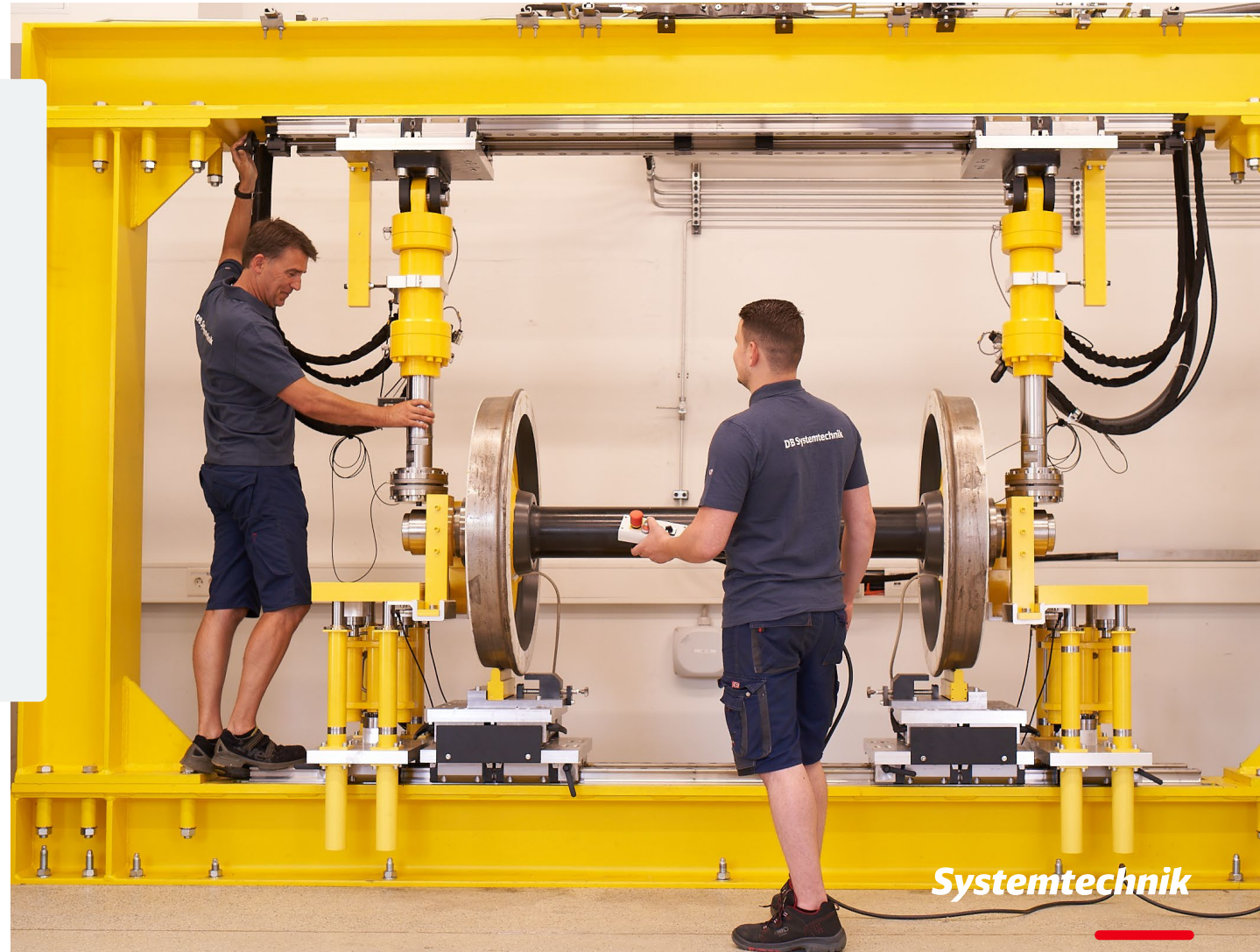
Reliable testing for small components and large units.



- Concrete sleeper test rig
- Strength test rig
- Bogie frame test rig
- Anti-skid test rig
- Instrumented wheel set calibration rig
- Axle box test rig
- Pantograph test rig

Other large test rigs:

Window test rig, strength test rig, wheel-rail-contact, screw test rig, rotating bending fatigue test rig



Systemtechnik

An overview of our laboratories.

Reliable testing for small components and large units.



- Combustible materials laboratory
- Braking systems
- Electromagnetic compatibility (EMC)
- Information technology
- Climatic chambers
- Tribology

Other labs:

Aerodynamics, acoustics & vibration, traction technology, battery technology, electromagnetic fields (EMF), track equipment, fuels, oils and lubricants, non-destructive testing...

An overview of our fleet.

We can provide our own vehicles, measuring cars & train drivers.



- ICE-S (high-speed reference vehicle)
- VT612 (tilting technology)
- Power measurement car
- Radio measurement car
- Noise measurement train
- Overhead line measurement car
- Other measuring cars (e.g. braking slip tests, running dynamics)
- Coupling cars
- Various traction units



DB Systemtechnik is also a rail company.

Certified and accredited.



Our certifications, accreditations and recognition as an **independent railway undertaking** ensure the success of your projects.



DB Systemtechnik

- Is certified in accordance with DIN EN ISO 9001
- Has EBA-recognised expert assessors as well as other technical expert assessors
- Is an administrative assistant to EBA for the certification of entities in charge of maintenance
- Has an inspection body accredited according to DIN EN ISO/IEC 17 020
- Cooperates with NoBo and DeBo for Germany, Railway Approvals Germany (RAG), which is part of the DB Systemtechnik Group
- Cooperates with NoBo and DeBo for UK, Railway Approvals Limited (RAL), which is part of the DB Systemtechnik Group
- Is AsBo and has an accredited inspection area for independent safety assessment in accordance with CSM-RA (EU Regulation)
- Is an associate partner of the EBC (EISENBAHN-CERT)
- Has 13 testing laboratories accredited to DIN EN ISO/IEC 17025 with the appropriate test procedures required for the approval of vehicles, components and infrastructure (in 27 areas of competence with over 200 test procedures)

Systemtechnik

A selection of our customers.

The success of our customers is our top priority.



Systemtechnik

Your contacts at DB Systemtechnik.

We would love to hear from you.



Board of Managing Directors

Chairman
Hans Peter Lang

Sales
Christoph Kirschinger

Finance/Controlling, Human Resources
Stefan Schneider

Sales

Deutsche Bahn
Alfred Hechenberger
alfred.hechenberger@deutschebahn.com

Europe
Steve Goebel
steve.goebel@deutschebahn.com

International (incl. UK)
Sergej Samjatin
sergej.samjatin@deutschebahn.com

Business lines

Head of the Testing Services Business Line
Dr Lars Müller

Head of the Engineering Business Line
Nils Dube

Head of the Maintenance Technology Business Line
Dr Burkhard Schulte-Werning

Head of the Digital Products and Services Business Line
Rupert Lange-Brandenburg



Systemtechnik



Systemtechnik

The centre of expertise for rail technology

We know and inspect every vehicle.
We test and check every railway line.
We complete the approval process for you: anytime, anywhere.
We are a railway undertaking in our own right with our own train fleet and drivers.
We are a one-stop shop for railway technology.
We have decades of railway experience.
We have mastered the technology of the railway system.