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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 204Xtra

Moving on slightly from last months news regarding the advancements in digitalization in the rail industry, there's more this month with a company called RAILSoft, who are Revolutionizing Intermodal Terminals and Container Depots in Poland.

Petrosoft.pl's RAILSoft is a comprehensive software solution for railway companies, is making significant strides in the management of intermodal terminals and container depots. Its recent implementation at the Baltic Hub, Poland's largest container terminal, is a testament to its robust capabilities and industry-leading features.

RAILSoft's functionalities are designed to streamline operations at intermodal terminals and container depots. The software offers comprehensive management of container movements, storage, and maintenance, ensuring smooth and efficient operations. It also provides real-time tracking of containers, enabling operators to monitor their status and location at all times.

One of the standout features of RAILSoft is its ability to manage intermodal transport. The software seamlessly integrates various modes of transport, including rail, road, and sea, ensuring smooth transitions and efficient logistics. This is particularly crucial in the context of intermodal terminals, where multiple transport modes converge.

RAILSoft also excels in managing the complex operations of container depots. It offers functionalities for container inspection, repair, and cleaning, ensuring that containers are always in optimal condition. Furthermore, it provides detailed reporting and analytics, enabling operators to make data-driven decisions and optimize their operations.

The recent implementation of RAILSoft at the Baltic Hub underscores the software's capabilities. As the largest container terminal in Poland, the Baltic Hub requires a robust and reliable software solution to manage its complex operations. The successful implementation of RAILSoft at the Baltic Hub is a testament to the software's robustness and reliability.

In conclusion, RAILSoft is revolutionizing the management of intermodal terminals and container depots. Its comprehensive functionalities, coupled with its successful implementation at the Baltic Hub, make it a leading solution in the railway industry. As the industry continues to evolve, solutions like RAILSoft will play a crucial role in driving efficiency and innovation.

However progress doesn't always go that smoothly as seen in Sweden where: Maintenance and operations contractor Railcare says train operators and contractors have been experiencing 'tough industry conditions' owing to 'major problems' with the introduction of Trafikverket's market-adapted planning method for allocating train paths.

The MPK platform and working methods went live in December but ran into problems. This included passengers experiencing difficulties buying tickets for travel over Christmas and Easter

Presenting its Q2 results on August 17th, Railcare said timetables were still being announced at very short notice, making planning difficult and resulting in cancelled work and trains. This affects end customers that rely on smoothly functioning railways, the contractor said.

Minister for Infrastructure Andreas Carlsson invited companies including Railcare, LKAB, SSAB, Volvo, Stora Enso and Holmen to a meeting in mid-June to discuss the situation. Railcare said everyone present agreed that the situation is unacceptable and the planning system needs to be improved and major shortcomings addressed.

In the longer term, Railcare said 'powerful measures' are required to reduce a maintenance deficit that had accumulated over decades.

Until next month... **David**

This Page

Northwestern Oklahoma Railroad Company No. 1401 is seen in the yard at Woodward. [Laurence Sly](#)

Front Cover

PKP Cargo loco No. ST44-1262 is seen at Olsztyn Główny on July 27th. [Gerard van Vliet](#)





Wichita Tillman & Jackson Railroad Nos. 1001 and 1018 approach 1670 Road whilst returning to Wichita Falls from Altus. *Laurence Sly*

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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.

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On July 25th, Roy Hill Nos. RHA100 and RHA1024 and mid-train unit RHA1023 take empties on the long journey to the mine, seen just south of Port Hedland.

Mark Bennett







Siemens Mobility wins framework agreement tender for up to 540 trains for ÖBB

Michael Peter, CEO of Siemens Mobility: “Siemens Mobility and ÖBB have long enjoyed a strong and trusting partnership. We are proud to be delivering a further development of the Mireo platform to ÖBB for the company’s new fleets. With numerous innovations, low energy consumption, and a high level of passenger comfort and convenience, the new Mireo trains will help make ÖBB’s local and regional transport even more attractive.”

The Mireo platform and its proven modular system can deliver an optimized train concept that meets all customer requirements. The electric multiple-unit trains are especially ecofriendly thanks to their low energy consumption and lightweight construction.



ÖBB Rail Cargo Group optimises logistics services in Italy

Until now, the two logistics centres of ÖBB Rail Cargo Group (RCG) in Desio and San Stino were operated by the RCG companies Rail Cargo Terminal - Desio S.r.l. and Rail Cargo Terminal - S. Stino S.r.l. They have now been merged and are operating under the new name Rail Cargo Logistics - Terminals Italy S.r.l. This strengthens the position of RCG as a top provider of intermodal and conventional rail logistics services in Italy. For customers, the merger brings several advantages in both the production and logistics areas: efficient transport solutions, increased service and comprehensive support in the distribution of goods – all efficiently and reliably from a single source.

Important for freight transport throughout Italy and beyond

Italy plays a crucial role as a transport hub for intercontinental and maritime connections as well as trade in the Mediterranean region. With high-frequency TransFER connections,

RCG links Italy’s economic areas with numerous economic centres in Europe. Thereby, the company puts great emphasis on sustainability, safety and reliability. The two logistics centres in Desio (province of Monza Brianza) and San Stino di Livenza (province of Venice) are at the very core of RCG’s freight transport throughout Italy, enabling integrated transport and warehouse logistics including final distribution across the country. The central location of the logistics sites enables optimal connections to the most important economic markets in Central, Southern and South-Eastern Europe.

TransFER – the connection

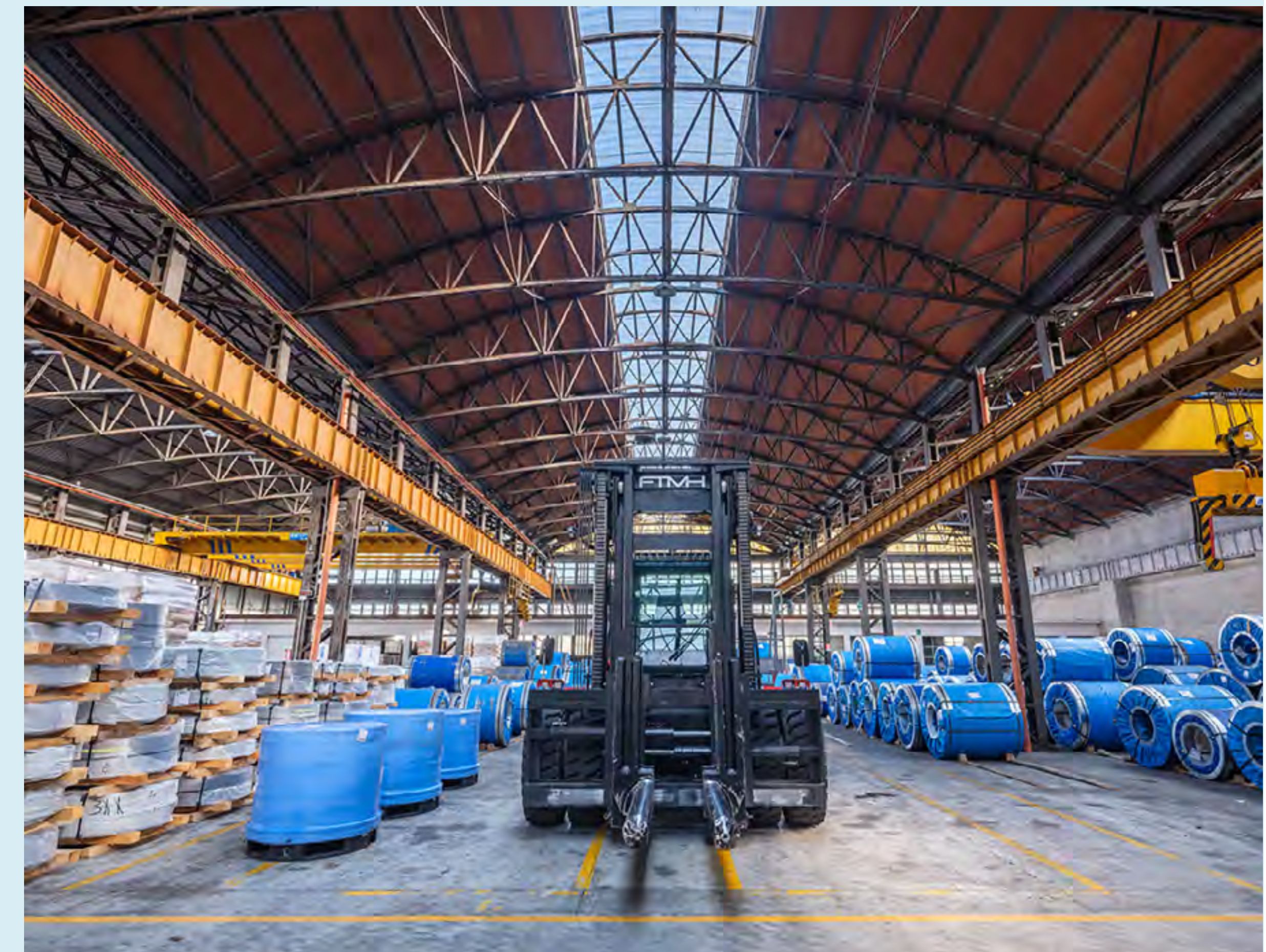
The ÖBB Rail Cargo Group transports goods across the whole Eurasian continent with around 60 TransFER connections, more than 700 TransFER combinations and many customisable routes. The transport units vary from entire wagonloads and intermodal

transport through to complete customisable solutions. Additional freight services such as transshipment, warehouse logistics and customs services can be booked according to the place of departure and the destination. The RCG takes care of all the details – from the first to the last mile.

Rail Cargo Group: the freight transport division of the ÖBB

As a leading rail logistics provider in Europe, we are shaping the industry. 365 days a year – 24 hours a day. Across Europe and beyond into Asia. With our presence in 18 countries worldwide, we connect people, businesses and markets – from the first to the last mile. It’s thanks to our 5,887 logistics professionals from 34 nations that 448,000 trains a year, respectively 1,230 a day, reach their destinations safe and sound.

Photo: Logistikzentrum Desio ©RCG



Siemens Mobility and ÖBB digitize Austria's rail network

Siemens Mobility and ÖBB (Austrian Federal Railways) are digitizing the Austrian rail network to further enhance the attractiveness of public transport. ÖBB is aiming to double the capacity of Austria's entire rail system by 2040 to cope with increasing passenger numbers. This goal is now a bit closer: The most modern technology for railway operations – the digital European Train Control System ETCS – has now been implemented and commissioned on the 57-kilometre route between Linz and Vöcklabruck. The system controls distances between trains, as well as their direction and speed in real time. This enables the route to carry more passengers and freight, and ensures that the trains run more reliably, punctually, and safely.

Framework agreement for further rail network expansion

At a press conference held in Linz, Siemens Mobility and ÖBB-Infrastruktur AG presented a framework agreement for a long-term cooperation and announced the successful commissioning of a first route section. The agreement regulates the expansion of the ETCS Level 2 system throughout Austria's high-level rail network, the establishment of so-called ETCS Radio Block Centres or RBCs, which will be redundant, and the maintenance and servicing of these facilities. During the project's rollout, plans call for installing a total of 21 RBCs by 2038 to provide fail-safe coverage for Austria's high-level rail network.

ETCS Level 2 operation began at the start of August on the Linz–Wels–Vöcklabruck and Wels–Haiding line sections, marking the first commissioning based on the new framework agreement. The ETCS Radio Block Center covering this section is located in Vienna, and trains operating on the route are digitally monitored and controlled in Linz.

Dipl.-Ing. Dr. Johann Pluy, CEO of ÖBB-Infrastruktur AG: "Efficient railway infrastructure is critically important for

achieving Austria's climate goals. To help us handle the expected increase in rail traffic and shift away from roads, we are relying extensively on digital initiatives, and ETCS Level 2 is an enormously important component for railways of the future. The framework agreement signed with Siemens Mobility is based on a Europe-wide tender and we're looking forward now to working with the best bidder to equip further rail routes with Level 2."

