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 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 180Xtra

It's great to see that many of you are heading overseas once again, with quite a few countries visited in this months issue. Normality is looking a bit closer, but such a shame that it has come so late in the summer with autumn almost upon us.

As we look forward to future trips, one country that might be worth visiting is Latvia, as SJSC 'Latvijas dzelzceļš' (LDz) launches the start of the platform modernisation and construction project, which encompasses the design and build of 48 new modern railway stations and stops.
In partnership and under a design and construction agreement with two contractors, 'BMGS – FIMA', will design and build brand-new stations and stops along five railway lines including: Rīga to Jelgava, Rīga to Tukums II, Rīga to Krustpils, Zemitāni to Skulte and Kalngale to Skulte. The second contractor, LEONHARD WEISS OÜ, will perform the same works but only on one railway line (Zemitāni – Skulte (Zemitāni – Vecāķi)). LDz is implementing the project as a part of the European Union's (EU) Operational Programme for 'Growth and Jobs'. Under measure 6.2.1.2, the "modernisation and construction of railway infrastructure" of the specific support measure 6.2.1. "to provide a competitive and environmentally-friendly TEN-T rail network, promoting its safety, quality and capacity." The estimated total cost for the project is €44.4 million, of which co-funding from the EU Cohesion Fund will make up 85 per cent. Furthermore, the remaining 15 per cent will be paid by LDz own funds.

"In all of Europe and across the world, railway is one of the most important types of public passenger transport," explained Māris Kleinbergs, Chairman of the Board of LDz. "For railway to become a strong backbone of passenger transport also in Latvia, a number of aspects are essential – modern infrastructure at railway stations and stops, that would be friendly to all groups of passengers, safe and high-quality overall railway infrastructure, fast and sufficiently frequent rail traffic, as well as comfortable and modern rolling stock. I am therefore glad that Latvijas dzelzceļš is starting, and by 2023 will complete, work on such a major and socially significant project as the modernisation and construction of 48 railway stations and stops."
The new railway stations and stops will include: elevated platforms, modern and functional canopies, adjusted to the capacity and requirements of passengers, benches and bicycle parking stands, as well as a client-friendly notification system that can be used by all passengers. The modern infrastructure will also be inclusive to passengers reduced mobility, providing them with tactile surfaces and guides. In addition, video surveillance will be installed to enhance passengers' safety and security.
In 2020, LDz launched a uniform visual guideline for passenger infrastructure, which will be utilised at all new and renovated railway stations under the platform modernisation and construction project.

Meanwhile in other news, for the new Lyon-Turin railway line, 2021 marks a turning point, with the award of the contracts for the entire cross-border base tunnel. This is an important milestone for the project, and it comes after the completion of a complex approval process in Italy and France and, even before that, the termination of the fundamental feasibility and study phases. The cross-border section connects the international stations of Saint-Jean-de-Maurienne (in Savoie, France) and Susa (in Piedmont, Italy), where the new railway connects to the existing line. It is 65km long, with 89 per cent of it passing through tunnels and most of the above-ground facilities located in already built-up areas. The key element is the Mont Cenis base tunnel (double tube with single track) through which the trains will travel. With its 57.5km of length (45km in France and 12.5km in Italy), it is the longest railway tunnel in the world. The construction of the Lyon-Turin line is part of the development of the European networks, and when the line will be fully operational, it is estimated that more than one million lorries will no longer travel across the Alps, reducing CO2 emissions by three million tonnes per year.

Until next month

David

This Page

MAV have repainted a three car set of their Bzmot railbuses in original livery to mark their 30th anniversary. The set is based in Balassagyarmat but was transferred to Tapolca for the recent retro weekend. *Thomas Niederl*

Front Cover

Zillertalbahn No. D16 with regional train No. 143 to Mayrhofen, is seen near Fügen on August 14th.

Mathijs Kok

On July 6th, Cantus Class 428.130-9 (Stadler Flirt) is seen at Hermannspiegel working an RB5 service from Kassel Auestadion to Fulda. *Erik de Zeeuw*

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With Thanks

Once again many thanks to the many people who have contributed, it really makes our task of putting this magazine together a joy when we see so many great photos.

These issues wouldn't be possible without: Ray Anslow, Brian Battersby, Mark Bearton, Mark Bennett, Tim Blazey, Rob Boyce, Keith Chapman, Julian Churchill, Nick Clemson, Derek Elston, Mark Enderby, Tim Farmer, Dave Felton, FrontCompVids, Paul Godding, Richard Hargreaves, Jim Haywood, Keith Hookham, Colin Irwin, John Johnson, Anton Kendall, Mathijs Kok, Jyrki Lastunen, Ken Livermore, Michael Lynam, Peter Marsden, Phil Martin, Denzil Morgan, Thomas Niederl, Peter Norrell, Chris Perkins, Mark Pichowicz, David Pollock, Andy Pratt, Paul Quinlan, Railwaymedia, Alan Rigby, Bryan Roberts, Neil Scarlett, John Sloane, Stephen Simpson, Laurence Sly, Stewart Smith, Steamsounds, Steve Stepney, Mark Torkington, Gerard van Vliet and Erik de Zeeuw.

Commonwealth Bulk Handling Nos. CBH010 and CBH011 pass through Wattleup and are a short distance away from their destination of the bulk handling facility at Kwinana, where their load of grain will be unloaded for export. *Colin Gildersleve*

Pacific National's Nos. NR89 and NR53 pass through Herne Hill with train No. 1MP2 a Melbourne to Perth steel train, they are about 30kms from their destination of Kewdale after their 3 day journey across the Australia. *Colin Gildersleve*

Aurizon's No. Q4007 travels through Kenwick nose first with a short oil train from Kwinana to Kewdale. To the left can be seen the Transperth single line branch to Thornlie, this will shortly be doubled and extended to Cockburn as part of the Western Australian Government's Metronet expansion plans. *Colin Gildersleve*

Zillertalbahn No. VL23 (hired from Steiermarkbahn) leads an empty wood train from Fügen to Jenbach at Schlitters on August 13th. The locomotive was built in 1972 by the Croatian factory, Đuro Đaković. *Mathijs Kok*

Austria

On August 9th, ÖBB Class 1116.199, with an REX service to Kufstein, arrives at Jenbach.
Mathijs Kok

TX LOGISTIK's Class 193.647 and 193.281 with a modal service heads towards Italy, seen near Wiesing on August 9th. *Mathijs Kok*

ÖBB Class 1016.042 and 1016.022 with a container train heading to Wolfurt, are seen near Wiesing on August 9th. *Mathijs Kok*

Zillertalbahn steam locomotive No. 5 with tourist train No. D211 to Mayrhofen, is seen near Uderns on August 13th. *Mathijs Kok*

ZSSK Cargo Class 383.209 with a batch of new SBB Rens-wagons is seen near Tratzberg on August 9th. *Mathijs Kok*

Zillertalbahn VT5 pulling the regional train No. 126 to Jenbach is seen from a drone crossing the Ziller river near Zell on August 13th. *Mathijs Kok*

Austria

ÖBB acquires 21 additional Desiro ML trains from Siemens Mobility

Four-car Desiro ML trains for ÖBB with more than 290 seats offer enhanced passenger comfort

Approval for four-car version already received

To expand its existing commuter and regional train fleet, ÖBB has ordered an additional 21 Desiro ML trains from Siemens Mobility. The multiple-unit trains have four cars, are approximately 100 meters long, have eight entrances and provide enhanced passenger comfort for local and regional journeys. The trains will be equipped with the state-of-the-art train control system ETCS (European Train Control System) and are planned for service in Austria's western state of Vorarlberg.

More than 180 trains of this modern and proven series from Siemens Mobility are already successfully operating as three-car trains in Austria alone. The four-car version of the Desiro ML ordered for Vorarlberg has already been approved for operation in Austria and Germany.

Albrecht Neumann, CEO Rolling Stock, Siemens Mobility, said: "The Desiro ML is an internationally tested and proven regional train that provides the highest level of passenger comfort and satisfaction. We'll now further adapt the train to meet ÖBB's latest customer requirements and build the new fleet in our usual excellent quality and in record time."

The Desiro ML trains planned for Vorarlberg will have a total of 290 seats and space for two wheelchairs. Depending on the season, the trains will either offer sufficient space for bicycles in the summer or be equipped with ski racks in the winter.

Passengers will enjoy a high level of comfort thanks to a number of technical innovations such as a digital passenger information system, air conditioning, WiFi service, and easier barrier-free accessibility through the eight doors equipped with extendable ramps.

To date, more than 540 Desiro ML trains from Siemens Mobility in three or four-car versions have been sold worldwide.

Rail Cargo Group opens warehouse in Praha-Malešice with direct rail connection

In addition to tailor-made logistics solutions for goods of all kinds, the warehouse location of the ÖBB Rail Cargo Group in Praha-Malešice stands out as one of the few warehouses in the area with a siding.

Due to its central location, the Czech Republic is one of the most important logistics locations in Central Europe. The RCG warehouse in Praha-Malešice is one of the few logistics areas with a functional siding in the Czech capital, which makes the location particularly attractive.

By transporting goods directly by rail, traffic delays such as traffic jams, border-waiting times, and night or weekend driving bans can be avoided. Thus, RCG not only enables efficient storage, but also fast and reliable transport on the sustainable rail directly to or from the warehouse – and both from a single source.

Full service package across the entire logistics chain

On the 29,700 m^2 area – of which 9,700 m^2 is covered and 20,000 m^2 uncovered – RCG takes care of handling, storage and retrieval, cross-docking, palletising, container loading and onward transport by rail or truck. Because of the direct connection to the rail network but also to the motorway, the warehouse in Praha-Malešice is ideal for combining rail and truck transport.

Austria

ÖBB Class 2070.026 is seen shunting a train loaded with Innofreight Woodtainers transporting woodchips at Jenbach on August 11th. *Mathijs Kok*

Austria

ÖBB orders 20 additional Nightjets from Siemens Mobility

A total of 33 Nightjets of the new generation Viaggio Next Level from Siemens Mobility in service by 2025

New Nightjet generation focuses on comfort, modern design and greater privacy

ÖBB secures its position as market leader in Europe's night train business

ÖBB has ordered 20 additional seven-car night trains from Siemens Mobility to expand its Nightjet fleet. The trains are based on the Viaggio Next Level platform. A total of 33 next-generation ÖBB Nightjets will be in service by 2025, providing climate-friendly overnight connections between various European cities. The new trains will attract night travellers by offering higher capacity, even more comfort, and greater privacy.

"Calling up 20 additional Nightjets is an important step in positioning ÖBB as the market leader in Europe's night train business. ÖBB is already Europe's largest night train operator, and with the new state-of-the-art Nightjet fleet, we will further reinforce our position and offer our travellers first-class comfort," says ÖBB CEO Andreas Matthä.

"With the new Nightjets, ÖBB is investing in the sustainable future of travel. Night trains provide climate-friendly overnight connections between European cities, make rail journeys more comfortable and attractive, and thus make an important contribution toward achieving climate goals. Innovative mini cabins on the trains offer passengers private space and a high degree of comfort. The special lightweight bogies help ensure a particularly smooth ride and reduced energy consumption over the train's lifecycle," says Michael Peter, CEO of Siemens Mobility.

Viaggio Next Level: the next-generation Nightjet
In 2018, Siemens Mobility and ÖBB signed a framework agreement for the delivery of day and night trains. Thirteen Nightjets of the new generation Viaggio Next Level called up from this agreement are currently being built at the Siemens Mobility plant in Vienna. The first trains to be delivered from this series will serve on connections from Austria and Germany to Italy beginning in December 2022.

The second call from this agreement is now for 20 additional Nightjets. These trains are planned for service from Vienna and Innsbruck to Hamburg and Amsterdam, and for operating on the routes from Vienna to Bregenz and Zurich. The connections from Graz to Zurich and from Zurich to Hamburg and Amsterdam will also be served by the new trains.

