



**Railtalk** Magazine *Xtra*

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## Content

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## Submissions & Contributions

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

### Photographic Contributions

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

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

## Welcome to Issue 175Xtra

Another month of lockdown here in the UK as is the case in many countries throughout the world, however the end is in sight, hopefully, as cases of COVID start to decline in the UK. In the meantime, we once again say many thanks to our contributors who can get out and about around the world for the photos sent in. Also a huge thanks to those who have raided the memory banks and sent in some truly memorable archive photos. However the railway world hasn't stood still during this pandemic, with even more new locos and stock ordered, consigning older vehicles to scrap. Lets just hope we can get out and see some of them before its too late.

We start this month in the UK where HS2 work rolls on with what will be the UK's longest railway bridge, the Colne Valley Viaduct. Ground engineers recently sank the first of almost 300 piles that will make up the foundations of the bridge. Once completed, the viaduct will carry Britain's new high-speed railway for 3.4km over a number of lakes and waterways to the northwest of London. The Colne Valley Viaduct will be almost 1km longer than the Forth Rail Bridge in Scotland and the trains crossing it will be travelling at speeds of up to 200mph (320km/h). The viaduct will be around 10m above ground and be supported by 56 piers. Over the coming year Align JV engineers will construct a total of 292 piles under the ground, which will support the viaduct's piers. Some of these piles will go up to 55m into the ground. Sitting atop them will be a concrete pile cap to support the pier. The bridge structure will weigh 6,000 tons. Align JV won't hammer the piles into the ground – it will bore holes and backfill them to create the pile.

With my thoughts on modernisation, then there could be a huge amount of change in America where new US President Joe Biden has announced how it plans to invest in infrastructure, including rail, in his administration's American Jobs Plan, which will see a 2 trillion USD investment over the next eight years, equating to roughly 1 percent of GDP. In the White House statement the administration said that despite the United States being the wealthiest country in the world, it ranked 13th in

terms of its infrastructure. That is why 621 billion USD are to go towards infrastructure spending dedicated to rail systems, as well as roads, bridges and ports. Creating jobs and investing in improving the country's infrastructure will see funds going to the rail industry: 85 billion USD to modernise public transit, incl. replacing rail cars, repairing stations and expanding rail into new communities. The Department of Transportation estimates that there is a repair backlog for 5,000 rail cars, 200 stations, and thousands of miles of track, signals and power systems. This investment is a doubling of federal funding for public transit and will help work off the repair backlog. And 80 billion USD to address Amtrak's repair backlog. In the US, rail does not have a multi-year funding stream that would pay for deferred maintenance, improvements to existing rail corridors, or the construction of new lines. Rail projects are already drawn up that are in need of funding. These would deliver new intercity services. The 80 billion USD will go towards Amtrak's repair backlog, modernising the Northeast Corridor, improving existing corridors and connecting new city pairs. The funds would also contribute to improving grant and loan programmes that address passenger and freight rail safety, efficiency and electrification.

And also in America, Canadian Pacific and Kansas City Southern, two of the seven North American Class 1 railroads, have announced that they have entered into a merger agreement under which CP would acquire KCS in a stock and cash transaction of around 29 billion USD. The new railroad would be the first whose network would connect Canada, the United States and Mexico. Canadian Pacific's network largely runs east-west across southern Canada and the northern US with a route running down to Kansas City, while Kansas City Southern's network runs southwards from Kansas City into Mississippi, Louisiana, Texas and Mexico, meaning that these two railroads have no route overlap.

Until next month

**David**

### This Page

TXLOGISTIK Class 193.607-7 hauls a rake of Sdggmrss cars loaded with semi-trailers from Verona Quadrante Europe (I) to Wanne-Eickel on February 25th.

