



**Railtalk** Magazine *Xtra*

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## Content

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## Submissions & Contributions

Railtalk Magazine Xtra, a magazine written by the Enthusiast for the Enthusiast. So why not join the team. We are always looking for talented photographers and writers to join us at Railtalk. Be it though pictorial submissions or via a written article featuring an event or railtour, we greatly appreciate any contributions to the magazine however big or small.

### Photographic Contributions

All Photographic contributions should to be sent to us via email, post or via the members section page on our website. Contact addresses are provided above.

All images should be provided at a resolution of at least 2400px x 1700px at 240dpi.

## Welcome to Issue 205Xtra

As per usual at this time of year, its been a bit quiet on the news front as many companies are having a summer recess, however two interesting item this month are firstly the news that Beacon Rail have acquired MRCE, which will probably mean the end of the black MRCE livery that looked so nice on the electric locos they leased...

*BEACON RAIL METRO FINANCE B.V. ("BEACON RAIL") HAVE ANNOUNCED THAT IT HAS COMPLETED THE ACQUISITION OF MITSUI RAIL CAPITAL EUROPE B.V. ("MRCE"), A FULL-SERVICE LOCOMOTIVE LEASING BUSINESS IN EUROPE FROM MITSUI & CO., LTD. ("MITSUI").*

### ABOUT BEACON RAIL

*Beacon Rail (together with its affiliates) is a leading rolling stock leasing company headquartered in Luxembourg and focused on serving the UK and European markets. Beacon Rail's current portfolio already includes 507 locomotives, 1,200 freight wagons, and 515 passenger train vehicles and intercity coaches on lease across 18 countries. Beacon Rail has management expertise and capital markets experience, enabling it to meet the equipment needs of its Pan-European customer base.*

### ABOUT MRCE

*Founded in 2004 and headquartered in the Netherlands, MRCE is a wholly owned subsidiary of Mitsui. The company is one of the leading electric locomotive leasing companies in Europe with a fleet of 229 electric locomotives as of September 2023. MRCE, offers a full-service offering delivered through a network of 3rd party workshops, which include maintenance, training and logistical support services.*

And secondly in the news this month an interesting article from Czech who are going over to solar energy in many stations.

*Dozens of railway stations will turn to the sun and Správa železnic will save over 1,200 MWh per year*

*The installation of photovoltaic power plants in the Czech railway environment continues. After the pilot project in Děčín, Správa železnic will install solar panels on the roofs of other station buildings across the country. Their operation will thus be more environmentally friendly thanks to the use of renewable energy sources.*

*Tenders are currently underway for the installation of photovoltaics in the railway environment. The winners will first design and then install the panels, so that they can be connected to the distribution network in the middle of next year. The costs are close to CZK 60 million and the payback period is approximately ten years at current prices. The total installed output will be approximately 1,240 kWp, which corresponds to an annual electricity saving of 1,260 MWh per year.*

*Among the existing stations, the railway stations in Brandýs nad Labem, Beroun or Kuřim will be equipped with solar panels, while the new buildings in Chodov and Aš, which are currently under construction, already foresee their installation. The panels will also be installed in administrative and operational buildings of Správa železnic in Brno, Pardubice, Plzeň, Hradec Králové, Ostrava, Olomouc, Ústí nad Labem and Děčín. They will also be used in suitable transformer stations, signal towers, and in the premises of railway Fire Rescue Corps.*

I would just like to add that if you read the article in this months issue regarding a robotic dog working on the railways, I assure you it isn't an April Fools!

Until next month... **David**

### This Page

On August 19th, PKP Class 183.719 is seen stabled at Ostrava hl.n. [Class47](#)

### Front Cover

On September 6th, Euro Cargo Rail Class E186.345 runs a northbound freight from Cerbere into Collioure with Fort St. Elme on the skyline. [John Sloane](#)







Česke Drahy's Class 754.045 and 362.071 stand underneath the impressive station roof at Praha Hlavní Nádraží on September 24th. The Goggle is waiting to depart with train No. Os9055, the 08:25 to Čerčany while the electric has just been uncoupled from the stock of a service which has departed to Klatovy. *Andy Pratt*

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These issues wouldn't be possible without contributions from:  
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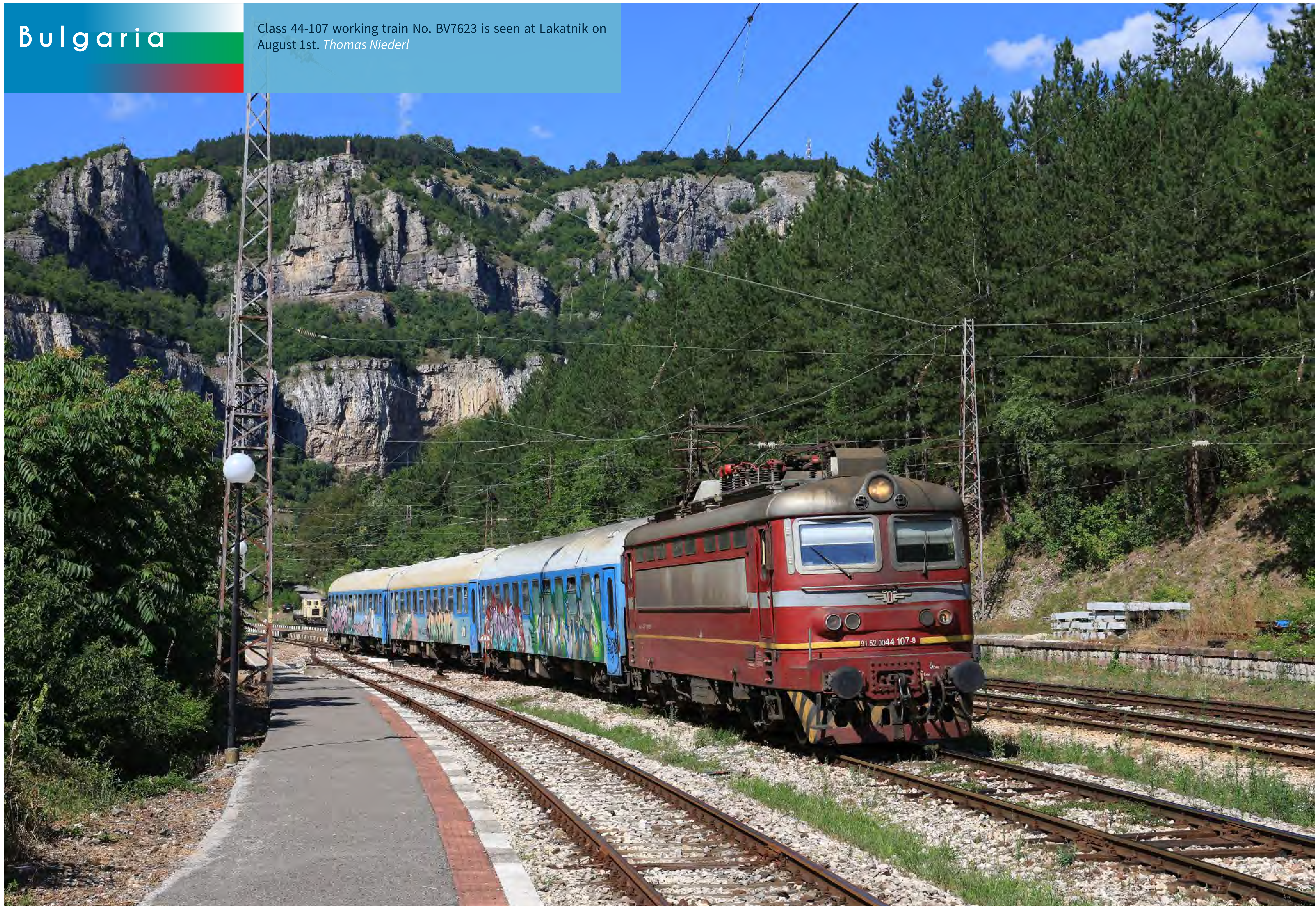






# Bulgaria

Class 44-107 working train No. BV7623 is seen at Lakatnik on August 1st. *Thomas Niederl*





# Bulgaria

▶ Romanian Class 40-0612 with the overnight train No. IRN79 waits departure time at Craiova on August 1st. *Thomas Niederl*

▶ In the evening sunlight, Class 75-005 stands at Velingrad with train No. KPV16220 on August 3rd. *Thomas Niederl*

▶ No. 45-159hauling train No. BV7624 is seen at Tompsan on August 1st. *Thomas Niederl*





▶ No. 45-176hauling train No. KPV20201 is seen at Levishte on August 2nd. *Thomas Niederl*

▶ On August 3rd, No. 75-009 arrives at Velingrad working train No. BV1661. *Thomas Niederl*

▶ No. 75-006 with train No. PV16102 calls at Avramovo on August 4th. *Thomas Niederl*













# Bulgaria

On August 4th, No. 75-006 with train No. PV16105 is seen at Jurukovo. *Thomas Niederl*

No. 75-008 with train No. PV16102 passes Velingrad-Jug on August 5th. *Thomas Niederl*

No. 75-005 arrives at Velingrad-Jug with train No. KPV16221 on August 5th. *Thomas Niederl*