By 2025, 33 next-generation Nightjets will be operating in Austria, Germany, Italy, Switzerland, and the Netherlands, thus replacing a large share of the current fleet.

Barrier-free travel with greater comfort and privacy
Each seven-car train is comprised of two coaches, three couchette cars, and two sleeping cars. The train's state-of-the-art design offers an even higher level of comfort. In the new couchette car concept, additional mini cabins provide significantly more privacy for single travellers and ensure a comfortable trip and relaxed arrival. Traveling in the sleeping cars is even more comfortable since all compartments will have their private toilet and shower. The new trains will also feature free WiFi service.
Barrier-free overnight travel will also be possible with the new Nightjets. Every Nightjet will include a multifunctional car with a low-floor entrance, a barrier-free couchette compartment, and a barrier-free toilet.

Class 2044.028 ascends the climb to Labin Dalmatinski on August 21st with the ZSSK / OBB operated train to Vienna and Bratislava - one of 3 international trains on this line this summer to cater for the tourist trade. *Mark Torkington*

Croatia

Class 2044.017 ascends the climb to Labin Dalmatinski with the Regiojet operated train to Budapest, Bratislava and Prague on August 21st. *Mark Torkington*

HZ Class 2063.003 and 2062.024 are seen taking a freight towards Knin at Bakovic on August 19th.
Mark Torkington

Czech Republic

JHMD locomotive No. T47.019 (705.919) with Balm trailer enroute as train No. 21213 Obrataň - Jindřichův Hradec is seen at Žďár u Kamenice nad Lipou on August 6th. *Gerard van Vliet*

Czech Republic

CSD Class E422.0003 with carriages as built for the Tábor - Bechyně line is seen near the stop at Třebelice on it's way to Bechyně on August 7th. *Gerard van Vliet*

Czech Republic

The Tábor - Bechyně line was the first electrified line in the former Czechoslovakia and is electrified with 1500v DC. The next electrification of railway lines was done with 3000v DC and later with 25kv, so that this line has always remained as an island company with special equipment. A service is seen on the combined rail/road viaduct just in front of Bechyně station on August 7th. *Gerard van Vliet*

Czech Republic

JHMD locomotive No. T47.019 (705.919), en route as train No. 21213 Obrataň - Jindřichův Hradec, crosses with JHMD railcar No. M27.002, which has arrived from Jindřichův Hradec as train No. 21214, seen at Kamenice nad Lipou on August 6th.
Gerard van Vliet

Czech Republic

Transport of rails to Kadaň

On August 30th, CD Cargo's modernized locomotive Class 742.727 was at the head of the Mn 52688 train, the task of which was to transport four Res series wagons loaded with rails from Třinecké železárny in Chomutov to Kadaň.

The rails are intended for the reconstruction of the 600 m long section Kadaň - Kadaň předměstí and the 75m long rails were unloaded at the stop Kadaň předměstí.

As part of this construction, the section will be electrified, a new platform will be built at the station and a new communication and security device will be installed, including an information point for passengers.

Photo: © CD Cargo

Germany

Moving more freight sustainably by shifting to rail

Over 80 million tonnes of construction rubble is produced in Germany every year. But this waste doesn't have to be wasted. Instead of treating bulk waste as a problem to be disposed of, RUZ Mineralik – a company based in Heilbronn in southwestern Germany – has created a sustainable circular economy. The company specialises in processing mineral products and waste so they can rejoin the resource cycle. It recycles construction rubble to extract new raw materials and turn this waste product into a resource for construction work.

Economic benefits of rail instead of road

RUZ Mineralik now wants to make the recycling of bulk materials even more sustainable, so the company plans to increase its use of rail freight. In preparation, it has expanded its private siding and points by 300 metres. The extended siding officially opened in August after successful test transports. Jochen Entenmann, head of track materials at RUZ Mineralik, explains the company's motivation: "Every year, we move many millions of tonnes of mineral waste and products. This naturally raised the question of how we could optimise our current transport activities. Chronic road congestion, speedy transhipment options for large freight volumes and, of course, environmental considerations mean that the railway is perfect for us and offers a lot of potential for the future."

Switching from road to rail has a double advantage for RUZ, particularly when moving freight over long distances: it helps the business meet its financial and environmental targets alike. The company therefore plans to use its private siding to move materials for all kinds of products between Germany's different regions as well as to and from neighbouring countries. The upgraded siding will also steadily enhance the appeal of rail even for shorter routes, adds Entenmann.

New private siding adds logistics capacity

Markus von Olnhausen, technical director at RUZ, says that his company's effectiveness and transport capacity have increased considerably since its extended private siding went into operation. He translates this into figures: "In the first two months after we opened our longer siding, we were able to load and transport approximately 15,000 additional tonnes of material. We are planning to expand our freight volumes by 100,000 to 150,000 tonnes a year." The extremely flexible transhipment options are one of the biggest benefits when transporting these larger quantities. Entenmann says, "We can dispatch almost every kind of wagon that is designed for bulk goods of some sort – hopper wagons, side-tipping wagons, flat wagons or other kinds of open-top wagons. Whatever the freight, we can handle it."

When RUZ invited DB Cargo to take a look at its new private siding, the rail company jumped at the opportunity, as it gave staff at sales and production the chance to see RUZ's premises and new rail connection for themselves.
Claudia Heiduk, account manager in the Stuttgart/Mannheim regional sales team, says, "RUZs larger private siding means that the company can transport more freight via the environmentally friendly rail system in future. At the same time, the shift from road to green rail services is essential so we can meet our national climate targets. We welcome the company's decision to go with rail and expand its private siding. As a company, DB Cargo aims to provide maximum support for our customer's project, and we will continue to build on the excellent working relationship that we already have with RUZ."

Award-winning: DB's environmental seal of approval for RUZ Mineralik

We always give credit where credit is due. Every two years, suppliers that make the most sustainable and successful contributions to Deutsche Bahn's procurement strategy are nominated for the DB Supplier Award. This year, the prize in the Environment category went to RUZ Mineralik GmbH. As a long-standing partner to the DB Group, the Heilbronn-based company plays a major role in helping Deutsche Bahn to strengthen the circular economy and boost recycling in the infrastructure business. This particularly applies to the reuse of old ballast, where RUZ makes a major contribution to sustainable resource management: its material processing work means that our CO2 emissions are up to 80% lower than they would be if we used "brand new" construction materials.

Siemens Mobility to deliver Vectron multisystem locomotives to Railpool for the first time

Railpool, one of Europe's leading rail vehicle rental companies, has ordered 20 Vectron MS multisystem locomotives from Siemens Mobility. The locomotives are intended for service in eleven countries along the Eastern Corridor (Germany, Austria, Poland, Croatia, Czechia, Slovakia, Slovenia, Hungary, Bulgaria, Romania, Serbia). The locomotives will be delivered in several phases beginning in March 2022. Railpool's fleet is currently comprised of more than 400 locomotives. When deliveries of this first order for multisystem locomotives from Siemens Mobility are completed, Railpool will have a total of 53 Siemens locomotives.

"We are proud that Railpool is for the first time adding Vectron multisystem locomotives from Siemens Mobility to its fleet. Our Vectron locomotive not only stands for reliability and high performance, features that ideally meet the needs of cross-border rail transport in Europe. The name Siemens Mobility stands for customer proximity and on-time deliveries," said Albrecht Neumann, CEO Rolling Stock of Siemens Mobility.

Torsten Lehnert, CEO of Railpool, commented: "Our first Vectron multisystem locomotives will enable our customers to transport freight and passengers across eleven countries along the Eastern Corridor. Combined with our customary level of Railpool service quality, we will be creating an attractive offer for rail transport companies that meets their freight and passenger transport needs along one of Europe's most important rail corridors. We at Railpool can not only flexibly and optimally serve the key transport routes in Europe, thanks to our strong fleet of more than 400 locomotives, but also maximize the availability of these locomotives by providing our full range of proven services."

Ingo Wurzer, CFO of Railpool, added: "With our purchase of the 20 Vectron MS locomotives, we want to position Railpool even better to handle anticipated market developments, especially in Eastern Europe. Railpool believes it is especially important to provide its customers with the best possible service and flexible solutions. To ensure we can continue to do so as we grow, we've already made important investments this year with the support of our shareholders, and look forward now to the new locomotives that clearly meet our fleet demands: 100% modern – yet proven – electric locomotives that provide our customers with highly reliable and high-performance service."

The Vectron MS locomotives ordered by Railpool have a maximum output of 6.4 megawatts and a top speed of 200 km/h. They are also equipped with the required national train control systems as well as the European Train Control System (ETCS). To date, Siemens Mobility has sold over 1,100 Vectrons to a total of 56 customers. These locomotives have accumulated more than 450 million fleet kilometres in service and are certified for operating in Austria, Belgium, Bulgaria, Croatia, the Czech Republic, Denmark, Finland, Germany, Hungary, Italy, the Netherlands, Norway, Poland, Romania, Serbia, Slovakia, Slovenia, Sweden, Switzerland and Turkey.

At the height of Braubach on August 4th, BayernBahn Class 139.287-7 heads the daily Henkel train on its way from Langenfeld to Gunzenhausen.
Erik de Zeeuw

DB Class 185.070-0 and a rake of Laeks cars loaded with Volkswagen Tiguans passes Salzbergen on their way to Emden on July 16th. *Erik de Zeeuw*

Freightliner Poland's No. 653-09, aka 92-80-1266.119-7, heads northbound through Wernfeld with a rake of empty box wagons on July 12th. *Anton Kendall*

At sunrise on August 2nd, Saar rail Class 151.165-8 is shunting in Völklingen. In the background the world heritage 'Völklinger Hütte' can be seen. *Erik de Zeeuw*

Germany

LTE Class 193.262-3 exits the Loreley tunnel with a southbound tanker train on August 4th. *Erik de Zeeuw*

BayernBahn's Class 139.309-9 heads south through Wernfeld with the 'Henkelzug' on July 12th.
Anton Kendall

Germany

Siemens Mobility and cooperation partner ViP present “Autonomous Tram in Depot” research project

Successful demonstration of a fully automated tram depot with a self-driving tram
Market maturity planned for 2026
Supported by the mFUND of the Federal Ministry of Transport and Digital Infrastructure (BMVI)

Siemens Mobility and ViP Verkehrsbetrieb Potsdam GmbH have successfully demonstrated a test of the mFUND’s AStriD (“Autonomous Tram in Depot”) research project. A consortium consisting of Siemens Mobility, ViP Verkehrsbetrieb Potsdam GmbH, the Karlsruhe Institute for Technology (KIT), the Institute for Climate Protection, Energy and Mobility (IKEM), and Codewerk GmbH began its joint research on a fully automated tram depot in October 2019. The technology is expected to be market-ready in 2026.

“AStriD is an important milestone on the way to achieving self-driving trams. Working with our partners, we are using valuable synergies to digitalize the depot and reduce time-consuming on-site shunting. By automating the depot, we can better support our customers in ensuring sustainable value growth over the entire lifecycle and guaranteeing the availability of their trams,” said Albrecht Neumann, CEO Rolling Stock of Siemens Mobility.

The research and development project is being implemented at the depot operated by Verkehrsbetriebs Potsdam.

“Autonomous driving along the tram route and within the depot relieves our drivers and increases the safety of our passengers and other road users,” said Uwe Loeschmann, CEO of ViP Verkehrsbetrieb Potsdam GmbH. “Autonomous tram operation in our depot with the AStriD system opens up the possibility of automated cleaning, supply and parking processes with central control and increased operational safety.”

Potsdam Mayor Mike Schubert: “This is an important, future-oriented project. The participation of the state capital and its transport company shows how the spirit of innovation is thriving in Potsdam. If this new technology can be used in the coming years, it could help transport companies modernize local public transport. That’s why we’re pleased to be working as a project partner of Siemens on what we believe is a pioneering development.”