*Erik de Zeeuw*

### Front Cover

RFO No. 683 (BR Class 08 derivative) is seen hauling a steel train in Amsterdam Houtrakpolder on February 25th. *Mathijs Kok*







On March 15th, three German coaches were transported from the Dutch Railway Museum to Germany on their way back after they had been part of an exhibition. NSM (Dutch Railway Museum) No. 1768, Mitropawagon uit 1961 (D-DB 61 80 88-90 103-7), Panoramawagon uit 1962 (D-DSG 56 80 81-71 002-8) and Restaurationwagon Rheingold uit 1962 (D-DSG 56 80 88-71 102-9) are seen passing the railway crossing in Bathmen (Netherlands) whilst heading to Bad Bentheim (Germany). *Andre Pronk*

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## With Thanks

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Two of Transperth's 'B' series EMUs race the traffic on the freeway as they negotiate the 'S' bend at South Perth on a Mandurah to Perth service. Shortly the train will dive underground as it approaches central Perth. *Colin Gildersleve*







CBH Group's Nos. CBH010 and CBH003 round the bend at Queens Park on the outskirts of Perth and heads for the Kwinana port with loaded grain for export. *Colin Gildersleve*











# Siemens Mobility wins multiple contracts to upgrade and modernize Sydney rail network

Siemens Mobility has been awarded two contracts worth around AU \$190M by the New South Wales (NSW) Government in Australia to significantly upgrade the rail network in metropolitan Sydney, one of the busiest networks in the southern hemisphere.

This work will improve the overall efficiency and capacity of the rail network. The total contract consists of two key packages, including the introduction of a new Traffic Management System (TMS) along with the upgrading of the Sydney Trains’ network conventional signalling to a digital ETCS-L2 train control system.

This work is part of the NSW Government’s broader Digital Systems Program, a ‘once in a generation change’ to replace legacy signalling and train control technologies with modern, internationally proven, intelligent systems. The systems are due to be available for operation in 2023.

“Siemens Mobility is delighted to have been selected to deliver the services that will modernize and optimize the Sydney rail network. Our state-of-the-art traffic management and signalling technology will augment operations throughout the network by increasing service reliability and availability, which will enhance the passenger experience,” said Michael Peter, CEO of Siemens Mobility. “This important project further underscores our leading position in the field for delivering automated signalling systems and expands our growing footprint in Australia.”

The TMS will be integrated with the new European Train Control System (ETCS) Level 2 technology, which is today’s leading technology running on some of the best and most efficient rail networks worldwide.

The Digital Systems Program upgrades will enable more frequent and reliable services and increase capacity to allow 24 trains to operate during peak hours and up to 30 trains per hour for recovery from disruptions.

The other key project element will include implementation of Automatic Train Operation (ATO) that assists drivers by providing more frequent, reliable, and consistent train journeys.

Train drivers will remain in control but will be assisted in improving operations and reducing journey times, which subsequently benefits passengers.

A crucial role of the state-of-the-art TMS solution, will be to continually monitor the position of all trains; helping keep train services running as planned and assist with responses to incidents. The TMS will be operated from the Rail Operations Centre and will work alongside other systems used by Sydney Trains to control train operations.





## ROLA: “We’re doubling our Wörgl - Trento services:

Starting on April 6th, the Rail Cargo Group are ramping up their ROLA services on the Wörgl - Trento route. This will mean more trucks travelling by rail CO2-neutral over the Brenner Pass, which makes a significant contribution to relieving the burden of transit traffic in the vulnerable Alpine region.

As a reliable partner of the Province of Tyrol, RCG provide rapid, efficient and, above all, environmentally friendly shift to rail with the Rolling Road (ROLA). As a result of the Corona pandemic and the associated official restrictions, the Wörgl-Trento connection had to be greatly reduced and at times even completely stopped last year.

Now the ROLA to Italy is picking up speed again: starting on April 6th, the service on the Brenner route between Wörgl and Trento will be running again with one twinset a day. This means that six round trips are available for the transport industry on this route, which is double the current offer. What’s more, this offer can be expanded even further if there is sufficient demand.

### Health and safety are paramount

RCG have extensive health and safety precautions in place in order to protect the truck drivers, staff and everyone involved in the ROLA system to the greatest possible extent. RCG monitor occupancy levels in the accompanying carriages to guarantee social distance on the trains and minimise the risk of infection. It is mandatory to wear FFP2 masks and increased health protection and disinfection measures are also in place. For example, the most important points of contact in the accompanying carriage such as toilet facilities, cabins, tables, and guiderails are disinfected every time the train turns around.



