



**Railtalk** Magazine *Xtra*

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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 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 182Xtra

With the clocks going back, we have shorter days and long dark nights, not to mention the colder weather, but I'm sure that many of us are already planning for trips abroad in 2022. Meanwhile we still have a couple of months left in 2021 and more excellent photos from around the world to share with you.

In the new this month, German railway company, Deutsche Bahn (DB), has awarded ABB the contract to upgrade its first flagship InterCity Express (ICE 1) high-speed train series. The contract is part of a refurbishment programme and includes the upgrade of 76 high-speed locomotives to ABB's highly energy efficient IGBT (Insulated Gate Bipolar Transistors) traction converters. Replacing existing power electronics from the 1990s with state-of-the-art traction technology will help to significantly extend the operating lifespan of the ICE 1 fleet making it fit for service for at least another decade. Financial details of the contract have not been disclosed and the order was booked in the third quarter of 2021. The traction equipment converts the electrical energy from the overhead power line to the right voltage and frequency to drive traction motors. The traction converters selected are based on ABB's three-level high power electronic platform, resulting in minimised energy losses, reduced mechanical stress on the existing traction motors and less noise. Upgrading to IGBT technology is an efficient and economical solution that elevates the traction system to that of modern trains with respect to reliability, energy efficiency and ease of maintenance. Energy savings of at least eight per cent are expected which is equivalent to the annual electricity consumption of 5,000 households.

Dr. Philipp Nagl, Executive Director Production for DB Fernverkehr at DB, said: "We are pleased to continue our partnership with ABB as a competent partner with proven expertise in customized propulsion solutions. ABB traction converters were already successfully deployed in a first batch of 40 modernised ICE 1 high-speed locomotives in 2010. This replacement enabled significant energy savings and reductions of operating costs that were higher than expected.

### This Page

SZ Class 664.110 arrives at Podbrdo after working train No. AVT855 11:37 from Bohinjska Bistrica on September 5th. *Laurence Sly*

Together with our investments in energy efficient new rolling stock and new maintenance facilities this project is another milestone to strengthen our position as the most climate-friendly transport mode."

Edgar Keller, President of ABB's Traction Division, said: "The fleet of ICE trains is the backbone of Germany's high-speed train network and we are grateful to DB for their trust in our technology. The need and demand for even more efficient, environmentally friendly and reliable rail travel is set to increase. With decades of rail experience, combined with the broadest traction portfolio, ABB is well positioned to help rail operators get the best efficiency and value from their existing system."

DB recently obtained the operating permit from the Eisenbahn-Bundesamt that allows the converter upgrade. The permit was granted after intensive testing of two upgraded pilot locomotives, and this milestone marks the start of the project. The replacement with a form, fit and function compliant ABB traction converter solution enables the high conversion pace of two ICE 1 locomotives being upgraded roughly every two weeks with the entire refurbishment project expected to be completed in the third quarter of 2023.

And in other news, Onrail and European Loc Pool have started a long term partnership with two innovative EuroDual locomotives will modernise Onrail's fleet from the end of 2022. The locomotives will be used on the route from Fauske to Oslo in Norway, which is only partially electrified and therefore ideal for hybrid operation. The new train service will run on the Nordland Railway, Norway's longest railway line, from Bodø to Trondheim. The total length of the line between Fauske and Oslo is 1,217 kilometres.

As always a massive thanks for all the excellent photos, please do keep sending them in, until next month

**David**

### Front Cover

PKP No. EP07.435 slows for Przeworsk with train No. TLK30105 heading towards Przemysl on September 21st. *Mark Torkington*







Watco Australia's No. G511 and on hire from Qube, No. GML10 bring an early morning intermodal service from Fremantle into Forrestfield yard for unloading. *Colin Gilderleve*

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AXPT working train No. NT36 Grafton - Sydney crosses Stony Creek at Pembroke on October 17th. *Mark Bennett*





CBH Groups Nos. CBH025 and CBH011 are seen through the trees as they pass Herne Hill, to the east of Perth with loaded grain hoppers heading for Kwinana.  
*Colin Gilderleve*





Australia



## Alstom delivers 100th Flexity light rail vehicle to world's largest tram network in Melbourne

Alstom has delivered the 100th, and final Flexity light rail vehicle (LRV) to its customer, the Department of Transport in Victoria. As Australia's only end-to-end manufacturer of LRVs, Alstom designed the vehicles to meet the specific characteristics of the Melbourne tram network, including increased accessibility. The trams were locally manufactured at Alstom's Dandenong rolling stock facility including more than 50% local content, supporting around 75 employees and a thriving ecosystem of local suppliers in Victoria.

The tram is based on Alstom's popular low-floor Flexity

LRV platform, which is the largest fleet of modern low-floor trams operating on the world's largest tram network, spanning over 250 km of double track. The fleet is approximately one fifth of the network's overall fleet.

The original contract for the first 50 trams was signed in 2010 with further orders for an additional 20, 10, 10 and 10 vehicles awarded between 2015 and 2019, proving the performance, quality and accessibility credentials of the platform. Alstom's LRV fleet in Victoria also includes 41 Citadis X02 LRVs, taking the total number of vehicles operating on the network to 141.

Alstom's Managing Director, Australia and New Zealand, Mark Coxon said, "This is a significant milestone for our operations in Victoria and I would like to thank and congratulate our team and all the local suppliers who have worked tirelessly to make this happen. We are thrilled to have delivered these 100 Flexity LRVs to our customer, creating a new milestone for Melbourne's much-loved tram network. In Australian rollingstock terms, this is a truly iconic fleet – the Flexity was made in Melbourne, for Melbourne – and Alstom is proud to be part of this story for Victoria."

Alstom has been providing sustainable infrastructure solutions across Australia for more than 100 years and currently employs approximately 1,600 people across 25 sites that include engineering centers, manufacturing facilities, project delivery offices and maintenance depots & workshops. Alstom's installed base of LRVs in Australia exceeds 250 vehicles.

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Photo: © Alstom







Train No. 6AB6, the Pacific National Adelaide to Brisbane container train is seen near Pembroke on the NSW North Coast on October 17th, hauled by Nos. NR27, NR77 and 8169. *Mark Bennett*





Australia



On September 7th, Pacific National's Nos. NR43 and NR52 pass the Midland Hospital with a Perth to Sydney intermodal. The double stack containers will probably be unloaded at Adelaide as the loading gauge through the Blue Mountains in New South Wales will only allow single height containers. *Colin Gildersleve*





# Austria

## 100 % green traction current reaches the Czech Republic

Following on from Austria and Germany, the ÖBB Rail Cargo Group (RCG) now also operates in the Czech Republic with 100 % green traction current. This means that all TransFER connections operated by RCG using in-house traction to, from and through the Czech Republic will be powered exclusively by traction current from renewable energy sources.

What was introduced in Austria in 2018 and in Germany at the beginning of this year now also applies to the Czech Republic: all TransFER services to, from and through the Czech Republic are now powered exclusively by green traction current from 100% renewable sources.

This applies to all TransFER connections operated by RCG in the Czech Republic. This represents a further investment by the RCG in obtaining traction current from clean energy sources. The plan is for more countries to follow suit in the coming years.

### Where the green traction current comes from

In Germany and the Czech Republic, the required green traction current is drawn from the public grid. Its origin is confirmed through certificates or proofs of origin.

Austria also has its own power plants: ÖBB-Infrastruktur operates eight hydroelectric power plants and one solar power plant, which together generate more than one third of the required traction current. This is distributed via traction current lines and converted into catenary voltage in substations.

The 100% green traction current then reaches the trains running on the ÖBB network in Austria via the overhead line.



## Five years of TransFER Wolfurt–Rotterdam



ÖBB Rail Cargo Group (RCG) celebrates the fifth anniversary of the successful TransFER connection between Austria and the Netherlands and is pleased about a continuous annual increase in the number of freight trains.

Wolfurt is not only of great importance for the strongly export-oriented economy of Vorarlberg. Austria's westernmost terminal is also a hub for the entire Lake Constance region. For five years, RCG has been offering the TransFER for intermodal flows of goods between Wolfurt and the Dutch port of Rotterdam, one of the most important transport hubs in Europe. In 2020, the TransFER was extended in the direction from Rotterdam to Wolfurt to include a stop in Frenkendorf, Switzerland. Since its introduction, the number of freight trains and transported TEUs (Twenty-Foot Equivalent Unit) have increased by around 70 % on this route.

### Connections to the wide TransNET of the RCG

With three weekly round trips, goods of all kinds are transported in containers on the sustainable rail from Wolfurt via Kufstein to Rotterdam and back. One of the trips runs from Rotterdam to Wolfurt via Frenkendorf in Switzerland. The unloading and loading facilities in Frenkendorf enable transport volumes to be taken to Wolfurt, from where RCG connects with its wide freight transport network TransNET. In this way, the TransFER Wolfurt–Rotterdam not only creates connections to other Austrian terminals and direct transport options to the northern ports of Hamburg and Bremerhaven, but also to the Adriatic ports of Koper and Trieste as well as the bimodal terminal Bilk, Hungary's largest terminal in Budapest.



# Czech Republic

On September 19th, CD Class 749.121 on its regular train to Blatná stands alongside 749.008 on a train to the rail day at Lužná u Rakovníka at a cold and damp Praha Hlavni Nadrazi.  
*Mark Torkington*









# Czech Republic

Train Europe Class 193.755-6 passes the Masarykovo lock complex in Ústí nad Labem-Střekov with hoppers heading to Žalhostice. *Erik de Zeeuw*















## Launch of business activities in Croatia

Monday, October 25th can be considered another milestone in the expansion strategy of ČD Cargo.

As of this day, their subsidiary ČD Cargo Adria provides commercially and organizationally transport of containers within the COSCO project from the port of Rijeka to Belgrade. Wagons for this transport were also provided by ČD Cargo.

At the same time, other business activities focused on the transport of agricultural products are being developed, and of course they are working very intensively to obtain our own license to operate rail freight transport in Serbia and Croatia.

Photo: ©CD Cargo





## The thirtieth locomotive of the 742.71 series has been delivered

On October 1st, representatives of ČD Cargo took over the thirtieth modernized locomotive of the 742.71 series on the premises of the company CZ Loko in Jihlava. In its modernization, the frame and other components from the locomotive 742.199 were used. For the 742.71 series, the engine bonnets have been lowered and there

is now a much better view from the driver's cabin located in the middle. The traction unit consists of a Caterpillar 3508C internal combustion engine and a Siemens 1FC2 560-6 traction alternator. The engine meets EU Stage IIIA emission limits. The locomotives are equipped with pneumatic, electrodynamic and manual parking brakes.

The source of compressed air for pneumatic equipment is a Mattei M 86J vane compressor. The control system of the locomotives comes from the company MSV Elektronika. The modernized engines are gradually deployed on first- and last-mile trains and shunting tasks in the district of the operational units Praha, České

Budějovice, Ústí nad Labem and Ostrava. Based on the concluded contract, ČD Cargo should take over a total of 50 of these modernized locomotives.