Andre Rodenbeck, CEO Rail Infrastructure at Siemens Mobility: "We are proud to be working with ÖBB to equip the Austrian rail network with ETCS Level 2, and the commissioning of this route marks an important milestone in ÖBB's continuing expansion of ETCS coverage. The use of ETCS Radio Block Centres and our innovative software-based DS3 safety platform will significantly increase route capacity and make the Austrian railway system one of the most modern in the world."

More is possible with ETCS

With ETCS Level 2, data is transmitted from the ETCS Radio Block Center to trains via GSM-R train radio. Data balises in the tracks are used to determine a train's position and relay unalterable route data. The corresponding interlocking transmits track vacancy data and other information to the RBC. The RBC then generates the driving permit and sends it to the train. This continuous bidirectional flow of data considerably increases the line throughput. Driving trains with this "electronic vision" through several track blocks allows shorter headways at maximum speeds.

ETCS thus provides the basis for autonomous driving at optimum speed. This, in turn,



saves energy and protects the environment. Without ETCS, long distances must be maintained between trains because of their lengthy braking distances. Thanks to precise high-tech tracking of the trains and mobile communications, ETCS reduces headways, allowing more passengers and freight to be transported in a shorter time.

These advantages can already be seen on railway lines equipped with ETCS, such as the Vienna–Breclav, Vienna–St. Pölten or Kufstein–Brenner routes. The system is being continuously expanded, with the goal of equipping all Austrian high-level and main lines with modern ETCS Level 2. ÖBB-Infrastruktur AG will invest €200 million in the train control system by 2026, and a total of around €900 million has been earmarked in the framework agreement for ETCS and train

controls. As a standard throughout Europe, ETCS will also make cross-border travel much easier, and journeys to international destinations will be more comfortable and shorter. A significant innovation in the framework agreement is the use of the DS3 platform, which has been employed successfully since November 2020 in a pilot project for the interlocking at the Achau railway station in Lower Austria. Thanks to this digitization, ÖBB achieves significantly higher cost-effectiveness through lower investment and maintenance costs.

DS3 platform: Foundation for cloud-based signalling technology

DS3 stands for "Distributed Smart Safe System" and is the new software platform from Siemens Mobility for safety-relevant logic. The platform is used to migrate existing

applications such as ETCS or interlockings to a standard high-performance platform based on COTS, which uses multicore technology and a new communication concept for a fully IP-based system architecture. DS3 will enable ETCS control centers to be further optimized and given greater flexibility.

Along with the coupling computer already running on the DS3 platform, which is the link to the interlockings, the ÖBB and Siemens Mobility partnership will also employ DS3 in all of the RBCs

Photo: ÖBB Fuhrpark ©Siemens Mobility/Markus Schieder.



Belgium

On August 17th, Thalys power car No. 4304 is seen on the rear of a Paris bound service as it departs Liege-Guillemins.
Class47



Braník Bridge will soon receive a second track

Expected capacity increase of the Braník Bridge (Branický most) is in sight. Vltava railway bridging, which is mainly used by freight trains, will be double-tracked in a year. This will also help during the planned reconstruction of the bridge at Výtoň. The opening ceremony of the more than two billion investment of Správa železnic has taken place at Praha-Braník station. The complete disruption of operation on the bridge will take place between October and April next year.

“Railway in the capital must offer sufficient capacity also for freight trains. In addition, the freight link over the Braník Bridge will start to play a more important role in Prague’s integrated transport. This is one of our concrete steps to promote environmentally friendly passenger and freight transport,” says Minister of Transport Martin Kupka.

“The double-tracking of the Braník Bridge was one of our priorities. That is why I am glad that in a very short time we were able to advance from the preparatory phase directly to implementation. Moreover, when selecting the contractor, we emphasised that the proposed period of interruption of traffic on the bridge should be as short as possible,” explains Director General of Správa železnic Jiří Svoboda. He adds that the construction will enable the diversion of trains between the Main and Smíchov railway stations during the planned reconstruction of the bridges at Výtoň.

The main scope of work will be the construction of the second track from Braník Bridge to Praha-Krč station. At the same time, a new Spořilov branch line will be built, which will allow trains to switch from one track to another. The project also includes the rehabilitation of the Braník Bridge, the construction of a new bridging of Údolní Street and the construction of technological buildings in Krč and Spořilov.

“We are facing a specific task where we need to complete a large scope of work in an extremely short time. After discussion with Správa železnic, we have proposed a change in the construction schedule that will enable us to meet the timeframe of the contract. We are pleased to be with the experienced team of our contractors’ association on this prestigious transport project, which will support the smooth running of rail traffic in the capital,” notes Aleš Gothard, director of the company Metrostav TBR, the leader of the contractors’ association, whose other members are the companies PORR, Elektrizace železnic Praha and GJW Praha.

Total investment costs of the project called Double-tracking of the line Branický most – Praha-Krč – Spořilov amount to CZK 2,705,265,000. The project has been approved by the European Union for co-financing from the Connecting Europe Facility (CEF). The total amount of eligible project costs is CZK 1,717,829,705.

The rate of EU support is 85% of the eligible costs, so the maximum amount of the grant is EUR 60,873,872, i.e., approximately CZK 1.46 billion. National funding is provided by Státní fond dopravní infrastruktury (State Fund for Transport Infrastructure).

ŠKODA GROUP PRODUCTION TO BE BOOSTED BY NEW EMPLOYEES FROM INDONESIA

The Pilsen production site of Škoda Group has started cross-border cooperation with Indonesia. Students from local polytechnic schools will be provided with a two-year internship at its production site. The young electro-mechanics, welders and locksmiths will help the company to cope with the pace of production, which is growing thanks to new orders. The unique project will help fill the very positions that are in critical shortage in the region. There is currently a shortage of up to 300,000 workers in manufacturing positions in the Czech Republic.

The first twenty students have already arrived in the Czech Republic and will undergo several weeks of training to learn local working practices. In total, up to 300 Indonesian students are expected to find employment at Škoda Group over the next two years.

“The project is unique not only because of the high number of employees from outside the EU, but also because of its concept. At the same time, our employees remain students at polytechnics in Indonesia. They come to us for a two-year paid work internship which ends with a certificate of completion in Indonesia. This will enable them to gain better employment on the local labour market later on,” explains Šárka Moučková, Vice President HR at Škoda Group and emphasises that employees from Indonesia will have comparable conditions to Czech employees. The company currently has hundreds of positions advertised, mainly in Pilsen and Ostrava.

“We have a strong tradition of manufacturing companies in the Pilsen region. We are an industrial region and we also have low unemployment. For the needs of the labour market, the number of graduates in technical fields is still insufficient, which is why I

am sympathetic to foreign recruitment. I appreciate that the project of the Pilsen Škoda Group is a conceptual one and has the support of many institutions,” said Rudolf Špoták, the Governor of the Pilsen Region.

“Unfortunately, the domestic labour market is currently unable to offer enough qualified workers. The Czech Republic has only 9,600 places per year allocated for the employment of non-EU citizens, so economic migration programmes are currently overloaded and companies wait six months or even a year for new employees. It is therefore necessary to support similar innovative projects,” said Radek Jakubský, Vice President of the Czech Chamber of Commerce.

The project took nine months to prepare. During the first mission to Indonesia, Škoda Group representatives checked the quality of schools and candidates and opened discussions with the Ministry of Education

about possible cooperation. With the Ministry of Industry and Trade, they discussed the possibility of creating their own labour migration programme with clear rules and a focus on fields of study. The initiative was supported by both the Government of Indonesia and the Czech Republic. “We are confident that this initiative will be successful. We are paving the way to create an effective system that will allow companies to attract the necessary workers from abroad with clear rules and government support,” says Šárka Moučková.

Nearly 900 students from 10 polytechnics in Indonesia applied for the selection process. Together, they took exams focusing on professional knowledge and technical skills over three weeks. The selected 300 students, aged 21 to 29, will join their Czech counterparts over the next two years. They will initially be assisted by a team of translators and coordinators, with English

being the primary language used for communication in the workplace. To facilitate integration, all newcomers will also undergo an induction course at the training centre, after which they will be able to work in production.

“Everyone benefits from our project. The Czech Republic will have a payroll tax payers for two years. Indonesia will get experienced employees for its growing industry after two years. The students will get adequate pay and experience, and Škoda Group will get employees with low turnover and motivation to learn new things for two years,” concludes Šárka Moučková.

France

At the village of Meribel-Monmarte, an interesting feature of the settlement is this funicular tramway which links the main shops to the lodges up the hill. Operated by the passengers in much the same way as a regular lift, it provided a handy (and fun) way to get to and from the accommodation. *Amy Bucki*



On the Mont Blanc Tramway on August 9th, one of the new Stadler EMUs 'Marguerite' pauses at the current terminus of Mont-Lachat; the rest of the line to the terminal at Nid d'Aigle is closed at present, whilst the track is refurbished. The other three members of the fleet are directly named after the older, 1950s EMUs which preceded them, but this set is an addition to provide increased capacity (handy on this day, where the line was very busy). *Ben Bucki*















Germany's most modern S-Bahn trains for Munich

Passengers on Munich's S-Bahn can soon look forward to traveling on the most modern S-Bahn trains in Germany.

Siemens Mobility will deliver 90 superlative new S-Bahn trains worth more than two billion euros after winning an EU-wide tender. The contract includes an option for additional trains. Financing for the trains is guaranteed by the State of Bavaria through a leasing model.

The new S-Bahn trains ordered for Munich offer more space, greater comfort, and many innovations. The first trains are scheduled to enter passenger service at the end of 2028. For the first time in Germany, completely integrated S-Bahn trains with a total length of more than 200 meters will be in use, providing capacity for 1,841 passengers. With the order, the State of Bavaria and the Munich S-Bahn are preparing for expected passenger growth in coming decades and for the planned mobility transition. The trains are highly energy-efficient, require little maintenance, and receive software updates via the cloud.

Evelyn Palla, Board Member for Regional Transport, Deutsche Bahn AG: "A 200-meter-long S-Bahn means higher capacity, better punctuality, and greater comfort for our passengers. Germany's most modern S-Bahn trains will be an important component in our efforts to drive the mobility transition in the Munich region. Each of the new XXL trains will replace 1,500 cars during rush hours. This is truly local transport of the future."

Bavarian Transport Minister Christian Bernreiter: "This marks a huge step towards ensuring even more climate-friendly mobility in Bavaria's largest metropolitan area. We are heralding a new era and taking the Munich S-Bahn into the future. As the person responsible for regional rail transport in Bavaria, I can say that this investment is well worth the price. After all, no less than two-thirds of all local rail passengers in

Bavaria will benefit from the trains, and virtually all local transport in the Munich region more or less depends on a well-functioning and attractive S-Bahn."

Michael Peter, CEO of Siemens Mobility: "Siemens Mobility is especially proud to be delivering the most innovative S-Bahn trains in Germany. Providing unique digital functions, maximum passenger comfort, environmental protection, and operational safety, this S-Bahn train will set new standards for the mobility transition in Germany. In the future, passengers in Munich and the surrounding region will travel in comfortable trains that are exceptionally reliable and future-proof thanks to state-of-the-art Siemens rail technology."

In the new trains, the interior LED lighting varies depending on the time of day. Classic three and four seat arrangements offer more legroom than the trains currently in service. The cars also have group areas and folding seats. Greater passenger comfort and convenience is provided by free WiFi, improved mobile phone reception with special windows, USB and power sockets, and generous storage racks.

A far more powerful air conditioning system operating with environmentally friendly refrigerants ensures pleasant interior temperatures even in extreme heat of up to 45 degrees Celsius.

The passenger information system is completely new: Displays are located above the doors both inside and outside the car, on the ceiling, and in the transitions between the cars. The displays track the course of the journey and provide information about the stations and the occupancy of the respective train. Before passengers exit, the displays indicate where the closest stairs or elevators are located on the platform. Outside the train, LED strips show the colour of the respective S-Bahn line.



Wide doors and spacious entry areas ensure easy and quick boarding and exiting and ease the optimal distribution of passengers throughout the train. Depending on the train's occupancy, the folding seats can be automatically locked in place to provide additional standing room. Five of the 13 cars have large multi-purpose zones, accessed through three doors, that provide sufficient room for bicycles, strollers, luggage, or walkers.