## Eco-friendly rail transport for waste

The ÖBB Rail Cargo Group has many years of experience in waste transportation and takes care of around 12 percent of Austria’s waste every year. This avoids over 80,000 tonnes of CO2 emissions and about 460,000 truck journeys.

Right now, the ÖBB RCG transports around 8 million tonnes – 12 percent – of all the waste produced in Austria on the eco-friendly railways. There’s a lot of scope for more, however. In 2018, Austria produced a total of 66 million tonnes of waste. Rail-borne types of waste like excavation material, building and demolition waste, household waste like ash and clinker are very well suited to rail freight transport on account of their mass, weight and features, and also how they are loaded and unloaded.

### Innovative transport services

The ÖBB Rail Cargo Group’s waste transportation options include everything from classic freight wagons to innovative container solutions for customised services. The ÖBB RCG’s MOBILER system is one of the ways the company is combining eco-friendly rail with flexible road transport. This hydraulic lifting device provides fast and simple transshipment with special MOBILER containers.

No cranes or industrial sidings are needed, so the system can be easily connected to industrial sites that don’t have any railway sidings. One million tonnes of goods have already been transported in 1,000 eco-friendly MOBILER containers, making a significant contribution to achieving our climate and environmental targets.





Austria

## Siemens Mobility Austria invests 12 million in Vienna-Simmering plant

Siemens Mobility is investing twelve million euros in the further modernization of its long-established production site in Vienna-Simmering. Together with Vienna's City Economic Councillor Peter Hanke, the groundbreaking ceremony for the construction project took place on Monday, March 1st.

The investment will focus on the construction of a new train commissioning hall, the expansion of digitalized production, and the optimization of production workflows. This will further increase the competitiveness of the site and secure local jobs and local value creation. Passenger coaches and metro trains are built at the historic Siemens Mobility plant, for example

the new night trains for ÖBB or metro trains for Vienna, Munich, Riyadh or Bangkok. ÖBB's popular Railjets were also manufactured here. At the Vienna plant, Siemens Mobility employs about 1,200 people, manufactures about 450 rail vehicles per year and currently trains a total of 88 apprentices.





## The Italian company CLF has ordered 10 741.7 series locomotives from CZ LOKO

CZ LOKO and the Italian company Costruzioni Linee Ferroviarie spa (CLF), which specializes in the construction and maintenance of lines, have concluded a framework contract for the supply of a total of 10 locomotives of the 741.7 series.

In the first phase, two new locomotives will be delivered by the end of 2021. The remaining eight will be upgrades to the existing 740 series locomotives used by CLF for track construction and maintenance. Maintenance and service will be provided by CZ LOKO Italia.

The four-axle locomotives of the 741.7 series are designed for station shunting and for demanding operation on industrial sidings, such as metallurgical, mining or petrochemical with the possibility of line service. The drive is provided by a combustion engine CAT 3508 C with an output of 1,000 kW. In Italy, a total of 13 741.7 series locomotives are in operation at five operators.

The locomotives will be further equipped with the European Train Control System, the supplier of which is ČD Telematika as and AŽD Praha sro.