Photo: © CD Cargo





## FIRST TRAM FROM ŠKODA TRANSPORTATION IS PRESENTED IN OSTRAVA

A new tram from Škoda Transportation for Ostrava has arrived in its future home, the Moravian-Silesian capital.

The first of 35 new Škoda 39T trams has been officially presented by Škoda Transportation and Dopravní podnik Ostrava (DPO), the local transport company. Passengers in Ostrava can look forward to modern, safe and comfortable carriages.

The low-floor trams will offer a capacity for 60 seated and 140 standing passengers. The new Ostrava tram will have test runs, still under the manufacturer's direction, first without passengers and then with them. As soon as the specified conditions are met, DPO will accept the tram for normal operation.

"The Ostrava tram is the longest two-unit tram we have produced and we have applied several innovations to it. Passive pedestrian safety has been significantly improved thanks to the newly-shaped front end. Passengers will appreciate the comfortable and modern interior, and tram drivers will appreciate the brand new seat. It was designed for maximum comfort and safety and has all the controls right at your fingertips. Moreover, it is great that the trams for Ostrava will be produced by Ostravans themselves," Petr Brzezina, President of the Škoda Transportation Group

The leading European manufacturer of vehicles for public transport. With

the exception of the first two trams produced in Plzeň, the new trams will be assembled at the Škoda Ekova plant in Ostrava.

"Passengers have a lot to look forward to. Our new tram offers them safe, quiet and comfortable travel at the highest possible standard. A CCTV system, air conditioning, USB chargers and a sloping front end with rounded elements designed to prevent obstacles from being pulled under the vehicle. It is 100% low-floor," said DPO CEO and Chairman of the Board of Directors Daniel Morys.

The ŠKODA vehicles for Ostrava are 100% low-floor trams, equipped with USB ports and fully air-conditioned, which will significantly contribute to passengers' comfort. The maximum operating speed is 80 km/h. Other advantages of the vehicles are the fully rotatable chassis and low axle pressures, which are gentle on the track superstructure. Five double doors allow passengers to get on and off quickly. The trams also comply with the latest European standards, including requirements for the fire-resistance of materials used, the strength of vehicle bodies and the impact resistance of the vehicle body. The vehicle's length is 26.6 metres, the maximum height with the collector lowered is 3.6 metres, the weight of the empty vehicle is



more than 36 tonnes, and 56 tonnes when fully occupied. The tram's front end is designed so that its shape is reminiscent of a mine tower, a reference to Ostrava's history.

At the moment, DPO has ordered 35 units worth approximately CZK 1.7 bn. There is an option on another 5 units. After the first tram is put into operation, further Škoda 39T trams will be deployed at regular intervals.

## New Station at Zahradní Město Opened for Passengers in Prague

Passengers can now use the new railway station Praha-Zahradní Město. As in the case of the extended northern underpass at the main station, the ceremonial handover of the construction to the public was attended by Prime Minister Andrej Babiš and Minister of Transport Karel Havlíček. The station at Zahradní Město is part of the newly built transfer terminal, which will significantly improve public transport travel in this part of the metropolis.

"I am glad that we have already managed to improve not only the comfort for passengers but also for the citizens of the adjacent districts during the ongoing construction between the main railway station and Hostivař railway station. In addition to the opening of the new stop in Eden, the extension of the pedestrian underpass under the Vršovice railway station towards Nusle contributed to this. Now the accessibility of the Zahradní Město area, which was previously served only by trams and buses, has improved significantly," said Director General of Správa železnic Jiří Svoboda.

The new station at Zahradní Město, like the Praha-Eden stop, is located on the line relocation built by Správa železnic as part of the modernisation of the section Praha-Hostivař – Praha hl. n. Trains can now use a higher-capacity

four-track line here. The benefit is also the shortening of the route by 232 metres and a line speed of up to 120 km/h, which will have a positive effect on the reduction of train travel times. In addition, a large part of Prague residents have gained better accessibility to train service than in the case of the original line via the stop in Strašnice.

"The railway station at Zahradní Město is important not only as part of the railway corridor Praha-Hostivař – Praha hl. n., but also as a transfer terminal that will significantly improve the quality of travelling by integrated transport service in this part of the metropolis," said Minister of Transport Havlíček, adding: "The creation of transfer points connecting railway with buses and trams is the future of environmentally friendly and comfortable public transport service."

Construction of the so called Hostivař Corridor was launched by Správa železnic in May 2018. Praha-Vršovice station was completely reconstructed and extended with a new platform No. 4. Barrier-free access is provided by sloping walkways. In addition to the construction of a new station and stop, it is worth mentioning the reconstruction of nine existing

stations and the construction of one new bridge structure. At the same time, new station interlocking system was built at the Praha-Vršovice and Praha-Zahradní Město stations. "As an interesting fact, almost half a million tonnes of material, the vast majority of it soil and stone rubble, were removed from the site. In addition to 1,580 trucks, 640 trains were used for this purpose," Jiří Svoboda explains the scope of the construction modifications.

"We are convinced that this project of the decade, also called a railway motorway due to the four-track line, will contribute to increasing the comfort of passengers in the affected parts of the capital city and the neighbouring Central Bohemian Region. And that it will be appreciated not only by the fans of football club Slavia thanks to the new Eden station, but also by environmentalists, because it will enable many people who commute to the city centre to switch from cars to a fast and safe train connection," Jaroslav Heran, CEO of Metrostav, says on behalf of the contractors' consortium. Praha-Zahradní Město station itself is located at the crossing with the extended Průběžná Street. It consists of two island platforms and one outside platform; stairs, lifts and escalators provide access to them. These connect the entire terminal, which also includes tram and bus stops in the underpass. Passengers also have access to a waiting room and check-in areas here.



## Alstom to supply new trams for the T1-Line in the Ile-de-France region

Alstom has been chosen by Ile-de-France Mobilités and RATP to supply the new trams for the T1-Line in the Ile-de-France region. The firm order, for 37 Citadis X05 tramways worth around 130 million euro, is to replace the current trams. An optional tranche of 83 tramways is also planned in order to reinforce the transport offer and meet the needs related to the extension of the line.

“Alstom teams in France are very proud to supply the new trams for the T1-Line and to participate in the renewal of this emblematic line in the Paris region. These new Citadis X05 trams will contribute to the beautification of the cities they will serve. They will also provide a greater level of comfort and services for passengers. We would like to thank Ile-de-France Mobilités and RATP for their renewed confidence in our latest generation tramway solutions,” said Jean-Baptiste Eyméoud, President of Alstom France.

### A concentration of innovations for the well-being of passengers

With a length of 33 metres and a width of 2.40 m, the new trams will be able to accommodate 15% more passengers than the current equipment. They will be equipped with six double doors of 1.30 m per side, including doors at the end of the trams, to make it easier for passengers to get on and off. The new trains will also be 100% accessible to all passengers. A new swivelling bogie profile under the cabin will minimise the space between the doors and the platforms and will improve accessibility for people with reduced mobility at all stations, particularly at the end.

To improve passenger comfort, the trams will be air-conditioned and equipped with an efficient passenger information system with 18 screens spread throughout the train, which represents a level of passenger information never achieved before on a tramway. The dynamic information system will be complemented by interior and exterior lighting and audio information. With 40 USB sockets, the trams will also offer the possibility of recharging mobile devices. Finally, a video-protection system will ensure the safety of passengers.

### More energy-efficient and environmentally friendly trams

While providing more services such as air conditioning and dynamic passenger information, these trams will reduce energy consumption by at least 30% compared to current equipment, thanks to a reduction in mass, a new motorisation (with better efficiency), efficient management of climatic comfort and a 100%-LED lighting. These trams are eco-designed, 95% recyclable and 99% reusable.

### Tramways with optimum availability

The innovations of the Citadis X05 trams for the T1-Line will also benefit the operator in regards to maintenance. Maintenance requirements have already been taken into account with a reduced number of spare parts references, improved accessibility of components, as well as sensors distributed throughout the tram to allow real-time diagnosis of the equipment, making it possible to anticipate and optimise periods of downtime and offer optimum availability.



Line 1 of the Ile-de-France Tramway (simply called T1) went into service in 1992, marking the great return of the tramway in the Paris region after a 35-year absence. It now links the Quatre-Routes crossroads in Asnières-sur-Seine with the Noisy-le-Sec station.

Photo: Citadis X05 Alstom tramway in commercial service in Vitry-sur-Seine, France - April 2021. © Alstom/Aldino Pavone

## Alstom to provide the track and the 3rd power rail for Line 18 of the future Ile-de-France metro

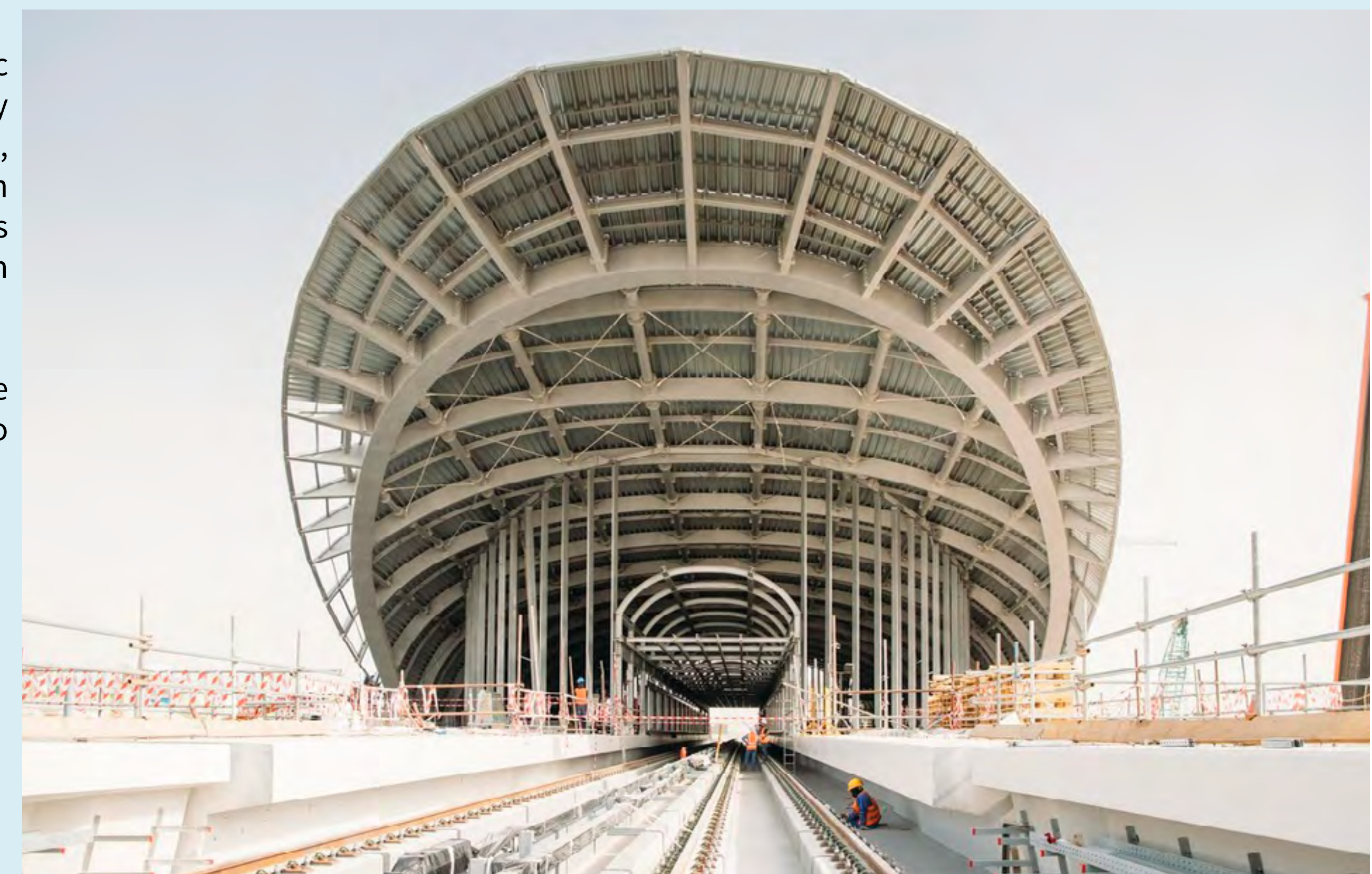
Alstom has been chosen by the Société du Grand Paris to supply, equip and commission the track, the 3rd power rail and the linear equipment for the eastern section and the viaduct of Line 18 of the future Ile-de-France metro. This order is worth 133 million euro for the firm tranche.