At the InnoTrans 2018, Siemens Mobility and Verkehrsbetrieb Potsdam demonstrated a test tram operating under real road conditions on a section of Potsdam’s tram network. The research project that resulted from this initiative aims at developing a digital depot on the basis of self-driving trams. The technical feasibility of the concept will be demonstrated with autonomous service functions, such as moving a tram through a washing facility to a siding. Making depot automation commercially viable is thus a first stage of introducing autonomous driving. Right from the start, the project is considering the various legal and economic conditions that must be fulfilled for the approval and operation of an autonomously driving tram. The three-year project is funded by the Federal Ministry of Transport and Digital Infrastructure (BMVI) as part of its Modernity Fund (mFUND).

The consortium partners have divided the project into different work packages. Siemens Mobility is developing the self-driving tram in the depot and the yard management system (YMS) that gives the tram its driving orders. In addition, it is working with project partner KIT to develop the digital map that is the basis for tracking the tram’s location within the depot.

ViP Verkehrsbetrieb Potsdam GmbH is providing the tram and the depot infrastructure, enabling access to all required data, systems, and facilities, and evaluating the project’s findings from the perspective of a depot operator. The KIT Institute for Information Processing Technology (ITIV) is contributing its expertise in the specification and digitalization of depots, the automation of processes, and identifying the necessary data, and is supporting the development of the digital map.

The IKEM is analyzing and evaluating the legal and economic issues related to the project.

Codewerk specializes in industrial systems and, among other things, develops software for data communication on rail vehicles. In this project, Codewerk is supporting the communication between the tram and control center and is responsible for integrating parts of the depot infrastructure.

About the BMVI’s mFUND:
As part of its mFUND innovation initiative, the BMVI has been funding data-based research and development projects for Digital and Networked Mobility 4.0 since 2016. The project funding is supplemented by active professional networking between players from politics, business, administration, and research, and by providing open data through the mCLOUD portal.

Germany

IGE Class 482.046-0 (Jim Knopf/Jim Button) enters Gemünden am Main on August 2nd with a rake of tankers on their way from Mainz Bischofsheim to Linz (Austria). *Erik de Zeeuw*

Alpha Trains upgrades its regional trains in Mecklenburg-Western Pomerania for the Ostdeutsche Eisenbahn GmbH

On behalf of Alpha Trains, continental Europe's largest lessor of trains and locomotives, Siemens Mobility has converted the multiple train units currently leased to ODEG - Ostdeutsche Eisenbahn GmbH from three- to four-car trainsets. With this upgrade, Siemens has completed the approval process to enlarge the capacity with Alpha Trains Desiro ML-trains for the first time at European level. According to the specifications of the EU's Fourth Railway Package, an expansion from three to four-unit trains needs to be approved by the European Union Agency for Railways (ERA) with the involvement of the national supervisory authorities. The plan to expand the capacity of the multiple-unit trains is made possible by the flexible single-car concept of the Desiro ML platform, which makes it possible to insert an additional unit. The optimal use of the entire length of the train for seating means that over 90 per cent of the vehicle is available to passengers.

"As the original launch customer for the Siemens Desiro ML series, we are particularly proud to be pioneers in the expansion of these trains as well. The combination of our know-how and a wealth of experience enabled us to offer a fast, flexible solution that will add to the satisfaction of customers and passengers alike. With this move we hope to make rail travel more attractive than ever as a sustainable and therefore future proof means of transport," said Shaun Mills, CEO of the Alpha Trains Group.

"The plan to expand the capacity of the Desiro ML trains is facilitated by the flexible single car train concept of our platform which makes it straightforward to add a further car. With its conversion of the Desiro ML trains for Alpha Trains, Siemens Mobility has for the first time completed the certification process for expanding capacity on a European level. We are proud to have facilitated this expansion of capacity on time, even under pandemic conditions," states Albrecht Neumann, CEO Rolling Stock at Siemens Mobility.

Stefan Neubert, Managing Director of ODEG: "We are delighted that, together with our partners Siemens and Alpha Trains, we have quickly achieved our goal to be in a position in the future to offer our passengers on the Baltic Sea coast even more space on our trains. The holiday region is enjoying increasing popularity, and we are proud to have made our contribution to enabling a growing number of people to reach it in our modern, comfortable trains in an eco-friendly, relaxed style."

Berthold Witting, Managing Director of VMV-Verkehrsgesellschaft Mecklenburg-Vorpommern mbH: "We welcome the longer regional trains and now we can offer our passengers across the Hanseatic cities of Rostock, Stralsund and the island of Rügen 68 additional seats and a 1st class area. Extending the trains to a four-car system is especially beneficial for the popular tourist route to Rügen. Germany's largest island with its spa towns of Bergen, Sassnitz and the Baltic Sea resort of Binz is a popular destination and thus regularly at full capacity during the season. The expansion of the regional trains' capacity along the Baltic Sea represents a further step towards climate-friendly, comfortable travel. Hop aboard and discover Mecklenburg-Western Pomerania's Baltic Sea coast!"

The background: at the end of 2018, Alpha Trains ordered seven three-unit regional trains of the Desiro Mainline (ML) series from Siemens Mobility – including subsequent expansion by adding a fourth unit. Ostdeutsche Eisenbahn GmbH (ODEG) is leasing the vehicles for use in its "Baltic Sea Coast-East network part II", which it has been operating on behalf of Verkehrsgesellschaft Mecklenburg-Vorpommern (VMV) mbH since December 2019. The trains were originally supplied as three-unit versions and are currently deployed on the RE9 (Rostock–Stralsund–Binz/Sassnitz) and RE10 (Rostock–Stralsund–Züssow) routes.

On August 3rd, RheinCargo Smartron Class 192.031-3 is seen on the curve near Harrbach with a rake of tank cars heading from Mainz to Augsburg.
Erik de Zeeuw

DB Class 152 044-4 heads through Retzbach with a rake of ‘Laaers’ loaded with BMW’s from Dingolfing to the port in Bremerhaven on August 2nd. *Erik de Zeeuw*

Stadler Euro Dual Class 159.203-9, working for HHPI, brings a loaded timber train southbound through Wernfeld on July 16th. *Anton Kendall*

On August 2nd, VTG Retrack Class 159.222-9 (a Stadler dual-mode locomotive) named 'Lena' hauls a rake of 'Zags' loaded with a hydrocarbon gas mixture (liquified) from Ingolstadt to Marl through Gemünden am Main. *Erik de Zeeuw*

Germany

The exotic long-distance Metropolitan trains are retiring

When the timetable changes in December 2021, the two sets of the Ex-Metropolitan will be switched off. Another operation is no longer economical for DB Fernverkehr due to the upcoming main inspection. Dirk Wittmann and Mathias Semrau from Product Management ICE / Intercity talk about the end of the multiple units and their special history. There are two true exotics in the long-distance fleet of DB: the two ex-Metropolitan multiple units, hauled by a specially equipped class 101 locomotive. After an accident, only one train in long-distance traffic is currently commuting between Berlin and Cologne as a special ICE.

With the timetable change in December 2021, the ex-Metropolitan trains will be taken out of service after a little more than 20 years in service. Isn't that a little early?

Mathias Semrau : From a technical point of view, the trains could of course continue to run. It is also a farewell that we find difficult. Because both trains are very popular with our guests and customer satisfaction is above average. However, it does not make economic sense to carry out another general inspection. This would allow both trains to run for eight more years, but they could only be used for two more years. The further influx of ICE 4 multiple units and the ICE 3neo are adding so many new vehicles to the fleet that we no longer need the ex-metropolitan trains, especially since their capacity is no longer sufficient for the growing demand.

Dirk Wittmann : In addition, there are only two train sets. For this, however, we have to reserve the appropriate resources for our own documentation, for example in vehicle management. It's not efficient. In addition, the supply of spare parts is becoming more and more difficult. During the main inspection, for example, the special half-shell central buffer couplings of the trains would also have to be replaced. On top of that, there has been no redesign of the interior in the past 20 years. The high-quality materials have aged gracefully, but should now be slowly renewed.

Mathias Semrau : Unfortunately, the trains no longer fit into the rest of the ICE fleet. There are several points that we would have to address so that we could also offer the meanwhile common product standard uniformly in the MET: Bicycle parking spaces, a toddler compartment, digital reservation displays, information monitors inside in the vestibules and in the passenger areas as well as outside on the doors, new mobile radio repeaters, but also a new train-to-land communication, for example, to be able to load reservation and timetable data onto the train.

Even when it was first introduced, the Metropolitan was a rarity at DB. How did it come to be introduced in 1999? The Intercity with only 1st class had already been given up in the 1970s.

Semrau : From my point of view, it was a wrong decision back then to only address wealthy business customers. You can already see this from the fact that two years after the launch, the traveller category was introduced at the Metropolitan in order to appeal to other target groups. The decision to host the Metropolitan was made very consciously. The new subsidiary should operate independently from long-distance transport and compete with ICE and Intercity. And at that time the greatest potential was seen in high-quality traffic in the competition with aircraft. Back then, flying was significantly more expensive than it is today, because the price war in the air didn't really start until later.

Wittmann : In the morning and in the evening, the trains between Hamburg and Cologne were also well used. After all, they were 45 minutes faster than the rest of the long-distance traffic by choosing an express route with few stops en route. There was also no waiting for connections. At lunchtime and on the weekends, however, the workload did not look so good. Another problem was the non-recognition of tickets on DB trains.

Semrau : That is another design flaw in the Metropolitan. Many passengers didn't just want to travel between Hamburg and Cologne, they wanted to continue on - for example from Lübeck to Cologne or from Hamburg to Bonn. For this they needed another ticket, which made the entire trip more complicated and often more expensive. From today's perspective, the train should have been integrated into the overall system. But at that time people wanted to deliberately set themselves apart.

Wittmann : In other ways , too, you saw yourself more like a plane on the rails. As usual in air traffic, the days of traffic were indicated with numbers instead of letters as in the railroad. There were also free drinks and snacks that were distributed in trolleys on the train.

What other differences were there in the Metropolitan?

Wittmann : There was a specially trained steward for each car who looked after the passengers. All operational tasks, however, lay with the engine driver. There were also many other services in the Metropolitan. It was possible to reserve a rental car for the onward journey at a terminal in car 5. There were special offers for guests of the Metropolitan in the printed travel guide for the respective destinations.

Semrau : Back then, laptops weren't very common, most people still had desktop computers. In the Metropolitan you could therefore borrow laptops for a deposit and work on board.

Wittmann : The three different areas on the train were also innovative: Silence, Office and Club. Depending on which one you booked, you could use different services. There was only a bar cart in the office and club area. In addition, "cell phone amplifiers" were installed in the office area and DVD players could be borrowed in the club area to watch films while driving.

Semrau : This target group-specific approach was indeed a novelty. In the ICE, for example, there were no cell phone areas with cellular repeaters and no rest areas. These were only introduced in the ICE around the same time as the introduction of the MET trains.

And how did it look in the bistro?

Semrau : There were Davidoff cigars, after all, you could still smoke in the Metropolitan. On top of that, a specially created cocktail was offered - even non-alcoholic. In addition tartare and many small high-quality dishes. Even in the Traveller Class, which was newly introduced in 2001, there were later free non-alcoholic drinks. So the train was exotic through and through.

Wouldn't it have been possible to order more ICE 2 multiple units to at least simplify maintenance?

Semrau : Such scenarios were indeed played out, but discarded. Especially since long-distance transport urgently needed the new ICE 2 multiple units for its own operation. And of course they wanted to consciously appear as a competitor and put something else on the rails than DB Fernverkehr.

But there were also ideas to convert used "Halberstädter" type passenger coaches instead of building a new one. After all, there were large numbers of them back then. When converting a compartment car for the first time, however, many problems were encountered and this plan was discarded.

When building the Metropolitan, however, the ICE 2 was used as a basis. The car bodies are just as wide and thus offer a better sense of space. The car crossings are also designed to be just as comfortable and pressurized.