Ludmilla No. 07-126 with train No. KPV28220 calls at General Toshevo on August 6th. There is a direct sleeping car service from Dobrich to Sofia, which is hauled by a Ludmilla, and upon arrival in Dobrich, the set is used on one of only two daily trains to Kardam. *Thomas Niederl*















On September 10th, Rocky Mountaineer locos Nos. 8013 and 8018 with the 'Rocky Mountaineer' train are seen at Jasper after dropping passengers off. *Phil Martin*













# Czech Republic

KŽC's Class 749.253 running with it's original number T478.1215 departs Všetaty at the head of train No. R1272 08:21 Praha-Vršovice - Mšeno on September 24th. *Andy Pratt*





# Czech Republic

On August 19th, ZSSK Cargo's Class 131.048 leads a mixed consist through Ostrava hl.n. *Class47*

Elderly CD Class 460.023 EMU stands at Prerov on August 19th with a service to Hranice nad Morave and Vsetin. *Class47*

Bulk Transshipment Slovakia Class 183.009 leads a rake of SlovVagon's through Ostrava on August 19th. *Class47*









Czech  
Republic

Class 720.091 is seen stabled at a scorching Prerov  
on August 19th. *Class47*

















# Czech Republic

▶ ČD Goggle Class 754.061 is ready to depart Trutnov hl.n. with train No. R926 12:42 to Praha hl.n. on September 29th. The Goggle will work as far as Hradec Kralove where an electric will take over for the remainder of the journey to Praha. *Andy Pratt*

▶ The Grumpy Railtours organised 'The (elusive) Silver & Green Dream Machine' 3 day railtour of Czech Republic is pictured at Zruč nad Sázavou with Class 751.115 in charge on day 1 of the tour, September 25th. *Andy Pratt*

▶ AccurrentisolationbetweenMostandChomutov saw eight 'R' trains dragged between the two stations on September 30th and October 1st. Sergei No. T679.1600 (781.600) was booked to do all of the drags and is seen waiting to depart Chomutov on the Saturday with train No. R609 the 08:25 Cheb to Praha hl.n. *Andy Pratt*





## AUTONOMOUS TECHNOLOGY FROM ŠKODA GROUP AS A SOLUTION TO REDUCE COSTS

Public transport providers are facing an increasing challenge - the significant rise in energy prices and the related need to optimise their operations. Every cent spent on inefficient operations means fewer resources to improve services and expand the transport network.

Transport providers are also facing rising costs of repairing vehicles damaged by collisions. There is also an increasing emphasis on ensuring safety, both inside and around vehicles. Škoda Group has come up with solutions that enable transport companies to take their services to a new level by integrating them. These include, for example, automatic train operation or an anti-collision system. The group presented its digital systems during a press conference at the Trako 2023 trade fair in Gdańsk, Poland.

Train operators are looking at how to optimise energy consumption across the vast rail network. Škoda Group's ATO system automatically guides the train. Its role is to automate the driver's tasks and plan the journey with respect to the timetable and energy savings. The system can react to the current situation on the route and thus minimise energy loss. The presence of the driver is then required to deal with unforeseen and unpredictable events.

“Smart digital solutions are a huge benefit for transport companies and passengers. The use of smart technology can reduce energy consumption by up to 15%, optimising financial costs. Trains also keep to timetables better thanks to the ATO system, leading to an overall increase in the quality of service. In addition, transport becomes more environmentally friendly, safer and smoother in daily operations,” says Jiří Liberda, President Business Unit Digital at Škoda Group.

### Reducing costs on rail and in cities

Urban transport companies, on the other hand, face high costs for repairing damaged vehicles after collisions. These occur not only in traffic but also in depots. Reducing the impact of collisions is the task of the anti-collision system (ACS). Škoda Group uses a combination of LiDAR technology, cameras and precise localisation using HD maps and odometry. This set-up allows the system to create a virtual tunnel in which the vehicle can detect obstacles, provide early warning and also provide emergency braking. By implementing ACS in their vehicles, providers can significantly reduce the costs associated with dealing specifically with the aftermath of accidents and reduce the number of serious injuries.

Škoda Group is not only coming up with breakthrough solutions, but also with a vision in which autonomous technologies play a key role in public transport. The group's latest project builds on existing digital systems and integrates them into a comprehensive smart depot ecosystem. The equation is simple – increased efficiency plus increased safety equals cost savings, a happier passenger and a cleaner environment.





France

VFLI branded No. BB419 is a rebuild of the former BB64010 and is seen standing with a P-Way train in the yard at Port Vendres on September 9th. *John Sloane*





France

Bombardier Bi-mode unit Nos. 81802/81801 departs Collioure on September 6th whilst working an Avignon to Port Bou service.

*John Sloane*





▶ SNCF Fret No. 27068 awaits departure from Le Boulou with a northbound freight on September 4th. *John Sloane*

▶ SNCF EMU No. 27759 awaits departure from Perpignan with a service to Avignon on September 8th. *John Sloane*

▶ On September 5th, Euro Cargo Vossloh Type G 1000 BB No. 1010 stands in the yard at Cerbere. *John Sloane*





# France

▶ SNCF Sybic No. 26114 approaches Perpignan with a northbound freight from Cerbere on September 8th. *John Sloane*

▶ SNCF Fret No. 60037 stands in Perpignan South Yard on September 8th. *John Sloane*

▶ On September 10th, SNCF BB No. 7306 working the 18:31 overnight service from Cerbere to Paris Austerlitz catches the last rays of the sun as it approaches Collioure. *John Sloane*





France

SNCF EMU No. 27644 is seen waiting to depart Perpignan with a service to Villefranche de Conflent on September 8th.

*John Sloane*













On August 23rd, DB Cargo Class 185.119 passes Wispenstein with a load of pipes heading towards Bebra. *Erik de Zeeuw*





## A proud anniversary: Mitteldeutsche Eisenbahn celebrates its 25th birthday

Time for a very special anniversary celebration: Mitteldeutsche Eisenbahn GmbH (MEG), founded in 1998 as a local factory railway, is celebrating its 25th birthday.

In that time, it has become an indispensable part of the rail freight transport sector in Germany. MEG was founded on October 1st 1998 as a joint subsidiary of DB Cargo and today's VTG Rail Logistics GmbH. The company's fleet has grown from just a few used locomotives to number around 60 state-of-the-art engines in 2023. Today, MEG serves European freight corridors and the sidings of industrial customers throughout Germany.

Dr Sigrid Nikutta, Board Member for Freight Transport at Deutsche Bahn AG and CEO of DB Cargo AG, was among the well-wishers at the anniversary celebration and lauded the company's achievements: "MEG is a success story. And behind every success there are people. The employees of MEG have worked hard for our industrial customers for 25 years, helping to create reliable and environmentally friendly supply chains.

Everyone benefits from MEG's growth, as putting more goods on the rails improves the carbon footprint of our economy." MEG now employs around 350 people, who are



committed to offering customers virtually every service in rail freight transport from a single source.

Fit for the future with a state-of-the-art fleet Also among the guests was Sven Haller, Undersecretary for Infrastructure and Digital Affairs in the state of Saxony-Anhalt. His welcoming address paid tribute to the company on its anniversary: "Over the past 25 years, MEG has developed from a factory

railway into a nationwide rail freight transport company, despite economic conditions that have not always been easy."

MEG transports all kinds of cargoes, from raw materials and chemicals to end products for industry in central Germany. Its fleet now also includes over ten hybrid locomotives that ensure sustainable mobility. According to Dr Jürgen Sonntag, Managing Director of MEG, this allows the company to offer the

environmentally friendly services that the market demands.

### **New simulator for vocational training and professional development**

As well as commemorating the past, MEG is securing its future with a new train driving simulator for training and professional development: "The simulator will further improve the quality of our training and professional development at MEG,"

emphasised Sonntag. "It can simulate dual-mode locomotive functions and the ETCS train protection system, and will take driver training to a whole new level."

Happy birthday to MEG and all the best for the next 25 years!

## Provisional contract awarded: Netherlands railways continue to rely to renewable power

### **The ink is not yet dry, but the agreement is in place.**

From 1 January 2025, the entire electrified rail network in the Netherlands will be supplied with renewable power. The tender process conducted by the Dutch railway company Nederlandse Spoorwegen (NS) was won by the energy suppliers PZEM and Shell, who will supply sustainable electricity for all Dutch railways for three years starting in 2025, with an annual volume of 1.46 terawatt hours.

DB Cargo Nederland will be another company to benefit from this, as the contract covers the Betuweroute, a rail line extending from the port of Rotterdam to Zevenaar near the border with Germany that is used exclusively for rail freight transport.

Easy access to renewable power in the Dutch rail network Until now, companies had to sign two contracts - one for the Betuweroute and one for the rest of the Dutch rail network. The new contract is therefore a significant improvement in this regard and presents less of an obstacle to rail freight operations in the Netherlands.

A mixture of solar and wind energy sourced in Europe will be used in the future. Ben Appeldorn, Head of DB Cargo infra, is pleased with the deal: "I'm happy that we've succeeded in finding new suppliers in this difficult energy market."