“After metro lines 15, 16 and 17, the Société du Grand Paris renews its confidence in Alstom’s expertise and experience in the field of tracklaying. I am extremely proud that Alstom has been chosen as the supplier for one of the most important tracks and third rail contracts in France. Alstom thus becomes a major player in the construction of Line 18 of the future Paris metro, with this order and the one for the rolling stock and the automatic control system obtained earlier,” said Jean-Baptiste Eyméoud, President of Alstom France.

“As a socially responsible company, Alstom will carry out at least 10% of this contract’s volume with people in social integration and will mobilise the ecosystem of small and medium-sized enterprises for the execution of this project.”

Line 18 of the future Ile-de-France metro is an automatic metro line that will eventually link Versailles to Orly airport in 30 minutes, passing through the Saclay plateau, its education and research centres. The section between Massy-Palaiseau and the CEA/Saint-Aubin station is scheduled to enter service in 2026; the section between Orly airport and Massy-Palaiseau is scheduled for 2027.

Photo: Infrastructure activities led by Alstom, close to one of the new passenger stations of the Route 2020 metro project. © Alstom





# Alstom wins the contract for the 100% automatic metro system for Line 18 of the Île-de-France network

Alstom has been selected by Société du Grand Paris, in agreement with Île-de-France Mobilités, to supply the rolling stock for Line 18 of the “Grand Paris Express” network (in France). The contract also includes solutions for driverless automated systems, data transmission, centralised supervision controls and the overall integration of the transport system. The contract is worth approximately 230 million euro[1]. The contract is co-financed by Société du Grand Paris and Île-de-France Mobilités, which is responsible for the rolling stock and on-board equipment.

Line 18 is a 35-kilometre automatic metro line, including 14 kilometres of overhead lines, which will eventually link Versailles to Orly airport in 30 minutes, passing through the Saclay plateau, well-known for its major education and research centres.

“Alstom teams are especially proud to win the contract for Line 18 of the Île-de-France network. After the Toulouse metro system, awarded to us last year, this contract award is further recognition of our expertise in integrated turnkey metro systems and digital mobility. This contract also points to the renewed confidence of our customers, Île-de-France Mobilités and Société du Grand Paris,” said Jean-Baptiste Eyméoud, President of Alstom France.

### A complete automated metro signalling solution

Alstom is deploying a complete signalling system for Line 18 of the Île-de-France network, comprising three types of technology:

- Urbalis Fluence automatic train control, an innovative solution based on direct train-to-train communication, brings the intelligence of the system on-board the trains and improves the line’s overall performance by reducing intervals between trains.
- Iconis centralised controls allow for automated traffic management with a high level of operational flexibility, enabling operators to develop advanced regulation scenarios.
- The data transmission system, based on robust, proven products, offers very high availability.

Today, 112 metro lines worldwide, including 68 in commercial service, are equipped with Alstom’s CBTC[2] solutions. Eighteen of these are fully automated driverless operation solutions. Alstom’s solution for Line 18 will achieve very high levels of performance and operational availability.

### Acting as general integrator

For Line 18, Alstom will also act as general integrator, which includes the verification of the tests for the different sub-assemblies and the organisation of the overall system tests, including the functional realisation of the overall tests and the verification of the entire transport system’s performance.

Alstom is a world leader in integrated metro systems with extensive experience in the design, construction, commissioning and delivery of more than 80 turnkey systems in commercial service worldwide. Singapore’s Circle Line



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- Photo non contractuelle -

and Panama City’s Lines 1 and 2 are among Alstom’s success stories in integrated metro projects, the most recent being the Dubai Metro “Route 2020,” which opened in July 2020.

### Proven rolling stock, suited to the specific requirements of Line 18

The rolling stock for Line 18, which belongs to the same range as Alstom’s Metropolis metro for lines 15, 16 and 17 of the Île-de-France network, optimises time and development costs while making it possible to share the same architecture and components. This new rolling stock is suited to the specific requirements and characteristics of Line 18. Its architecture and interior fittings have been designed to maximise train capacity while enhancing comfort, accessibility and passenger flow. It features wide corridors, easy circulation throughout the train, three wide doors per car and spacious panoramic openings at each end. It also includes multiple sources of light, numerous passenger information systems (including digital route maps) and USB sockets, making journeys ‘cosy and connected’. At peak times, each train will be able to carry 498 passengers (54 seated) at commercial speeds of up to 100 km/h.

### How the French sites are contributing to the contract for Line 18

Alstom will mobilise its centres of expertise in digital mobility and signalling. With nearly 2,100 employees, Alstom is the largest employer in this field in France. The Saint-Ouen and Villeurbanne sites will be responsible for developing and deploying automatic operation, data transmission and centralised control systems, as well as the general integration of the transport system. For the rolling stock, the Valenciennes Petite-Forêt site will be responsible for project management, studies, development, production, assembly and validation of the trains.

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[1] This amount has been recorded in the second quarter of Alstom’s 2021/2022 financial year.

[2] Communication Based Train Control (CBTC).











# Germany

On September 1st, České Dráhy Cargo Class 372.012-5 (built by Škoda) is seen near Rathen hauling a car train from Lanžhot (CZ) to Dresden-Friedrichstadt. *Erik de Zeeuw*





HECTORRAIL No. 162.007 'Beckert' (ex-DB Class 151.134-4) is on its way with a rake of tankers from PCK Stendell to MiRo in Karlsruhe as it passes Hermannspegel on September 17th. *Erik de Zeeuw*





On September 17th, Altmark Rail NOHAB Class 227.008-0 (MY 1149 in Christmas outfit) passes Haunetal with an engineer train in the direction of Bebra. *Erik de Zeeuw*





# Alpha Trains leases 23 EMUs on a long-term basis to Trans Regio

## Use of existing vehicles and additional new trains

### Comprehensive refurbishment & modernisation measures for higher quality and more space

On September 29th, Trans Regio Deutsche Regionalbahn GmbH (Trans Regio), a subsidiary of the Transdev Group, and Alpha Trains, the leading rolling stock lessor in Europe, signed a long-term lease contract for 23 EMU trains.

The vehicles currently are and will continue to be in service on the MittelrheinBahn concession operated by Trans Regio. In mid-2021, the Transdev subsidiary won the Europe-wide re-tender for this concession. The new contract will start in December 2023 and runs to December 2033 – with several options to be extended until December 2036 and even to June 2037 for some services on the Mainz - Bingen - Koblenz section.

“We are delighted that our long-term partner Trans Regio will continue to operate this line with our reliable trains which will undergo an extensive modernisation and refurbishment programme for that purpose,” states Thomas Schmidt, Managing Director of Alpha Trains Europa GmbH.

17 of the 23 vehicles are Siemens Desiro ML, connecting the cities of Cologne, Koblenz and Mainz on the MittelrheinBahn since 2008. Six new vehicles of type Siemens Mireo have complemented the fleet on the Mainz to Bingen section since December 2020. These additional six vehicles enable a capacity expansion on the busiest section of the MittelrheinBahn line between Cologne and Remagen by converting from double-unit to triple-unit traction during peak times.

The refurbishment and modernisation work required on the existing Desiro ML in accordance with the new concession contract, will be carried out by Siemens Mobility Werkstätten West in Wildenrath. The focus will be on



improving quality and enhancing passenger comfort.

“Siemens has been a competent and reliable partner in numerous joint projects, and always was able to meet our own requirements and those of our customers”, says Jörg Hagemeyer, Engineering Director of Alpha Trains Passenger Trains’ division.

“We look forward to continuing to work with our long-standing partner Alpha Trains”, states Adam Leitner, Head of Customer Services Germany

at Siemens Mobility. “The modernisation & refurbishment programme will enhance passenger comfort, for example through new seating arrangements, new side tables and larger distances between seats. Wifi, additional sockets and dynamic passenger information on TFT monitors will also be provided. Thanks to their modern interior and by refreshing the external livery, the trains will look as good as new both inside and outside.”

Maintenance of the vehicles will continue to be carried out in Trans Regio’s Koblenz-Moselweiß workshop in Koblenz.



On September 17th, EVB Class 182.912-6 (in former MWB livery) lies in the Harrbach bow with a rake of Snps wagons loaded with timber heading from Plattling to Brake. *Erik de Zeeuw*







## Sending more parcels by train

In 2020, people living in Germany received an average of 49 parcels over the course of the year, some 13% more than in 2019. DHL wants to meet this rising demand and, at the same time, its own ambitious climate targets. The company has therefore decided to work with DB Cargo on substantially scaling up its rail transport activities. It's a development that has been building for a long time. Year after year, DHL's parcel statistics have repeatedly set new records. Between 2015 and 2020, volumes increased from 1.12 billion to 1.8 billion items, and this upward trend shows no sign of slowing. If anything, it has continued to gather pace due to the pandemic, which forced many shops to shut their doors for weeks at a time.

### 100,000 parcels on every train

DHL is the world's leading parcel delivery service, and it is responding to increasing demand by working with DB Cargo to transport even more consignments by train in future. It's not just the absolute number of parcels that will increase: DHL also wants trains to move an ever-growing percentage of its deliveries. At present, DHL uses the rail network on the longest leg of the delivery route for 2% of its parcels in Germany. The company aims to increase this figure to 6% in the medium term and around 20% in the long term.

DB Cargo's CEO, Sigrid Nikutta, says, "Parcels belong on trains. We are working with Deutsche Post DHL to develop a delivery network that relies on the railway. This will form a strong team for climate protection, because every single DHL train does our planet good by reducing CO2 emissions by 80–100% relative to road transport. One freight train can carry up to 100,000 parcels."