Special areas at each end of the train provide space for wheelchairs. To better understand announcements made on the train, passengers with hearing aids can connect to the information system via Bluetooth.

The new trains are more innovative, more digitalized, and more networked than ever before in order to minimize lifecycle costs through maximum energy efficiency, lower maintenance costs, and optimized operational support. The S-Bahn trains are designed with a large number of redundant components and are equipped with the Railigent X system that guarantees maximum train availability. Railigent X is part of the open, digital Siemens Xcelerator business platform, which enables customers to achieve a simpler, faster, and readily scalable digital transformation. Moreover, software updates for the trains no longer have to be manually installed in the depot, which is time-consuming, but are transmitted to the trains via a secure online connection as part of the maintenance.

Siemens Mobility equips all trains with its European Train Control System [ETCS], an Automatic Train Operation (ATO) system, and a Train Integrity Monitoring System [TIMS]. The train's ETCS system combines the latest, reliable technology with lower maintenance costs through standardization, and introduces interoperability to the Munich rail network, which DB plans to digitalize and equip with ETCS line equipment beginning in 2030. Thanks to their integration of ATO over ETCS, the new S-Bahn trains will be fit for rail transport of the future.





Germany

A pair of BahnService Class 140s, Nos. 140.789 and 140.772 are seen stabled at Duisburg Hbf on August 17th. *Class47*





In Bad Bentheim, NS No. 1739 has just take over from DB with a Berlin (D) to Amsterdam (NL) international service on July 28th.
Erik de Zeeuw



Siemens Mobility to deliver 28 Mireo regional trains for Baden-Württemberg

Siemens Mobility has won the order for the delivery of 28 three-car electric Mireo regional trains for the “Digital Node Stuttgart” (DKS) pilot project of “Digital Rail Germany” (DSD). The trains will have complete DSD equipment, including the latest automatic ETCS (European Train Control System) and Level 2 (GoA 2) Automatic Train Operation (ATO). The Mireo will be capable of operating on steep grades and be approved for operation in Austria. The framework agreement, signed with the State Institute for Rail Vehicles Baden-Württemberg (SFBW), includes a ten-year maintenance contract with an option for extending it by a further 20 years. The trains will be delivered in record time between November 2025 and April 2026. The order is worth approximately €300 million.

The head of the State Ministry of Transport, Berthold Friess, said: “Baden-Württemberg is continuing to be a trailblazer in the digitization of railways. Over the next ten years, the 28 ordered Mireo regional trains will primarily serve to keep passenger operations in the state as convenient and comfortable as possible while the existing fleet is being retrofitted with DSD technology. Siemens Mobility is now the second industrial partner for integrating complete DSD equipment in our trains. This will significantly accelerate the development of a fully digitized rail system in Germany.”

“The Mireo will give the state of Baden-Württemberg a state-of-the-art train that provides impressive cost-effectiveness in operation and a high level of comfort and convenience for passengers. The long-term maintenance contract, which includes digital services based on Railigent X, also ensures reliable operation and high availability of the trains,” said Albrecht Neumann, CEO Rolling Stock at Siemens Mobility.

The Mireo trains will be manufactured in the network of Siemens Mobility plants. The trains are required to be commissioned in the infrastructure of the Digital Node Stuttgart, since only trains with specifically functioning ETCS systems will be able to operate on those routes. This is the first order for Siemens Mobility requiring the implementation of complete DSD train equipment.

DSD train equipment

All 28 Mireo trains will have DSD equipment, including the European Train Control System and on-board units enabling Level 2 (GoA 2) Automated Train Operation

(ATO), according to TSI ZZS 2023 with system versions SV2.0 and until 2030 with SV3.0. As a carrier system for the digitization of rail, ETCS is also paving the way for harmonized, cross-border and, above all, safe rail transport in European and worldwide rail networks. Siemens Mobility is also equipping the new trains with a Train Integrity Monitoring System as well as the Future Railway Mobile Communication System for the first time in Germany. This digital equipment allows for more tightly scheduled, energy-saving operations through digitally predictive signalling and driving instructions.

Replacement train requirements

In the course of implementing the nationwide rollout of “Digital Rail Germany”, including the Digital Node Stuttgart pilot project, existing trains purchased by the State Institute for Rail Vehicles Baden-Württemberg (SFBW) and leased to various railway operating companies (EVUs) have to be retrofitted with DSD train equipment. During these retrofits, trains leased to

the EVUs are not available for use. The need for their replacements is set for a period of at least ten years and they must ensure the highest degree of flexibility due to uncertainties involved in expanding the infrastructure and carrying out the DSD retrofits. The goal is to be able to swap trains and provide replacements to the EVUs while their trains are being retrofitted. The Mireos can also be used as a redundancy fleet as needed. The trains will initially operate in the Stuttgart metropolitan region as part of the DKS pilot project and subsequently be used throughout the state of Baden-Württemberg and neighboring states. It is planned to approve the trains for operation in Austria and for border routes to Switzerland, such as to the central station of Basel.

Ten-year maintenance contract

The framework agreement also includes a comprehensive ten-year maintenance contract with an option for extending it by a further 20 years. Digital services based on the Railigent X application suite from Siemens

Mobility will also be provided. These include industry-specific apps and data services that support the digital transformation of rail systems for sustainable passenger and freight transport. This service provides valuable information gained from the diagnostic and operating data of the trains, and ensures reliability and availability at the highest level.

Improved passenger comfort

The new three-car regional trains will offer a further improved level of passenger comfort and convenience by providing 218 fixed seats as well as free WiFi service and barrier-free access. The higher energy efficiency and operating reliability of the Mireo will ensure trouble-free, climate-friendly operation and offer further passenger benefits.



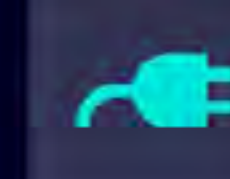
INTELLIGENCE ON RAILS

Baden-Württemberg receives 28 more Mireo trains

SIEMENS bwegt Mobilis für Baden-Württemberg



10 years of maintenance



3-car **electric multiple units**



Short delivery time: **Start of operation from 11/25**



ETCS/ATO equipment for the **„Digitalen Knoten Stuttgart“**



Homologation for **Austria**

Germany

Alstom and Verkehrsverbund Mittelsachsen present a new battery-powered electric train in Germany

An important step in the strategy to reduce pollution on non-electrified lines

This battery-powered train has a range of up to 120 kilometres

Alstom offers a complete range of traction solutions with zero direct carbon emissions

Alstom, global leader in smart and sustainable mobility, and the Central Saxony transport authority, Verkehrsverbund Mittelsachsen (VMS), has presented in Chemnitz, Germany, a new battery-powered train developed by Alstom.

A total of eleven Coradia Continental battery-electric trains have been ordered by VMS. These trains will enter service in 2024 on the Chemnitz-Leipzig line.

Müslüm Yakisan, President of Alstom Region DACH: “Alstom’s ambition is to be the global leader in sustainable mobility, reducing emissions and pollution in catenary-free operation. The presentation of the first battery-powered train developed by Alstom is an important step in this direction.

With the Coradia iLint, Alstom also has the world’s first hydrogen train in commercial service in its portfolio. With hydrogen and battery trains, Alstom offers its customers two environmentally friendly alternative drive solutions for rail.”

Mathias Korda, Managing Director of Verkehrsverbund Mittelsachsen GmbH (VMS): “With the battery trains from Alstom, we want to start into the future of local rail passenger transport. We will be able to run electrically on one of the most important rail routes in the transport association without it already being electrified. Being able to travel cleanly, environmentally friendly and comfortably between Chemnitz and Leipzig is the result of the interplay between regional ownership as a transport association and innovative technology from Alstom.”

A comfortable, high-performance train

The Coradia Continental battery-electric train has a range of up to 120 kilometres and can be operated under catenary as well as on non-electrified sections of line. The three-car trains are 56 metres long and seat 150 passengers. In battery mode, they will reach a maximum speed of 160 km/h. The capacity of the high-performance

lithium-ion batteries is calculated to guarantee catenary-free operation on the Chemnitz-Leipzig line without sacrificing performance or passenger comfort.

The German sites of Salzgitter and Mannheim are involved in the production of the battery electric trains. The battery traction subsystem is designed and supplied by Alstom’s Tarbes site, a world centre of excellence for green traction systems.

A complete portfolio of solutions with zero direct carbon emissions

Alstom offers the largest and most complete rolling stock portfolio of traction technologies with zero direct emissions, from hydrogen fuel cells to battery and electric.

Introduced in 2016, Coradia iLint is the world’s first and only operational passenger hydrogen-powered train. This green traction train is quiet and emits only water. Alstom has also developed battery traction solutions across multiple product platforms to serve shorter non-electrified lines.

In addition, Alstom’s green traction solutions offer the opportunity to convert existing diesel trains to traction with zero direct emissions.

Alstom™, Coradia™ Continental and Coradia iLint™ are protected trademarks of the Alstom Group.

DB Cargo operates the first EfficShunter 1000

At the beginning of August, the most important European carrier, DB Cargo, took over the EfficShunter 1000 from the production of the Czech manufacturer CZ LOKO.

It is the first of four locomotives ordered, intended for operation in Italy. Here, they will provide service to important logistics terminals, as well as the collection of individual car shipments from non-electrified lines. In operation, it will replace the competing Vossloh G1000 machines, which the carrier had to hire.

The first EfficShunter 1000 DB Cargo was marked 744.154 during trial operation in the Czech Republic, while for operation in Italy it is currently re-marked to 744.034 according to local customs. Its transportation from Havlíčkov Brod to the Italian station of Brescia was ensured by DB Cargo with its own funds.

Brescia will also be the target of the second mentioned locomotive 744.155 (744.035), which is currently

being completed at the Jihlava production plant. The remaining two locomotives will be handed over at a later time towards the end of this year. They will be deployed in Cervignano and Domodossola.

The EfficShunter 1000 type is the imaginary flagship in the current CZ LOKO portfolio. It is equipped with a CAT C32 combustion engine with an output of 895 kW, which meets the strictest EU Stage V emission standards. It is equipped with AC/AC electric power transmission with individual two-wheel drive. Thanks to the approval according to the uniform European TSI standards, it can be operated (after being equipped with the relevant national packages) in practically all EU countries. In addition to Italy, this type can currently be found in the Czech Republic, Hungary, Slovenia, Sweden and Slovakia. An approval process is being prepared in Norway and Romania.

There are currently 33 EfficShunter 1000 type locomotives

operating in Italy. In total, more than 100 locomotives have already been delivered to this country by CZ LOKO. This success is mainly due to our own representation, provided by the subsidiary company CZ LOKO Italia. In the given location, it provides not only the business activities themselves, but also related services from service, through training to major repairs of previously delivered machines.

Photo: ©Dalibor Palko/CZ LOKO



Decarbonising transport with digital innovations

There is no doubt that climate change is the greatest challenge of our time. Decisions made today will significantly impact the near and long-term future. Drastically reducing CO2 emissions is at the heart of measures to curb global warming – for industry, households and transport alike. Rail freight transport is pivotal to these efforts, with each freight train at today's capacity levels already replacing 52 trucks and reducing CO2 emissions by 80 to 100%. DB Cargo has chosen the slogan "Freight belongs on rail" to emphasise that embracing rail is the only way for the transport sector to significantly reduce its CO2 emissions and play its part in the fight against climate change. To achieve this goal, DB Cargo is implementing a variety of technical innovations to promote the digitalisation and automation of rail freight transport.

Camera gantries with artificial intelligence scan the train in seconds

The high-performance rail network will form the backbone of this effort. In addition to this, innovations on freight trains and at other central locations such as marshalling yards will ensure increased capacity and more freight transport by rail. There is no silver bullet but rather a series of different developments that complement each other and improve effectiveness together. One of the testing grounds for DB Cargo's digital innovations is the Munich North marshalling yard, which will be the first digital yard in Germany. The goal is to increase marshalling yard capacity by up to 40%.

Increasing freight capacity with Digital Automatic Coupling

One of these new innovations is Digital Automatic Coupling (DAC), which is designed to significantly speed up the coupling process in future compared to the traditional manual coupling method. Using DAC on freight trains will lead to shorter turnaround times in marshalling yards, significantly increasing rail freight capacity. DAC will also connect power and data lines, paving the way for the smart freight train. DAC is currently being tested for series production and is set to revolutionise single wagonload transport.