On August 24th, Netzwerkbahn Sachsen (NeS) Class 159.248 is seen in Nordstemmen with an Innofreight tanktainer train (lye empties) from Bokeloh to the Werra-Kaliregion. *Erik de Zeeuw*





## Putting the digital sniffer dog through its paces

As demand for rolling stock in freight transport grows, so do the maintenance requirements. Digitalisation is playing a key role here as part of the drive to decarbonise transport, with digital tools making maintenance more effective and helping to get trains back on the rails sooner. By reducing the amount of time trains spend in the depot, this helps boost capacity in rail freight transport. One of these digital tools is Spot, the walking robot. He was unveiled recently at the freight station in Mainz, where he will help with identifying wagons and inspecting axles.

### Rise of the robots

Digitalisation is revolutionising vehicle maintenance. By relieving employees of time-consuming routine checks, digital tools give them more time for important repair work. Some of the digital tools already in use at DB Cargo include the automated wheelset measuring system, camera bridges with artificial intelligence and underfloor robots. Spot the walking robot is the latest recruit. Fitted with sophisticated cameras, sensors and AI, Spot can identify freight wagons and carry out visual inspections to detect damage to the train.

### A colleague with four legs

The four-legged robot, which resembles a dog, is a cutting-edge industrial product from Boston Dynamics. It can be used in various places that are difficult or dangerous for people to access, such as underneath trains. The remote maintenance software comes from the German start-up firm Energy Robotics, which adapts the system to DB's specific requirements and leases it as a "Robot as a Service". Spot weighs 25 kilograms, is 84 centimetres tall and can reach a speed of up to six kilometres per hour. He is also extremely robust and more agile than any robot that has come before. After being presented at InnoTrans 2022, the walking robot is now being used in operations at DB for the first time.

### Digital sniffer dog in action at DB Cargo

Spot is being tested in a six-week trial focusing on two applications. First, he will identify wagons using RFID (a process for automatically identifying objects via radio) and identify text on two tracks. Next, he will perform visual inspection of axles in the maintenance pit of the freight wagon depot.

The walking robot can reduce walking distances by half, objectify inspection results and increase safety by removing the need for human workers to enter the pit. This relieves employees of physically demanding work and gives them time for more productive activities. It also reduces maintenance costs and helps compensate for the lack of skilled workers.

If the trial is successful, walking robots like Spot could take over these tasks in four DB Cargo facilities in the future. The robots could also perform other tasks like detecting loose brake hoses and leaks on freight wagons.





# Timetable 2024: up to 25 percent more seats on main routes

**Significantly more capacity between Berlin and North Rhine-Westphalia as well as Berlin and Munich New, particularly fast sprinters Berlin–Munich**  
**Many regional improvements**  
**Tickets available from October 11th**

With the 2024 timetable, Deutsche Bahn (DB) is creating more new long-distance connections than in 20 years. Thanks to the constant influx of new trains, DB can offer more and faster connections as well as significantly more seats between major cities. The regions also benefit from additional connections and new trains.

Dr. Michael Peterson, DB board member for long-distance passenger transport: “We are now reaping the fruits of our fleet strategy of the last few years. It was right that we continued to expand our long-distance transport fleet even during the pandemic. This means our passengers benefit twice: they experience the comfort of new vehicles and benefit from new connections that we can offer with more trains. With two trains per hour between Berlin and Hanover as well as Berlin and Munich, we are taking another step towards the German rhythm.”

### More frequent and faster between metropolises

On the high-demand Berlin-NRW and Berlin-Munich connections, DB is offering up to 25 percent more seats with new ICE lines and longer trains. Between Berlin and Munich, the number of Sprinter trips in each direction is growing to up to 14 - twice as many as before and almost every hour during the day. Together with the hourly trains via Leipzig and Halle, two trains run between the federal and state capitals every hour. Three new, particularly fast sprinters complete the route in 3¾ hours every day, driving between Berlin and Nuremberg without stopping.

With a new transport concept and longer trains, the DB is also increasing the number of seats available between Berlin and North Rhine-Westphalia. With a new two-hourly ICE line Berlin–Wuppertal–Cologne, the splitting and coupling of trains in Hamm (Westphalia) every two hours will no longer be necessary.

This shortens the travel time between the Rhine and Spree by up to ten minutes and the ICE trains via Dortmund and Düsseldorf can then run every two hours with double capacity. The new line and changed timetables of existing lines will create a half-hourly service between

Hanover and Berlin.

The travel time between Berlin and Amsterdam is reduced by around 30 minutes. This is achieved through the use of multi-system locomotives, which eliminate the time-consuming change of locomotives at the border, and a new stopping concept on this line.

### Significant improvements in the regions

DB is significantly expanding its offering on the Nuremberg-Jena-Leipzig intercity connection. Instead of one, there will now be five trips in each direction every day. With Rudolstadt and Ludwigsstadt, East Thuringia and Upper Franconia will gain two additional long-distance transport stops. Compared to the Regional Express, travellers on this route travel 30 minutes faster with the IC.

Saxony-Anhalt, Brandenburg and Mecklenburg-Western Pomerania also benefit from additional IC connections. Magdeburg is getting a new direct Intercity connection to/from Hamburg with a stop in Stendal. There will be an additional trip on each of the existing connections (Leipzig)–Magdeburg–Schwerin–Rostock and (Norddeich)–Magdeburg–Potsdam–Berlin.

### New vehicles

The ICE 4 now also runs cross-border connections to Austria and replaces previous intercity trains. The DB will put further modern ICE 3neo trains, some with new interior design, on the rails between North Rhine-Westphalia, Frankfurt, Stuttgart and Munich, as soon as approval is available, including on the routes to Amsterdam and Brussels. All new ICE trains offer parking spaces for eight bicycles each. Railjet trains of the new generation from the Austrian Federal Railways (ÖBB) are gradually replacing the EC trains in Brenner traffic between Munich and Italy.

### More night traffic

ÖBB and DB are expanding their cooperation in night traffic. From December this year, the two companies will be offering Nightjet connections from Berlin to Paris and Brussels. These connections will initially run three times a week, then daily from autumn 2024. This doubles the



number of Nightjet connections for Berlin.

### Better service and more comfort

The new DB Navigator offers numerous helpful functions and even better digital travel support before, during and after the trip. Customers can now easily book tickets for dogs or bicycle tickets digitally. To provide personal advice in a modern atmosphere, the DB is investing 60 million euros in the travel centres at the 25 most frequented train stations. The newly designed travel center in Düsseldorf Central Station has been open to travellers since September. Nuremberg and Göttingen will follow soon.

The renovation of the travel centres in Berlin, Mannheim, Cologne and Hamburg is planned for 2024. In the future, the DB travel centres will have the same signature as the DB lounges and the modern ICE interior design, which will be on the rails for the first time in the new ICE 3neo from autumn 2023. Warm, natural colours.

### Building at DB 2024

The renovation of the rail network will continue unabated in 2024 in order to be better prepared for further traffic growth. The DB's pilot project on the way to a high-performance network begins on July 15th with the general renovation of the Riedbahn between Frankfurt/Main and Mannheim.

By the timetable change in December, the DB will be replacing the entire infrastructure on this heavily used route, including the train stations - with positive effects for train traffic throughout Germany.

Due to these and other construction sites, the railway will temporarily adjust the offer on some connections. Diversions and timetable changes have already been incorporated into the timetable or will be announced as required. The DB will inform the regions in good time about all major construction projects that are planned for next year.

### Information and tickets from October 11th

The new timetable will apply from December 10th, 2023. Information and tickets will be available from October 11th on bahn.de, in the DB Navigator, in DB travel centres and DB agencies as well as at DB machines.



## New S-Bahn for Berlin: complete and in service

The new Berlin S-Bahn fleet has been completed today: all 106 trains of the new series are now in service. The trains, equipped with air conditioning, state-of-the-art passenger information systems and cameras for greater security, offer passengers a new level of comfort and convenience. The new fleet also increases the transport capacity in parts of the city's S-Bahn network, thus expanding services. In the course of replacing the older trains, the number of cars per train was also increased. For customers, this has specific benefits: longer trains operate on the Ring lines S41/S42 as well as the S8 line, and the S8 line is extended to Wildau during peak hours. The new S-Bahn fleet now offers a total of around 18,000 seats. The new trains have entered service successively since the beginning of 2021, and have been operating on lines S41, S42, S46, S47 and S8 since then.

Representatives from politics, business, the Berlin-Brandenburg Transport Association (VBB) and the Berlin S-Bahn gathered at the Charlottenburg S-Bahn station for the ceremonial delivery of the last train in this tranche. The states of Berlin and Brandenburg are financing the purchase of the trains, which were manufactured by a consortium of Stadler and Siemens.

Manja Schreiner, Berlin Senator for Mobility, Transport, Climate Protection, and the Environment: "Completion of the new fleet of trains on the Ring line marks a significant step forward for the S-Bahn service and the entire Berlin public transport system. This progress can be directly experienced by passengers every day: the longer trains offer more seats; air conditioning and the state-of-the-art passenger information system enhance comfort and convenience. The expanded and improved service can make switching to rail an interesting option for many. We will continue to pursue this course of offering attractive services to win over more and more people."

Guido Beermann, Minister for Infrastructure and State Planning of the State of Brandenburg: "The S-Bahn is a vital link between Brandenburg and Berlin, especially for the many commuters. I am therefore delighted that the new fleet of trains is now complete. By providing significantly more space on

board and many technical innovations, we are making climate-friendly public transport even more attractive. This is how the transport transition works."