By using rail connections (each train can move an average of 100,000 parcels), DHL already ensures that its monthly CO2 emissions are some 1,000 tonnes lower than they would be if it relied exclusively on road transport. "Our partnership with Deutsche Bahn and the expansion of fast, light freight transport by train are a key component in our sustainability strategy," says Tobias Meyer, head of Post & Parcel Germany at Deutsche Post DHL Group. "Our CO2 figures per parcel are already far lower than those of our competitors' services, partly because we have made so much progress in using electric vehicles for our delivery activities. We want to keep extending this lead, so we are now looking at using trains for long-distance deliveries. This represents a further step towards a carbon-neutral postal service in Germany."

### More connections for greater flexibility

One element of the long-standing cooperation between DB Cargo and DHL is the extensive rail transport network that has grown steadily larger over the past 21 years. When parcels first took to the railway in 2000, there was a single north-south corridor through Germany. Now, the number of connections has grown to 20. No fewer than seven have been added since April 2021, and most of the links run every weekday. The freight terminal at Grossbeeren, just south of Berlin, is the nerve centre of this network, and trains set out from there for destinations such as Bönen, Mannheim and Frankfurt am Main. Lorries transport packages to the nearest freight terminal from outlying DHL parcel centres. At the terminal, the packages are loaded onto trains that then bring them to the relevant destination region, where the wagons are unloaded and lorries are used once again for the last mile of the journey to the parcel distribution centres. This generally happens at



night. But DHL isn't content to leave it at that. The company now wants to build private sidings for some of its new parcel distribution centres. This will reduce lorry transport to terminals, speed up loading and facilitate larger parcel volumes within a given time slot. DHL's Cologne base is first up: the company plans to open a siding there next year. The end-of-year surge in demand will soon be upon us, and DHL plans to tackle this by deploying at least additional 20 trains at weekends. So roll on Christmas – and bring on the new record figures!

Photo: Tobias Meyer, Member of the Management Board of Deutsche Post DHL Group responsible for Post & Parcel Germany, and Sigrid Nikutta, Chairman of the Management Board of DB Cargo, symbolically give the starting signal for the new connections. © DB















Europe's largest freight operating company and one of the largest ferry operators in the world have renewed their partnership agreement. Each year, more than 90,000 intermodal and conventional freight wagons are transported between Scandinavia and Europe's central and southern regions. The wagons carry metal and stone products, household appliances, automotive parts and forestry products. Freight trains can take one of two routes: an overland route through Denmark by way of the Great Belt or the Öresund Bridge, or alternatively the rail ferry offering direct service operated by the shipping company Stena Line. Since 1994, DB Cargo has relied upon the ferry link between the Rostock and Trelleborg seaports, thus ensuring two end-to-end routes are available to and from Sweden. In addition to providing regular service, the ferry also helps maintain rail connections between Germany and Sweden during infrastructure construction and when accidents occur on overland routes. Today, DB Cargo works with Stena Line to run up to 30 freight wagons in both directions every day. When transports which normally travel by land need to be rerouted, the ferry's capacity is increased to accommodate them.

#### New three-year contract

DB Cargo and Stena Line have recently entered into a new three-year agreement to ensure existing transports can continue and to actively promote new growth on the rails. "Our Rail & Sail combination has huge potential – our long-term focus on rail products is paying off, not only in terms of sustainability, which is more important than ever, but also financially. We believe in our services, and we'll continue working hard to ensure their success," says Katrin Verner, freight commercial manager at Stena Line.

"Both of the railway ferries running the Rostock-Trelleborg route are the largest of their kind. Boasting 1,000 m of track per ferry, they provide three departures a day, which means high frequency with maximum flexibility. Our international team of experts works around the clock for our customers, because nowadays, every load of cargo is time-sensitive. The ferries and our colleagues form the two pillars of a successful Rail & Sail product, and we're very pleased to be able to offer it to satisfied customers like DB Cargo."

Pierre Timmermans, Member of the Management Board for Sales, DB Cargo, wants to connect the ports by rail as well as possible and pragmatically link modes of transport. We discussed the partnership with Pierre Timmermans, Management Board Member for Sales at DB Cargo:

#### Why is DB Cargo's work with Stena Line so important?

Pierre Timmermans: This partnership is very important to us because Stena Line is the sole provider of rail freight transport services on the Baltic. Having access to these services is absolutely essential to our two-pronged transport strategy, i.e. maintaining a connection between Sweden and central Europe, including Germany, by leveraging railway infrastructure in Denmark and the railway ferry link between Rostock and Trelleborg. This strategy allows us to shorten transport routes and times, but also to ensure transports can run even when overland routes experience unscheduled closures.

The whole model makes our transports more resilient on the whole, i.e. less susceptible to disruptions. Even so, the ferries are not just a fall-back for us. In fact, they are a very real option for relieving pressure on the heavily trafficked land route through Denmark, thus affording us an opportunity to improve the quality of our transports in terms of reliability and timeliness.

#### How does this model benefit customers? In other words, how would transports work if the contract with Stena Line didn't exist?

PT: As a rail logistics provider, we always seek to create individualised solutions for our customers. In doing so, we optimise links between all of the various forms of transport – with rail as the core, of course. To this end, we are trying to build an optimal European logistics network with partners like Stena Line. This enables us to provide the best possible reliability for end-to-end rail transports between Germany and Sweden. If needed, we reroute them across the Baltic, for instance during track closures or when accidents or capacity problems arise on the land route. If the land route shuts down, we're able to respond very quickly; transports can continue on with zero delay. Additionally, we can use the sea route to provide special transports which can't run across bridges because of the tight restrictions placed on them. This is how we transport on-track machines, MU trains and other bulky cargo.

#### Have you noticed any transport trends on these routes? What adjustments, if any, will you need to make in response?

PT: We're seeing a trend among companies toward doing business the green way, which aligns with our growth and sustainability strategy. Our two-route strategy offers a true alternative to pan-European road haulage. The trend is clearly moving toward growth in rail transport. If conditions are right, particularly as regards investments in port infrastructure, the number of wagons transported by sea will continue to rise. In the intermodal business, too, ferry connections at the Baltic Sea ports represent a critical pillar for transports to and from Scandinavia and the Baltic countries. To ensure ferry connections continue to grow, transports on the ferry route need to be bookended by long-distance rail connections for financial reasons.



Several interesting projects are currently on the horizon in this space, including a north-south connection from Scandinavia to Italy and back.

#### What role have ports played for rail freight transport with regard to efficiency increases and climate targets?

PT: As a logistics specialist, I'm well aware that ports are a major source of freight transports, so they're always points of interest for logistics experts and transport operators – even beyond ferry connections. Particularly when considering the achievement of climate targets, we need to work together to link ports by rail as best we can and connect different modes of transport in ways that make sense. For DB Cargo, the two-route strategy, i.e. using a sea route and a land route to connect Scandinavia with central Europe, is an integral part of our overarching strategy. In this way, we're able to offer our customers attractive, reliable, green services which they can use to transport their goods to northern Europe and back. Using our strategy, we're able to literally run freight trains across the sea, while transports remain green and rail-bound from start to finish.

Photo: © DB



Near Braubach, BLS Cargo Class 475.421-4 hauls the Ambrogio Intermodal Muizen-Goederen (B) to Gallarate (I) and follows the Rhine upstream under the watchful eye of Marksburg Castle. *Erik de Zeeuw*





On September 18th, BoxXpress Class 193.612-9 passes the 'Schwenk' cement works in Karlstadt with a Hamburg Waltershof to München Riem deep sea container service.  
*Erik de Zeeuw*











## Euro Cargo Rail (ECR) becomes DB Cargo France

With the renaming, DB Cargo completes the integration of Euro Cargo Rail (ECR) and underpins its position as Europe's largest rail freight operator.

DB Cargo's network now comprises 17 national companies. Each national company is run independently by a management team based in the respective country. The organisational assignment of the national companies to DB Cargo's Board of Management departments optimally integrates regional and functional management for the benefit of the European network.

The new national company DB Cargo France also adopts the DB Group logo, thereby visually confirming its affiliation to Europe's largest freight railway.

### New services as proof of integration into the DB Cargo Group

Euro Cargo Rail thus becomes part of DB Cargo's nationwide freight transport services in Europe and ensures that national and international block trains can be produced with exemplary reliability and smooth border crossings with high punctuality. Its intermodal end-to-end services also include local activities (storage, loading/unloading, first/last mile).

Its wagonload service is offered with reduced transport times and regular shuttles between major European hubs. Finally, the digitalisation of all processes enables real-time monitoring of solutions and favours reliable, fast and personalised communication with all customers.

The result: DB Cargo France complements and diversifies DB Cargo's unified European strategy with its experience and solutions.

### About DB Cargo France

DB Cargo France operates in all business areas and has a team of over 900 employees. Its wide range of services covers the whole of France and offers rail traction for all types of freight – from planning to delivery. Within the European network, the company offers safe solutions and a competitive service by optimising its resources. DB Cargo France's success is based, among other things, on its service culture at all levels. Each corridor is responsible for its train from start to finish, and a hotline is available around the clock for personalised customer support.



TXLOGISTIK Class 185.407-4 'MARCO POLO' passes Hude with train No. 41790, the Westerman shuttle from the Mertz Transport Kombiterminal Malmö (Sweden) to Railterminal Greenport Venlo (Netherlands). *Erik de Zeeuw*





# Netherlands

LTE Class 186.941-1 is seen on the 'Betuweroute' near Meteren with a deep sea container train from Mannheim and Wörth am Rhein (Germany) to Rotterdam on September 24th. *Erik de Zeeuw*





# Netherlands

On October 23rd, the SSN (Stoom Stichting Nederland) had a trip called 'De Muziekweb Express'. They departed from their depot in Rotterdam and follow the route to Rotterdam Centraal, Den Haag and had a short stop at Hilversum Mediapark before continuing the journey to Amersfoort Centraal. Their the train had a break before heading back to Rotterdam late in the afternoon. Steam loco No. 01.1075 leads the train past Weideweg Soest with Railexperts No. RXP9901 (which was used as traction for the way back) on the rear. *Andre Pronk*





On September 27th, NS International Class 193.759-8 passes Baambrugge with ÖBB Nightjet test train No. 13415 from Amsterdam Watergraafsmeer to Köln West (Germany). In December 2021 ÖBB will start a new Nightjet connection from Amsterdam to Zürich (Switzerland) in collaboration with SBB, DB and NS. *Erik de Zeeuw*













After a break, PKP CARGO Class 370.026-4 (193.514) departs Amersfoort with an intermodal train from Kaunas in Lithuania to the Industrial estate in Tilburg (Netherlands) on September 14th. *Erik de Zeeuw*





TCS Class 189.091-2 passes Soest with train No. 50195, driven by Ryan Palmer, heading from the Amersfoort yard to the Watergraafsmeeryard on September 14th. DB has bought the locomotive, which could previously be admired in an RRF livery, from MRCE. Train Charter Services (TCS) has temporarily leased the loco to train their drivers on the Class 189. *Erik de Zeeuw*





On September 16th, NS VIRM-4 No. 9522 in NS Flow livery works Intercity service No. 2123 from Amsterdam to Den Haag whilst passing the 'Lageveense water windmill' in Lisse. *Erik de Zeeuw*













▶ On October 23rd, SHD (Stichting Historisch Dieselmaterieel) No. 2282 is seen with a short freight train near Eys. *Mathijs Kok*