Fully automatic hump locomotive and camera gantry pave the way for the digital yard of the future

At marshalling yards, DB Cargo is testing other innovations for the intelligent rail freight system, such as the fully automatic hump locomotive (VAL) and AI camera gantries. The VAL will autonomously perform the tasks of the traditional shunting locomotive, which is responsible for distributing the freight wagons to form trains. In future, the camera gantry will inspect freight wagons and automatically detect damage.

The freight trains and their wagons will pass through the camera gantry, which will take pictures of the train from every angle. AI will then analyse whether the locomotive or any of the wagons need attention. This will ensure increased safety, speed up train preparation and further boost rail capacity.

Using innovations for more climate protection

DB Cargo is using these and other innovative developments to chart a



path to success in shifting logistics from road to rail. The mix of different, AI-supported digital innovations, combined with improvements in rolling stock, underlines DB Cargo's role as a modern logistics provider with big environmental ambitions.

Photo: The fully automatic hump locomotive ensures faster provision of the train. ©DB Cargo AG

An unusual sight: ICE as a "passenger" on freight trains

What does DB Cargo have to do with passenger trains? At first glance, not much. But if you look into how new long-distance trains get to where they are tested and approved, you'll find that they're brought to their destination by freight trains. That's because they're not allowed to travel the route themselves without approval.

To Germany by freight train: the new ICE L

This also applies to the first new long-distance trains from the Spanish rolling stock manufacturer Talgo. Talgo built the trains in Spain for Deutsche Bahn and recently sent them to various destinations in Europe for testing and approval. The first trains are scheduled to begin

passenger service at the end of next year.

Also a first is the way the trains are transported from the plants in Spain to Central Europe: by rail from start to finish. Since a different track gauge is used in Spain, the trains are transported to the French-Spanish border on auxiliary bogies and then transferred to UIC standard gauge via a specially designed ramp.

The trains are then towed to their final destinations on UIC standard gauge tracks.

Charged up and ready for the long journey north: the new ICE L

Locomotives are brought by special lorries and placed by crane on the standard gauge tracks in Figueras near the French border. As with the ICE L wagons, which also still need approval, the locomotives have to be pulled in a freight train.

The brand new locomotives were received by DB Cargo staff in Mannheim and brought to Nuremberg.

DB Cargo Full Load Solutions ensures smooth transport. DB Schenker's Global Project & Industry Solutions (GPIS) unit in Spain has overall responsibility for the project, with DB Cargo Full Load Solutions acting as a rail logistics partner.

The first transports have already been carried out successfully and handed over to the approval partners, who picked them up for the last mile to the approval and test centres.

Deutsche Bahn honors employees of the Ukrainian Railways with a photo exhibition in Berlin Central Station

“Rail lifeline – Ukrainian railway workers in war” is the name of the new photo exhibition of Deutsche Bahn AG (DB), which was opened in Berlin Central Station by DB Chairman Dr. Richard Lutz was opened together with the Ukrainian ambassador HE Oleksii Makeiev, Susanne Henckel, State Secretary in the Federal Ministry for Digital and Transport, and Julia Becker, Chairwoman of the Supervisory Board and Publisher of the FUNKE Media Group. With the exhibition, DB honours the employees of the Ukrainian Railway “Ukrzaliznytsia” (UZ). Since the Russian war of aggression began 18 months ago, they have been defying everyday wartime life in Ukraine and maintaining mobility and supplies.

The photo exhibition can be seen in Berlin Central Station until September 10th. It will then be shown at another five train stations between September 13th, 2023 and the end of January 2024 - in Essen, Hamburg-Altona, Leipzig, Braunschweig and Nuremberg. 19 pictures by photographer Reto Klar and journalist Jan Jessen show

the lives of railway workers during the war. In March 2023, the two reporters accompanied, among others, a train driver, two repairmen and a track worker, who are repeatedly the target of Russian attacks.

Dr Richard Lutz, CEO of Deutsche Bahn AG: “The railway is indispensable: it ensures supplies, brings help and enables escape - and is therefore a lifeline for millions of people. DB stands firmly on the side of the people from Ukraine and Ukrzaliznytsia. Ukrzaliznytsia has become an important part of the European railway family.”

HE Oleksii Makeiev, Ambassador of Ukraine to the Federal Republic of Germany: “The Ukrainian Railway became the road of life. And the evacuation trains became the lifeline for millions of people. During Russia’s major offensive against Ukraine, Ukrainian Railways evacuated 3.8 million people, including children, 100,000 animals



and transported more than 200,000 tons of humanitarian supplies across the country.”

Susanne Henckel, State Secretary in the Federal Ministry for Digital Affairs and Transport: “The images exhibited here show the horrors of the war that is raging in the middle of Europe. But they also show the incredible courage and perseverance with which the Ukrainian railway workers keep the country mobile and supplies maintained. It is clear to us: we will support Ukraine for

as long as necessary.”

Julia Becker, chairwoman of the supervisory board and publisher of the FUNKE media group: “Just as the railway is the lifeline for Ukraine, independent reporting is the elixir of life for free thinking. The Russian war of aggression on Ukraine is also a war for democratic values and freedom of speech: nothing should be allowed to cut people off from their basic right to non-partisan information.”

Deutsche Bahn secures green electricity from EnBW North Sea wind farm

Green electricity for green mobility: From 2026, green electricity from North Sea wind power will make the traction electricity mix in Germany even greener. For 15 years, the EnBW offshore wind farm “He Dreihrt” will supply green electricity to Deutsche Bahn from around 20 megawatts (MW) of installed capacity.

The amount of electricity supplied can supply the entire German traction power network for three days. For this purpose, the DB Group subsidiary DB Energie and the Karlsruhe energy company EnBW Energie Baden-Württemberg AG have concluded a Power Purchase Agreement (PPA). By delivering from the He Dreihrt wind farm, Deutsche Bahn will save up to 60,000 tons of CO2 per year in the future.

Torsten Schein, CEO of DB Energie GmbH: “Deutsche Bahn will become climate neutral in 2040. To ensure that we can achieve this, we will be switching all traction power to renewable energies by 2038. DB is already Germany’s largest user of green electricity. With the green electricity from the He Dreihrt wind farm, we are now taking another important step in restructuring our energy portfolio and are getting closer and closer to our goal.”

Dr Georg Stamatelopoulos, Board Member for Sustainable Generation Infrastructure at EnBW: “The parallels between EnBW and Deutsche Bahn are remarkable: As operators of central infrastructure, we have a shared responsibility for society and pursue the same goal of a CO2-free energy future. Promoting sustainable energy supply and mobility is an essential part of our agenda. We are pleased to be able to further advance this together with a partner like Deutsche Bahn through our He Dreihrt offshore wind farm.”

Power Purchase Agreements (PPAs) are a central component for securing and financing non-subsidized renewable energy projects on the market. These long-term industrial partnerships make a significant contribution to the rapid expansion of renewable energies. The He Dreihrt wind farm will be built from 2024 around 90 kilometres northwest of Borkum and around 110 kilometres west of Heligoland and will go into operation at the end of 2025. EnBW secured the contract in the first offshore tender in Germany in 2017 with a zero-cent bid and is investing around 2.4 billion euros in the offshore wind farm.

The plan is to install 64 latest-generation Vestas turbines. With a nominal output of 15 MW, the turbines are among the most powerful systems currently on the market. With these, the wind farm has a total installed generation capacity of 960 MW, making it one of the largest energy transition projects in Europe. After completion, EnBW will take over the technical and commercial management as well as the maintenance and repair of the wind farm. DB currently covers more than 65 percent of the DB traction current with renewable energies - and is thus far above the public green electricity mix in Germany of currently less than 50 percent. By 2038, all DB traction power will be 100 percent green. To this end, the Group subsidiary DB Energie is fundamentally restructuring its portfolio of contract power plants and supply contracts. Renewable energies are gradually and consistently replacing fossil fuels. To this end, DB Energie is building what is known as a mixed portfolio for traction current requirements: the contract terms, energy sources, feed-in regions, contractual partners and pricing are mixed in order to ensure the high level of security of supply in the traction current network.

About DB Energie GmbH:

With its development and provision of energy

infrastructure, DB Energie is making an important contribution to Deutsche Bahn’s energy transition. The subsidiary of Deutsche Bahn, based in Frankfurt am Main, is the fifth largest energy supplier in Germany and offers railway companies and customers from industry, trade and commerce a reliable, economical and sustainable energy supply. As a network operator, DB Energie manages the more than 7,900 kilometre long 16.7 Hertz traction power network, closed 50 Hertz distribution networks and the direct current supply systems of the Berlin and Hamburg S-Bahn systems. More than 50 power, converter and converter stations spread across Germany supply the energy, and over 1,800 transformer stations ensure the right voltage.

DB’s green electricity comes from an ever-expanding portfolio: In addition to green electricity from wind and solar parks, DB has been feeding solar electricity directly into the traction power network in a pilot project since April 2023 for the first time. The new solar system in Wasbek, Schleswig-Holstein, is around 40 hectares in size and will deliver around 38 gigawatt hours of green electricity annually. The DB is thus consistently continuing its path to continually increase the proportion of green electricity in the traction current mix.

Reggio Emilia station: pink parking for female workers on duty at night

Two new parking spaces in the service car park at the Reggio Emilia railway station (Via Turri area), accessible via a numeric code, in a well-lit area near platform one and the Rete Ferroviaria Italiana (Italian Railway Network) offices.

It is the new Pink Parking reserved for female workers of all FS Group companies whose work is organised in shifts and who now will be able to make a request to use it at the start or at the end of their work shift between 10 pm and 5 am.

Promoter of the initiative, supported by the National Equal Opportunities

Committee of the FS Italiane Group, was the Emilia-Romagna Equal Opportunities Committee that, since its new establishment, has initiated discussions with female workers, to identify their deepest needs. Among these, there is that of parking spaces that suit the needs of female workers who use their cars at night, to go to work or return at the end of their shift.

The request was accepted by Rete Ferroviaria Italiana (Lead company of the FS Group's Infrastructure Hub), owner of the area, which has identified two parking spaces inside the service car park, accessible only via a numeric code to be entered using one's own mobile phone and in a particularly well-lit and protected location.

The pink parking area in Reggio Emilia is the third in the region after those in Bologna and Rimini and is part of the Agreement between the Community of European Railways (CER) and the European Transport Workers' Federation (ETF) on women in the railway sector, signed on November 5th, 2021.

The Agreement, which aims to attract more women to the railway sector and create the right basic conditions for them to remain within companies and in the sector, in fact pays particular attention to the issue of protection and safety at work, also urging the creation of parking spaces reserved for the night shifts of female workers.

ŠKODA GROUP AND TITAGARH FIREMA WON TENDER FOR COACHES FOR ITALIAN NIGHT LINES

Škoda Group is announcing another success in Italy, this time a project to supply new sleeping coaches. The contract for the production of up to 370 new railway coaches was awarded to Škoda together with Titagarh Firema. The consortium was successful in the European tender procedure announced by Trenitalia, a member of the Ferrovie dello Stato Italiane group. In the future, the Milan - Palermo - Syracuse line will be served by completely new rolling stock that combines the most modern and efficient technical solutions with respect for all the characteristics of environmental sustainability. The contract's total value is €732.5 million.

This project reflects the growing popularity of night train travel in Europe. The new coaches for the Italian railways will offer an extraordinary travel experience with greater comfort, privacy and a tranquillity resembling a conventional hotel room. The trains are thus ready to meet the demanding requirements of passengers.

"I'm proud of our team, which has done a great job on the Italian market. In October 2022, the Škoda Group opened an office in Florence to enter a new market. A few months later, in Italy, we are involved in two important projects for new long-distance carriages and trams for Bergamo. I'm thrilled that another European carrier trusts our more than 160-year tradition in vehicle manufacturing and has ordered sleeping coaches with a distinctive Škoda footprint. I must thank our partner Titagarh Firema SpA, which brings expertise and excellent local market knowledge to this project. We look forward to the project's start," said Didier Pflieger, CEO of Škoda Group.