"We have received very positive responses to the new air-conditioned, quiet and comfortable trains – from our passengers as well as our employees. The new trains have already covered around 17 million kilometres in service."

Ute Bonde, Managing Director of Verkehrsverbund Berlin-Brandenburg: "We are especially pleased that the new trains have been delivered on time despite the difficult conditions and are now all in service. For passengers, this means benefiting from more space and greater comfort and convenience on the Ring line and on the S46, S47, and S8 lines. Looking to the tasks ahead, we welcome the fact that S-Bahn Berlin GmbH is strongly committed to continuing its longevity program for the older 481 series trains. It is important to keep this main part of the S-Bahn fleet fully upgraded for operations until it is replaced by further new trains."

Jure Mikolčić, CEO Stadler Germany: "Our employees worked on the project in various phases for nearly ten years. The collaboration with our consortium partner Siemens and S-Bahn Berlin was very good throughout the entire project. We are especially proud that we were able to manufacture the new S-Bahn trains for Berlin at our location here in Berlin."

Elmar Zeiler, Head of Commuter and Regional Trains, Siemens Mobility:



"As a company with Berlin roots, we are particularly proud to be contributing to a sustainable improvement in passenger experience and comfort on the Berlin S-Bahn. The trains of the new 483/484 series not only stand out with their reliability, greater seating capacity and air conditioning, but also with their modern, energy-efficient drive technology." The 483/484 series trains are part of the transport contract for the Ring subnetwork and are financed by the regions of Berlin and Brandenburg. Parallel, S-Bahn Berlin is continuing to implement its "BR 481 longevity program". More than 300 of the 500 trains in the 481 series (built between 1996 and 2004) have already been rebuilt. Every day, around 1.4 million people use the S-Bahn Berlin trains, which operate on 16 lines in the capital and the state of Brandenburg.

## DB Cargo IT fit for the future

The Wagon Information System (WIS) is one of the most important applications at DB Cargo: it controls all logistics processes in freight wagon management. For this purpose, it stores and processes technical attributes and reports on maintenance. The platform, which was developed by ADABAS/NATURAL, has been in operation for 25 years and is becoming increasingly complex – and expensive – to maintain and develop. That is why DB Cargo now wants to replace the system.

### New system for more data

In order to be able to increase reliability and quality for

customers, our future operations will involve innovative approaches such as automatic damage detection and the automatic transmission of GPS-based location information and condition data captured by sensors on the wagon.

Due to its outdated architecture, the WIS system is unable to record and process this additional information. In order to be able to use all available data efficiently and effectively across systems in the future, legacy systems must be replaced and their functions transferred to new or existing systems. The technical benefits include more

seamless, streamlined processes, as fewer different systems are used within workflows. Other technical benefits are:

- Simplification and standardisation of the IT landscape
- Use of future-proof technologies
- Diverse options for improvement

### Fit for Europe

While replacing WIS, a completely new database is being set up which, in addition to distributing information, will also be used for electronic data exchange within DB Cargo in accordance with the European TAF-TSI

specifications. These specifications state that there will be a uniform EU-wide message format in future for exchanging data among rail system stakeholders (e.g. railway undertakings (RUs)) – both for train path requests and rail operations. Thanks to the new system, DB Cargo will exchange this data with other RUs via the GCU broker.



# The federal government and Deutsche Bahn are launching the largest rail infrastructure program

At the rail summit of the Federal Ministry for Digital and Transport (BMDV) in Frankfurt am Main, the federal government and Deutsche Bahn (DB) presented the largest and most comprehensive infrastructure program for the rail network and stations since the rail reform in 1994. The aim is to make train traffic more punctual in the long term and to create the conditions for achieving transport policy goals in passenger and freight transport.

The focus of the program is:

1. The renovation of the highly loaded network and the associated expansion into a high-performance network with a length of 9,000 kilometres.
2. Clearing the investment backlog and upgrading the rail network across the area.
3. Capacity-increasing measures such as additional crossing points, switches and denser signalling for more stability and a better train service.
4. The digitalization of the rail network with the Germany-wide rollout of the European Train Control System (ETCS). It creates up to 30 percent more capacity on the existing network.
5. The targeted expansion and new construction of routes in order to resolve bottlenecks and thus make the Germany clock possible.
6. A large-scale modernization of train stations throughout Germany and the expansion into future train stations with better comfort and greater offerings for travellers along the high-performance corridors and

the area network.

Richard Lutz, CEO of DB AG: “We are renewing and modernizing the infrastructure with a program that is unprecedented in DB history. A big thank you goes to the federal government for its commitment to provide the necessary additional funds amounting to up to 45 billion euros. It is now up to us to roll up our sleeves together with the construction industry. However, the truth is also: The enormous construction workload will also be challenging for travellers and freight transport companies. But there is no alternative to tackling the renovation backlog. If all partners in the construction and rail industries pull together with us, this feat of strength will succeed.”

The central lever for a better quality rail service is the general renovation of a total of 40 route sections in the heavily used network by 2030. The stations along the routes will also be modernized and upgraded. In order to be able to carry out the ambitious workload, the route sections will be closed for several months each. Once the work has been completed, the routes are less prone to failure and are significantly more efficient. The general renovation of the highly stressed sections of the route will begin next year on the Riedbahn between Frankfurt/Main and Mannheim. The Hamburg-Berlin and Emmerich-Oberhausen routes will follow in 2025. The DB will also significantly upgrade 20 stations along

Riedbahn alone as part of the renovation.

For the duration of the general renovation, the DB is developing a high-performance transport concept together with the affected railway companies and the authorities responsible for local transport. This includes, for example, upgrading diversion routes. The aim is to keep the restrictions for travelers and freight transport customers as low as possible during the construction period.

Subject to pending parliamentary resolutions on financing and more detailed findings within the framework of detailed planning, the federal government and DB, with the participation of the industry, have planned the following order for the general renovation of the rail network:

- **2025:**
- Hamburg–Berlin
- Emmerich–Oberhausen
- **2026:**
- Hamburg–Hannover (subject to further decisions)
- Hagen–Wuppertal–Cologne
- Troisdorf–Koblenz
- Koblenz–Wiesbaden
- Nuremberg–Regensburg
- Obertraubling–Passau
- **2027:**
- Lübeck–Hamburg
- Bremerhaven–Bremen
- Lehrte–Berlin
- Hamm–Düsseldorf–Cologne
- Frankfurt/Main–Heidelberg
- Munich–Rosenheim
- Rosenheim–Salzburg

- **2028:**
- Bremen–Hamburg
- Nordstemmen–Göttingen
- Uelzen–Stendal
- Stendal–Magdeburg
- Hagen–Unna–Hamm
- Cologne–Bonn–Koblenz
- Koblenz–Mainz
- Bebra–Fulda
- Würzburg–Nuremberg
- **2029:**
- Hamburg–Hannover (subject to further decisions)
- Bremen/Rotenburg–Wunstorf
- Lehrte–Gross-Gleidingen
- Bebra–Erfurt
- Aachen–Cologne
- Forbach–Ludwigshafen
- Stuttgart–Ulm (old line)
- **2030:**
- Bremen–Osnabrück
- Osnabrück–Münster
- Münster–Recklinghausen
- Minden–Wunstorf
- Weddel–Magdeburg
- Kassel–Friedberg
- Würzburg–Ansbach–Treuchtlingen
- Mannheim–Karlsruhe
- Ulm–Augsburg

The general renovations and the future train stations will be part of the comprehensive program for infrastructure oriented towards the common good. DB is working intensively with the federal government to create all the conditions for the start of the new company on January 1th, 2024.

## Deutsche Bahn and Vossloh expand their cooperation in preventive rail maintenance

Vossloh and Deutsche Bahn AG’s railway infrastructure manager, DB Netz AG, are continuing their successful cooperation in the field of preventive rail maintenance with the HSG (High Speed Grinding) technology developed by Vossloh. Following the successful collaboration in the current year, the scope of high-speed grinding for 2024 has now been extended by 1,000 kilometres to at least 13,000 kilometres.

The focus of the work will again be on the most heavily used lines of the German rail network, the so-called high-performance network. In addition to the actual grinding work, DB Netz AG has again ordered the use of extensive digital measurement and analysis technology. During the grinding, important condition data is collected and evaluated in real time, and relevant information can

be visualized in a web-based application, including concrete recommendations for action. This creates the basis for a transition from time-based to condition-based maintenance.

“The importance of preventive and condition-based maintenance measures cannot be overstated. They are a crucial step toward higher track availability, which in turn is a mandatory prerequisite for shifting more traffic to rail and thus supporting the achievement of ambitious climate protection targets,” says Oliver Schuster, CEO of Vossloh AG. “At Vossloh, we have built up a unique understanding of the rail track, which we are increasingly using also with the aid of digital offerings to develop tailored solutions for our customers.

We are pleased to continue our successful and trusting cooperation with Deutsche Bahn and to enable more green mobility in Germany,” adds Schuster.

The globally unique grinding process for preventive maintenance of the rail network allows an operating speed of more than 80 km/h on mainline tracks. This allows Vossloh machines to “float along” with freight traffic at night, for example, making line closures obsolete. The grinding program can be individually adapted to the respective track condition. Under the current contract, for example, additional cross-sectional optimization has been carried out on some sections of track.