▶ SHD (Stichting Historisch Dieselmaterieel) No. 2205 leads a museum freight train near Simpelveld. *Mathijs Kok*

▶ ZLSM (Zuid-Limburgse Stoomtrein Maatschappij) steam locomotive No. 1040 passes the signal box at Simpelveld on October 23rd. *Mathijs Kok*





On September 4th, NS Traxx Class 186.008-6 passes Lisse and the Keukenhof with the Connecting Europe Express, train No. 13407 from Amsterdam Centraal station to Brussels-Schaarbeek (Belgium). The Connecting Europe Express train was running as part of the European Year of Railways 2021. *Erik de Zeeuw*

















# Portugal



On October 15th, Comboios de Portugal Suburbano 3400 Series EMU No. 3412 is seen at Porto-Campanha. *Andy*

Bombardier Flexity Outlook Eurotram No. MP086 is seen crossing the Dom Luís I bridge in Porto on October 15th. *Andy*

On October 15th, Bombardier Flexity Swift Metro do Porto tram No. MP116 is seen working a line C service to Ismaí. *Andy*







Siemens EuroSprinter No. 5627 operated by Medway passes through Porto-Camphana with a container train on October 15th. *Andy*





# Portugal



▶ CP Class 1400 No. 1461 is seen with a Duro valley service at Pocinho on October 16th. *Andy*

▶ A pair of Bombardier Flexity Outlook Eurotrams are seen crossing the Dom Luís I bridge in Porto on October 15th. *Andy*

▶ Bombardier Flexity Swift Metro do Porto tram No. MP128 working a line C service to Camphana heads through a rather quiet Porto on October 16th. *Andy*



















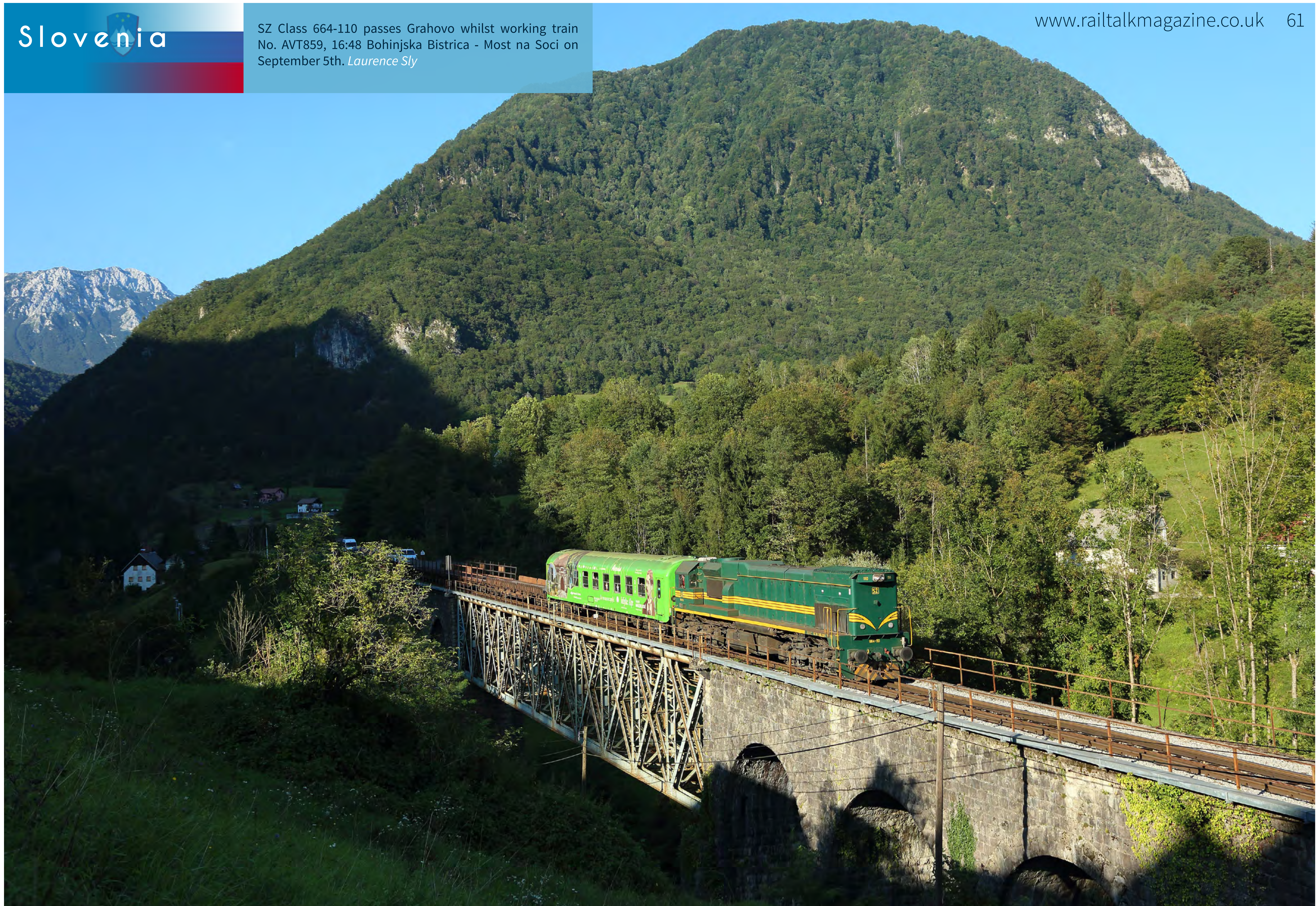






















































## Stadler awarded contract for 286 new multiple units for regional services

Together with its subsidiaries Thurbo and RegionAlps, SBB is to procure 286 new single-deck multiple units for use in regional services. Stadler has been awarded the contract. Its offer was the best in terms of both cost and quality.

In May 2020, SBB, RegionAlps and Thurbo began a two-stage tender procedure for the new multiple units. A pre-qualification phase sought to identify three applicants who could prove their experience and specific market orientation with a tried and tested vehicle concept. Alstom, Siemens and Stadler best fulfilled these selection criteria and were invited to prepare a tender. All three companies submitted a tender at the end of April 2021. The tenders have been evaluated in line with the award criteria and Stadler has been awarded the contract based on this evaluation. Stadler's offer was particularly good on both cost and quality.

The new multiple units will provide several improvements for customers. For example, the new trains will offer more storage space for bikes, pushchairs, and large

items of luggage than the vehicles currently in use. They will also ensure good mobile phone coverage and data reception and will be equipped with power sockets in every compartment. The trains will meet the requirements of passengers with restricted mobility and will provide two spaces for wheelchair-users as well as a wheelchair-accessible toilet. Wheelchair spaces will be available in 1st class for the first time. Thanks to better motorisation, the new multiple units will also make a significant contribution to improving punctuality. The new train is to be authorised to operate in Switzerland, Germany, and Austria.

SBB, Thurbo and RegionAlps had originally issued a call for tender for 194 trains. This rose to 286 trains after the railway companies had determined the definitive area of operation for the trains in concert with the Confederation and the Cantons. This higher volume of procurement is the only way to replace all the trains that are due to be taken out of operation upon reaching the end of their life cycle. The investment volume for the procurement project is CHF 2 billion.

The first trains are expected to enter operation in December 2025; the trains will gradually replace the following rolling stock by a provisional deadline of 2034:

- SBB: replacement for Domino, Flirt (first generation) and locomotive-driven push-pull trains. Order for 155 trains, with option to purchase 174 further trains.
- Thurbo: replacement for articulated railcars. Order for 107 trains, with option to purchase 40 further trains.
- RegionAlps: replacement for Domino and Nina. Order for 24 trains, with option to purchase 10 further trains.

The newly procured vehicles will help all three railway companies to implement their planned improvements to services as well as the service expansion projects planned by the Confederation and the Cantons.

By taking a joint approach to procurement and purchasing a homogenous fleet, SBB, Thurbo and RegionAlps are simplifying rail operations and making a significant contribution to ensuring public transport is competitive and attractive for railway customers.

### The award criteria.

SBB awarded this major contract in accordance with the requirements of procurement law. The bidding companies were informed of the award criteria at the start of the process. Important factors for evaluating the tenders were cost, quality, degree to which specifications were fulfilled and individual commercial/technical elements.

The cost evaluation took into account both investment cost, i.e. the purchase price per vehicle, and operating costs. These include costs for maintenance, cleaning, energy, and train paths, as well as prices for selected replacement parts. Overall, Stadler performed best on costs, due to its lower operating costs.

On quality, Stadler stood out in large part thanks to its project plan. This gave a detailed and comprehensible outline of project-critical milestones such as safety cases, authorisation, and network access.

Photo: ©SBB/Stadler





Italy

## Trenitalia in Abruzzo sees over 350,000 passengers aboard trains headed to the sea

**Passengers on convoys bound for locations in Costa Teramana increased (+14%) whilst a positive trend was also seen for Costa dei Trabocchi (+13%)**

During the summer season, more than 350,000 passengers opted for the train to reach the Abruzzo coast, rewarding the commitment of Trenitalia (FS Italiane Group) to support local tourism.

A positive balance for the summer trains was directed towards the coasts of Abruzzo – so far, increases of 14% have been recorded for the number of passengers on regional trains headed towards the seaside resorts of the Costa Teramana. Amongst the stations to have recorded the greater increases, Pineto and Scerne di Pineto are up 20% compared to last year.

This is consolidated by the data relating to the other stations along the line at an average of 12%: Alba Adriatica, Tortoreto, Gulianova, Roseto and Silvi. Also in line with expectations is the data relating to frequency flows on the Trabocchi Line.

Compared to 2020, there were increases of up to 29% for Casalbordino, +25% for Ortona and +18% for Vasto–S.Salvo, with S. Vito, Fossacesia and Porto di Vasto. The stations of the Costa dei Trabocchi recorded an increase of 13% on average.

The growing popularity of the train+bike combination is confirmed with around 9,000 passenger-cyclists. The availability on weekdays of over 600 spots for bicycles is thanks also to the entry into service of two new Pop

trains recently delivered to the Abruzzo region along with the adaptation of the fleet of Minuettotrains.

Amongst Trenitalia's commercial offerings, the Promo Junior – granting free travel for children up to 15 years of age when accompanied by an adult – was also very popular with families in Abruzzo, where some 11,000 passengers availed of this offer for regional train travel.

U.S.A.

## Wabtec Wins Equipment Contract to Modernize Chicago's Metra Commuter Rail Service

On October 21st, Wabtec Corporation announced an order to improve passenger experience, reliability, and safety for Metra, the commuter rail system in the Chicago metropolitan area serving the city of Chicago and its surrounding suburbs. The contract includes the latest brakes, passenger access doors, heating, ventilation, and air conditioning (HVAC), and event recorder solutions for 200 new rail cars.

“We are thrilled to begin work on this large-scale contract supplying the most advanced technology for doors, brakes, and HVAC to one of the world's busiest commuter rail systems,” said Lilian Leroux, Wabtec Transit President. “This new contract builds upon our position as a leading equipment manufacturer on both sides of the Atlantic and across the world, and will ensure safe, reliable, and timely passenger service to millions of riders over 1,200 miles of track and across more than 240 stations throughout the greater Chicago land area.”