Carlo Logli, CEO of the Caserta-based Titagarh Firema, stated: "Firema achieved another significant success and took on a new challenge in the case of an extremely important contract for Trenitalia, for the country, which has contributed PNRR funding to the project, and for our company, which is constantly increasing its leading position in the Italian railway industry. I am really pleased that the production of the new coaches will take place in Italy, at a historic site of rolling stock manufacture, because of the subsequent positive impact on employment levels that will result. I would therefore like to thank Škoda for this unprecedented partnership, which we hope will be the first of many more fruitful collaborations in the future."

The first part of the contract covers the delivery of a total of 70 sleeping coaches – 44 of them in the Comfort category, 22 are DeLuxe and 4 are Economy – with a total value of EUR 138.59 million.

The DeLuxe coaches are equipped with comfortable spacious bedrooms, six of which are single and two double. Each has its own toilet and shower. Thanks to the air-conditioning solution, the temperature in each unit can be individually adjusted. The facilities also include modern information and audio/video infotainment systems. A coach also includes a small kitchen equipped with electrical appliances.

The Comfort Class offers seven compartments in each coach, each equipped with four beds and its own



washbasin. In addition, the facilities also include a larger space for people with reduced mobility and their companions. Toilets and transport platforms are also available for such people to facilitate their entry and exit. The air conditioning can also be individually adjusted in each compartment.

The Economy Class coaches offer a spacious passenger lounge with a 2+1 seating arrangement. For maximum comfort, individual sections have dividing walls,

armrests and oversized headrests, and each seat has its own individual lighting. The wide central aisle allows for comfortable use of the interior space when the train is moving, while the vestibule area features luggage racks and storage spaces. There is one toilet on each side of the vestibule.



Netherlands

Every year in August, the Sziget Express runs from Amersfoort to Budapest to take people to the Sziget festival. The festival starts on August 10th and finishes on the 15th. The train carriages come from Germany to Amersfoort (the Netherlands) and here TCS loco No. 101004 has arrived with the train from Bad Bentheim, Germany into Amersfoort, prior to the journey to Budapest. The TCS loco will be changed at the border train station of Bad Bentheim. Train Charter Services No. 101004 is the former NS No. 1751 locomotive and Train Charter Services runs several trains like this as well as cargo services and dining trains. *Andre Pronk*



PKP IC loco No. SU160-010 is seen waiting departure from Osztyn Glowny on July 27th with train No. IC TLK 51102 'BIEBRZA' after a loco change.
Gerard van Vliet



▶ PKP Cargo electric loco No. EU07-1517 and diesel loco No. SA48-015 stand at Olsztyn Główny on July 27th. *Gerard van Vliet*

▶ PKP IC Flirt No. ED160-013 with train No. IC5322 Olsztyn Główny - Krakow Główny, stands at Olsztyn Główny on July 27th. *Gerard van Vliet*

▶ PKP Cargo loco No. SM42-923 is seen at Olsztyn Główny on July 27th. *Gerard van Vliet*



Poland

PKP IC trainset No. ED161-001 working train No. 1423 to Bielsko-Biala Główna calls at Białystok on August 1st. *Gerard van Vliet*



Poland

PESA Class 111Db - 001 with train No. IC143 'Hańcza', Mockava - Kraków Gł.
passes Augustów on July 31st. *Gerard van Vliet*





▶ CP Class 1400 No. 1427 is seen operating the 07:25 Porto Campanha to Pocinho service on July 15th. *Kevin McCormick*

▶ CP No. 2603 has brought in the stock for the 08:20 service from Porto Sao Bento to Pocinho on July 15th. *Kevin McCormick*

▶ Porto Tram No. 203 is seen at the end of the Line 1 route in Porto on July 14th. *Kevin McCormick*





▶ On July 15th, CP No. 1436 is seen running around the stock at Pocinho, before forming the 15:08 back to Porto. *Kevin McCormick*

▶ At Porto Sao Bento, CP 1400 No. 1436 is seen at the blocks on July 15th having worked the 15:08 from Pochino. *Kevin McCormick*

▶ CP Class 1400 No. 1461 awaits departure time with the 08:20 service from Porto Sao Bento to Pocinho on July 15th. *Kevin McCormick*





Portugal



▶ Porto tram No. 213 is seen crossing Jardim da Cordaria on July 16th. *Kevin McCormick*

▶ Class 1900 series in Medway livery, No. 1907 is seen stabled at Vila Nova de Gaia. *Kevin McCormick*

▶ Modern Porto tram No. MP071 is seen at Jardim do Morro. *Kevin McCormick*









▶ BNSF Nos. 6666 and 6560 approach Vaughn whilst hauling an eastbound tank train.
Laurence Sly

▶ Union Pacific Nos. 8016, 6854, 5277 and 3841 approach Dragoon whilst hauling a westbound container train.
Laurence Sly

▶ BNSF Nos. 8390 and 4713 wait in a siding near Vaughn whilst hauling an eastbound manifest train.
Laurence Sly





Fort Worth and Western Railroad Nos. 2032 and 2027 cross County Road 1000 whilst hauling the Cleburn Turn from Cresson. *Laurence Sly*

Fort Worth and Western Railroad Nos. 2032 and 2027 arrive at Cleburn. *Laurence Sly*

Fort Worth and Western Railroad Nos. 2032 and 2027 approach Cleburn whilst hauling the Cleburn Turn from Cresson. *Laurence Sly*





▶ Wichita Tillman & Jackson Railroad Nos. 1001 and 1018 pass Tipton whilst hauling the Friday train from Altus to Wichita Falls. *Laurence Sly*

▶ Wichita Tillman & Jackson Railroad Nos. 1001 and 1018 approach Humphreys whilst making their way from Altus to Wichita Falls. *Laurence Sly*

▶ Wichita Tillman & Jackson Railroad Nos. 1001 and 1018 cross the Farmrail line at Frederick whilst returning to Wichita Falls. They would stop at Frederick to pick up the grain hopper on the right. *Laurence Sly*



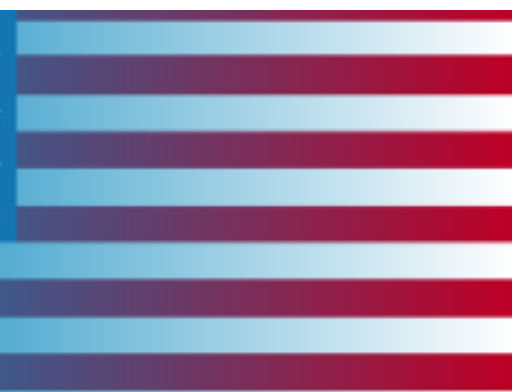


▶ BNSF Nos. 6914 and 4227 pass Gage whilst hauling an eastbound container train.
Laurence Sly

▶ BNSF Nos. 7706, 4284, 4445 and 7910 pass Dimona whilst hauling an eastbound intermodal train.
Laurence Sly

▶ BNSF Nos. 3852, 6888, 4634, 5474 and 9563 pass Vaughn whilst hauling an eastbound double stack container train.
Laurence Sly





▶ Arkansas & Missouri Railroad Nos. 68 and 62 head north from Rogers to deliver a couple of tank cars to a customer. *Laurence Sly*

▶ BNSF Nos. 7560, 9174, 4702 and 4024 pass Curtis Hill whilst hauling an eastbound intermodal train. *Laurence Sly*

▶ BNSF Nos. 7399, 4362 and 7341 approach Mooreland whilst hauling a westbound container train. *Laurence Sly*





▶ Stillwater Central Railroad Nos. 9056, 4033 and 3859 approach the Stillwater Central Yard in Oklahoma City with a transfer job from the BNSF. *Laurence Sly*

▶ Arkansas & Missouri Railroad Nos. 62 and 68 work the yard in Springdale. *Laurence Sly*

▶ After picking up cars from the KCS, Fort Smith Railroad No. 3832 returns to the Fort Smith Railroad yard. *Laurence Sly*



U.S.A.



Freeport McMoRan Copper & Gold Railroad Nos. 52, 55, 53, 57 and 59 approach the Clifton interchange with a train from the Morenci mine. At Clifton they will exchange trains with the Arizona Eastern Railroad. *Laurence Sly*

Arkansas & Oklahoma Railroad Nos. 8996, 2411, 2402 and 3098 work the yard in Shawnee. *Laurence Sly*

Freeport McMoRan Copper & Gold Railroad Nos. 59, 57, 53, 55 and 52 climb out of Clifton whilst hauling a train to the Morenci mine. *Laurence Sly*



U.S.A.

Northwestern Oklahoma Railroad Company No. 1201 seen in the NOKL yard in Woodward. *Laurence Sly*





Arizona Eastern Railroad Nos. 4004 and 4011 depart Clifton whilst hauling a cut of cars to South Siding. *Laurence Sly*

Arizona Eastern Railroad Nos. 4004 and 4011 make a second trip from Clifton to South Siding. *Laurence Sly*

Arizona Eastern Railroad locomotives Nos. 4002, 2322 and 4003 depart South Siding whilst hauling train No. 202 to Lordsburg. *Laurence Sly*



U.S.A.

Farmrail Nos. 2618, 2675 and 2309 pass Custer City whilst hauling the 'North Train' from Enid to Clinton. *Laurence Sly*



U.S.A.

Arizona Eastern Railroad Nos. 4002, 2322 and 4003 pass Three Way whilst hauling train No. 202 to Lordsburg. *Laurence Sly*



U.S.A.

Union Pacific Nos. 3077, 8913 and 4512 approach Cochise whilst hauling a westbound local freight. *Laurence Sly*



U.S.A.

Union Pacific Nos. 9007, 9933 and 7519 pass Cochise whilst hauling an eastbound manifest train. *Laurence Sly*



U.S.A.

Union Pacific Nos. 5891, 2714 and 4249 approach Cochise whilst hauling a double stack container train. *Laurence Sly*

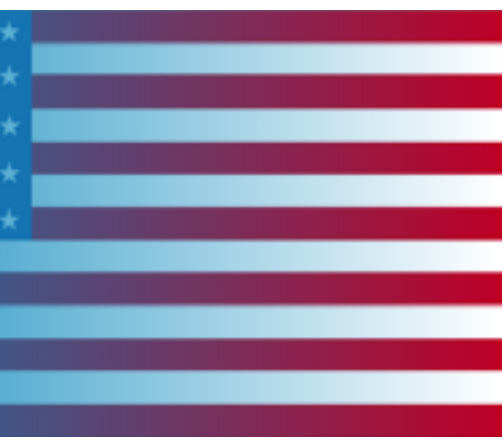


U.S.A.

Union Pacific Nos. 5876, 6172 and 8478 pass Dragoon whilst hauling a westbound manifest train. *Laurence Sly*



U.S.A.



Stadler to build first bi-level battery train for US market

Caltrain and Stadler have announced the order for four additional bi-level EMU trains and one bi-level battery vehicle. The order is an option from Caltrain's current contract with Stadler.

Caltrain announced on August 17th that the California Transportation Commission approved the allocation of funds from an \$80 million award from the California State Transportation Agency (CalSTA) for one battery-equipped electric multiple unit train (BEMU) from Stadler that will be operable on both Caltrain's electrified service area of the corridor as well as the portion of the corridor from San Jose to Gilroy that does not yet have overhead electrified lines.

The BEMU train, which will be purchased on a contract option with Stadler will charge while the train runs on

overhead power in the electrified service areas and then use battery charge to travel "off-wire" on non-electrified line areas. This will pave the way for Caltrain to operate in the future, a fully zero-emission service.

The current demonstration plan will have the BEMU charge while in operations between San Francisco and San Jose, and then operate using battery power on non-electrified tracks between San Jose and Gilroy. The goal is to show successful service operations and learn from the implementation to provide a roadmap for future BEMU operations and procurements.