Photo: ©CZ Loko



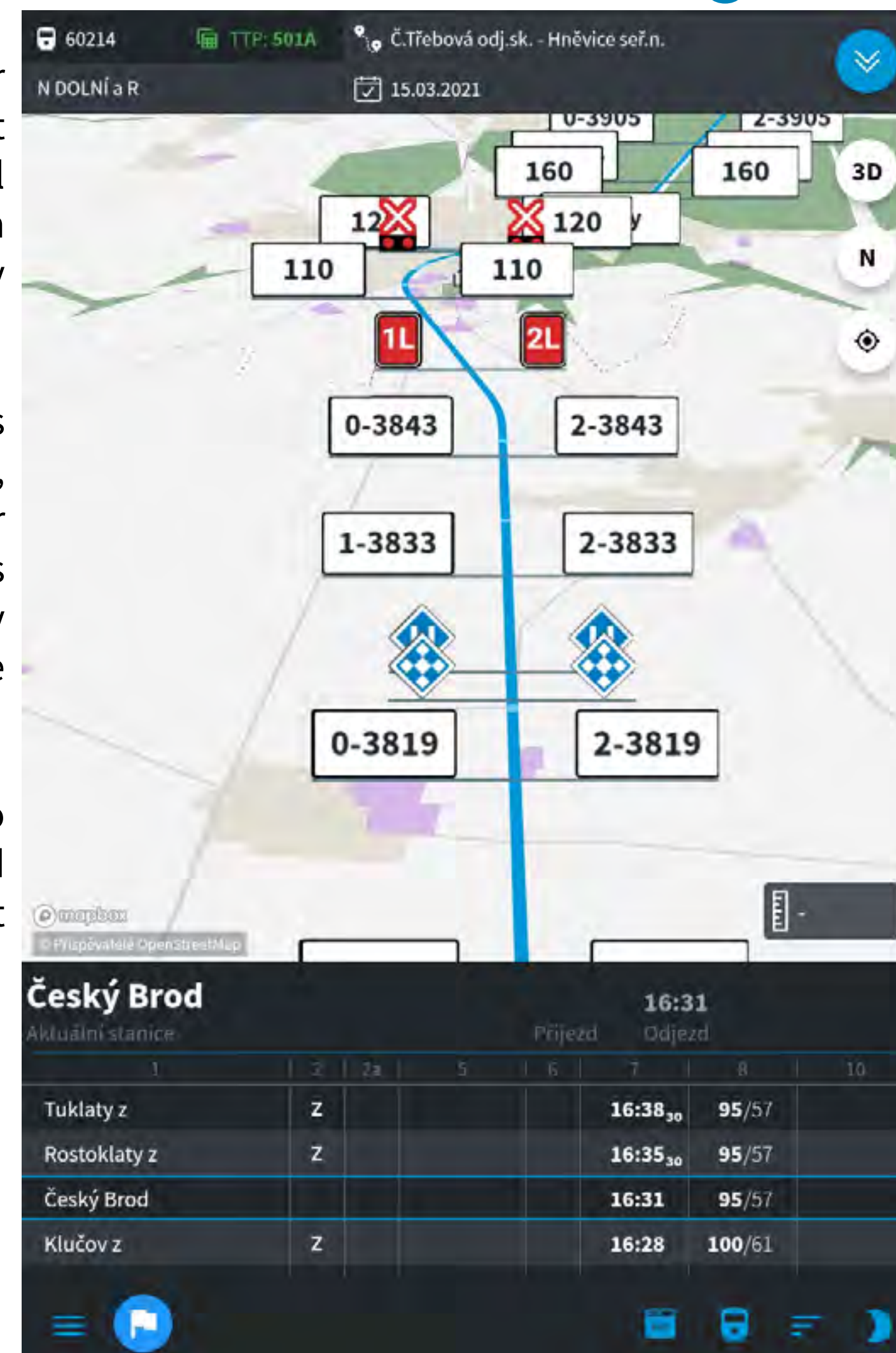
## ČD Cargo has started testing a new application for train drivers

ČD Cargo has unofficially started testing a new application for train drivers. It will inform them via their tablet about the current track conditions at the places of travel of their train. Drivers will soon receive a long-awaited tool that combines information from tabular timetables and digitized track conditions tables issued by the Railway Administration.

As part of the DISAF project (Digital SAFety First), ČD Cargo was selected for pilot verification of the application. During the year, the parent company Czech Railways will also take part. All their drivers should have the application available by the end of this year. From the user's point of view, the application works similarly to car navigation - the driver will be notified of changes that have occurred on the lines.

As part of the presentation ride, the application was presented to representatives of the Railway Administration, Czech Railways and the carrier Metrans Rail. All participants agreed that its deployment will mean a significant increase in safety on the Czech tracks.