Wabtec will provide 800 double doorways and 400 single doorways, which include the new DLC Next door control unit, one of the most modern door control systems in the world. This solution includes touchless buttons to protect passenger's health and safety. It also enables acoustic sealing of cabin end-doors and allows for 80-percent commonality between all types of doors making maintenance easier. It is one of the most reliable and robust door systems available in the industry.

The HVAC system will also provide another level of passenger comfort and safety. Wabtec will install 400 passenger HVAC systems, with an efficient energy management system.

In addition, Wabtec will supply its proven FastBrake microprocessor controlled braking system along with the latest generation wheel slide protection to provide optimum stopping distances in adverse conditions. This system will allow interoperability with existing fleet cars.





Sweden

## Alstom launches an innovation hub for mobility in Västerås, Sweden

Alstom, a global leader in sustainable mobility, has broken ground on a green e-mobility innovation centre in the Lake Mälaren region. The ongoing transition to electrified transportation creates the need for additional testing capacity.

“With its geographic location, proximity to companies in the area, and ties to Mälardalen University, Västerås is the perfect place for this initiative. Additionally, Sweden is at the forefront of the ongoing green transition. Alstom has over 100 years of experience with electrified transportation and the auto industry can learn a lot from us – and vice versa. The centre is meant to serve as a hub for the exchange of ideas and a place where companies can develop and test new sustainable mobility innovations,” says Rob Whyte, MD Alstom Nordics.

### Industry cross-fertilization to accelerate the green transition

The core of the new centre’s operations will be the opening of Alstom’s lab in Västerås to external parties interested in testing and developing electrical drive systems. Doing so, Alstom will help to accelerate the transition to an

emission-free future through cross-industry collaboration. The climate-smart mobility innovations of the future will result from cross-fertilizations between industry, universities, and start-ups.

“Sweden is in the middle of a green transition. But the electrification of road and construction vehicles requires competence that is relatively limited in Sweden. Cross-fertilization between industries is therefore necessary to accelerate the process,” Rob Whyte explains.

The centre has already begun operations quietly prior to the official ground-breaking ceremony. Alstom has invited external users into the testing lab and started collaborating with e-mobility start-ups. Today’s ground-breaking on the new annex marks another important milestone, with the centre expected to be completed by 2023.

### Alstom is a sustainable mobility pioneer

Alstom has pioneered several sustainable mobility solutions in line with the ambition to facilitate the global transition to low climate footprint

transportation systems. In Sweden, the company has global development centres for drive, control, and signalling systems in Västerås and Stockholm. Among other innovations, the new energy-efficient silicon carbide-based drive system technology demonstrated in the Stockholm subway in 2018 has its origin in Västerås.

Last August, Alstom’s Coradia iLint passenger train, the first in the world to be powered by hydrogen, makes its Swedish debut in Östersund for 2 days. This demonstration was an innovative answer to sustainable mobility without compromise.

Alstom is the largest player on the Swedish railway market, with over 1000 trains delivered. Alstom is holding several large maintenance contracts and is offering maintenance in 18 local depots. Alstom™ is a protected trademark of the Alstom Group

Tanzania

## ŠKODA TRANSPORTATION GROUP TO PARTICIPATE SIGNIFICANTLY IN PRODUCTION OF LOCOMOTIVES FOR TANZANIA

The Škoda Transportation Group will be participating significantly in production of a fleet of new passenger locomotives in Tanzania, Africa. Škoda has signed a contract worth more than CZK 580 million with the multinational Hyundai Rotem for delivery of seventeen sets of complete electrical equipment which will form the “heart” of the new locomotives for a new railway line in Tanzania.

The new locomotives with electrical equipment by Škoda will be used in Tanzania on a new electric line roughly 550 kilometres in length which is operated by the local TRC rail operator between the coastal port of Dar es Sallam and the city of Makutupora. The locomotives will have to cope with challenging climatic conditions and large differences in altitude.

The project for Tanzania is technically very interesting for Škoda. “We will be supplying complete sets of electrical equipment including main and auxiliary drives, battery chargers, traction motors, gearboxes and wheelsets.

The locomotives will run at speeds of up to 160 km/h on the route, which under the local conditions represents a significant increase in speed compared to the usual standard,” says Karel Majer, Sales Director at Škoda Electric providing more detail about the contract. Final assembly of the locomotives will take place at the Hyundai Rotem production plant in Changwon, South Korea, where deliveries from ŠKODA in Pilsen will also be directed.

Cooperation on production of locomotives for the African country is one of a number of joint projects involving Škoda and Hyundai Rotem. For example, the Pilsen-based company produced complete equipment sets for 80 locomotives for the multinational group, intended for the Turkish customer TCDD, or participated in the deliveries of LRV “light unmanned metro” vehicles for the South Korean city of Incheon. “Our current contract is a very important reference for us – it proves that we are able to succeed with our products on a global scale,” adds Bedřich Koukal.





## World premiere: DB and Siemens present the first automatic train

Deutsche Bahn (DB) and Siemens Mobility have developed the world's first train that operates by itself in rail traffic. Dr. Richard Lutz, CEO of DB, and Dr. Roland Busch, CEO of Siemens AG, together with Dr. Peter Tschentscher, Mayor of Hamburg, presented the train as it made its premiere run as part of the Digital S-Bahn Hamburg project.

The train is controlled by digital technology and is fully automated. The driver remains on the train to supervise the journey with passengers on board. Shunting, such as turning the train around, is done without on-board personnel. The project partners DB, Siemens Mobility, and the City of Hamburg have invested a total of €60 million in the digital S-Bahn Hamburg, which is part of DB's Digital Rail Germany project.

Dr. Richard Lutz, CEO of DB: "We're experiencing the true turn of an era: The railroad has arrived in the digital future and Digital Rail Germany has become a reality. With automated rail operations, we can offer our passengers a significantly expanded, more reliable and therefore improved service – without having to lay a single kilometer of new track. It is our goal to make rail transport attractive to ever-larger numbers of people, which is the only way we can achieve the mobility transition."

"We are making rail transport more intelligent. Trains drive the perfect timetable automatically, accurate to the second and energy-optimised," says Dr. Roland Busch, CEO of Siemens AG. "This way, we are supporting our partner Deutsche Bahn in its goal of making train travel more attractive and protecting the climate. With our technology, our customers can transport up to 30 percent more passengers, significantly improve punctuality and save more than 30 percent energy. The digital S-Bahn Hamburg marks a world premiere. The new technology has already been officially approved and, since it features open interfaces, can immediately be used by operators worldwide for all types of trains."

Dr Peter Tschentscher, First Mayor of the Free and Hanseatic City of Hamburg: "Digitisation holds a lot of potential for the entire Hamburg S-Bahn network. We are creating greater capacities on the



existing tracks and improve reliability and punctuality of rail travel. The premiere of the digital S-Bahn at the ITS World Congress is a strong signal for efficient and climate-friendly mobility of the future."

The digital S-Bahn had its premiere run at the opening of the Intelligent Transport Systems World Congress (ITS) in Hamburg. During the congress, four digital S-Bahn trains operated automatically along the 23-kilometer section of S-Bahn Line 21 between the Berliner Tor and Bergedorf/Aumühle stations.

The technical basis for digital rail operations is the future European Automatic Train Operation (ATO) standard, combined with the European Train Control System (ETCS). The trains receive their control signals via radio. The four digital S-Bahn trains in Hamburg will provide regular scheduled passenger service beginning in December. Plans to digitalize Hamburg's S-Bahn entire system by the end of the decade are already under way, and investments in trains and infrastructure are being made. The technology is projected to be used nationwide for regional and mainline rail systems.

### DB presents further innovations at the ITS World Congress in Hamburg

From October 11th to 15th, Hamburg and the ITS World Congress held a global showcase for the future of mobility. Companies from around the world presented their innovations at the world's largest trade fair for transport and logistics. Deutsche Bahn is highlighting innovations in rail infrastructure, train stations, mainline and commuter transport, and mobility interconnections. Just last year, DB and the city of Hamburg extended their 2017 smart city partnership for a further five years. Both partners plan to use digital technologies and innovative ideas to make local public transport and train stations more attractive for customers. This trend can already be seen at the Dammtor train station, the gateway to the ITS World Congress: Improved displays with new train information and innovative routing guidance provide orientation for all travellers and congress guests. Artist-designed showcases created a special flair in the station.

## H2goesRail - Green mobility thanks to hydrogen

Deutsche Bahn wants to further reduce CO2 emissions on the railways and thus achieve its climate target even faster and more effectively. That is why we want to replace more and more diesel multiple units in regional transport. In the H2goesRail project, DB is now testing solutions for the use of trains with hydrogen propulsion.

### What does that mean?

Together with Siemens Mobility, DB are developing an innovative, coordinated overall system consisting of the newly developed Mireo Plus H hydrogen train, a newly designed filling station and the appropriate maintenance infrastructure.

### The next generation of hydrogen trains

With the Mireo Plus H, together with partner Siemens, DB are testing an innovative drive technology for the climate-friendly traffic transition. DB can thus actively help shape the development of the train.

The hydrogen train is powered by a fuel cell and a buffer battery. This makes it as powerful as electric multiple units and has a range of 600 kilometres. Trial operations on the route between Tübingen, Horb and Pforzheim will start at the beginning of 2024 in order to gain valuable experience.

### Quick refuelling for green hydrogen

DB Energie has set itself the goal of developing the best tank infrastructure for hydrogen vehicles. The hydrogen is generated by electrolysis in a mobile filling station at the DB Regio plant in Tübingen.

In addition to the actual refuelling, the hydrogen filling station must also be able to store, compress and generate hydrogen on site. Green electricity is used to generate the environmentally friendly green hydrogen.

In the closely-timed local traffic, a filling station will enable rapid refuelling of hydrogen trains within 15 minutes. So far, this has only been feasible with conventional diesel fuelling.

### Maintenance

The DB Regio workshop in Ulm is being converted for the maintenance of the hydrogen multiple units. Extensively trained employees from DB Regio and employees from Siemens Mobility ensure smooth operations and regular maintenance of the train on site.



## Reconstruction Will Improve Line Parameters for Freight Trains in Děčín

Freight trains will soon use the reconstructed line between the stations Děčín východ and Děčín-Prostřední Žleb, which is part of the Trans-European Transport Network (TEN-T) freight corridor. The construction with the estimated total investment costs of CZK 1,138,717,343 has been opened by Správa železnic.

The electrified section of approximately 1.4 kilometres long will undergo a complete renovation, and in addition to the Děčín Tunnel, it includes a bridge over the Elbe

River as well. Trains will return to the reconstructed line next year in November and the entire construction will be completed in mid-2023. An important part of the construction is the reconstruction of the 265 metre long bridge over the Elbe. Its more than 100 years old steel bearing structure will be replaced by a new one with longitudinal and transverse reinforcements and a continuous ballast deck. Its layout will respect the appearance of the original structure, while meeting all current standards and operational requirements of rail

transport. The speed on the bridge will be increased from the current 30 to 50 km/h. The construction will also include the complete restoration of the 395 metre long Děčín tunnel. The railway superstructure and substructure will be replaced and the overhead contact line will be repaired. The project also includes the reconstruction of signalling and telecommunication equipment.