"Making the switch from fossil fuels to electric power is vital for California to meet its transportation and climate change goals", says California Secretary Toks Omishakin. "This demonstration train will continue California's clean

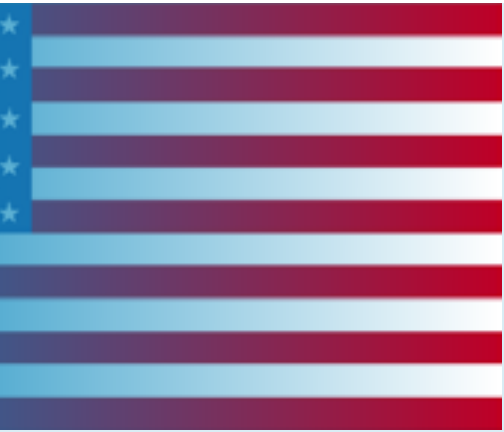
energy, innovative leadership."

Jeff Gee, Caltrain Board Chair says "We're excited to be the first in the nation to pilot this hybrid electric and battery service to extend our zero-emission service beyond our electrified service areas, which will not only allow for more sustainable and environmentally friendly operations, but also faster and more reliable travel times for riders."

"Stadler is proud to continue our partnership with Caltrain and our shared mission of helping California provide zero emission travel" says Martin Ritter, CEO of Stadler US. "With additional bi-level EMUs and this first-of-its-kind BEMU for Caltrain, Stadler is able to expand our overall portfolio for the US market, especially in the zero emission product line."

The Caltrain Board also approved exercising the options on its contract with Stadler, for four electric multiple unit (EMU) trains to replace aging diesel trains and rail cars. These trains along with the BEMU demonstration will allow Caltrain to run over 90% of its service with electric trains, benefiting riders and communities throughout the corridor.

U.S.A.



Alstom to supply 60 single-level coach cars to the Connecticut Department of Transportation for its statewide rail system

Alstom and the Connecticut Department of Transportation (CTDOT) have confirmed an order for 60 single-level rail coach cars valued at approximately €285 million (approximately USD \$315 million) with options to build an additional 313 cars, as part of CTDOT's coach renewal program for its statewide rail system. Delivery is scheduled to begin in 2026.

The agreement calls for the delivery of fully customised, sustainable, next-generation commuter rail cars specifically designed for North America, providing riders with safe, comfortable, 125 mph commuter rail service. The new vehicles will all be compliant with the Americans with Disabilities Act (ADA), Federal Railroad Administration (FRA) and American Public Transportation Association (APTA) requirements.

The vehicles will have a convenient two-by-two seating configuration with foldable tables and easy access for wheelchair passengers. The new cars will also provide an enhanced passenger experience with convenient overhead luggage racks, workstation tables and a bicycle storage area, safe and reliable wi-fi access, real time information on upcoming stops, conveniently located power and USB access, and the most current

cybersecurity safety features. In addition, passengers will enjoy panoramic balcony-style windows at wheeled mobility spaces, allowing for the flow of natural sunlight through the car's interior, giving riders great views.

"Having a modernised transit system with safe, comfortable, and convenient access to work, homes and fun is essential to attracting the kind of businesses and workforce talent we need to grow good-paying jobs and remain economically competitive," Governor Lamont said. "Connecticut is the home of the busiest rail line in the nation, and the purchase of these new rail cars continues our efforts to deliver better and more reliable service for commuters."

"The CTDOT Office of Rail is working hard to upgrade the trip for rail customers across Connecticut. We know they want more comfortable seats, Wi-Fi access, bike storage, and ADA accessibility, and we're taking action on those needs with steps like this," said Connecticut Department of Transportation Commissioner Garrett Eucalitto. "We're pleased to partner with Alstom on the order of this next generation of rail cars. This order is part of our ongoing capital program to purchase new rail cars and improve the customer experience."

"We are proud to be a part of this exciting new chapter for CTDOT and the people of Connecticut," said Michael Keroullé, President, Alstom Americas. "We look forward to further building upon our relationship with CTDOT by providing extensive expertise ranging from passenger ergonomics, experience, and comfort to operational considerations and optimized maintenance practices for years to come."

Alstom is leading the way toward more sustainable mobility options. With demand on the rise, cities and countries need transport solutions that help decrease greenhouse gas emissions, congestion, and pollution to improve public health for the years to come. The new cars will offer CTDOT passengers a reliable and fast regional rail option, reducing traffic congestion along the region's interstates and the state's greenhouse gas (GHG) emissions to meet its 2030 targets. With more than 2,500 bi-level and multi-level cars and more than 1,400 single-deck cars developed and manufactured in North America, Alstom is a significant contributor to the capacity and quality of passenger rail transportation of major cities across the United States, specifically the northeastern region.



Alstom's commuter transport solutions support urban ecosystems all over the world to grow sustainably, accommodate increasing numbers of commuters and alleviate traffic congestion. Alstom is a leader in the commuter market with over 40 years of experience in designing, manufacturing, and maintaining commuter trains. Alstom is constantly improving its products to provide passengers and operators with the best and latest railway technologies based on electric overhead catenary, hybrid, battery, and hydrogen energy supply.

SBB is preparing for the freight transport of the future

SBB is fleshing out the “Suisse Cargo Logistics” concept and increasing its commitment to freight transport: SBB Cargo AG will once again become a 100 percent SBB subsidiary. The minority shareholder Swiss Combi sells its 35 percent shareholding to SBB and becomes a strategic partner.

Alexander Muhm, the current head of SBB Real Estate, has been appointed as the new group management member for freight transport.

With the buyback of the shares and the new line of freight traffic, the SBB wants to increase freight traffic and manage it from a single source. The previous management of the goods transport segment had a coordinating role on a mandate basis and was not a member of the group management. Freight traffic is now managed at SBB Group level again. This simplifies the SBB management structure and prepares for possible state subsidies for single wagonload traffic.

Alexander Muhm has been a member of the Group Executive Board since 2019: As Head of Real Estate, he has strengthened the earning power of SBB Real Estate and positioned the division as part of the integrated railway that takes its social responsibility seriously. In addition to managing SBB Immobilien, he shaped the “Suisse Cargo Logistics” concept as a responsible member of the Group Executive Board. He is also a member of the Board of Directors of Hupac AG. Alexander Muhm took on his new role on June 26th, 2023. As the new head of freight transport, he is also CEO of SBB Cargo AG. Here he replaces Désirée Baer, who has led the company since 2020. Désirée Baer played a key role in driving forward the further development of SBB Cargo and consistently geared the organization towards customer orientation and customer solutions. With the changing framework conditions, she decided to leave the company and face a new professional challenge.

During her time as CEO of SBB Cargo, customer and employee satisfaction have improved substantially and quality and productivity have increased. In addition to his role as CEO of SBB Cargo AG, the new head of freight transport is responsible for all of SBB’s freight transport subsidiaries, including the newly founded SBB Intermodal AG. This SBB subsidiary is intended to plan and create a comprehensive terminal infrastructure in Switzerland.

In this way, SBB is concreting the “Suisse Cargo Logistics” concept, which it presented in autumn 2022. Under the motto “For more goods, more rail”, the SBB wants to transport 60 percent more goods in its core business of freight transport in Switzerland by 2050. “Suisse Cargo Logistics” plans to expand the transshipment network with five terminals for combined transport between Geneva and St. Gallen.

The SBB would like to thank Désirée Baer for her great and long-standing commitment to the SBB, including as CEO of Securitrans Public Security AG and before that as a member of the SBB Infrastructure management team. The SBB would also like to thank the previous freight transport

segment manager, Nicolas Perrin, for his great commitment.

SBB rail freight transport

These are the freight transport subsidiaries of SBB:

- SBB Cargo AG: Provides a seventh of Swiss freight transport with wagonload transport, block trains and combined transport, transports 180,000 tonnes a day for its customers, thereby reducing the burden on the roads by 15,000 truck journeys per day and the environment by 490,000 tonnes of CO2 annually.
- SBB Cargo International: Market leader on the north-south axis through the Swiss Alps, connects the North Sea ports with the most important economic hubs in Italy with block trains from the loading point to the unloading point, or from terminal to terminal. Shareholders are SBB AG with 75 percent and Hupac AG with 25 percent.
- SBB Intermodal AG: As the developer, the newly founded Intermodal AG will drive forward the expansion of the terminal infrastructure in Switzerland, as envisaged in the “Suisse Cargo Logistics” concept.

Swiss Combi and SBB Cargo enter into a strategic partnership

In view of the changed framework conditions and possible government support for wagonload transport, SBB and Swiss Combi AG, as a minority shareholder in SBB Cargo AG, have redefined their partnership. Swiss Combi sells its shares to SBB. It was agreed not to disclose the price. The new environment requires a clear separation of shareholder and customer roles. As part of a strategic partnership, the collaboration will remain close.

Three years ago, Swiss Combi AG - consisting of the logistics service providers Planzer Holding AG (40 percent), Camion Transport AG (40 percent), Bertschi AG (10 percent) and Galliker Holding AG (10 percent) - had 35 percent of SBB shares Cargo AG taken over. The minority shareholders have contributed valuable knowledge from the transport and logistics sector to SBB Cargo AG as a leading company in Swiss rail freight transport.

However, it has now become clear that wagonload transport cannot be operated in its current form in a cost-covering manner and therefore does not meet the federal government’s requirements for economic

viability. On the other hand, it makes a significant contribution to security of supply and a functioning economy and society and contributes to modal shift and climate goals. The Federal Council has put forward proposals on how to sustainably strengthen regional rail freight transport and, in particular, single wagon load transport. The federal parliament will decide on these proposals.

SBB Cargo AG and Swiss Combi AG believe in the future of an adapted offer in wagonload traffic. The companies involved will continue to actively support wagonload traffic and thus the modal shift policy. On the one hand, thanks to continued close cooperation, direct access to the needs of the logistics industry is ensured for the freight railway, and the transport companies continue to promote the further development of SBB Cargo’s offering in wagonload transport.

SBB Cargo is open to further strategic partnerships with other important customers. The reorganization of the shareholders was carried out in coordination with the owner of SBB AG and still has to be approved by the competition authorities.



Azerbaijan

HHLA Project Logistics: cargo from road to rail in Central Asia

HHLA Project Logistics is increasingly focusing on rail transport for various destinations as part of its commitment to sustainability. The subsidiary of Hamburger Hafen und Logistik AG (HHLA) is shifting project cargo from road to the more environmentally friendly rail mode for further orders in Central Asia.

Part of the project cargo is loaded by HHLA Project Logistics in Baku, Azerbaijan, and carried to different destinations in Kazakhstan. Various shipments are going via rail from Baku to the port of Alyat and then transported across the Caspian Sea to the port of Aktau.

HHLA Project Logistics also established a new container block train in Kazakhstan to transport goods from the port of Aktau to various Chinese destinations via the city of Khorgos, China. This project is organised by the company's local office in Almaty, Kazakhstan, which was opened in February 2023. "We are always looking at opportunities to offer more sustainable rail products in the region, thus supporting the modal shift," says Korneli Korchilava, Managing Director of HHLA Project Logistics.

Accordingly, transports were also shifted with another project: At the port of Poti in Georgia, HHLA Project Logistics is receiving cargo from China destined for Baku. From here, the cargo is transferred from the ships to the container block trains pulled by locomotives operated by Azerbaijan's leading railroad company Azerbaijan Railways (ADY).

HHLA Project Logistics

HHLA Project Logistics offers specialist transport solutions for the entire Caucasus region and Central Asia, dealing with heavy and oversized loads and unique requirements every day. The subsidiary of HHLA specialises in all stages of handling project and transit cargo, particularly on behalf of international and local freight forwarders. Since 2001, HHLA Project Logistics has had its headquarters in the Georgian seaport of Poti, a hub on the ancient Silk Road. It operates additional branches in Tbilisi (Georgia), Baku (Azerbaijan), Astana and Almaty (Kazakhstan).

Photo: © HHLA/Giorgi Meparishvili



India

ŠKODA GROUP PARTNERS WITH TATA AUTOCOMP SYSTEMS TO PRODUCE COMPONENTS FOR INDIAN RAILWAY

Strengthening its position on foreign markets and expanding its presence outside Europe - this is one of the goals of the Škoda Group's business strategy. Therefore, Škoda Group, a leading European manufacturer of components and vehicles for public transport, signed a Memorandum of Understanding ("MoU") with TATA AutoComp Systems, Indian provider of the products and services to the automotive original equipment manufacturers and suppliers. This agreement sets the framework for a strategic joint venture aimed at producing components for the growing Indian railway and public mobility market. India, with its vast and rising market, presents huge opportunity for growth and expansion. Through the partnership with a traditional and well-known Indian company, Škoda Group seeks to tap into India's potential to deliver shared benefits and accelerate business development.