Wittmann : The Metropolitan was thus a permanent train set. Only at both ends of the car trains were there normal screw couplings for coupling the locomotive. By the way: With a top speed of 220 km / h, the Metropolitan was the fastest locomotive-hauled train until the introduction of the Railjet of the ÖBB with its Vmax of 230 km / h

And did something change inside too?

Wittmann : In a way, the Metropolitan was always a train on which you tested a lot of new things. At that time, among other things, a self-cleaning toilet seat. But even later we tried a lot in it, precisely because there were only two vehicles and we didn't have to work with a whole fleet. For example, we tested the WLAN system in it for installation in the Intercity, which has to be set up differently for single wagons in the Intercity 1 and Intercity 2 fleets than in ICE multiple units. We are also testing a sound project in the toilets with chirping birds and new pictograms for guidance and orientation.

Finally, the question that will probably be of interest to many: What will happen to the ex-metropolitan trains now?

Wittmann : We will offer them at DB Used Train. The Metropolitan is sure to find a buyer there. We are curious to see what future these two trains will have.

On August 3rd, PKP CARGO Class 370.025-6 (celebrating the 20th anniversary of PKP CARGO) is seen near Harrbach hauling a deep sea container train from Nürnberg Hafen to Małaszewicze (Poland). *Erik de Zeeuw*

On August 5th, TRI Class 112.309-0 passes Remagen with the nostalgic ‘RHEINGOLD’ organized by AKE, from Dortmund to Andernach. In Brohl the travellers had a trip with a steam train on the metre gauge Brohltalbahn/Vulkan-Expreß line. *Erik de Zeeuw*

RheinCargo TRAXX F140 AC3 Class 187.074-0 passes Gemünden am Main working a tank train from Würzburg to Köln Eifeltor on August 3rd. *Erik de Zeeuw*

On August 2nd, LINEAS Class 186.451-1 runs through Gemünden am Main with the GXN Slovakia Xpress from Antwerpen (Belgium) to Bratislava (Slovakia). *Erik de Zeeuw*

ÖBB Class 1293.037-8 is on its way from Neuss to Budapest Soroksár-Terminál (Hungary) with a combined freight train on August 4th. *Erik de Zeeuw*

ÖBB Class 1116.060-5 passes Harrbach with a combined freight train from Budapest (Hungary) to Neuss on August 2nd. *Erik de Zeeuw*

Near Harrbach, Railsystems Vectron Dual Mode RP Class 248.002-8 is seen leading a southbound log train on August 3rd.
Erik de Zeeuw

On August 4th, BLS/CROSSRAIL Class 186.499-0 leads the Ambrogio shuttle from Muizen-Goederen (Belgium) to Gallarate (Italy) through Oberwesel. *Erik de Zeeuw*

On August 4th, DB Class 185.089-0 has past Marksburg Castle in Braubach as it works a combined freight train from Zeebrugge (Belgium) to Gallarate (Italy). *Erik de Zeeuw*

H-Start Class 418.330 with train No. IC19703 Tapolca - Budapest Deli reaches the station Badacsonytördemic-Szigliget on August 6th. *Thomas Niederl*

On August 6th, due to a lack of Class 418 diesels, the additional pair of trains that only run in summer Nos. S19606/19607 Szombathely - Keszthely are often hauled by a Class 628 which are normally used for freight duties only. Here No. 628.301 with train No. S19606 calls at Sümeg station. *Thomas Niederl*

MAV Nostalgia No. M62.194 is seen near to Abrahamhegy halt on its way as train No. Sz19747 to Balatonfüred on August 7th. *Thomas Niederl*

On August 7th, steam loco No. 424.247 has taken over the haulage of express train No. 1972 Szolnok - Tapolca at Balatonfüred from an electric loco and is seen at Badacsonytomaj. *Thomas Niederl*

MAV Nos. M62.127 and M41.2103 with train No. IC19702 from Budapest Deli to Tapolca are seen at Badacsonytomaj on August 7th. *Thomas Niederl*

NoHAB No. M61.006 calls at Badacsonytördemic-Szigliget station with train No. IC19703 to Budapest. The first carriage is a generator coach because the engine has no facilities to operate electric heating or air-con of the carriages. *Thomas Niederl*

H-Start No. 418.148 departs Tapolca for Budapest with train No. IC19707 on August 8th. *Thomas Niederl*

MAV Nostalgia No. M62.194 with train No. Sz19747 to Balatonfüred is seen departing Tapolca on August 8th. The first coach is a heritage dining car. *Thomas Niederl*

Hungary

MAV No.M62-194 is seen heading train No. Sz19734 to Tapolca at Badacsonytomaj on August 8th. *Thomas Niederl*

NoHABs Nos. M61.020 and M61.006 are seen near Nemesgulács-Kisapáti with train No. IC19703.
Thomas Niederl

On the south side of Lake Balaton, there is a narrow gauge railway from Balatonfenyves to Somogyszentpal and Csisztafürdő. On August 9th, Shunter No. Mk48.2022 is seen near Imremajor with train No. Sz30815 from Somogyszentpal. *Thomas Niederl*

Netherlands

On July 3rd, SBB Cargo International Class189.985-5 runs through Boxtel with GTS shuttle No. 40118 from Milano Smistamento to Rotterdam. *Erik de Zeeuw*

DB ICE No.4683 (406.083) 'Limburg an der Lahn' passes Baambrugge on July 22nd as train No. IC 157 from Amsterdam via 's-Hertogenbosch and Köln to Frankfurt am Main (Germany). *Erik de Zeeuw*

Netherlands

On August 1st, ZLSM No.1040 is seen in Wijlre leading a museum train from Schin op Geul to Simpelveld.
Erik de Zeeuw

Netherlands

RFO No. 1829 and classmate 1828 pass Holten with a rake of tankers from Bad Bentheim (Germany) to the Kijfhoek Yard on August 13th. *Erik de Zeeuw*

At the height of Terschuur, NS ICM-IV No. 4214 is seen working train No. IC2058 from Deventer to Den Haag Centraal station. *Erik de Zeeuw*

RFO No.1830 is on its way from the Kijfhoek Yard to Bad Bentheim (Germany) with a train consisting of Habiins cars on August 13th. *Erik de Zeeuw*

Netherlands

On August 13th, PKPCARGO Class 370.025-6 (its livery celebrating the 20th anniversary of PKPCARGO) is seen on the rear of some Sdggmrs double pocket wagons, suitable for deep sea containers, curtain siders and semi-trailers, on its way from Tilburg to Kaunas Intermodal Terminal (Lithuania).Kaunas is the most eastern point of the European railway system. The main work for the Rail Baltica project's Kaunas - Palemonas section has been completed with the laying of the final European standard gauge rails to connect directly the Kaunas Intermodal Terminal to the European railway network.. *Erik de Zeeuw*

PCC Intermodal's No. EU07-512 heads a container train southbound through Rozyny on July 21st. *Anton Kendall*

DB Poland Vectron No. 91 51 5 170.042-3 brings a rake of brand new GATX steel hoods northbound through Rozyny on July 22nd. *Anton Kendall*

Pesa Gama No. 111Ed-026, (91 51 5 170.136-3) brings a rake of new Eurowagon container flats northbound through Cieplowo on July 21st. *Anton Kendall*

Slovenia

The new order in Slovenia (like most of Europe) is hired in Vectrons.... here Class 193.723 backs onto train No. EC212 at Dobova on August 22nd. *Mark Torkington*

August 23rd, and during a day of rainstorms, Sz No. 644.110 runs around the 'autovlak' train at Bohinjska Bistrica whilst the cars are unloaded. *Mark Torkington*

On August 15th, VL60.1844 rests on the blocks at the wonderful Odessa Holovna station on ECS duties.
Mark Torkington

On August 11th, VL82-047 takes over from TEP70-0145 at Kupiansk-Vuzlovyi on train No. 46 from Lysychansk to Užohorod. *Mark Torkington*

One of the very old VL8 locomotives is seen on a staff train at Mariupol on August 13th, whilst a refurbished ChS2 (originally the same as a Czech Class 121) stands alongside on an express to Kyiv. *Mark Torkington*

CHME3-5638 is seen on shunting duties at Dnipro Holovni in the early hours of August 12th. *Mark Torkington*

Sweden

AB Transitio, Tåg i Bergslagen and Stadler attend signing ceremony to celebrate the order of seven more trains for Sweden

Representatives from AB Transitio, Tåg i Bergslagen and Stadler came together for a signing ceremony to mark the purchase of seven additional double-decker DOSTO trains for the Swedish market. Stadler has already sold 53 trains of this type in Sweden, which means that there will soon be 60 Stadler trains in operation up and down the country. Designed to cut carbon emissions and developed for use in harsh, wintry climates, these trains are characterised by high levels of passenger comfort and are proving popular with travellers.

A signing ceremony for seven more additional double-decker DOSTO trains was held in Stockholm and attended by executives from Stadler, AB Transitio, who are buying these trains, and also from Tåg i Bergslagen, the network which the new trains will be operating on. The trains are built to promote decarbonisation, accommodate the severe Swedish winters and to provide high levels of passenger comfort. Made up of four carriages, they are set to be delivered in winter 2022/2023. Passenger comments secured by Mälardalstrafik MÄLAB AB, as well as from another individual member of the public, demonstrate that rail travellers in Sweden recognise the trains' qualities, providing glowing testimonials and indicating that they appreciate the improved customer experience. One person said: 'It is fantastic! The best train I have been on!' Others like the quietness of the trains, with another claiming: "The new trains are perfect! It is very good to work during the train journey as it is quiet, calm and comfortable on board the train." A second person added: "It is silent – fantastic!"

In reference to the trains' airiness, an individual commented: "It feels spacious and warm welcoming. Really big effective wide doors. The upper floor seems wide and is comfortable, with nicely placed windows."
The design of the seats is proving popular, with a person saying: "My back just love these chairs – perfect and firm."
Others were happy with the capacity of the train, explaining: "I feel like the new trains have more seats. And so it is faster to get home to Eskilstuna, which I commute from every day."

Passenger Comfort
Designed to maximise passenger comfort, these trains are spacious, stylish and modern. Saloons are light airy, entrance areas are generously proportioned and staircases are wide so that travellers can get on and off easily. There is more storage space than on most trains. Individual reading lamps and two power sockets are built in at each seat. Carriages are 'pressure-managed' to avoid discomfort for passengers when travelling through tunnels and are sound-proofed. They feature a sliding step, to make getting on and off easier for wheelchair users and people with reduced mobility, luggage or pushchairs.

Cutting Carbon Emissions
To manage the trains' carbon footprint, carriages are made of aluminium profile. This keeps trains relatively light in weight to minimise energy consumption and at the same time, meet all safety requirements, including crashworthiness. Up to four trains can be coupled together to promote environmental efficiency.
Trains feature 'regenerative braking'. This involves an extremely powerful electric brake, which returns a large part of the energy used to the electrical braking system. Trains feature air-cooled, dry transformers, as opposed to ones powered by oil.

Built for Harsh Winters
These trains are designed to run in temperatures as low as minus 40 degrees and with 80cm of snow on the track. They can do this thanks to inter-carriage connections with twin bellows, large snow ploughs, made specifically for this train, as well as efficient floor and wall-heating systems and specially adapted insulation. Trains are fitted with carpeting made from absorbent material, which dries quickly, thanks to the underfloor heating system. The underframes of the trains have been designed to reduce freezing and the accumulation of snow and ice. The pantograph has been developed to cope with winter conditions.

Italy

Alstom signs framework agreement worth €910 million to supply up to 150 Coradia Stream regional trains to Trenitalia

€910 million framework agreement: 150 regional trains + maintenance
Coradia Stream: State-of-the-art electric multiple unit
ERTMS onboard: the highest European safety standard

Alstom has been awarded a framework contract to supply Trenitalia with 150 Coradia Stream regional trains for a total value of around €910 million. The trains will have a maximum speed of 160 km/h and will be equipped with state-of-the-art onboard equipment that ensures the highest levels of safety and first-rate passenger experience.