Heike Junge-Latz, Member of the Board of Management responsible for Plant and Maintenance Management at

DB Netz AG, adds: “We expect passenger and freight traffic volumes to continue to rise in the coming years, and we are constantly upgrading our network in response. The size of the German high-performance network will almost triple to over 9,200 kilometres by 2030. By means of prevention using HSG technology, for instance, we will further increase the reliability of our network.”



## Siemens Mobility completes first test runs with hydrogen train in Bavaria

Siemens Mobility has completed the first test runs with the Mireo Plus H hydrogen-powered train in Bavaria. The two-car trainset will enter passenger service in mid-2024 on routes between Augsburg and Füssen and Augsburg and Peissenberg on the rail network of Bayerische Regiobahn (BRB). Pilot operations of the train are planned for 30 months and are supported by the State of Bavaria. Siemens Mobility and Bavaria signed the corresponding development partnership in 2021.

Karl Blaim, Managing Director and CFO of Siemens Mobility: “Partnering with the State of Bavaria, we have reached an important milestone today for the future of alternative drive systems for trains. Our hydrogen-powered Mireo Plus H train will operate completely emission-free between Augsburg, Füssen and Peissenberg. With this train, we are offering a sustainable solution for rail routes that are not electrified.”

Bavaria’s Transport Minister Christian Bernreiter: “By conducting 30 months of passenger operations, we will test the hydrogen train under a full range of everyday conditions. The results of these tests will then determine whether we decide to use hydrogen-powered trains on additional routes in Bavaria. Our goal is to end diesel operations in Bavaria’s local and regional rail passenger transport by 2040. In addition to electrifying routes and using battery-powered trains, hydrogen propulsion can be an important factor in achieving this goal.”

Bavaria’s Economics Minister Hubert Aiwanger: “With this first hydrogen train, Bavaria is taking another step towards a hydrogen future. By implementing the pilot project together with our partners Siemens and Bayerische Regiobahn, we are making the hydrogen future a tangible experience and at the same time gaining key practical know-how for the broad application of sustainable hydrogen innovations.”

Arnulf Schuchmann, Managing Director of Bayerische Regiobahn (BRB): “Today we can experience the Siemens Mobility hydrogen train live on a normal line for the first time, and are preparing intensively for passenger operations next year. As the second largest railway company in Bavaria, we are especially pleased with the confidence that politicians, the Bayerische Eisenbahngesellschaft and Siemens Mobility have shown in entrusting us with the test operations. Green hydrogen is an additional climate-friendly solution for local passenger transport. As part of the Transdev Group, we attach great importance to environment protection and are happy to support innovative, future-focused projects.”

The Mireo Plus H is a state-of-the-art hydrogen-powered train based on Siemens Mobility’s proven Mireo regional train platform. Two roof-mounted fuel cells and a lithium-ion battery ensure completely CO<sub>2</sub>-free mobility. The H<sub>2</sub>



energy supply system, combined with the electric drive, provide high 1.7 MW traction power for acceleration of up to 1.1 m/s<sup>2</sup> and a top speed of 160 km/h. The train has an operating range between 1,000 and 1,200 kilometers with one tank filling. The Mireo Plus H also impressively features the lowest lifecycle costs compared to other fuel cell trains on the market and can be quickly refueled in just 15 minutes. The Mireo is designed to be energy-saving and environmentally friendly with its monocoque, welded lightweight aluminum structure. In addition, its improved aerodynamics, energy-efficient components, and intelligent electrical system management effectively

reduce the use of resources as well as emissions. The development of alternative drives in rail transport is part of Siemens Mobility’s sustainability strategy. The company is a pioneer in sustainable mobility solutions and offers the successful Mireo regional train platform not only as an electric train for routes with overhead power lines, but also as hydrogen and battery-powered variants.

## Coca-Cola working with DB Cargo to protect the climate

Soft drinks produced by Coca-Cola Europacific Partners Germany (CCEP DE) are available throughout Germany.

CCEP DE has 27 production and logistics facilities in the country for bottling, storing and distributing its beverages.

DB Cargo is also involved: When short distribution routes can’t be used, rail transport is an obvious option – for example, for long-distance transports exceeding 300 kilometres. For consumers, this combination of mostly short routes and additional transports by rail for longer distances is a clear example of sustainable logistics.

### An eye-opening joint campaign

The partnership between CCEP DE and DB Cargo is an ideal way to raise awareness about green rail freight transport among consumers. The campaign is taking place right where they come into contact with Coca-Cola and other classics like Fanta, Sprite and mezzo mix: in around 1,500 beverage stores throughout Germany from late July to the end of October. In the stores, labels and signage inform customers about the partnership with the theme “Unterwegs zu mehr Klimaschutz” (On the way to a better climate). Buyers of selected promotional products from Coca-Cola can also win something: A total of 300 Deutsche Bahn travel vouchers worth EUR 49 each are being raffled.

### High potential for emissions cuts in the logistics sector

CCEP aims to achieve net zero emissions along its entire value chain by 2040 in order to meet its commitment according to the science-based targets initiative (SBTi) for the 1.5-degree target of the Paris Climate Agreement. The company is taking action in various fields to reach this goal, including the successful partnership between CCEP DE and DB Cargo. From 2020 to 2022 alone, the two partners cut around five million truck kilometres and 3,000 tonnes of CO<sub>2</sub> emissions by shifting transports to rail.

### Environmentally friendly rail freight transport

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## After the flood: DB is completely rebuilding the last destroyed section of the Ahr Valley Railway at record speed

Deutsche Bahn (DB) is rebuilding the last destroyed section of the Ahr Valley Railway from scratch at a record pace of just over two years. The flood disaster in the summer of 2021 completely devastated the route between Walporzheim and Ahrbrück. The DB is now starting to rebuild, in collaboration with the federal government, the state of Rhineland-Palatinate and the municipalities, and is also electrifying the route. The work should be completed by the end of 2025. This means that the Ahr Valley Railway can be used continuously for travellers again. Passengers will also be able to benefit from trains running every 20 minutes in the future.

The reconstruction between Walporzheim and Ahrbrück is equivalent to a new build. Among other things, the DB is replacing nine Ahr bridges and almost all supporting structures and railway embankments and re-laying 16 kilometres of tracks and eight switches. In addition, six train stations and seven level crossings are being repaired. At the same time, DB is designing the infrastructure so that it will be more resilient to extreme weather events in the future. This includes bridge structures without central pillars in the Ahr, which offer as little attack surface as possible in the event of a potential flood. To ensure reliable train traffic, the DB is also equipping the route with modern electronic signal box technology.

Berthold Huber, Director of Infrastructure at DB: “The Ahr Valley route has been of great importance for the entire region, tourism, but above all the everyday life of the people here for over 110 years. The extent of the destruction is still clearly visible and the suffering remains unforgotten. That’s why I’m glad that things will look completely different here in just two years: we’re completely rebuilding the section between Walporzheim and Ahrbrück at record speed and also electrifying it. I would like to thank all the partners involved for their close and constructive cooperation right from the start, especially the federal government, which made rapid reconstruction possible by facilitating planning and the reconstruction fund.”

Dr. Volker Wissing, Federal Minister for Digital and Transport: “Today’s appointment is particularly important to me. What happened here in the Ahr Valley was one of the worst natural disasters in the history of our country. Much has been accomplished, much is still to be done. Today we send another signal of hope to all the people who are still suffering from the massive



damage to buildings, bridges, roads and railway lines. The Ahr Valley Railway is making progress – and very quickly. To make this possible, the federal government has made planning easier for the reconstruction and electrification of the Ahr Valley Railway. This has meant that we can now begin rebuilding the rear section of the route that was completely destroyed by the flood. The federal government stands firmly on the side of the people here in the region and will continue to do everything it can to support reconstruction.”

Malu Dreyer, Prime Minister of Rhineland-Palatinate: “The start of construction work on the new Ahr Valley Railway from Walporzheim is a good day for the people in the Ahr Valley. Realization at this record pace is only possible thanks to the very close cooperation between Deutsche Bahn, the state, district, municipalities and SPNV Nord.

I would like to thank everyone involved very much for this. The reconstruction also ensures a flood-resilient infrastructure that is sustainable and future-proof. The Ahr Valley Railway will be electrified along with the reconstruction of the entire route, for which the federal and state governments will jointly invest a large sum. Of the approximately 92 million for electrification, the country is responsible for 20 million euros. We use synergies and plan and implement the railway line and the Ahr Valley cycle path from a single source. Several bridge structures are used together for rail and bicycle traffic. A highly innovative supply artery runs under parts of the cycle path with pipes for gas, water, electricity and, in the future, climate-neutral biogas or hydrogen. We will continue to work together to ensure that this beautiful

region has a good future.”

Achim Hallerbach, head of the Rhineland-Palatinate North Regional Transport Association: “The SPNV North is very pleased that this terrible catastrophe can be used for a climate-friendly and mobility-improving future. We would like to thank DB, the federal government and the state very much for allowing our rail transport mode to be developed so quickly and much better than before. We have developed and decided on a 20-minute service in the Ahr Valley between Remagen and Ahrbrück for passengers. These now go together wonderfully hand in hand. Implementation with electric vehicles is also well on the way.”