Photos: ©CD Cargo





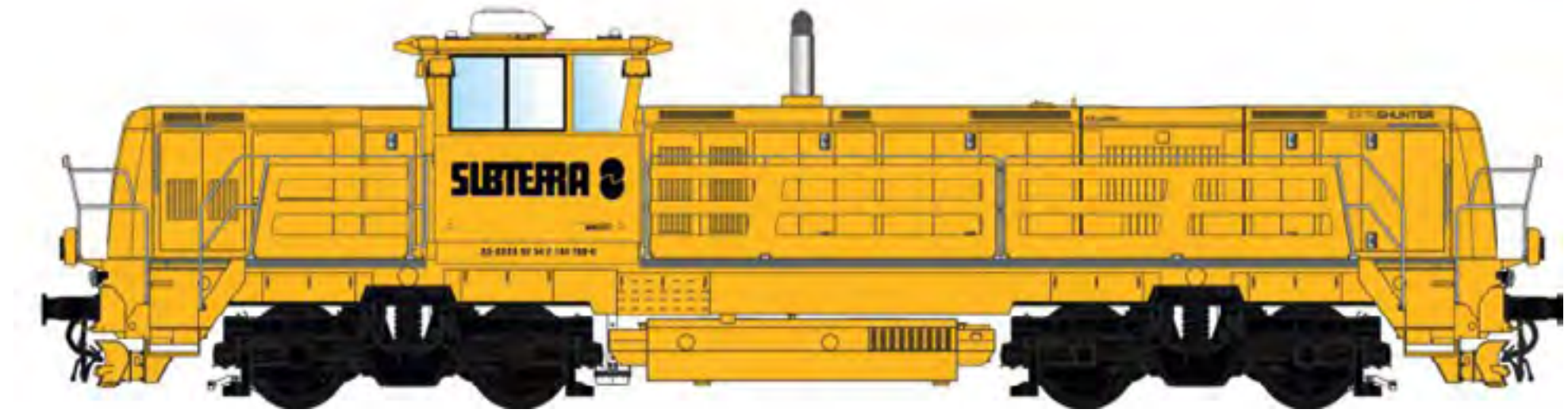
## Subterra will use EffiShunter from CZ LOKO for railway constructions

The joint-stock company Subterra will become the first Czech private operator of an EffiShunter 1000 locomotive produced by CZ LOKO equipped with the ETCS system. The contract for its delivery was signed by representatives of both companies. The locomotive will be used mainly for the transport of building materials and track mechanization. In addition to increasing the efficiency of operation, the main reason for acquiring a brand new locomotive is mainly equipped with a single European ETCS interlocking, which will be a necessity for operation on the main railway corridors from 2025.

“By purchasing a locomotive, we will achieve greater independence and flexibility. This will allow us to better plan and coordinate activities on our construction sites in the Czech Republic and Slovakia. We will increase the work efficiency of our entire railway construction division and qualitatively move it one step higher again, “ said Jaroslav Čížinský, Production and Technical Director of Subterra. “ When making a decision, quite logically, the choice fell on the domestic and established manufacturer, which also gives us the assurance of trouble-free service and maintenance. This is the first step for further possible cooperation, “he added.

Subterra is a multidisciplinary construction company with a 55-year tradition, belonging to the Metrostav Group. Railway construction is also one of the fields in which it is increasingly active. Subterra’s track mechanization is undergoing constant renewal to replicate current industry trends. While until now the rail transport of building materials and the transport of equipment have been handled by suppliers or leases, the purchase of the EffiShunter 1000 locomotive will provide the company with greater independence and a long-term perspective.

“We are very pleased that Subterra has expanded the portfolio of our domestic customers and we firmly believe that it will be as satisfied as possible with the vehicle. With the locomotive, we would like to supply an extended range of services, especially regular maintenance, troubleshooting, and other, especially online services, which are slowly but surely becoming a trend on the railways, “ says Jan Kutálek, Member of the Board and Sales Director of CZ LOKO. It has long been one of the largest manufacturers of locomotives in Europe. The key to maintaining this position remains our own development, the current culmination of which is the EffiShunter 1000 type, which meets



uniform European TSI standards. Thanks to this, almost 50 machines of this type have already been sold. In addition to the Czech Republic, it also runs in Italy, Slovenia, and one locomotive will also be delivered to Sweden next year.

The EffiShunter 1000 type is supplied with an 895 kW CAT C32 internal combustion engine. Power transmission is electric AC / AC. In addition to the unified European ETCS interlocking, the national train interlocking MIREL will also be installed in this case, enabling operation in the Czech Republic and Slovakia. The equipment also includes a camera system. For work in demanding conditions of railway constructions, the vehicle will also be equipped with warning beacons to increase safety. According to the contract, the locomotive with the jubilee number 744.150 will be delivered in the first quarter of 2022. The contract envisages long-term cooperation, including the possibility of purchasing additional machines. An important parameter is the long-term strategy of CZ LOKO to provide customers with a comprehensive portfolio of services, including comprehensive management and renewal of the locomotive fleet.