In addition to the renewal of the track superstructure,

the reduction of noise pollution in the vicinity of the line will also entail the installation of approximately 700 metres of noise barriers where the line passes through urban areas. The contractor of the investment project called Optimisation of the line section Děčín východ – Děčín-Prostřední Žleb is Společnost most Prostřední Žleb. Its administrator is STRABAG Rail, the partners are DT Mostárna and STRABAG AG. The construction is financed by Státní fond dopravní infrastruktury (State Fund for transport infrastructure).

## Stadler and KiwiRail sign a contract for 57 mainline locomotives

Stadler and KiwiRail have signed a long-term framework agreement with a first call off for the supply of 57 diesel mainline locomotives. The order value of the call off amounts to around 228 million euros. This is the first contract for Stadler in New Zealand.

KiwiRail is a New Zealand government state-owned enterprise, which is responsible for New Zealand's national rail network, and operates New Zealand rail freight and between-island ferry services. For more than 150 years, New Zealand rail has connected communities, delivered goods and people around the country.

Under this contract, Stadler will supply a latest state of the art Co-Co monocoque locomotive, narrow gauge, customized to KiwiRail requirements and specific operational schemes, incorporating well service proven components and systems. The new locomotives will be used for freight and passenger rail operation predominately on the South Island, with its challenging track topography.

Following Stadler's focus on providing sustainable solutions for railway transportation, the locomotives will be compliant with the latest European emission standard (Stage V). This results not only in a substantial reduction of nitrogen oxides and particulate emission and in the consequential cost to environment and public health, but also in optimized combustion, lowering fuel consumption and CO2 emissions.

With its decision for Stadler Stage V locomotives, KiwiRail underlines its clear commitment to provide a highly energy efficient and low emissions mode of transport to New Zealand. The two-cab, narrow body locomotives will be equipped with a diesel engine providing an installed diesel power of 3000 kW, that will in many cases allow KiwiRail to operate its trains with less

locomotives than in the current services. Each of the two cabs will be designed in close cooperation with KiwiRail and according to the latest European standards aiming to achieve an ergonomic, comfortable and safe working environment for KiwiRail's engineers.

KiwiRail Group Chief Executive Greg Miller said the locomotives represented a new era for rail in New Zealand. "The 57 locomotives will replace our South Island fleet, which has an average age of 47 years. Stadler's high quality, fuel efficient, more powerful locomotives will allow us to improve service reliability to get more South Island freight off New Zealand's roads and onto rail. The low emission locomotives are also an important step in KiwiRail's plan to be emission neutral by 2050."

Furthermore, Greg Miller added: "It's a pleasure to work with Stadler. Their professional interactions, quality of engagement and state of the art designs ensure we are partnering with a company that will deliver an outstanding outcome for KiwiRail and New Zealand, and enable our South Island fleet to take advantage of technology advancements well into the future. I'm already looking forward to seeing the first new locomotives heading down our Kaikoura coast in 2024."

Peter Spuhler, Executive Chairman of the Board and Chief Executive Officer ad interim of Stadler, commented: "It is a great honour for Stadler to be able deliver our modern and innovative

locomotives to New Zealand for the first time. We thank KiwiRail for this contract and look forward to a successful partnership."

Dr Ansgar Brockmeyer, Executive Vice President Marketing & Sales and Deputy Chief Executive Officer of Stadler, added: "We are very proud to have signed our first contract for New Zealand and are fully committed to a long-term partnership with KiwiRail. With our wide portfolio of modular and customized vehicle solutions, green traction concepts, digital solutions and tailored expert support services, we indeed see the opportunity to provide further value to KiwiRail and New Zealand mobility beyond the delivery of the first project."





# Germany

## The first rails for S21 are here

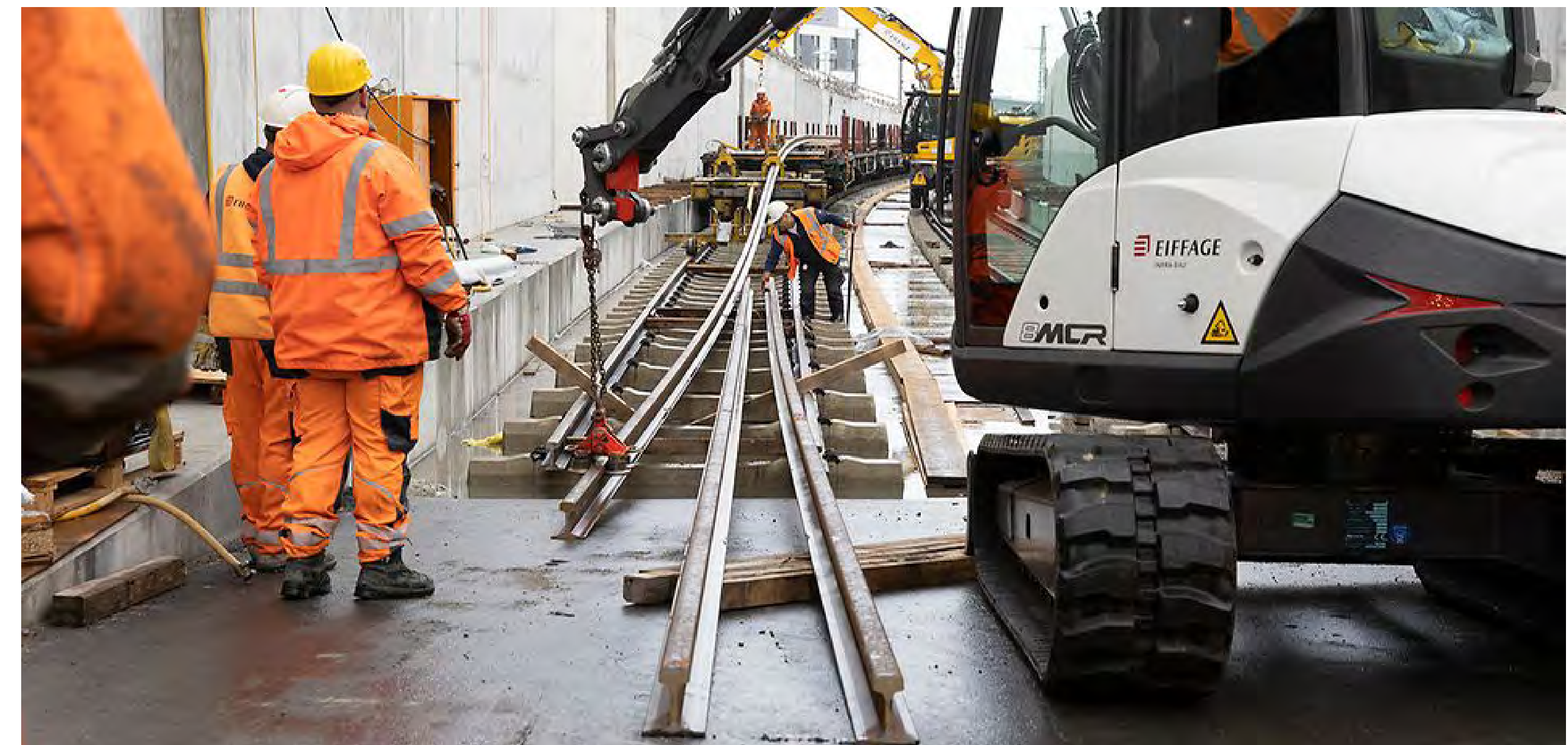
More than 50 kilometres of tunnel for Stuttgart 21 in the Stuttgart basin are almost finished. Now it's time for the rails: 120 meters long and 7.2 tons in weight - every single long rail is a real giant. The first arrived at the Feuerbach tunnel and were withdrawn piece by piece. A special moment, because the expansion of the railway infrastructure for S21 has definitely begun.

It runs like clockwork. One long rail after the other is fixed to the arm of the excavator, one after the other is pulled off the freight wagon and towed in the direction of the Feuerbacher tunnel. Everything is going according to plan, everything is right. This is how routine the track construction work is: the first rails are a special moment. After all, they stand for the fact that the final spurt for Stuttgart 21 has heralded and that the state capital of Baden-Württemberg is on the home straight to one of the most modern railway hubs in Europe.

The steely leading actors therefore deserve full attention. Because every long rail from the Donawitz rolling mill in Austria measures 120 meters and weighs 7.2 tons. A complete freight wagon load weighs 325 tons with almost 5.5 kilometres of rails, from which a good 2.7 kilometres of track are built.

### Tens of thousands of sleepers

For the Feuerbach tunnel with its two tubes, each three kilometres in length, several loads are required before the track construction finally begins in November. The first rails will also be delivered to the Bad Cannstatt tunnel. In addition, there are tens of thousands of sleepers required for track construction. Meanwhile, work is underway on the so-called track support plates in the 9.5-kilometre-long Filder Tunnel, which will be the third longest railway tunnel in Germany in the future.



### A network is created

A total of around 120 kilometres of track will be built in the Stuttgart 21 project. A Herculean task. The track builders: Inside create around 100 meters of track per day.

The delivery of the first rails is a decisive factor for

Olaf Drescher, CEO of DB Projekt Stuttgart-Ulm GmbH: "Because it doesn't work without rails."

The start of the expansion of the rail infrastructure also brings a change for Drescher in the way of looking at it. Because now the individual and previously loose structures are brought together with it and a network is formed.

# Germany

## Glamour on the rails

In the 1950s it was the design icon of the Deutsche Bundesbahn: the legendary "Trans Europ Express" (TEE). Now the team of train driver Wolfgang Ihrlich has brought it to Berlin. His heart beats especially for this train, which has been on show in the technology museum for four weeks. The legendary economic miracle train went on the rails for the first time in 1957. With its streamlined design, the round power car and the softly curved band along the lettering, the diesel multiple unit quickly became an icon of modern long-distance transport. Not only did it impress with the look of its outer shell, but also with its inner workings. "The equipment of the originally 7-piece set was top notch," enthuses Wolfgang Ihrlich, train driver and deputy director of the DB Museum. "Back then, it wasn't about getting from A to B as quickly as possible, but rather people perceived the trip as a luxury, a very special experience. That was an extraordinary travel culture."

### When the landscape flies by

Anyone who sat down on one of the more than 120 armchairs felt as if they were in an elegant salon. The walls were covered with cherry, teak or walnut wood. Reading lights provided light in the compartments, and air conditioning ensured pleasant temperatures. When looking through the soundproof glazed windows, the landscape flew by. The train went up to 140 km / h. Incredibly fast in a time when steam locomotives were mostly still on the rails in Europe.

Five-course menus were served on china in the two dining compartments. With a golden TEE emblem, of course. Then you enjoyed a drink in the bar. The guests were looked after by train attendants, who were then called stewardesses for the first time - just like on a plane. Whoever wanted to work here had to be very familiar with the upscale gastronomy. Tea and oenology were therefore on the training plan for the TEE. But also cosmetic courses so that the stewardesses looked smart.