“This agreement confirms the know-how and experience of Alstom, which provides state-of-the-art trains and railway technologies that are used around the world. This new generation of trains represents the future of Italian regional rail transport. We are proud to give impetus to a passenger-focused vision of green regional transport, in line with national objectives on the ecological transition,” said Michele Viale, General Manager of Alstom Italy.

The Coradia Stream for Trenitalia are single-deck, bi-directional, 3kV electric trainsets. The trains will also be equipped with onboard ERTMS, guaranteeing the highest European safety standards. They will boast high levels of energy efficiency and recyclability.

Features for passengers include stations for transporting bicycles – including electric bikes. Accessibility is maximised with sliding steps.

Coradia Stream is range of state-of-the-art, low-floor, high-performance electric multiple units (EMU) for regional and intercity lines. Coradia Stream offers a modular design to allow operators to choose the configuration that addresses their needs. Coradia Stream also offers emission-free traction solutions for non-electrified lines

The Coradia Stream for Trenitalia are designed and will be built in Italy at Alstom’s sites in Savigliano, Sesto San Giovanni and Bologna.

Bangladesh

Alstom’s bogie technology to support Bangladesh’s ambitious Padma Bridge project

In the summer of 2021, teams at Alstom’s site in Qingdao, China won a contract to supply bogie technology and support for 200 MD523 bogies that will be used by rail vehicles on the Padma Bridge project in Bangladesh.

Currently nearing completion, the Padma Multipurpose Bridge is a three-billion-dollar project to build a road and rail bridge across the Padma River in western Bangladesh. Once complete, the 6-kilometre bridge will be the nation’s longest and connect the country’s northern and eastern regions. The resulting commerce is expected to increase Bangladesh’s gross domestic product by 1.2%.

A pilot project based in China
The contract outlines a pilot project awarded by the Chinese rolling stock manufacturer CRRC Tangshan and is valued at around €8.5 million. Under the agreement, one of Alstom’s Chinese businesses called BTRE[1] will provide CRRC Tangshan with bogie kits, licensing, technical support, and related service for 200 MD523 broad gauge bogies that will be operated by Bangladesh Railway.

This is not Alstom’s first contract to provide bogies for Bangladesh Railways. The MD523 broad gauge bogie is a proven platform and this contract, the second of its kind in six months, illustrates Alstom’s excellence in providing key rail components to customers across the globe.

Jianwei Zhang, President of Alstom China, said. “We are very honoured to be awarded the pilot bogie kits project by CRRC Tangshan. This contract is recognition of our expertise in delivering key rail components for use in a wide range of applications. We sincerely thank the CRRC authority for their trust and support and are committed to delivering high performance products to ensure the success of this ambitious project”

With two successful MD523 projects already won, Alstom is looking forward to deepening our third-party bogie business with customers like CRRC Tangshan, a key rolling stock player in the Chinese domestic rail market.

This pilot project with CRRC Tangshan is scheduled to be carried out between November 2021 and June 2022 and is in large part due to the highly engaged contributions of Alstom’s bogie team in Siegen, Germany who will provide the engineering work and material supply. The projects also set up our organization to contribute to similar bids in the coming years while also opening the door to enlarging its cooperation with CRRC Tangshan.

[1] Bombardier Transportation Railway Equipment (Qingdao) Co., Ltd (BTRE). Founded in 2005, today BTRE is an Alstom wholly-owned foreign entity based in Qingdao, China

Photo: An artist’s graphic rendering of the Padma Multipurpose road and rail bridge currently being constructed in Bangladesh.

U.S.A.

Siemens Mobility battery hybrid operated streetcars enter revenue service in Charlotte, North Carolina

Innovative battery technology allows for hybrid operation on or off-wire
Sustainable technology preserves city's historic district
S700s were manufactured in Sacramento, CA

Siemens Mobility's S700 streetcars delivered to the Charlotte Area Transit system (CATS) in the United States are now in revenue service. Designed with advanced hybrid technology that features an innovative battery storage system, these new streetcars run wirelessly through the heart of the city, maintaining a catenary-free zone in the city's central business district, while offering all the same sustainability benefits as when operating with overhead wires. The six new S700 streetcars join Charlotte's current light rail fleet of 42 S70 light rail vehicles, bringing the total number of Siemens Mobility vehicles operated by CATS to 48.

"We are delighted to once again partner with Charlotte to help them meet their growing mobility needs by delivering our market leading streetcar platform that incorporates the most innovative and intelligent technologies available," said Michael Peter, CEO of Siemens Mobility. "Sustainable transportation is one of the most important features for growing cities. Our battery hybrid vehicles provide CATS and its passengers with an energy efficient mobility solution that not only improves the overall availability of transportation, but also offers a comfortable ride and enhanced passenger experience."

Each streetcar features a hybrid wireless technology allowing the vehicle to run both on and off-wire via an Onboard Energy Storage System (OESS). The OESS includes an expandable and modular design that can be updated as battery technology evolves. The battery-storage and energy-saving technology was first demonstrated in San Diego and allows the battery to recharge when the vehicle is connected to the overhead catenary system. The vehicles operate at speeds up to 25 mph and are capable of carrying nearly 195 passengers.

The new streetcars also include features that enhance the overall riding experience such as large passenger windows for increased visibility, improved passenger safety through an interior surveillance system, and an unobstructed floor concept that allows more space for bicycle storage and wheelchairs. In addition, the operational performance enhancements of the new streetcars include traffic light preemption, a pedestrian-friendly front mask and an automatic passenger counter with enhanced 3D infrared sensor technology.

The streetcars were ordered in late 2016 when the Charlotte City Council chose Siemens Mobility to build six new S700 Streetcars for the Charlotte Area Transit System (CATS), the public transit system operated across Mecklenburg County and four other surrounding counties in North Carolina. The vehicles were built at the Siemens Mobility rail manufacturing hub in Sacramento, California and all have been delivered.

The streetcars for Charlotte run on the second phase of the CityLYNX Gold Line, replacing the legacy green and yellow trolleys currently in operation. The new phase adds 2.5 miles to the Gold Line, expanding it to 4 miles in length and adding 11 new stops.
CATS is one of more than 35 agencies across the United States benefiting from Siemens Mobility's portfolio of rail vehicles, locomotives, components, and automation systems. American cities also rely on Siemens to provide traction-power substations and electricity transmission, as well as signalling and control technology for freight and passenger rail and transit systems.

Dominican Republic

Alstom signs a contract to supply Metropolis trains to the City of Santo Domingo

Alstom will manufacture, supply and commission eight new three-car Metropolis trainsets for Line 1 of the Santo Domingo Metro serving the capital of the Dominican Republic. The international public tender, managed by the Oficina Para el Reordenamiento del Transporte(OPRET), and financed by the Agence française de développement, is a priority project for infrastructure development in Santo Domingo and to increase the transportation capacity of the country's capital city.

Line 1 of the Santo Domingo metro, conceived to improve mobility in the north-centre-south city corridor, serves 16 stations across 14.5 kilometres.

The new trains that Alstom is supplying will be able to operate in multiple units, coupled with each other or with the trains of the fleet previously acquired by OPRET, allowing capacity to be adapted to demand: 6-car configurations at peak times and 3-car configurations at off-peak times.

The new trains will have the same features, functionalities and characteristics of the Metropolis trains that currently operate in the Santo Domingo Metro, such as wide doors, wide corridors and a low floor for an optimal flow of passengers. In addition, the new trainsets will have additional features and technological improvements to enhance the passenger experience and optimize operations and availability, including LED lighting in the passenger area, Wi-Fi connection for the uploading of multimedia files and data transmission to the control unit, as well as improvements in the passenger information and alert system, train control and self-diagnosis systems.

"With the announcement of this new contract Alstom reaffirms its commitment to continue working hand in hand with OPRET on the path to a greener and smarter mobility that provides a sustainable solution for transportation in Santo Domingo and the Dominican Republic," says Iván Moncayo, Alstom's Managing Director in the Dominican Republic.

The new trains will be manufactured at Alstom's plant in Santa Perpetua, Barcelona, Spain, and the first two trains will arrive at the port of Santo Domingo approximately 18 months from the signing of the contract. These new trains will join the 25 Metropolis trains that Alstom previously supplied to Santo Domingo Metro for Line 1 and the 21 Metropolis trains supplied for Line2, since 2009, for a total of 138 cars. Globally, more than 6,000 Metropolis cars have been sold across the globe, including to cities such as Barcelona, Amsterdam, Mumbai, Chennai, Montreal, Singapore, Buenos Aires, Lima and Santiago de Chile

Sweden

Alstom's Coradia iLint hydrogen train runs for the first time in Sweden

Alstom's Coradia iLint passenger train, the first in the world to be powered by hydrogen, has made its Swedish debut in Östersund. Alstom teams presented the train to a variety of local stakeholders, including regional operators, transport authorities, government decision makers and leading media, to highlight the potential of the Coradia iLint for sustainable transport in Sweden.

"The Coradia iLint trains represent a huge opportunity for Sweden to reduce CO2 emissions and even decarbonise rail transport. Thanks to hydrogen-powered public transport, regional operators can be beacons of modern mobility, as experienced recently in Germany, the Netherlands and Austria – that have tested and are implementing (or planning to implement) hydrogen trains." Rob Whyte CEO, Alstom Nordics, Sustainable Mobility Without Compromise

In 2016, the launch of the Coradia iLint, a CO2-emission-free regional train that represents a true alternative to diesel power, positioned Alstom as the first railway manufacturers in the world to develop a passenger train based on hydrogen technology. The first two 100% H2 iLint trains entered commercial service in 2018 in Germany and have already covered more than 100 000 km. To date, 41 trainsets have been ordered in Germany, and successful trials have taken place in Austria and in the Netherlands. In Italy, the operator FNM confirmed an order for 14 100% H2 trains at the end of 2020.

In line with its aim to facilitate a global transition to a low-carbon transport system, Alstom has pioneered several sustainable mobility solutions. The Coradia iLint is a perfect illustration of Alstom's commitment to designing and delivering innovative and environmentally friendly solutions: the Coradia iLint is the world's first passenger train powered by a hydrogen fuel cell, which produces electrical power for traction. This zero-emission train emits low levels of noise, with exhaust being only steam and condensed water. Its performance matches with regular regional trains with a maximum speed of 140 km/h and comparable acceleration and braking performance. Likewise, passenger capacity is up to 300 passengers and the train has a range of 1,000 kilometres.

The innovative hydrogen technologies implemented by Alstom have been recognised by the industry. In 2021, world's first hydrogen train Coradia iLint was honoured with the European Railway Award 2021. Alstom are also doing this to demonstrate that hydrogen is a possible climate friendly solution for trains in general, not just the iLint.

Hydrogen Trains for Non-Electrified Routes

Designed specifically for use on non-electrified lines, the Coradia iLint enables clean, sustainable train operations. This is of great importance for the environment: replacing one diesel regional train with one hydrogen train will reduce the yearly CO2 emission equivalent to 400 cars. Despite many electrification projects in several European countries, a significant proportion of the continent's rail networks will remain non-electrified for the foreseeable future. Coradia iLint uses the existing infrastructure without the need to invest in electrification.

Alstom is the largest player on the Swedish railway market, with over 1,000 trains delivered. Alstom is holding several large maintenance contracts and is offering maintenance in 19 local depots, including depots in Motala and Västerås specialising in heavy maintenance and refurbishment.

Italy

Trenitalia: a boom in cycling tourists in Friuli Venezia Giulia
+37% compared to last year. 13,000 visitors between June and August

Cyclists aboard the regional trains of Trenitalia (FS Italiane Group) in Friuli Venezia Giulia are up by 37% compared to last year. An initial assessment of the 2021 summer season confirms a phenomenon in constant growth, with positive repercussions throughout the territory.

Particularly popular with tourists, bicycle transport accounted for around 13,000 visitors from 13 June to 15 August.