Cornelia Weigand, district administrator of the Ahrweiler district: “As the fastest means of public transport, the train is used intensively by commuters, school children and students. It also offers an extremely attractive timetable for occasional travelers and is therefore an important part of public transport and at the same time tourism in the Ahrweiler district. The continuing rail connection is therefore a crucial factor after the destruction caused by the flood and the linchpin of a functioning infrastructure in the region. With the planned 20-minute intervals and the continuous connection to Bonn, it also makes an important contribution to climate protection and the mobility transition.”

Reconstruction at a record pace is possible, in addition to the close cooperation of all those involved, primarily through legal exceptions in the flood areas. For example, simplified conditions apply to planning law and

procurement. The federal, state, local authorities and DB are working closely together to quickly bring people back a bit of normality.

The aim is for a 20-minute service on the entire route from Remagen to Ahrbrück, from which travellers can particularly benefit in the future. To achieve this, the DB is extending the double-track section in Dernau by around 700 meters. A larger train station with two platforms is being built in Altenahr. The old platform and the track were completely washed away by the flood. Together with the Rhineland-Palatinate State Office for Mobility, DB is also building five cycle path bridges between Walporzheim and Altenahr. As a result, the region will again have a continuous cycle path almost at the same time as the railway line goes into operation, making it particularly attractive for cyclists and tourists.

The first section of the Ahr Valley Railway from Remagen to Walporzheim has been in operation again since the end of 2021. Between Walporzheim and Ahrbrück, buses will replace trains until the route is reopened. The federal government is providing the financial resources for reconstruction. The state of Rhineland-Palatinate is financing the electrification of the Ahr Valley Railway together with the federal government.



## More night trains, more connections, more comfort: DB and ÖBB are expanding cross-border traffic

Rail traffic between Germany and Austria is booming: by the end of the year, Deutsche Bahn (DB) and the Austrian Federal Railways (ÖBB) expect around 40 percent more passengers than five years ago. The two companies are therefore continuing to expand their cross-border long-distance services between neighbouring countries.

Stefanie Berk, Director of Marketing and Sales at DB Long-Distance Transport: “The trend towards rail is unbroken. More and more people in Germany and Austria are relying on the climate-friendly train to travel to their neighbouring country. We want to further stimulate growth with new trains, more comfort and more connections. This can only be achieved through a joint effort by the railway companies involved. The expansion of the international timetable in

close collaboration with ÖBB is our answer to growing demand.”

Dr. Sabine Stock, ÖBB board member for passenger transport: “We want to double the number of passengers on Nightjet transport by 2030! Deutsche Bahn plays an important role here, as many Nightjet lines start and end in Germany. The new connections from Berlin to Paris and Brussels and the use of the ‘new generation Nightjet’ in Germany are strong signs that DB and ÖBB believe in the night train product and will provide more services.”

With the timetable change from December, there will be another ICE connection between Berlin and Vienna via Nuremberg. By extending the route to Hamburg, the Elbe metropolis will also receive another daily

connection to the Austrian capital. From December onwards, DB and ÖBB will also be offering the ICE journey from Berlin via Frankfurt/Main and Stuttgart to Innsbruck and back every day instead of only on weekends. In the future, long-distance trains will run every hour between Munich and Salzburg from around 06:00 to 21:00. From Innsbruck to Munich there is a two-hour service every day between 06:40 and 21:40.

ÖBB and DB are also investing more heavily in new trains. From the timetable change, ICE 4 will be used on the Frankfurt/Main-Munich-Salzburg-Klagenfurt route and will ensure more comfort and reliability in long-distance transport.

The new generation of Railjets, which will gradually operate on the route between

Munich and Italy from April 2024, also offer more quality and seats. The brand new and ultra-modern trains offer ICE-level comfort.

ÖBB and DB are also expanding their cooperation in night traffic. From December this year, the two companies will be offering Nightjet connections from Berlin and Vienna to Paris and Brussels. These connections will initially run three times a week, then daily from autumn 2024. This doubles the number of Nightjet connections for Berlin.

The completely new ÖBB Nightjet trains will be in use for the first time from the turn of the year 2023/24. They will initially be used on the Hamburg-Vienna and Hamburg-Innsbruck connections.

These newly developed Nightjets with speeds of up to 230 km/h offer a new level of comfort, including through individual cabins (mini cabins) in the couchette car and level entry for people with limited mobility. Further connections in Austria, Germany and Italy will follow in the course of 2024.









# Hungary

On September 12th, Tram No. 1365 working a Line 49 service and tram No. 1461 with a line 47 service are seen at Deák Ferenc.

*Mark Armstrong*

Unit No. 853 and 627.852 with a line H7 service are seen at Boráros tér on September 12th.

*Mark Armstrong*

Nos. 1119 and 769.1120 with a line H7 service are seen at Boráros tér on September 12th.

*Mark Armstrong*





# Hungary

Nos. 130.555, 958, 679 and 957 are seen at Csepel depot on September 12th.  
*Mark Armstrong*

Tram No. 1351 working a Line 2 service is seen outside the parliament building on September 12th.  
*Mark Armstrong*

A former tram car is seen converted into a bar at Csepeli HÉV Sörözőe.  
*Mark Armstrong*





# Hungary

▶ Cesky Drahý Class 380.007 is seen at Budapest Nyugati on September 12th having arrived with a Eurocity service from Praha hl.n.

*Mark Armstrong*

▶ H-Start Class 418-131 has recently arrived at Budapest Nyugati on September 12th.

*Mark Armstrong*

▶ Class 480.009 waits for its next working at Budapest Nyugati on September 12th.

*Mark Armstrong*





On September 13th, steam loco Class 109 No. 109.109 is seen at Magyar Vasuttorteneti Park.  
*Mark Armstrong*

A view of the steam locos round the turntable at Magyar Vasuttorteneti Park including Nos. 480, 265, 2, 17, 2459, 377-493, 7111, 5, 375.1032 and 376.615. *Mark Armstrong*

Even more steam locos round the turntable at Magyar Vasuttorteneti Park including Nos. 342.006, 442.013, 301.016, 328.054 and 520.034  
*Mark Armstrong*





# Hungary

On September 13th, Class V55.004 is seen at Magyar Vasuttorteneti Park. *Mark Armstrong*

Class 439.001 in the yard at Magyar Vasuttorteneti Park. *Mark Armstrong*

A true railcar is seen at Magyar Vasuttorteneti Park. *Mark Armstrong*









H-Start EMU Class 415.010 stands at Budapest Delistation on September 13th. *Mark Armstrong*

Trams Nos. 4091, 4020 and 4255 working a Line 14 service are seen at Gyongyosi Utca Stopt. *Mark Armstrong*

MAV tours No. M61.001 is seen at the depot adjacent to Magyar Vasuttortenet Park on September 13th. *Mark Armstrong*





# Hungary

▶ A pair of train heating units, Nos. VF10 (V42525) and VF 11 (V42536) are seen at Budapest Deli station on September 13th. *Mark Armstrong*

▶ H-Start Class 630-027 stands at Budapest Deli station on September 13th. *Mark Armstrong*

▶ Shunter No. V46-036 waits with an empty stock move at Budapest Deli station on September 13th. *Mark Armstrong*





# Hungary

▶ Class 470.005 and 480.013 wait departure time at Budapest Keleti on September 13th.

*Mark Armstrong*

▶ OBB Railjet Class 1116.217 has arrived at Budapest Keleti with a Eurocity service from Austria. *Mark Armstrong*

▶ Having deposited stock in Budapest Keleti station, Class 448-439 heads back to the stabling point. *Mark Armstrong*





Iceland is not known for railways, however a brief visit to Reykjavik on August 4th revealed this loco preserved on the quay side of the harbour. The Reykjavik Harbour Railway operated from 1913 - 1928. Its main purpose was to carry stone from quarries south of the city for the construction of breakwaters at the harbour. It was 900mm gauge and approximately 10km in length. This loco was one of two the company acquired, with 0-4-0 wheel arrangement and named 'Minør'. She was built in 1892 by Arnold Jung in Germany and worked in Germany and Denmark before arriving in Iceland in 1913. *Keith Chapman*





Japan



A N700A Japanese Shinkansen high-speed train with tilting capability developed for JR Central and JR West. Manufactured by Hitachi, Kawasaki Heavy Industries, Kinki Sharyo, Nippon Sharyo and constructed between 2005-2020. Runs on the Tōkaidō and San'yō Shinkansen lines since 2007, and is operated by JR Kyushu on the Kyushu Shinkansen line. With a maximum speed of 285 km/h, one of them is seen here at Tokyo station. *Andre Pronk*





# Japan



A Sunrise Express train is seen at Tamachi station. The Sunrise Seto is an overnight train that runs between Tokyo and Takamatsu in Shikoku. This train is coupled with the Sunrise Izumo between Tokyo and Okayama and has combined or single private sleeping berths or you can sleep in your seat. The 285 series EMU used for this train are diesel and were constructed in 1998 by Kawasaki Heavy Industries, Nippon Sharyo, Kinki Sharyo. Thirty five have been built each having 7 cars. *Andre Pronk*





Japan



The Nankai Railway runs between Kansai Airport and Namba station and the Nankai 50000 series train was constructed in 1994 by Tokyu Car Corporation and designed by Hiroyuki Wakabayashi with a maximum speed of between 110/120 km/h and runs on 1500v DC power. One of them is seen here at Namba station. *Andre Pronk*