## ČD Cargo participated in a police exercise

Police officers of the Alien Police Department of the Regional Directorate of the Pilsen Region Police, employees of ČD Cargo and employees of the Railway Administration focused mainly on illegal migration during a joint action at the Vejprnice railway station. The object of their control became an international container train.

The event took place on March 16th, shortly after 1AM, and police officers focused on searching for people wanted or staying illegally in the Czech Republic, on searching for weapons, ammunition, explosives, narcotics or stolen items.

Photo: ©CD Cargo





## ČD Cargo acquires ten new locomotives

Renewal and modernization of the locomotive fleet is one of the priorities of ČD Cargo. “Without modern interoperable locomotives, we are not able to operate on foreign markets,” says the Chairman of the Board of Directors of ČD Cargo Ing. Tomáš Tóth. “Last year’s pandemic year, we provided transport of 4.5 million tons of goods outside the Czech Republic; this year we plan to at least double these volumes. Therefore, in accordance with the concept of sustainability and development of the rolling stock, we decided to purchase other modern multi-system locomotives. Our decision has already been approved by the Supervisory Board, “ explains Tomáš Tóth.

Another reason for acquiring new locomotives is the

need to renew part of the technically obsolete locomotive fleet associated with low operability, insufficient performance for heavy long-distance transport and, in general, the end of life of some vehicle series. Up to ten new interoperable locomotives should be purchased each year in line with the above concept. The ongoing purchase of ten new locomotives is carried out on the basis of a regular tender announced in September last year. The call for tenders addressed 13 potential tenderers from among manufacturers or other providers of locomotives on the European market. The carrier also used its contracting authority profile to address other tenderers. The winner was again Bombardier Transportation GmbH, now part of the Alstom Group, which clearly submitted the most economically advantageous offer.

ČD Cargo already uses two 388 TRAXX 3 MS locomotives as part of the test operation, and the other eight locomotives will gradually arrive by the end of March to expand the test operation. They will be deployed during April, and so far only for performances within the Czech Republic. According to the purchase agreement, the first ten locomotives of this series were to be approved for operation in all neighbouring countries and in Hungary. Unfortunately, the European approval process has still not been completed.” We now see no reason to end our cooperation with Bombardier. The company faced non-compliance with the delivery deadline set out in the contract with all the ensuing consequences. I cannot comment on the details due to confidentiality, but I would like to assure you that the delay was fully compensated

despite the complications caused by the pandemic. There is therefore no reason to end the cooperation “ comments Tomáš Tóth on the purchase and at the same time he adds that “ the delivery of other ten TRAXX 3 MS engines will be completed in 2022. “

Since the beginning of the test operation, the first two third-generation TRAXXes have driven more than 160,000 km at ČD Cargo, without any major problems. The European approval process is nearing completion and during the third quarter of this year, the locomotives, in accordance with the signed addendum to the purchase agreement, should already be used for foreign services.

Photo: ©Martin Chyle













# Alstom to supply double-decker trains for regional transport in Lower Saxony in Germany

Alstom has been selected to supply 34 Coradia Stream High Capacity double-decker EMU trains to Landesnahverkehrsgesellschaft Niedersachsen (LNVG) in Germany. In addition to the delivery of the trains, the contract with a total value of around €760 million also includes the maintenance of the vehicles for 30 years.

Müslüm Yakisan, President of the Alstom DACH region emphasizes: “I am very pleased about the decision of the State of Lower Saxony and LNVG to set an example for sustainable mobility and climate protection with our Coradia Stream. Our modern double-decker train for LNVG is an ideal combination of innovation and passenger comfort.” The order is also an important signal for value creation in the region. Alstom has been contracted to maintain the trains for 30 years, which includes a guarantee for spare parts at all times. “We are building our own service center especially for this order and will thus set an example with regard to environmental protection and energy efficiency.” As of December 2024, the trains will be in service in the so-called Expresskreuz Bremen/Niedersachsen (EBN), which connects Bremen, Hanover, Oldenburg, Wilhelmshaven, Norddeich-Mole, Osnabrück and Bremerhaven.