The AlpeAdria Line service, which attracts the majority of cycling tourists, alone recorded about 8,000 visitors, of which 2,000 travelled the Udine-Tarvisio line.

Operating each weekend from 13 June to 12 September, with 16 equipped connections per day between Trieste, Udine and Tarvisio (with a minimum of 30 bike spots per train), means easily reaching the AlpeAdria cycle path, a destination recognised at a European level thanks to the quality of the route immersed amongst the nature of the Eastern Alps.

The Trenobici delle Lagune also saw excellent results, allowing travellers to reach locations along the Trieste-Venice line with bike in tow.

Another initiative that is enjoying considerable success is the new intermodal train+bus connection of the Lignano Link. Conducted in collaboration with Arriva Udine is the service coordinated with the regional trains of the Trieste-Venice line, connecting the Latisana station to the renowned seaside resort of Lignano Sabbiadoro, also being very popular with passengers from outside the region.

Trenitalia's commitment to supporting local tourism is reinforced also by the numerous connections to the main tourist attractions of Italy.

Saudi Arabia

The age of hydrogen in the Middle East and North Africa

Tackling climate change and reducing greenhouse gas emissions requires a holistic review of how we live and travel. Rail is at the heart of sustainable mobility - there is simply no cleaner collective transportation system. In terms of energy efficiency per passenger kilometre, it is the most efficient mode of public transport, as well as the most effective. To meet the climate challenge, we need to get more people out of their cars and onto public transport. Rail can achieve this objective - it is the only 'green' solution that also solves the problem of congestion in cities and towns worldwide. However, creating the greenest, most sustainable rail network is only part of the answer. Potential users also need to be motivated to use it. To make rail more attractive, we need to accelerate the transition towards reliable, seamless transportation in the most timely and cost-effective way possible. That includes increasing capacity to cater for these potential new users. The transport sector represents nearly 25% of worldwide emissions from fuel combustion. Rail is the lowest emissive mode in the motorized segment emitting 10 times less CO2 / pass.km than planes.

Hydrogen technologies and solutions in transport will play a very important role in transitioning to a cleaner more sustainable future, accelerating the Middle East and North Africa Green Economy vision. We believe hydrogen trains are a revolution in rail transport, as it represents a genuine economical and clean alternative to diesel when overline electrification represents a too significant investment for customers. Alstom, a global leader in rail transport and sustainable mobility, is working closely with many regional transportation authorities to ensure the most advanced and sustainable technology innovations are in place to safeguard the health, wellbeing, and mobility of communities across the Middle East and North Africa. In line with the aim to facilitate a global transition to a low-carbon transport system, Alstom has pioneered several sustainable mobility solutions. The Coradia iLint™ is a perfect illustration for the commitment to designing and delivering innovative and environmentally friendly solutions, making Alstom the first company to have developed and put into operation hydrogen trains.

The region's government is taking major strides towards reducing greenhouse gas emissions, cutting down on the use of fossil fuels, and decarbonising transportation. Supporting the UAE Vision 2021, the National Agenda focuses on improving the quality of air, preserving water resources, increasing the contribution of clean energy, and implementing green growth plans. Consequently, outlining Dubai's commitment to transitioning to a green economy, the leadership inaugurated the Green Hydrogen Project at the Mohammed bin Rashid Al Maktoum Solar Park – a first of its kind project in the MENA region that aims to produce eco-friendly hydrogen using renewable energy. As a part of Vision 2030, Saudi Arabia aims to move towards an economy less dependent on oil by launching several projects and initiatives to promote clean and affordable energy. The Kingdom has committed to developing an additional 10,000km of rail and metro by 2030, as a part of the National Renewable Energy Program initiatives within the transport sector. With Alstom's sole focus being transport and mobility, we continue our support of the Kingdom's economic growth and development, through the enhancement of infrastructure and the supply of sustainable solutions such as the Riyadh Metro. In September 2020, Saudi Arabia became the first country to export blue hydrogen for zero-carbon power generation and signed an agreement to develop and operate a $5 billion facility to supply green hydrogen to the world, outlining the Kingdom's effort in implementing the circular carbon economy framework and supporting the global energy transition.

"At Alstom, we are proud to be contributing to promoting the use of hydrogen as our aim is to position hydrogen as a strategic factor in the energy transition, as we are convinced it will bring about the change in road and rail transport - towards a clean and ultimately emission-free energy system. The key advantage of the technology is that it is emissions-free when used to power a train (the only by-product is water) and is zero-emission throughout its full lifecycle if produced from renewable energy. The railway industry is already one of the cleanest sectors in the field of transport. As a dedicated and long-standing partner of the region's transportation and mobility development, Alstom will continue to play an integral role in improving the environmental performance of rail across the region," says Mama Sougoufara, Managing Director Alstom MENAT.

Known as a global driver of innovation towards carbon neutrality in rail transport – Alstom places a huge focus on greener and smarter mobility solutions. Alstom has been the first company worldwide in 2018 to introduce a new regional train based on hydrogen fuel cells and batteries. Most recently, Alstom completed the acquisition of Helion Hydrogen Power. This promising, innovation-driven company, a 100% subsidiary of AREVA Energies Renouvelables, is specialised in high power fuel cells, thus complementing Alstom's expertise in hydrogen technology. Alstom acknowledges its responsibilities to further decarbonise mobility and thus is committed to accompany its clients in this major transition by offering efficient alternatives to diesel trains. Developing a train powered by hydrogen fuel cells is the most illustrative example, in addition to offering an extensive portfolio of sustainable solutions adaptable to the different challenges of customers and to local specificities. Railway applications are ideally suited for the use of hydrogen, as the quantities of hydrogen required are large, predictable, localized and constant over a long period of time. It can cover ranges up to 1,000 kilometres. Through innovations in electric transport and hydrogen fuel, Alstom aims to shape the future of the region's mass transit and mobility for the better. In doing so, it remains dedicated to significantly reducing emissions, minimising land use and carbon footprint, and decarbonising rail transport.

U.S.A.

Wabtec Celebrates the 1,000th Modernized Locomotive in the Americas

Locomotives reduced more than 1.4 million tons of CO2
Remanufacturing reused more than 100,000 tons of steel

On August 6th, Wabtec celebrated its 1,000th locomotive modernization in North and South America. The milestone delivery to Norfolk Southern highlights the commercial and environmental success of Wabtec's modernization program.

"This achievement is a testament to the value that our locomotive modernization service provides to customers," said Pascal Schweitzer, President of Wabtec Freight Services. "Our modernization program breathes new life and technological advancements into customers' aging locomotives, while also reducing a railroad's operating costs and carbon footprint."

The modernization program is a key component of Wabtec's sustainability efforts. Modernizations revitalize older locomotives resulting in up to a 25-percent improvement in fuel efficiency; more than a 40-percent increase in reliability; up to a 55-percent increase in haulage ability; and up to a 20-percent reduction in maintenance, repair, and overhaul expenses. The fuel efficiency benefits of these 1,000 locomotives have reduced carbon emissions by more than 1.4 million tons since 2015. That reduction is the equivalent of removing the emissions from 340,000 cars.

Norfolk Southern accounts for 500 of the 1,000 locomotives Wabtec has modernized. Each modernized locomotive in Norfolk Southern's fleet reduces more than 500 tons of carbon emissions per year. With rail already four times more fuel efficient at moving freight than trucking, the increased emission savings from locomotive modernizations further helps Norfolk Southern and its customers meet their sustainability targets.

"As a leading transportation provider, it is our responsibility to reduce our environmental impact," said Tom Schnautz, Vice President – Advanced Train Control for Norfolk Southern. "Our partnership with Wabtec is one way we plan to achieve our target of a 42-percent reduction in emissions intensity by 2034. Wabtec's program is maximizing the value of our locomotives, lowering operating costs, and reducing emissions."

Wabtec's modernization program also reduces emissions by reusing the existing steel on the locomotive through a robust requalification and remanufacturing process. More than half of a locomotive's critical components are reused, rebuilt, or remanufactured at least three times over their useful life. Wabtec's locomotive plants in Erie, PA; Fort Worth; and Contagem, Brazil have reused more than 100,000 tons of steel in modernizing the 1,000 locomotives.

"The modernization program has been a tremendous success and has created a new segment in the market. It is now a key pillar of fleet management strategies for many railroads," said Schweitzer. "That is a tribute to our employees, suppliers and customers. From product development to industrialization, their support was essential in making this service such a success in the market."

Wabtec's modernization program updates aging locomotives with customized solutions that range from simple changes like control system upgrades to complex restorations, such as the comprehensive transformation of an aged DC locomotive into an AC locomotive outfitted with state-of-the-art digital technology.

Eurostar

Eurostar adds more high-speed services to Europe

Expanded timetable builds on growing demand since UK travel restrictions eased
Bookings double with 39 additional trains running in August
Five daily returns on London-Paris and three daily returns on London-Brussels route from September

Eurostar, the high-speed rail link between the UK and mainland Europe, is adding more trains between the UK and the continent in response to growing demand following the removal of quarantine for fully vaccinated travellers from France to the UK and the easing of restrictions for travel to Belgium and the Netherlands.

Higher demand in August
During August, Eurostar has seen double the amount of bookings, and has added 39 trains for travel between the UK and the continent this month alone. The busiest days for travel are between August 27th and 30th, with Paris the most popular destination from the UK as travellers seize the opportunity to enjoy a summer on the Seine.

Since the easing of travel restrictions by the UK government in August, the high-speed rail operator is seeing the gradual return of the weekend break, with a 105% rise in August and September weekend trips between London and Paris compared to the same period last year and 83% of bookings attributed to leisure travel or visiting friends and family.

Updated timetable from September
From September 6th until November 1st, eight daily return services will operate, with five in each direction on the London to Paris route and three in each direction between London and Brussels, with one each way extended to Rotterdam and Amsterdam. The expanded timetable offers improved flexibility to both business and leisure travellers with great value fares from £39 each way.

Travellers can book with confidence knowing that all tickets are flexible with no exchange fee up to 7 days before departure, offering peace of mind should travel restrictions or plans change. Eurostar has introduced new measures to keep passengers safe, with trains deep cleaned before every journey, and cleaning teams on board to regularly disinfect high contact areas. All travellers must wear a mask on board and in stations, this continues to apply after check-in in London St Pancras.

Eurostar offers the most environmentally friendly choice for travel to Europe, with each journey using up to 93% less CO2 than the equivalent flight.

Siemens Mobility and everis to develop a Mobility as a Service (MaaS) platform for Renfe in Spain

A countrywide platform that allows users to plan, book and pay for trips in a single application

Integrates different modes of transport to provide seamless door-to-door traveling

Renfe expecting up to €156 million additional revenue with the intermodal platform

Siemens Mobility and everis have been awarded a 5-year contract by Renfe, the national railway company of Spain, to develop and operate a countrywide, intelligent Mobility as a Service (MaaS) platform. The comprehensive digital platform will integrate various modes of shared and public transport, such as train, bicycle, metro, bus, car sharing, and scooter services, so passengers can easily identify and directly book the trip option that best meets their needs. Once completed, the platform will be available in 27 cities across Spain including metropolitan areas like Madrid, Barcelona, Valencia, Bilbao, and Sevilla.

"We are delighted to have been given the opportunity to accompany Renfe in their aspired transformation from a rail operator to an enabler of seamless door-to-door mobility. Our intermodal software platform and digital solutions will help deliver one of the world's most ambitious MaaS projects, that has the potential to set new benchmarks", said Andre Rodenbeck, CEO Rail Infrastructure at Siemens Mobility.

"MaaS is a very passenger-centered approach and significantly enhances the passenger experience for travelers throughout Spain and will contribute to making sustainable modes of transportation more attractive. Renfe is shaping the future of mobility in Spain and we're proud to be part of this journey", added Agustin Escobar, CEO of Siemens Mobility Spain and Southwest Europe region.