The MoU marks the first step towards a comprehensive feasibility study that will outline the scope of investment, expected scale of business, and other key considerations. By combining the expertise and knowledge of both companies, the joint venture aims to create a strong foundation for long-term success in the Indian railway sector.

"Our collaboration with TATA AutoComp Systems represents an exciting opportunity to enter the Indian railway and bus public mobility market," says Petr Novotný, President Components & Bus Mobility at Škoda Group and adds: "India's great potential, coupled with the skilled workforce and market demand, aligns perfectly with our group's growth strategy. Together, we will explore new opportunity and create innovative solutions to meet the developing needs of the Indian

railway industry. In line with this, we particularly have on top of our mind the Make in India initiative, under which we will work together to support the growth of the industry in response to dynamic market demands." "Tata AutoComp has always been a pioneer in introducing cutting edge technology to its customers. This association with Škoda Group will further strengthen our presence by bringing the latest electrical equipment and components for Indian Railway & Metro & Bus market. We take pride in our partnership with Škoda Group, a company steadfastly dedicated to serving global markets with its diverse range of Railway Components," stated Arvind Goel, Chairman at Tata AutoComp

The development and production of electrical equipment and components is one of the strong foundations of Škoda Group. In addition to supplying its own products,

Škoda aims to significantly increase the volume of orders from external customers in the rail and urban transport sectors. Škoda Group designs and manufactures the components to meet key requirements such as high reliability, safety, efficiency, low energy consumption, robustness, low lifecycle costs and maximum environmental friendliness.

By joining forces with a respected Indian partner, the group aims to build a strong position in the Indian railway market, encouraging economic growth, job creation, and technological advancements. "The integration of local skills, knowledge, and resources with our proven products and know-how will contribute to the realization of a mutually beneficial and sustainable partnership," adds Petr Novotný.

Ireland

Alstom chosen to provide Smartlock Interlocking and ETCS for Irish Rail's Cork Area commuter rail

Alstom, the global leader in smart and sustainable mobility, has been awarded a groundbreaking contract by Irish Rail (Iarnród Éireann) to revolutionise rail travel and mobility on the Cork Area Commuter Rail (CACR) network. The project, set to enhance the rail service within the Cork metropolitan area, will feature Alstom's cutting-edge signalling technologies - Smartlock Computer-Based Interlocking (CBI) system and European Train Control System (ETCS).

The CACR project aims to modernise and upgrade 62km of the rail network, stretching from Mallow to Cork, Cobh, and Middleton, creating a seamless, high-frequency unified suburban rail service for the people of Cork.

Nick Crossfield, Alstom UK & Ireland Managing Director, expressed enthusiasm for the partnership with Irish Rail, stating, "We are excited to embark on this journey,

bringing cutting-edge technology to the Cork Area Commuter Rail network. With Smartlock and ETCS, we are confident that this project will set new standards in safety, efficiency, and passenger experience, providing a strong foundation for sustainable mobility in the region." Jim Meade, Iarnród Éireann Chief Executive said "I commend our Cork Area Commuter Rail team in ensuring that all three elements of the CACR Programme are progressing so swiftly. New signalling, our new platform, and twin-tracking of Glounthaune to Middleton are set to transform the capacity of our Cork Commuter rail network, and position us well to move forward with other rail projects under the Cork Metropolitan Area Transport Strategy, including the critical delivery of new stations."

Alstom's Smartlock Interlocking System: A Foundation for Safety and Efficiency

At the core of this transformative initiative is Alstom's

Smartlock CBI system. This state-of-the-art technology will serve as the project's primary foundation, offering a safe, simplified, and maintenance-friendly solution. By directly interfacing with axle counters and trackside objects through SmartIO, the Smartlock system eliminates the need for intermediate relays, ensuring a robust, efficient, and streamlined operation.

ETCS: Ensuring Continuous Train Protection and Efficiency

In addition to Smartlock interlocking, the project will also feature the European Train Control System (ETCS) Level 1 trackside technology. ETCS is a train protection system that guarantees enhanced safety, efficiency, and reliability throughout the Greater Cork area. The implementation of ETCS further strengthens the commitment to safety and ensures a smooth, secure, and eco-friendly rail network.

Revolutionising Passenger Journeys and Sustainable Transport Solutions

The combined power of Smartlock and ETCS will pave the way for a remarkable transformation of passenger journeys on key commuter routes within the Cork area and is able to be expanded across the entire rail network. Alstom remains committed to delivering sustainable transport solutions and contributing positively to Ireland, its people, and the communities served. Emphasising sustainability and the environment, the CACR project aligns with Alstom's vision for a cleaner and more sustainable tomorrow.

Ireland

Alstom to provide new state-of-the-art train-charging infrastructure for Irish Rail (IE) in Drogheda, Ireland

Alstom has announced that it has been awarded a contract to provide a charging facility for Irish Rail's new Battery Electric Multiple Unit (BEMU) trains that will operate between Drogheda, Dublin City Centre and beyond.

The fast-charging infrastructure on two platforms and one siding at Drogheda will be installed by end of 2024 to enable new battery-electric DART+ trains that will enter service in 2025, to operate to and from Drogheda in advance of planned electrification of the line, and to be recharged during service turnaround at Drogheda.

"Alstom is pleased to partner with Irish Rail in delivering the new state-of-the-art BEMU's charging facility. Projects such as this will deliver social and economic benefits to Irish Rail passengers and Alstom is proud to be playing a part in the first project of its kind in Ireland and the UK." said Piers Wood,

Managing Director of Alstom in Ireland.

"This investment will allow us to accelerate the benefits of DART+ to customers on the Drogheda commuter route, with a brand-new fleet and extra capacity to be provided in just two years' time." said Jim Made, CEO of Irish Rail (IE).

The infrastructure will include a medium voltage connection to ESB (the electricity network operator) and a traction substation converting electricity to the voltage suitable for charging the trains. The substation will be equipped with an energy storage element which enables integration with the ESB network and enhances availability of the charging system. The substation will provide a controlled current to trains stabled on the platforms in Drogheda Station, for recharging their on-board batteries through an overhead rigid catenary system and the pantographs.

Alstom has won a ten-year framework agreement with Irish Rail for up to 750 new X'trapolis commuter rail cars for Ireland's DART network, with firm orders for 37 five-car X'trapolis trains including a 15-year support services contract. 31 of the ordered trains are battery-electric multiple units (BEMUs) while six are electric multiple units. The new trains will deliver more capacity and decarbonisation benefits to the local community of Greater Dublin.

DART+ is the transformative programme that will ensure train travel is at the heart of Ireland's sustainable transport network. Funded under the National Development Plan by the National Transport

Authority, DART+ is an investment that will double the capacity and treble the electrification of the Greater Dublin Area

network, facilitating sustainable mobility and development to enhance quality of life in the capital and its surrounding counties.





Alstom has successfully delivered the first trainset for the Bhopal-Indore metro project to Madhya Pradesh Metro Rail Corporation Limited (MPMRCL). Built in record time of fourteen and a half months from its Notice To Proceed (NTP), this trainset will be deployed to Indore, which is set to be operational from April 2024. The mock-up car was unveiled at Smart City Park, Bhopal on August 26th 2023, by Hon'ble Chief Minister of Madhya Pradesh in the presence of MPMRCL, the General Consultant and Alstom.

The second trainset, expected to be delivered by September 20th, will be deployed to Bhopal. These ultramodern, light-weight trains will operate at a top speed of 80 km/h, across the 31 km line in Bhopal with 30 stations and the 31.5 km line in Indore with 29 stations. 27 of the 3 car configuration trainsets, will be for Bhopal while 25 trainsets will be for Indore. The trains have a 50-passenger seating & 300 standing capacity.

Commenting on the delivery update, Oliver Loison, Managing Director, Alstom India said, "It is a proud moment for us to deliver the first trainset for the Bhopal-Indore metro project in advance. Bhopal and Indore has been recognised as a smart city in India, and the addition of metro will modernise the city infrastructure notably. These trains will ensure safe, reliable, efficient, and affordable mass transport system, while also promoting economic activity. Alstom is India's long-standing partner in the journey towards sustainable mobility and we are looking forward to further strengthen this partnership by redefining the mass transportation needs of Madhya Pradesh."

Under the 'Make in India' campaign, the Bhopal-Indore Metro trainsets are being manufactured 100% indigenously at Alstom's state-of-the-art rolling stock manufacturing facility at Savli, Gujarat. As a part of the contract awarded in July 2022,

Alstom is responsible for the design, manufacturing, supply, installation, test, and commissioning of 52 standard gauge Movia metro passenger trainsets of 3-car configuration each, with 15 years of comprehensive maintenance.

Valued at €387 million (over INR 3200 crores), this order includes installation of latest generation of Communications Based Train Control (CBTC)



signalling system as well as train control and telecommunication systems; each with seven years of comprehensive maintenance.

This is the second such combined order in India for Alstom, after the Agra-Kanpur metro projects.

The Movia metro family offers the latest technology combined with proven and reliable components, and have been operational in numerous global cities, including London, Delhi, Stockholm, and Singapore.

These air-conditioned cars are developed with a strong emphasis on eco-friendly design to eliminate hazardous substances providing a safer environment for passengers. The trains are powered with modern energy efficient propulsion systems with regenerative braking,

making them a sustainable alternative to other modes of transport, thus reducing energy consumption.

Features such as ambient lighting and smart light solutions further help in energy saving. Train Control and Management System (TCMS) has been adopted with an automatic track inspection system embedded to ensure error free and highspeed data transmission. Highest standards of safety and security have been ensured with continuous CCTV surveillance and a direct communication channel with the train operator and the control centre, in case of distress.

The intelligent CCTV features also include unattended object identification and empty train detection (passenger counting in Emergency evacuation). The trains also have dedicated wheelchair space for specially abled persons.

Alstom India has a rich legacy of successfully delivering world-class metro trains for major cities, including Delhi, Chennai, Mumbai, Lucknow, Kochi in India, as well Sydney, Queensland, and Montreal. The company is currently manufacturing metro trains for Agra-Kanpur, and Mumbai Metro Line 3, and modern trainsets for India's first semi high-speed Delhi-Meerut RRTS project.

Photo: The first trainset delivered for the Bhopal-Indore metro rail project. ©Alstom

Serbia



On the Fast Track: European Loc Pool awaiting EuroDual Homologation in the Balkan countries

European Loc Pool (ELP) proudly announces the successful completion of test drives with the EuroDual No. 90802159246-8 locomotive in Slovenia, Croatia, and Serbia. Throughout June and July 2023, these test runs were conducted to evaluate the locomotive's compatibility with the local infrastructure and adherence to safety regulations.

The EuroDual 246, originally designated for the German market, underwent tailored modifications to meet the unique operating requirements in the Balkans. Additionally, it received a special design, tailor-made for the seamless operation of the EuroDual across the Balkan Peninsula.

The EuroDual locomotive embarked on a series of successful test drives, showcasing its versatility and adaptability for the demanding Balkan region.

Commencing on June 18th, 2023, at the Jesenice border station, the locomotive underwent a comprehensive static compatibility assessment by both the Slovenian and Croatian Designed Bodies (DeBo's). After receiving their approval reports, the eagerly awaited first test drive kicked off from the Zagreb Ranžirni kolodvor marshalling yard.

The testing route spanned from Zagreb to Novska and Okučani before concluding back in Zagreb. This line is equipped with ETCS thus both the class A system (ETCS) and the class B system (PZB) were tested, as well as the dynamic transition between the two systems.

The locomotive drove with its own traction, without load, at a maximum speed of 120 km/h. Both its diesel traction (CAT C175 Engine, 2.8 MW, Stage V, HVO ready) and electric traction (6.2MW, 25kV AC) with a specially adapted 1600mm wide pantograph, were tested, including dynamic transitions between the two modes.