The Coradia Stream High Capacity double-decker electric multiple unit train has a modular design and is characterized by variable seating capacities in addition to passenger comfort. The 34 new double-decker trains ordered

by LNVG consist of four vehicle units - two driving cars and two center cars each. In addition, 18 more center cars will be delivered to extend the trains to up to six units, depending on passenger volume. In total, the order amounts to 154 vehicle units (68 driving trailers and 86 middle coaches).

The combination of single and double-deck coaches is the hallmark of the Coradia Stream High Capacity. In this way, an optimum is achieved in terms of accessibility, capacity and flexibility. The Coradia Stream High Capacity offers the most comfortable access for passengers with reduced mobility thanks to ramp-free access in the middle carriages. Standardization on the one hand and individual customer solutions, such as expandable bicycle compartments or multi-generation areas on the other, enable a future-oriented vehicle concept. Passengers benefit from an impressive travel experience in the Coradia Stream High Capacity, whether on short or longer journeys.

Photo: ©Coradia Stream for LNVG (for illustrative purposes only).  
Alstom Design & Styling



## Alstom's forward-looking technology making Germany's railways fit for the future

Alstom will install a digital interlocking in Coburg, Germany on behalf of DB Netz AG, a subsidiary of Deutsche Bahn AG (DB), on the Lichtenfels-Coburg-Sonneberg line section in Bavaria and Thuringia to support DB's Digitale Schiene Deutschland programme. Once installed, the technology will begin transmitting rail control information digitally, increasing the line's passenger capacity and reliability while reducing CO2 emissions. Digitalising rail interlockings is one of the key steps in introducing European Train Control (ETCS) in Germany and DB plans to digitalise its interlockings and railway network by 2035 to make the nation's rail lines fit for the future. To support DB's goals, the German government is financing the implementation of new digital interlocking technology on seven regional lines as part of a Coronavirus stimulus package valued at €500 million.

“For Alstom, it is another special milestone to be involved in the digital revolution of the German rail network. We are committed to serving Deutsche Bahn with the latest standards in digital trackside equipment, making rail more reliable, more efficient and fit for a sustainable future in Europe,” said Michael Konias, Head of Digital & Integrated Systems for Alstom in Germany, Austria and Switzerland.

Dr. Kristian Weiland, Head of Digital Rail Germany, Deutsche Bahn AG:  
“We are now in turbo-mode with Digitale Schiene Deutschland. This year,

together with our partner Alstom, we will start digitalising our interlocking in Coburg where rail passengers will benefit from a larger and more reliable rail service.”

By the end of 2023, Alstom will replace the existing interlockings on the Sonneberg-Coburg-Lichtenfels section with a digital interlocking solution. From then, control commands will no longer be transmitted electrically, or even mechanically, but rather from a high-performance fibre optic cable and data network to control elements that monitor vacancy signals, switches, and other information. This new technology will not only meet the most modern communications requirements, but also make the system less susceptible to interruption.

The development of this new interlocking technology has been a key element in DB's digitalization strategy and, during this innovation phase, the project will create a uniform operating system with standardised interfaces between ETCS and digital interlockings. With this in place, rail vehicles and infrastructure will communicate and operate smoothly as part of a digital railway, regardless of the underlying technology or previous equipment provider. Alstom and DB Netz AG also plan to simplify and accelerate processes within the project to support its successful execution.

Alstom is the world leader in ETCS, with projects in 30 countries with its Atlas ERTMS digital signalling solutions allowing trains to run at higher speeds without physical lineside signals. The company is a major supplier of onboard and trackside ETCS equipment representing 70% of the world's onboard rail systems in service and 18,000 kilometres of track worldwide. To date, trains equipped with Alstom's digital onboard signaling technology, including DB's high-speed ICE 3 fleet, have covered more than 250 million kilometers. With its entry into trackside digital control and safety technology in Germany, Alstom is now expanding its signaling portfolio and reinforcing its prominent position in digital mobility solutions in the European market. As part of Germany's Economic Stimulus Package, six other rail infrastructure digitalisation projects are receiving investment funds. For example, the Ansbach - Triesdorf railway line project has been awarded to InoSig GmbH (part of the Alstom Group since 29 January 2021). The high-performance interlocking system uses an internet protocol-based (IP) architecture. With the associated replacement of the old technology with modern technology, an important contribution is being made to increasing the safety of the railway infrastructure as well as its availability. Alstom is ideally positioned to shape the digitalisation of the railway sector with innovative solutions, in Germany and across the globe with around 13,000 employees worldwide dedicated to signalling, smart mobility and cybersecurity.