"For everis NTT DATA it is an authentic pleasure to consolidate our relationship of more than 20 years with Renfe with this strategic MaaS project, which represents a relevant milestone in its transformation process to get along with the new technological and market trends. With this objective in mind, we will deploy our design, branding, marketing, commercial, technological and business capabilities to develop this project", said Pedro Mur, Head of Mobility, Transport and Logistics at everis NTT DATA.

Renfe predicts the intermodal platform will attract a minimum of 650,000 new customers to train travel, who will generate 1.8 million new trips in five years, increasing train ticket sales in the main corridors by between 3% and 4%. Renfe's forecast is that the new system and personalized passenger experience has the potential to provide up to €156 million of additional income in the five years following implementation.

Siemens Mobility and everis have teamed up to deliver and operate the platform. Siemens Mobility will provide the core technology for the system, while the multinational consulting firm everis will supply the system integration and support for the commercial operation, including the marketing and legal aspects.

Siemens Mobility's intermodal digital solutions are powered by its subsidiaries Hacon, eos.uptrade, Bytemark and Padam Mobility. With its trip planning software HAFAS provided by Hacon, Siemens Mobility has successfully implemented intermodal MaaS systems across the world including, Dubai, Denmark, Luxembourg, Andorra and soon to be Netherlands, as well as the San Francisco Bay Area in the United States.

Vossloh wins major contract for the supply of infrastructure components in Norway

Vossloh, a leading international supplier of rail infrastructure products and services, has won a comprehensive framework contract in Norway. Via its Swedish subsidiary Vossloh Nordic Switch Systems AB, switches and crossings will be supplied over the coming years to Bane NOR, the state-owned infrastructure manager of the roughly 4,200-km-long rail network in Norway. The agreement mainly covers the supply of switches and crossings for conventional rail lines as well as the development of a new range of switches for heavy-haul lines.

In addition, Bane NOR chose as standard way of delivery the supply of fully assembled switches on special tilting wagons, delivered just-in-time from Vossloh's Swedish plant. Finally, the contract also covers the supply of an extensive range of spare parts for all existing switches and crossings in the Norwegian network. The contract has an initial term of two years and includes extension options for further six years. Deliveries under the framework agreement are scheduled to start already in the course of the current year. The order value for the entire term including options is over €80 million.

"Sustainability criteria also played a major role in the awarding of the contract, further evidence of the high importance attached to this issue in our industry. We are therefore very pleased that we were again able to convince in this area and successfully continue our long-standing business relationship with Bane NOR," explains Oliver Schuster, CEO of Vossloh AG.

"The framework agreement underlines our strong market position in Northern Europe and the close cooperation with Bane NOR also opens up further growth potentials for us. In the years ahead, for instance, significant investments are planned for the digitalization and data-based monitoring of the Norwegian rail network. With our globally unique product and service portfolio and the comprehensive systemic understanding of the rail track, we are the perfect partner when it comes to condition-based and predictive maintenance."

Within the Vossloh Group, Vossloh Nordic Switch Systems is part of the Customized Modules division. Based in Ystad, Sweden, the company employs a local workforce of around 150 and specializes in the development, manufacture and distribution of switch systems.

Singapore

Siemens Mobility to install CBTC on the rail link connecting Malaysia and Singapore

Siemens Mobility has been awarded a contract by RTS Operations to design, install and commission a Communications-Based Train Control (CBTC) signalling system and Platform Screen Door System on the Johor Bahru-Singapore Rapid Transit (RTS) Link. This will be the first ever case of CBTC technology being used on a cross border rail link. The 4 km system connecting Johor Bahru, Malaysia and Woodlands, Singapore will be operated by RTS Operations, a joint venture between Singapore rail operator SMRT and Malaysian public transport firm Prasarana. Once completed, the RTS Link will be able to transport an estimated 10,000 passengers an hour in each direction, helping ease current congestion at existing border entry points, improving cross-border connectivity and bolstering economic activity in the region. The line will also be equipped with GoA 4, the highest grade of automation that allows for trains to be automatically controlled and operated.

“We are delighted to have the opportunity to provide our state-of-the-art signaling technology for this important regional project that will deliver a vital transportation link for the almost 300,000 people who cross the Malaysian-Singapore border daily for work,” said Andre Rodenbeck, CEO of Rail Infrastructure at Siemens Mobility. “The RTS Link will be the first ever cross border system to be equipped with CBTC technology, which will allow it to operate with superior availability, reliability and passenger experience, and further underscores our leading position in the field for delivering automated signaling systems.”

For this project, Siemens Mobility will utilize its Trainguard MT solution to install CBTC technology on 4 km of rail line, as well as at one station and control center (OCC) on each side of the border. In addition, platform screen doors will be installed at both stations and a depot will be established on the Malaysia side that will be able to accommodate eight four-car trainsets. Trainguard MT is the Siemens Mobility high-performance CBTC system which lets operators maximize their network capacity and throughput. The radio-based technology provides real-time data on vehicle position and speed conditions, allowing system operators to safely increase the number of vehicles on a rail line.

This project builds on the already well-established relationship Siemens Mobility has with Singapore and Malaysia that includes providing the signalling for multiple mass transit projects in Singapore, including the recent contract award for the installation of an automatic train control signaling system on the Jurong Region Line. In Malaysia, Siemens Mobility is currently working on implementing a Trainguard MT signalling system for the Klang Valley LRT Line 3.

Germany

New ways for more green electricity: Deutsche Bahn secures hydropower from Norway

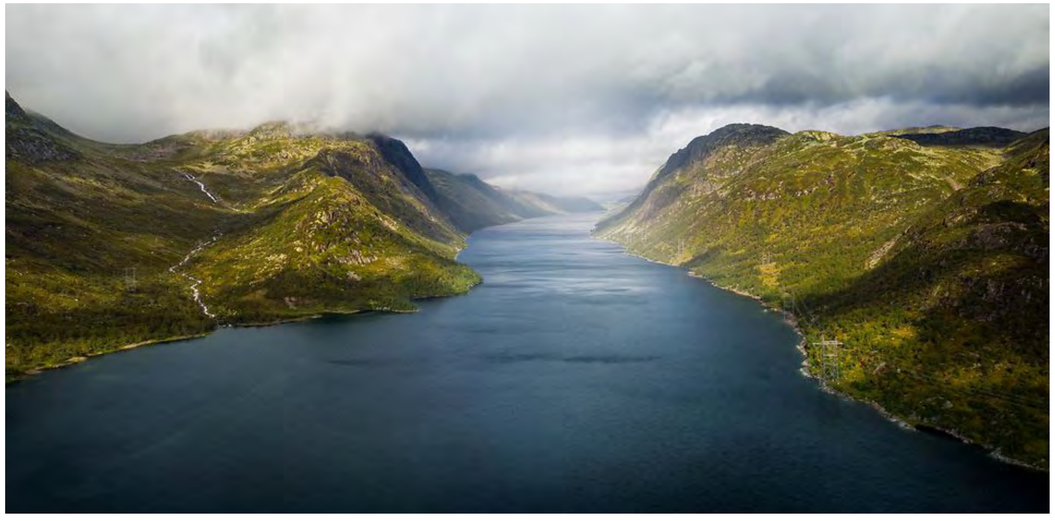
The delivery covers almost a week of traction power requirements
DB boss Richard Lutz: “DB’s ambitious climate protection plans are currently hardly feasible with only available domestic green electricity”
Two further green electricity contracts concluded in Germany

Deutsche Bahn is securing the ramp-up to a completely green power supply and is breaking new ground: From 2023 onwards, hydropower from Norway will make the traction current mix in Germany even more sustainable. For ten years, the Mågeli hydropower plant in southern Norway will supply Deutsche Bahn with almost 190 gigawatt hours of green electricity a year. The North Sea cable Nordlink, which has been connecting the electricity grids of Norway and Germany directly since April, makes this possible. The amount of green electricity will then cover the energy requirements of around 40,000 trains in Germany every day for about a week. DB thus concludes the first cross-border, long-term green electricity contract, known as the cross-border PPA. The partner is the Norwegian state-owned energy company Statkraft, based in Oslo.Compared to the supply from coal power, the hydropower from Norway generates up to 146,000 tons of CO per year2 saved.

DB CEO Richard Lutz: “Ten years earlier than previously planned, Deutsche Bahn will be completely climate-neutral by 2040. Our ambitious climate protection plans can currently hardly be covered with the available supply of green electricity in Germany. This contract is therefore of strategic importance - for both partners and for climate protection. “

More than 100,000 tons of annual CO 2 savings and almost four days of sustainable rail traffic in the rail network result in two more green electricity contracts that DB has concluded in Germany: for ten years, more than 90 gigawatt hours of hydropower from the Black Forest will be delivered to DB every year. The partner in the contract, which starts in 2023, is RWE. As early as next year, wind power from Hohen Pritz in Mecklenburg-Western Pomerania will enrich DB’s green power portfolio for two years. This is green electricity from a wind farm that is more than 20 years old and whose state funding has expired. With the conclusion of the contract, the wind turbines will continue to generate almost 40 gigawatt hours of green electricity per year. Contract partner is the company Ane Energy.

DB currently already covers over 61 percent (2014: 42 percent) of the ten terawatt hours of traction power demand per year with renewable energies - and is thus well above the public green electricity mix of around 50 percent at present. All DB traction current will be 100 percent green by 2038. Interim target for 2030: 80 percent share of green electricity. To this end, the group subsidiary DB Energie is fundamentally restructuring the portfolio of contract power plants and supply contracts. Renewable energies are gradually but consistently replacing fossil fuels. To this end, DB Energie is building a so-called mixed portfolio for traction power requirements: the contract terms, energy sources, feed-in regions, contractual partners and pricing are mixed in order to ensure a high level of security of supply in the traction power network.



Germany

This is how it works with the S-Bahn during the strike days

The S-Bahn operates during the GDL strike with a reliable basic service. A look behind the scenes in Munich, Hamburg, Berlin and Frankfurt am Main shows what this means in terms of additional effort and organizational skills in the background.

They are big, they are green and they are always on the move: the S-Bahn trains in Germany are at the heart of mobility for people in large metropolitan areas.

Reliable basic service on offer in Berlin
This should also be the case as far as possible in the case of strikes. “The most important thing for our passengers now is a service that they can use to plan despite the strike. That is why we do everything in our power to bring the basic service reliably onto the rails, especially during rush hour. As soon as additional train drivers are available, we will of course first increase services on the most frequently used lines,” says Karsten Preißel, Managing Director of Production at S-Bahn Berlin. In Berlin, the S-Bahn runs a steady 20-minute cycle on most lines, on weekends at night it runs every 30 or 40 minutes.

The view in Munich
In the case of the Munich S-Bahn, the S-Bahn lines run at least every hour, and on several line sections every 20 to 40 minutes. “The most important thing for our customers is a timetable with which they can plan safely despite the strike. That is why we are doing everything we can to reliably bring the basic service - especially during rush hour and on connections that are in high demand” says Marcel Schäfer, deputy head of the control center at the Munich S-Bahn.