As part of the Common Safety Method (CSM), a comprehensive compatibility test with infrastructure detection systems, especially at railway crossings, was conducted over a test run of more than 250 km. Additionally, a successful compatibility test with the local GSM-R network was carried out.

After successfully passing the required tests in Croatia, the EuroDual 246 proceeded to Slovenia for additional testing, exclusively in diesel traction, over the course of three days. Departing each morning from Ljubljana Central Station, the locomotive covered routes in directions Koper, Jesenice, and Zidani Most. The testing rigorously examined safety systems such as ETCS and PZB, along with compatibility with the local infrastructure and GSM-R network.

Following the successful completion of tests in Slovenia and Croatia, the EuroDual was transported to Serbia. As Serbia is not an EU member state, the approval process followed the national legislation of the Republic of Serbia. Prior to entering Serbia, the locomotive was exported from the European Union, with Rail Cargo Carrier and Kombinovani Prevoz handling the process expertly. The compatibility tests in Serbia occurred on July 4th, 2023, during which the local infrastructure (Direkcija za železnicu) temporarily blocked the Sremska Mitrovica – Ruma – Golubinci line for the tests. Covering over 120 km, the locomotive underwent rigorous testing at the highest permitted speed on this line, 100 km/h, in both diesel and electric traction. Following the test, the locomotive successfully met all prescribed parameters and returned to

Sremska Mitrovica, marking a successful completion of the test run.

As part of the Balkan test runs, various representatives from major railway carriers operating in Serbia, Montenegro, Croatia, Romania, and Bulgaria inspected the EuroDual locomotive at an European Loc Pool commercial event. Notably, some representatives travelled over 700 km to witness this unique locomotive firsthand!

The EuroDual received special praise for its ability to replace double traction and shunting locomotives for first-and last-mile operations, along with its impressive 50,000 km maintenance interval. The special features of the EuroDual allow carriers to optimize their current production concepts and focus on their core business. To further

support the successful operation in the Balkans, ELP offers full-service leasing of these locomotives with a care-free maintenance package in all countries of operation.

The approval process in the Balkan is now entering the administrative phase. Approval in Serbia is expected by the end of summer 2023, in Slovenia and Croatia by the end of 2023.



Kazakhstan

Alstom inaugurated first bogie centre in Kazakhstan to produce and maintain bogies for all types of railway vehicles

Alstom has inaugurated its first bogie centre in Astana, Kazakhstan, to produce and maintain bogies for all types of railway vehicles throughout their entire lifecycle; this new centre comprises an impressive total area of more than 8,000m2. In the framework of Alstom's development plan in Kazakhstan, Alstom invested over €15 million in creation of the bogie centre and has opened more than 100 jobs locally.

Alstom prioritises optimizing the total cost of ownership for customers through measures such as extended component lifetimes, efficient maintenance plans, and advanced condition-based maintenance features for maximum availability. Alstom bogies are highly reliable and designed to withstand different environmental and climatic conditions and 98% recyclable. The bogie centre combines original equipment manufacturer knowledge and technology with product innovations.

Alstom covers various service needs, bringing bogies and their components back to impeccable condition through repairs and overhauls, lifecycle and technical solutions management. The bogie centre is capable to overhaul bogie subcomponents which includes wheelset and dampers repair, 3D measuring, non-destructive inspection, wheelsets and motors testing, and other related activities supported by digital manufacturing process. Moreover, the facility is qualified to maintain non-Alstom railway components as well.

“This state-of-the-art facility has been established as a result of Alstom's industrialisation development in Kazakhstan. Our bogie centre plays a crucial role in providing full maintenance for Alstom freight and passenger locomotives over a 25-year period. With full range of innovative equipment and services, we are happy to support Kazakhstan's mobility as a trusted partner”, said Kanat Alpysbayev, Managing Director in Western and Central Asia.

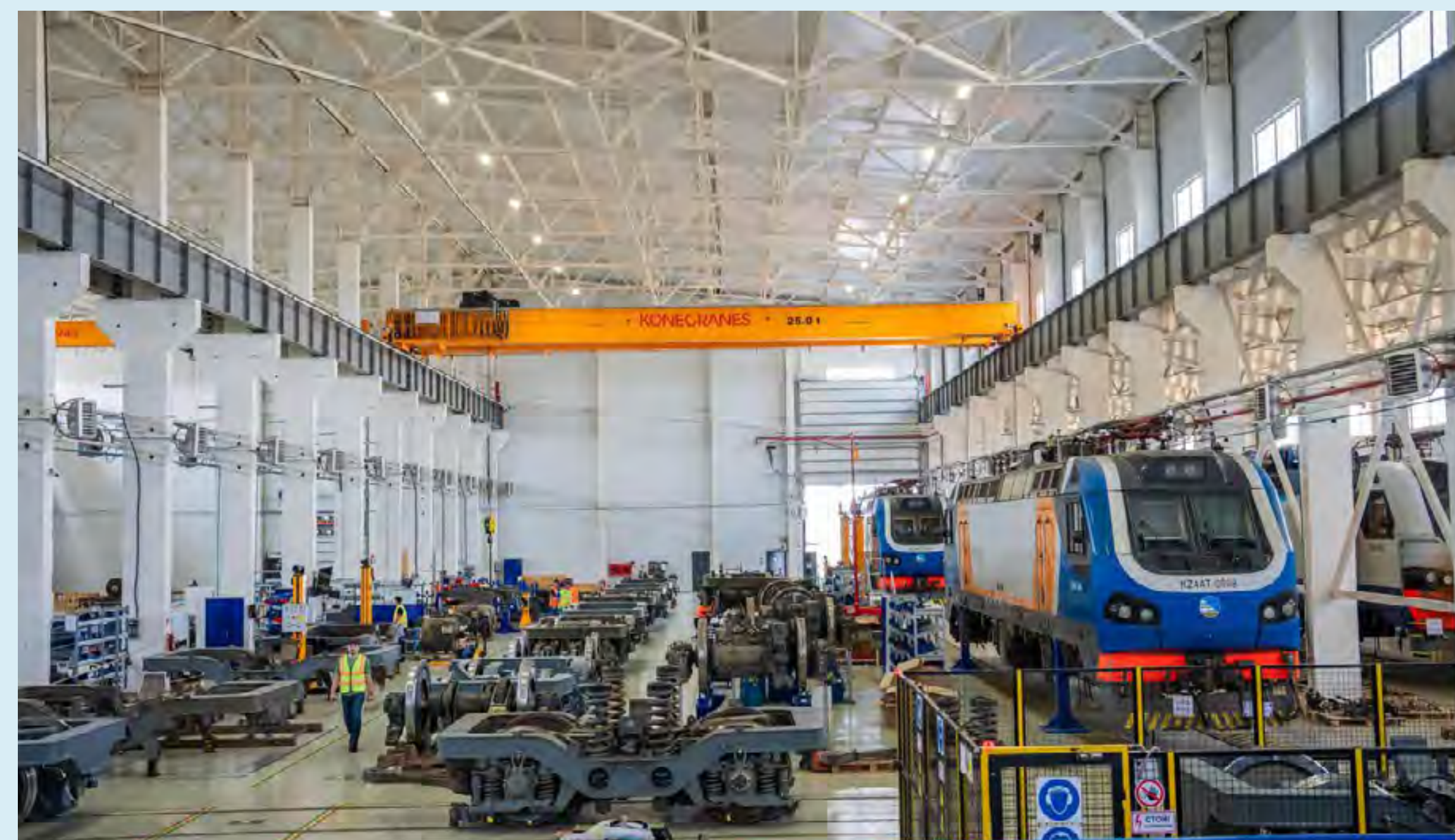
As part of its Flexx bogies offering, Alstom proposes the widest range of products, catering various rail transportation needs, from light rail to high-speed trains. Through continuous investment in research & development, Alstom's bogies show high reliability, optimised total cost of ownership, and result in improved comfort for passengers. Alstom also offers Flexx Consult services, including the wheel-rail interface study to create the optimal interface between wheel and rail profiles, resulting in improved performance and reduced life cycle cost for both, wheel and rail.

Alstom has been operating in Kazakhstan since 2010 and has established a significant industrial base with over 1,000 employees working to address national mobility's needs and modernisation of the country's railway. Today, Alstom's footprint spans across 11 sites in 6 cities throughout the country: two production plants: Electric Locomotive Assembly Plant (EKZ) in Astana for the production of electric locomotives

and JV KazElectroPrivod (KEP) in Almaty for the production of point machines; four service depots to maintain locomotives in Astana, Almaty, Arys and Shu, two troubleshooting areas located in Tobol and Ekibastuz. Repair centre, Bogie centre and Corporate office

are located in Astana.

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Spain

Celebrating our long-term partnership with Stadler!

What a great reason to celebrate! With the purchase of a further 15 Stadler EURO6000 locomotives, Alpha Trains have reached an important milestone in the history of their company. In total, they now have more than 1000 locomotives and multiple units in the fleet.

This last order EURO6000 locomotives takes the total numbers of Stadler locomotives owned by Alpha Trains to a remarkable number of 121 and together with 162 Stadler multiple train reflects our enduring and successful relationship with Stadler. For this reason, the Alpha Trains Locomotive team paid a visit to the Stadler factory in Valencia and handed over an illustration of a EURO6000 locomotive by the Cologne artist Ulrike Selders.

Alpha Trains partnership with Stadler dates back to 2007 when they first ordered the EURO4000 locomotives. In 2018, Alpha Trains Group ordered the first EURO4001 locomotives and became in 2019 the inaugural customer for the EURO6000. With the additional 15 EURO6000 locomotives, Alpha Trains' total asset count to 121 Stadler locomotives. Alpha Trains would like to express their sincere thanks to Stadler Valencia for their continued support

and co-operation over the years. Together, they will continue to deliver exceptional rail solutions that meet the demands of modern transportation.

On the photo (from left to right):

- Pablo Juan (Area Sales Manager Stadler Valencia)
- Arturo González Bermejo (Regional Commercial Manager, Alpha Trains)
- Iñigo Parra (CEO Stadler Valencia)
- Fernando Pérez (CEO Alpha Trains),
- Hedwige Van de Wyer (Legal Director, Alpha Trains)
- Rafael Montesinos (Director Jurídico-Secretario del Consejo, Stadler Valencia)
- Mariano Marti (Director Comercial Locomotoras, Stadler Valencia)
- Román Ortega Blázquez (Director Ventas, Stadler Valencia)



From the Archives

OBB 2-8-2T No. 93.1446 seen at a level crossing whilst working a train from Stammersdorf to Gross Schweinbarth on April 2nd 1975. *John Sloane*

Austria



From the Archives

Czech Republic

Ceske Drahy Class 749.006 waits to depart from Brno on July 6th 2008.

John Sloane



From the Archives

SNCF BB No. 7330 emerges from the tunnel into Vienne station with a southbound service on April 14th 1992. *John Sloane*

France



From the Archives

PKP Cargo Class 189.804 runs light through Hamburg Harburg station on July 12th 2013. *John Sloane*

Germany



From the Archives

DB Class 211.020 seen on a trip freight at Sunching on July 24th 1989.

Mark Enderby

Germany



From the Archives

Germany

Euro Cargo Rail Class 247.053 waits in the loop at Weidenbach on April 11th 2011. *Mark Enderby*



From the Archives

FS D445-1113 is seen ready to leave Florence SNM station for Siena on September 10th 2017. *John Sloane*

Italy



From the Archives

A quiet moment in the roundhouse at Palermo, Sicily, with railcar No. 772.3332 and two Class 343 diesels on March 26th 1979. *John Sloane*

Italy



From the Archives

PR Alco Class ALU24 Co-Co diesel No. 4619 approaches it's call at Multan with an express bound for Karachi on February 18th 1980. *John Sloane*

Pakistan



From the Archives

South Africa

At the De Arr loco shed in 1982, SAR Class 25NCs Nos. 3515, 3473 and 3428 are being prepared by freight duties.
Brian Dobbs



From the Archives

TCDD 0-6-2T No. 3411 built by Robert Stephenson in 1911 stands at Izmir on August 20th 1969. *John Sloane*

Turkey 



From the Archives

Ukraine

Skoda built ChS2-335 at the head of a westbound service to Kiev at Debalchevo on May 3rd 1993.

John Sloane