### Towed to Berlin

Wolfgang Ihrlich and his team arrived in Berlin with four parts of the former seven-part train: two powered end cars, an open-plan car and a compartment car. It took him and his colleagues Walter Gras and Patrick Petersen a good 15 hours to haul the train from Koblenz to the capital, by electric locomotive and at a maximum speed of 80 km / h. The express train can no longer run on its own, the drives are no longer functional. Many railway fans were waiting along their route to capture the attraction with their mobile phones and cameras.

A volunteer team from the Bahn-Sozialwerk Foundation was also on the train. "While we were on the move, they brought the TEE to a high gloss, vacuumed carpets and removed the last grains of dust on the window sills," says Wolfgang Ihrlich. Fine-tuning after a month and a half of preparation.



After all, the TEE should shine when it arrived at Südkreuz, where it met the EU special train Connecting Europe Express (CEE). The historic classic was received by DB boss Richard Lutz, Federal Transport Minister Andreas Scheuer and Berlin's Mayor Michael Müller. And Wolfgang Ihrlich received a grant for a locomotive-hauled TEE from the DB Museum.

Then it went to the Berlin Museum of Technology where visitors could view the luxury train. Afterwards, Wolfgang Ihrlich and his team took the TEE home by electric locomotive. "Of course, my dream would be that one day the TEE would be operational again and my colleagues or I could sit in the driver's cab again," says the passionate railroader who has been with Deutsche Bahn for over 45 years.



### Shiny & bright new livery for G1206

Alpha Trains are so fond of our green beauties. Our long-term partner IMATEQ France has overhauled our Vossloh G1206 from top to bottom, including a shiny bright new green livery. The locomotive is now ready for the next customer.

Photo: G1206 with a shiny new green livery.  
© Alpha Trains



## “Natural Talent” - Alpha Trains gets 400th locomotive on track

A good reason to celebrate: with the two newly designed Vectron multi-system locomotives leased to TX Logistik, the 399th and the 400th Alpha Trains locomotives are now on track.

Back in 2017, the leasing company delivered the first Vectron MS to TX Logistik, at that time with the slogan “Two poles with enormous attractive power”. “A great motto also for the future success of our long-term partnership,” says Shaun Mills, CEO of Alpha Trains Group. A total of 14 Vectron locomotives from Alpha Trains operate for the rail logistics experts from Troisdorf. With the current locomotive designs, the company is now once again underlining its commitment to climate protection: “Sustainability and Green Logistics are part of our corporate strategy,” emphasises Gian Paolo Gotelli, CEO of TX Logistik. “We want to continue to expand this in the future.”

Fernando Pérez, Managing Director of the Locomotives Division of Alpha Trains, adds: “We are delighted that our 400th locomotive is on track with TX Logistik, one of our most long-standing and reliable customers over the years – a cooperation that we hope to continue expanding for many years to come.”

Alpha Trains, Continental Europe's largest lessor of locomotives and passenger trains, offers logistic companies a wide range of electric and diesel locomotives, certified for a total of 19 European countries. The locomotive portfolio in combination with the different leasing models - from Full Flex to Full Service to Dry or Soggy Lease - enables Alpha Trains to respond to market requirements with individual and tailor-made leasing solutions.

Alpha Trains supports the sustainable development of European rail transport in East and West and is gradually investing in the further expansion of its locomotive portfolio. This includes further Siemens Vectron multi-system locomotives for Italy and Eastern Europe on the one hand, but also Stadler EURO6000 for use in Spain, France and Portugal.





# From the Archives

On the 75cm Patagonian system  
2-8-2 No. 1 is seen working south of  
El Maiten on November 3rd 2004.  
*John Sloane*

## Argentina





# From the Archives

## Bulgaria

BDZ Romanian 1969 built B-B diesel Hydraulic No 55 007 sits at Sofia shed on May 6th 2011. *John Sloane*





# From the Archives

China 

ChinaRail No. DF4D 5273 is seen at Lishuguan in Northern China on January 24th 2005.

*Mark Enderby*





# From the Archives

Egyptian Railways No.1112 is seen at Cairo Ramsees station on January 15th 2009. *Mark Enderby*

## Egypt





# From the Archives

SNCF BB Nos. 12106, 12061 and 12101  
stand ready for duty at Bobigny depot,  
Paris on October 29th 1992.  
*John Sloane*

France





# From the Archives

SNCF steam loco No. 141R 180 is seen at Boulogne depot on March 26th 1970. *John Sloane*

France





# From the Archives

DB Class 140.843 passes Ingolstadt on August 2nd 1989 with a rake of empty car transporters. *Mark Enderby*

## Germany





# From the Archives

## Germany

A DB Class 112 crosses the Spree in  
Berlin on November 2nd 2004.

*Mark Enderby*





# From the Archives

## Germany

DB Class 101.027 leads an InterCity service past Oberwesen on May 6th 2005. *Mark Enderby*





# From the Archives

## Germany

DB Class 155.251 passes Tostedt with a container service on April 27th 2006.  
*Mark Enderby*





# From the Archives

Indian Southern Railway WDS4 No. 19322 arrives at Madras Central with an overfull morning commuters service on November 23rd 1977. *John Sloane*

India

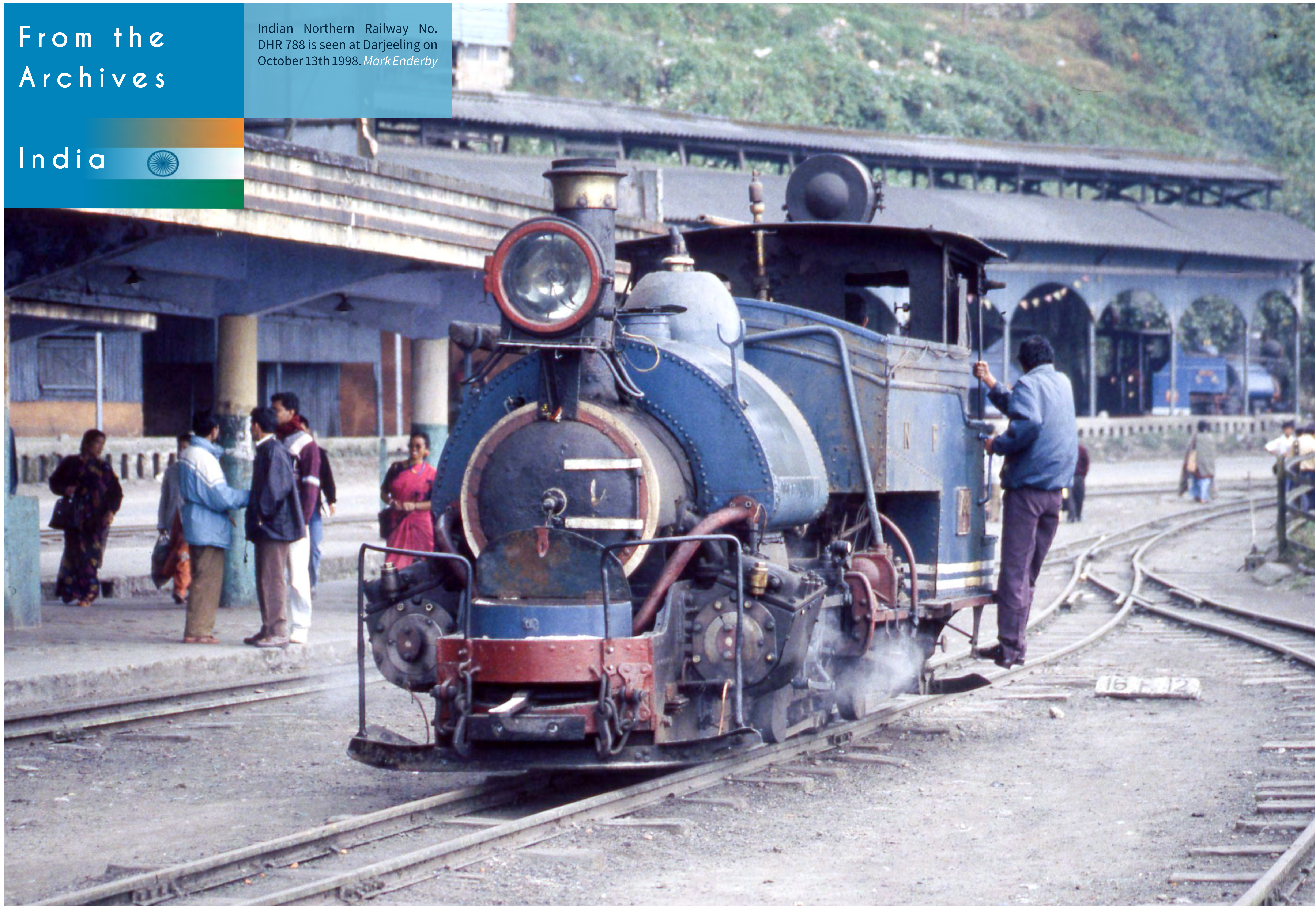




# From the Archives

Indian Northern Railway No.  
DHR 788 is seen at Darjeeling on  
October 13th 1998. *Mark Enderby*

India





# From the Archives

FS Unrebuilt Class E444.038 sweeps through Sestri Levante with a Naples to Turin express on July 31st 1984. *John Sloane*

Italy





# From the Archives

Morocco

Polish built Co-Co electric No. E-1020 (similar to PKP Type ET22) is seen at Casablanca Roches Noires depot on April 13th 1993. Some of this type were subsequently sold back to Poland.  
*John Sloane*





From the  
Archives

Netherlands

NS No. 1713 stands inside Amsterdam  
Centraal station with a commuter  
service on March 20th 2011. *John Sloane*





# From the Archives

Czech built ChS4t No. 689 and Russian VL60k No. 1227 await their duties at Kavkaskaya depot on March 19th 2002. *John Sloane*

## Russia





# From the Archives

Russian Railways VL60k No. 2416 (built Novochoerkassk) runs light at Bataisk North near Rostov on March 18th 2002. *John Sloane*

## Russia





# From the Archives

Former Vascongados Railway Bo-Bo electric No. 5 'Mugara' (built by Brown Boveri in 1928) seen at San Sebastian Amara station with a train to Bilbao Achuri on April 12th 1977. *John Sloane*

Spain





# From the Archives

Switzerland

BVZ HGe 4/4 1929 Rack and Adhesion loco No. 13 waits to depart from Brig Bahnhofplatz station with a 'Glacier Express' relief working to Visp and Zermatt on August 2nd 1985.  
*John Sloane*





# From the Archives

## Thailand

RSR Hitachi 1958 built Co-Co No. 627 is seen ready to depart from Bangkok Thonburi station on April 15th 1981. *John Sloane*





# From the Archives

SNCF Alstom 1967 built Bo-Bo No. 040-DG-48 stands in Tunis yard on August 29th 1979.

*John Sloane*

Tunisia 





# From the Archives

TCDD GE 1965 Co-Co No. DE24-025 is seen at Balıkesir on August 17th 1976.  
*John Sloane*

Turkey 





# From the Archives

Amtrak No. FP40-PH 297 is seen at Jack London Square, Oakland on December 9th 1997.  
*Mark Enderby*

U.S.A.