Antonia Helmes, Head of Passenger Marketing and Communication, adds: “Whether via the Munich Navigator, the route agent app or on the information monitors in our trains - we inform our passengers as early and as comprehensively as possible about the replacement schedule during the strike days we also have employees on site who can help with any questions. “

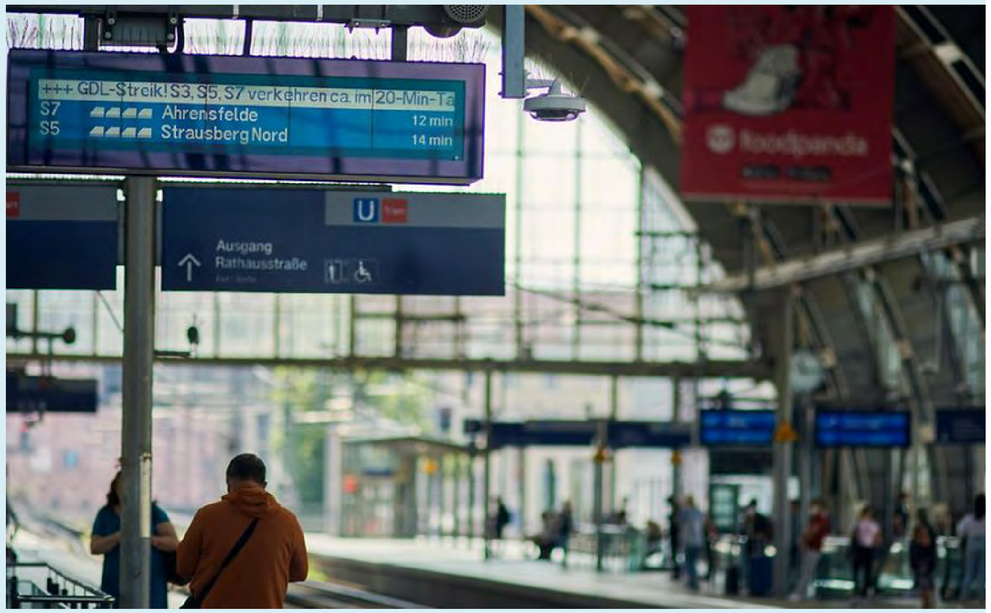
Main line in Hamburg has ‘long train’ service
The Hamburg S-Bahn runs every 20 minutes. It was important to offer this stable and reliable service across the entire Hamburg S-Bahn network. S-Bahn boss Kay-Uwe Arnecke: “We can even go a little further. We have switched our main line, the S3, to long-train operation so that we have more and higher capacities there.”

Local transport in close association
When the replacement timetables for the S-Bahn are drawn up, this is often done in close cooperation with regional transport, municipal transport companies and the associations. For example, instead of the S-Bahn, the regional train stops on routes that are travelled together. Elsewhere, the subways or trams go to the desired destination. The regional public transport companies often increase their services during the strike so that there is enough space available for passengers. The whole industry stands together to maintain mobility with public transport as best as possible.

S-Bahn boss in Hamburg: Kay-Uwe Arnecke “No replacement schedule at the push of a button.”

In order for this to succeed, an organizational show of strength begins behind the scenes at every S-Bahn with the announcement of a strike. The replacement timetable is “a huge effort, because we are developing a completely new timetable that we will then implement,” says Kay-Uwe Arnecke. Thanks to the dedicated staff, it worked really well again this time. The following applies to all S-Bahn trains: even if the basic concept has been prepared, the task now is to implement the replacement concept in a stable manner within the shortest possible time until the start of the labour dispute. With the Metropol-S-Bahn, the daily up to 3,000 S-Bahn trips per region have to be rescheduled according to the current availability of staff and vehicles.

S-Bahn Rhein-Main: A lot going on in the background
In all areas of the S-Bahn, the strike situation means a high workload: “What everyone is doing here from the time the strike is called to the start of the replacement service deserves absolute respect and high recognition,” says Michael Gödde, Head of Production at S-Bahn Rhein -Main. In Frankfurt am Main, in the event of a strike, the approximately 1,000 daily S-Bahn trips have to be rescheduled depending on the current



availability of staff and vehicles. The trains run every hour.

Dispatchers in the control center, personnel and vehicle planners, colleagues from the timetable and the route agents - they all work hard until late at night and on weekends to organize operations so that a stable replacement timetable for the strike starts on time customers are running and passengers are reliably informed about their travel options. “Many people do not even realize what that means in the background for a job,” says Gödde. “And that in addition to day-to-day business, which must also continue.” On the days of the strike, the following applies: Anyone who can drive drives. These are then also the team leaders: inside and executives or colleagues who meanwhile no longer work in the transport service, but do a completely different job at the S-Bahn.

After the end of the strike: get everything rolling
The number of strikers can also change over the course of the day. Then it is again: take countermeasures in the background, make arrangements, make decisions and, for example, set up a rail replacement service with buses in order to maintain the offer for customers. The effort at the end of the strike is just as great. The planners then have their hands full so that every S-Bahn and every train driver is exactly where they should be and needed for regular operation at 2 a.m. in the morning and at the start of operations. During the first two waves of strikes, thanks to the great commitment of all Metropol-S-Bahn employees, this was already successful.

Photo Left: Antonia Helmes and Marcel Schäfer from the Munich S-Bahn in the control center in the customer information area.

From the Archives

China

A SY 2-8-2 takes a train from Chengde CNR exchange sidings up to the steelworks on December 7th 1992.
Mark Enderby

From the Archives

China

Built by Alsthom and based on the SNCF CC 72000 type, No. ND4-39 is seen near Fengtai on March 16th 1987. *John Sloane*

From the Archives

Cuba

Minaz operated No. 38135 is a Russian TGM6 type B-B Diesel Hydraulic and is about to depart the 10 Octobre sugar mill with a caboose on March 10th 1988. *John Sloane*

From the Archives

Egypt

No. 3269 (built by Henschel in 1976) arrives at Cairo Main from the north on April 6th 1982. *John Sloane*

From the Archives

Estonia

EVR CeM33 No. 3141 shunts at Tallinn depot on July 14th 2005.
Mark Enderby

From the Archives

France

SNCF BB No. 17047 is about to depart Pontoise with a shuttle service to Creil on November 21st 2012. This was one of the last services to be worked by this class. *John Sloane*

From the Archives

France

SNCF BB No. 27334 approaches Paris St. Lazare with a local service on November 8th 2012. *John Sloane*

From the Archives

Germany

A former TEE Class 601 unit seen stabled in Hamm West yard on February 22nd 1986. *John Sloane*

From the Archives

Germany

DB Class 103.204 is seen at Munchen Hbf on July 26th 1989. *Mark Enderby*

From the Archives

Germany

ITL Class 118.001 passes Hoyerswerde on April 24th 2008. *Mark Enderby*

From the Archives

India

WDM2 No. 18484, hauling a premium express service from Madras to Delhi, passes Basin Bridge Junction station in the suburbs of Madras on November 24th 1977. *John Sloane*

From the Archives

India

WDS4 No 19231 is seen at Madras on August 7th 1991.
Mark Enderby

From the Archives

Italy

FS Class D445 is seen at Padua on October 18th 2011.
John Sloane

From the Archives

Italy

A pair of FS Class ETR 220s, originally built by Breda in 1941 and modernised in 1972, stand outside Milan Greco depot on August 20th 1987. *John Sloane*

From the Archives

Morocco

No. DI.513 is a GM built SW1001 type of 1982 and is seen shunting at Marrakesh yard on April 12th 1993. *John Sloane*

From the Archives

Netherlands

NS DE IV No. 1003 as TEE Edelweiss is seen on its last journey to Zurich on May 25th 1974. After its regular stop in The Hague, this train set with its characteristic engine sound is back up to speed as it passes through Rijswijk.
Gerard van Vliet

From the Archives

Netherlands

NMBS/SNCB No. 1503 hauling Belgian and French stainless steel carriages as TEE 'Etoile du Nord', is seen two days before the end of the TEE services at Rijswijk on May 23rd 1974.
Gerard van Vliet

From the Archives

Portugal

Siemens built CP No. 5614 about to depart the spectacular Lisbon Oriente station with the 17:20 service to Faro on April 26th 2015.
John Sloane

From the Archives

Russia

TEP No. T3070-300 is seen departing Likhaya with a service to Volgograd on March 17th 2002.
John Sloane

From the Archives

Spain

There's no mistaking the number of RENFE No. 319.213 at Barcelona Can Tunis shed yard on February 10th 2001. *John Sloane*

From the Archives

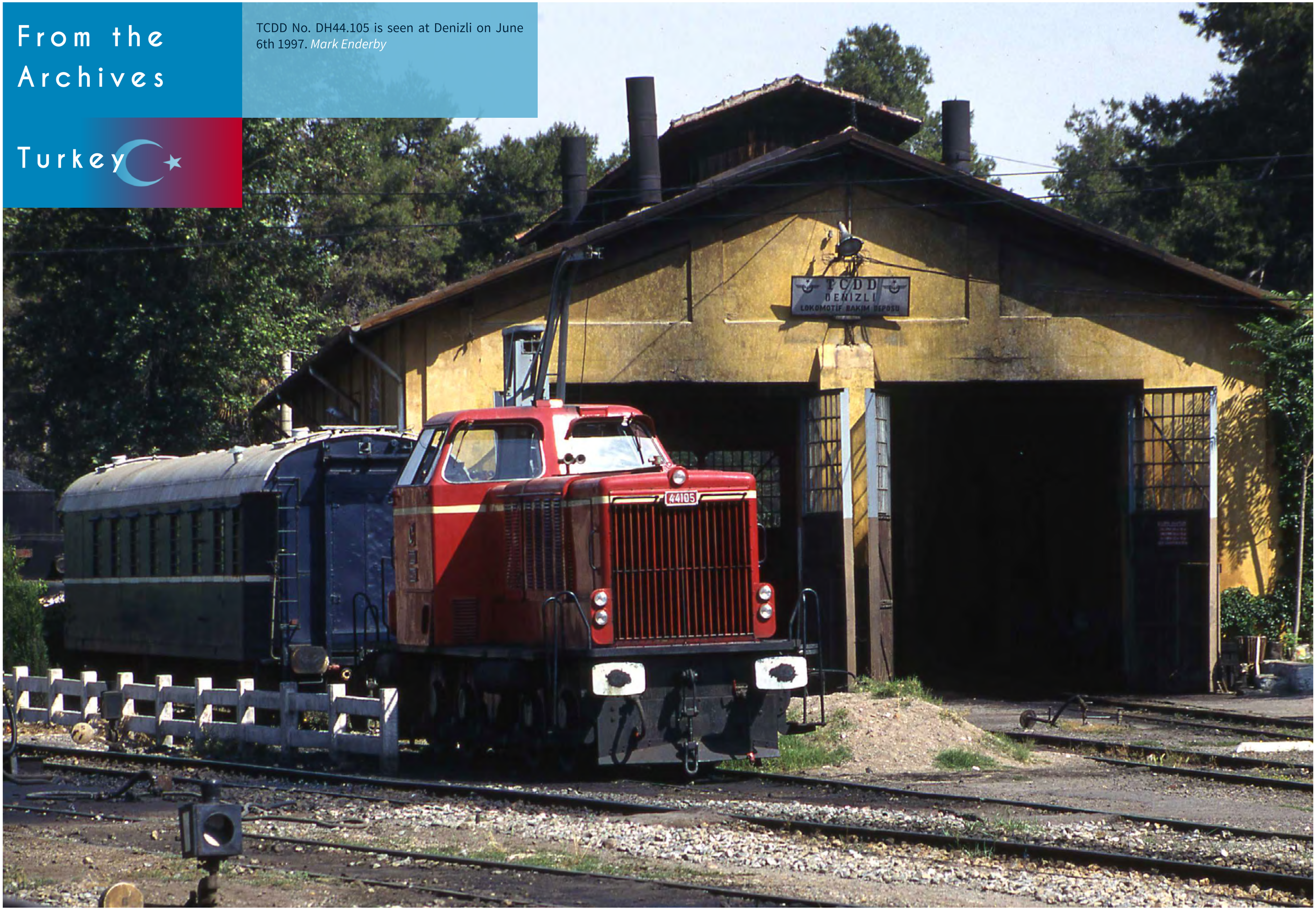
Switzerland

SBB Re 4/4II No. 12880 arrives at Geneva on June 4th 1995. *Mark Enderby*

From the Archives

Turkey

TCDD No. DH44.105 is seen at Denizli on June 6th 1997. *Mark Enderby*



From the Archives

Vietnam

Vietnam Railways, Russian-built D4H is seen between Hue and Hanoi on October 17th 1974.
Mark Enderby

From the Archives

U.S.A.

Chicago Metra system Bo-Bo No. 158 'City of Des Plaines' stands outside the Metra shops at Western Ave, Chicago on June 8th 1999.
John Sloane