Netherlands

Eurostar E320 No. 4031 heading from Amsterdam to London St. Pancras International arrives at Rotterdam Centraal on September 20th. *Gerard van Vliet*





# Netherlands

Thalys No.4533 heading from Paris Nord to Amsterdam calls at Rotterdam Centraal on September 20th. *Gerard van Vliet*





# Poland

Polregio DMU No. SA133-020 is seen at Białystok on August 1st. Gerard van Vliet





# Poland

A slowly disappearing train type in Poland is the virtually unmodernized train set series EN57. Here Polregio No. EN57-1330 with train No.R10203 to Kuźnica Białostocka is seen at Białystok on August 1st. *Gerard van Vliet*





# Poland

SKPLDH90SD85-001 (Mazik), the former Netherlands No. NS3429, with the full registration number of NL-SKPL 95 84 5 133 429-5, where both the NL and the old NS number stand out is seen at Zagórz on August 4th. *Gerard van Vliet*









# Spain



Heavily graffitied RENFE Mercancías locos Nos. 253.016, 253.090 and 253.061 are seen stabled at Port Bou on September 9th. *John Sloane*

ADIF shunters Nos. 311.142 and 311.126 await their next duties in the yard at Port Bou on September 5th. *John Sloane*

SNCF EMU No. 27851, in the former Languedoc-Roussillon livery, awaits departure from Port Bou with a train to Avignon on September 9th. *John Sloane*





Spain

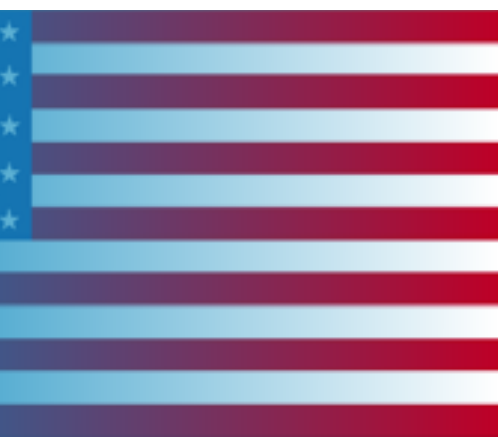


RENFE clearly have considerable problem of graffiti as evidenced by EMU No. 447.364M which has arrived at Port Bou from Barcelona Sants on September 5th. *John Sloane*





U.S.A.



## New Caltrain EMU at APTA EXPO

Stadler and Caltrain are presenting the new electric multiple unit vehicle for the Bay Area at APTA EXPO in Orlando, FL.

Caltrain currently has 23 seven-car units on order with Stadler and has recently added a bi-level battery-powered EMU to the fleet in production. The vehicles will be going into service on the route between San Francisco and San Jose and will replace Caltrain's diesel-powered fleet in fall 2024.

Stadler is building the seven-car multiple units for Caltrain at the US headquarters in Salt Lake City. So far, four vehicles have arrived in California and have been undergoing testing on the Caltrain network. Although the Stadler bi-level EMUs are a proven product in Europe and have been in service overseas for several decades, these will be the first to be deployed in the United States. Caltrain's new Stadler trainsets will serve as the foundation for the first modern, electrified railroad in California.

This transformational project is creating jobs across the country, combatting climate change, and will significantly improve service for riders. These new trainsets and their associated infrastructure in California represent a keystone in the state's transit and sustainability future. The project is a critical component of California's future high-speed rail system as the two systems will share a corridor. Furthermore, the associated electrification lays the foundation for Caltrain's revolutionary 2040 Service Vision that will reduce greenhouse gas emissions by 110 metric tons every day, and support tripling ridership to 180,000 passengers every weekday—the equivalent of adding 5.5 new freeway lanes worth of capacity to US Highway 101.

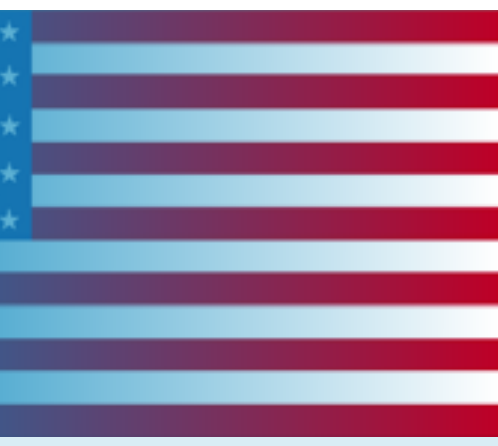
### More about the train

The seven-car EMU, referred to as the KISS (German abbreviation, stands for Comfortable, Innovative, Fast, Regional Train) with its high performance and passenger capacity helps alleviate rapidly growing ridership by allowing faster and more frequent service. It offers seating for around 600 passengers and standing room for additional riders. Fixed seats are equipped with power plugs and each train has a restroom on board. Digital passenger information displays allow guests to receive information about their journey in real time.





U.S.A.



## New H2 Train for SBCTA Shown in the US at APTA EXPO

Stadler and San Bernardino County Transit Authority (SBCTA) are presenting Stadler's first hydrogen passenger train for the first time in the United States at APTA EXPO in Orlando. The FLIRT H2 for SBCTA is one of Stadler's newest additions to its alternative drive portfolio and will start operations in Southern California's Inland Empire in 2024.

The Zero-Emission Multiple Unit (ZEMU) is equipped with a modular power pack that is capable of powering a four-car train. The power pack contains the hydrogen power equipment, from the fuel cells and batteries to the hydrogen tanks. This means that

hydrogen technology is spatially clearly separated from the passenger compartments of the train. Rail transport is the most sustainable mobility solution of all. In the fight against climate change, shifting transportation of passengers and goods to the rails therefore plays a key role. As infrastructure electrification is time consuming and costly a different approach is needed.

The Stadler partnership and introduction of a hydrogen-powered ZEMU in the U.S. reflects SBCTA's vision and leadership in bringing innovative transportation solutions

to the forefront. The agency serves one of the most vibrant population and economic centers in the country and had the foresight to insist that any new rail service within the region break the mold when it comes to sustainable transit technology. The opportunity presented itself with the new Arrow Line – a nine-mile rail extension from Redlands to Metrolink's popular San Bernardino Line. SBCTA is already deploying Stadler's FLIRT diesel multiple unit (DMU) on the Redlands Line and in November 2019, partnered with Stadler to design and build the first hydrogen-powered FLIRT.

The contract marked a key milestone for Stadler, as it played a significant part in the effort to bring zero emission technology to passenger rail in the United States. The FLIRT H2 is scheduled to start operation in 2024.

### More about the train

The first FLIRT H2 consists of two electrically powered end cars and a power pack in the middle. This power pack contains the fuel cells and hydrogen tanks. The fuel cells convert hydrogen into electricity. This electricity is sent to a traction battery. The battery then supplies the drive of the vehicle with the power required at any given time.

This configuration also allows for recuperation of brake energy back to the battery. Therefore, the battery stores both braking power and power from the hydrogen cells. Thanks to Stadler's innovative propulsion solution, the FLIRT H2 is able to operate all day without re-fueling. The train offers seating for 108 passengers and additional generous standing room. The maximum speed is 130 km/h (79 mph). Furthermore, the train is designed to handle operation in high ambient temperatures of up to 120 degrees Fahrenheit (49 degrees Celsius)





Poland

## Alstom and Polskie Linie Kolejowe sign a contract for the service and maintenance of rail traffic control systems

On September 21st, Alstom, a global leader in smart and sustainable mobility, and Polskie Linie Kolejowe (PKP PLK), the manager of the national rail network, signed a contract for the service and maintenance of rail traffic control systems delivered by Alstom. The contract will be implemented until 2027.

Under the contract, Alstom will be a supplier of spare parts for railway traffic control devices, including relays, point drives, vacancy detection systems, crossing signaling systems and computer dependency systems. The contract will enable continuous implementation of activities related to the preventive and corrective maintenance of railway traffic control systems.

“The new contract is a sign of confidence in our state-of-the-art international standards and local engineering competence. As Alstom, we have been developing our know-how in rail traffic control systems based on the experience of the Katowice site. Last year we announced our intention to hire 150 software developers, testers and other IT experts. A part of them is already working on, among other things, the development of advanced systems for railway traffic management,” said Adam Juretko, Vice President of Alstom Poland and Managing Director of Alstom ZWUS.

Alstom also carries out other service projects for PKP PLK, such as post-warranty service of computer equipment built on the entire PKP PLK network, or service of EBICab-2000 on-board equipment. The company is also responsible for service of trackside equipment for PKP PLK sites in

Tarnowskie Góry, Opole, Kraków, Łódź and Warsaw.

Alstom is one of Europe’s largest producers of rail traffic control systems and equipment. As the first in Poland deployed European Rail Traffic Management System (ERTMS) Level 2 on the majority of the country’s main railway lines, as well as the control centre for Warsaw Metro. In addition, Alstom installed over 30 Centralised Traffic Control (CTC) systems, equipped over 200 stations with computerised interlocking systems and modernised over 1,700 level crossing systems.

Poland

## Alstom integrates its operations in Poland to form a single company, ALSTOM Polska S.A. and solidifies its leading position in the market

Alstom, global leader in smart and sustainable mobility, has merged all companies operating in the Polish market into a single entity, ALSTOM Polska S.A. This step will seal the integration of Alstom’s units in the domestic market and strengthen the company’s position as a provider of full range of products and solutions for rail customers – including modern rolling stock (high-speed rail, regional rail, subways, trams), services, as well as rail traffic control systems. This momentous integration has paved the way for the creation of a leading railway producer in the country.

“By creating a single company, ALSTOM Polska S.A., we are starting a new chapter in Alstom’s history in Poland. The merge of three entities with a heritage of more than 120 years of history in Poland and 4000 employees, solidifies our leading position in the market and enables us to serve our customers both in the domestic market, as well as in the international arena, with our export activities extending to Italy, the Netherlands, Norway, Germany, the Baltic states and United Arab Emirates,” said Sławomir Cyza, CEO and Managing Director of Alstom in Poland, Ukraine and Baltic States.

Alstom has been operating on the Polish market for 25 years. The company has built on the extensive industrial heritage of its sites – 180 years of presence of Pafawag in Wrocław, 150 years of Konstal in Chorzów and 100 years of ZWUS in Katowice. Alstom Konstal, Alstom

Szynowe and Alstom ZWUS are replaced by ALSTOM Polska S.A., operating through four branches: Warsaw, Chorzów, Katowice and Wrocław.

Alstom has a significant impact on the transport industry in Poland. At present, trains, locomotives, subways or trams manufactured by Alstom are already in operation in Poland. The company is the producer of the first high-speed train in Poland, the Pendolino. Alstom has introduced major railroad automation and infrastructure projects such as ERTMS/ETCS L2 or the ATC system in the Warsaw metro to the Polish market.





# Switzerland

The rail freight industry is experiencing a revolution, led by European Loc Pool AG (ELP) from Switzerland. ELP specializes in advanced full-service leasing offers and presents the most impressive locomotive portfolio for the market. At the heart of ELP's locomotive portfolio are undoubtedly the EuroDual and Euro9000 locomotives, which offer impressive performance. With up to 2.8 megawatts in diesel mode, 9 megawatts of electrical power and a tractive force of 500 kilonewtons, these six-axle hybrid locomotives set new standards. Thanks to being equipped with ETCS Level 2 (Baseline 3.4.0) and full TSI compliance, they ensure maximum safety.

Since their rollout on the European rail network in April 2020, they have proven themselves impressively on both electrified and non-electrified lines as well as in last-mile and shunting operations. In addition,

these locomotives are equipped with radio remote control as standard, which further enhances their flexibility. The Euro9000 locomotive is the latest highlight in ELP's product range. This multi-system locomotive was specially developed for international rail freight transport. With its unique 9 megawatts of electrical power, 1.9 megawatts of diesel power (2 x 950 kW) and 500 kilonewton of tractive power, the Euro9000 locomotive is ideally suited for European corridors. It can operate in countries such as Germany, Austria, the Netherlands, Italy, Belgium and Switzerland. Its versatile performance and the ability to operate on different power systems makes the Euro9000 locomotive a new standard in cross-border freight transport. Both locomotives, the EuroDual and the Euro9000, are offered by ELP under full-service leasing throughout Europe.

This offers customers, especially rail

transport companies, numerous advantages:

- Flexibility after Term: ELP offers flexible options after the term to meet changing needs.
- Worry-free operation guaranteed: In addition, the full-service leasing offer includes a thorough handover, driver training in cooperation with Stadler, and a locomotive foiled in the customer's design. All locomotives are delivered fully equipped and ready for operation.
- Financial flexibility: ELP provides access to state-of-the-art rail vehicles without pre-paying and tying up capital, and allows financial resources for other core business activities.
- Operational efficiency: Leasing with ELP includes locomotives, comprehensive maintenance services and an innovative insurance package. This offer ensures long-term operational reliability, minimizes maintenance expenses and allows you to

## Innovative Locomotive Leasing: The Unbeatable Offer



focus on your core business: Your operation!

- Risk management: With ELP, companies can avoid asset retirement and reuse risks.

ELP takes care of procurement, maintenance and insurance of the vehicles. ELP drives the rail industry with advanced locomotives such as EuroDual and Euro9000, opening

new horizons for rail freight operators. Technological excellence, increased efficiency and productivity, and full-service leasing make ELP the first choice for efficient and reliable transport solutions.

# Finland

Estonian railway company Elron has renewed maintenance contract of its Flirt train bogies with VR FleetCare after an international tender. The three-year agreement covers the periodic maintenance of bogies and traction wheelsets for 38 Flirt trains. The bogie maintenance will take place at VR FleetCare's component workshop in Pieksämäki, where optimised production lines for bogie and wheelset maintenance have been established. The bogie is a crucial component of rail vehicles both in terms of costs and operational safety. Bogies account for approximately one-fifth of the life-cycle costs of train rolling stock.

"We are happy to continue our cooperation with VR FleetCare for the Elron trains components service. Earlier experience has shown that we can be confident in VR

## VR FleetCare to continue maintaining Estonian railway operator's train bogies in Finland

FleetCare as trustable partner," says Mark Pakin Elron's Technical manager.

"We are truly pleased with the continuation of the agreement and the employment impact it has for us. The maintenance agreement for Elron's bogies and traction wheelsets is strategically important for us. Two years ago, we opened a new component workshop specialized in the maintenance of bogies and other components. Elron's decision to continue working with us reflects their strong confidence in our expertise and cost efficiency in component services," says Wilhelm Schevelew, Head of Sales of VR FleetCare.

VR FleetCare's production can address the maintenance needs of various types of rolling stock components

VR FleetCare has been maintaining the bogies of Elron's Flirt trains for five years, and this agreement ensures the continuation of this collaboration. The component workshop, opened two years ago, focuses specifically on the heavy maintenance of bogies and traction wheelsets, and it also handles bogies from other railway equipment.

"At VR FleetCare, we have extensive expertise in various types of rail vehicle bogies and other components. We provide maintenance for bogies of freight wagons, electric and diesel locomotives, electric trains, and passenger coaches under one roof. Our skilled workforce has taken concrete steps to enhance the efficiency and productivity of our production lines, enabling us to offer internationally competitive component maintenance services to our clients", says

Juha Lintula, Head of Component Services at VR FleetCare.

The rolling stock operating in Finland has relatively many Flirt trains manufactured by Stadler and Siemens Vectron locomotives, which are also widely

used in other European countries. Naturally, the bogies and components of these trains are of particular interest to the Head of Component Services.

"We possess expertise in maintaining components from several manufacturers' rolling stock. Now, the combination of our expertise in the maintenance of Flirt trains



and Vectron components in locomotives and the European-wide market potential looks good. Expanding our capabilities to other types of rolling stock with this experience and expertise is also interesting to us," adds Lintula.



# From the Archives

## Argentina

At Esquel depot on November 4th 2004, Baldwin 2-8-2 No. 1 rides the turntable whilst Henschel 2-8-2 No. 105 waits in the background.  
*John Sloane*





# From the Archives

France

On a very gloomy October 29th 1997,  
SNCF No. 2D2-9135 sits outside the  
roundhouse at Charolais depot in  
Paris. *John Sloane*





# From the Archives

An SNCF 22xxx sweeps across the famous viaduct at Port de La Rague on the Riviera with a train from Paris Lyon for Nice on July 22nd 1997.  
*John Sloane*

France





# From the Archives

A service to Strasbourg pulls out of Paris Est hauled by SNCF BB No. 15010 on February 28th 1998. *John Sloane*

France





# From the Archives

SNCF No. 72189 in 'en voyage' livery awaits departure time at Troyes with a late afternoon train to Paris Est on November 8th 2016. *John Sloane*

France





From the  
Archives

Co-Co No. 59 stands inside the shed  
at Hung Hom, Kowloon on April 2nd  
1987. *John Sloane*

Hong Kong





# From the Archives

Western Railway WP Pacific No. 7465 departs from Agra Idgah with a train to Bayana on April 4th 1983.  
*John Sloane*

India





# From the Archives

Western Railway metre gauge YP Pacific No. 2572 (Telco/1964) arrives at Jaipur on a train from Delhi on April 19th 1984. *John Sloane*

India





# From the Archives

FS Bo-Bo-Bo No. 626.404 wheels a southbound freight through Sestri Levante on August 25th 1992.  
*John Sloane*

Italy





# From the Archives

A collection of various types of small FS diesel shunters stand outside the repair shop at Rome San Lorenzo depot on May 9th 2008. *John Sloane*

Italy





# From the Archives

FS Bo-Bo-Bo No. 636.467 calls at Manarola in the Cinque Terre with a train from Genoa to La Spezia on August 18th 1992. *John Sloane*

Italy





# From the Archives

Sabah

Amongst the items in the depot at Beaufort on July 22nd 2005 are Wickham railbus No. 1101 and railcar No. 3105. *John Sloane*





# From the Archives

## Sabah

Sabah Railways 2-8-2 No. 6-015 stands at Tanjung Aru with a special service on July 21st 1995.

*John Sloane*





From the  
Archives

GEA 4-8-2+2-8-4 No. 4039 takes water  
at Vorbaai shed on a damp October  
22nd 1973. *John Sloane*

South  
Africa





# From the Archives

## South Africa

16CR 4-6-2 No. 837 makes a vigorous start away from its call at New Brighton with a local service from Uitenhage to Port Elizabeth on October 23rd 1973.  
*John Sloane*