# Germany

On February 25th, ECR Class 247.059-9 works a train loaded with steel bats from Duisburg Hüttenheim to the Oberhausen West Yard, heading along the Lotharstrasse freight line.

*Erik de Zeeuw*



## Full load, full charge

When DB Cargo Logistics transports batteries and cell modules with made-to-measure rail services, it takes care of everything from planning to execution. In summer 2020, the company's logistics experts started using trains to move batteries, each weighing hundreds of kilos, from Braunschweig to Zwickau, where they are needed at the ID.3 and ID.4 production bases. The future's electric. As more and more carmakers switch to electric-powered models, Volkswagen, too, is focusing its efforts on e-mobility. By 2025, the German automotive giant plans to build and sell over 1.5 million electric-only cars at its main VW brand alone. Production of the first model in this campaign, the ID.3, started at Volkswagen's Zwickau plant at the end of 2019, followed by the ID.4 from August 2020.

One component is essential for both cars: lithium-ion cells. Having initially imported most of these products from Asia by ship, Volkswagen has now formed partnerships with an ever-growing number of European producers, such as LG Chem in the Polish city of Wrocław. The carmaker needed a battery logistics expert to complete its team for this new set-up, so it tasked DB Cargo Logistics with transporting the lithium-ion cells from Poland and other European countries to its plants in Germany. The collaboration between DB Cargo Logistics and the Volkswagen Group's own logistics team dates back to 2017, when the DB Cargo subsidiary started developing a rail-based logistics plan for Volkswagen's battery transports. When the carmaker put the contract out to tender, DB Cargo Logistics was the winner. Andrey Ludwigs, senior project manager for components at DB Cargo Logistics, recalls: "Honest, detailed discussions about rail journey times, costs, proposals and ways to improve environmental performance were at the heart of our work with Volkswagen from the very start. This resulted in a bespoke logistics solution that concentrates above all on sustainability and flexibility – precisely what made it the service of choice for Volkswagen's logistics team."

DB Cargo Logistics has become a pioneer in creating a carbon-neutral supply chain for battery and cell module transportation. "A freight wagon can hold up to 64 tonnes, two and half times more than a lorry. At the end of the ramp-up phase, we will be moving up to 22 wagons a day via the rail network, the equivalent of some 60 lorry-loads. This will make it easier for Volkswagen to reach its sustainability targets," says Ludwigs. From 2021, the carmaker will be able to cut CO2 emissions by some 11,000 tonnes a year.

DB Cargo also impressed Volkswagen with the flexibility of its transport logistics services. Patrick Möhle, Account Manager Sales & Operations Centre at DB Cargo Logistics, says, "We can respond very flexibly to current circumstances and fluctuations in battery requirements at Volkswagen. From the get-go, we were able to offer our client frequent trains while at the same time accommodating changing volumes and expanding the network quickly to handle higher levels of freight."

Speaking of expansion, the railway is likely to play an important role in transporting lithium-ion cells and battery systems in the future. "At the moment, companies are moving relatively little freight, but we expect substantial growth in the coming months," says Ludwigs. Möhle adds, "The switch to electric mobility is reshaping established supply systems in Europe. Our network solution for Volkswagen, which directly integrates battery module manufacturers into our Automotive Railnet, is an important first step in this process. However, customers' needs will keep changing in these turbulent times, so our work is far from over – if anything, it is just beginning."



The ramp-up phase has seen 25 single wagonloads of lithium-ion battery cells a week travel from Poland to Germany since last year. Their destination is Volkswagen's components plant in Braunschweig, where individual cell modules, each weighing some 30 kilos, are assembled to form the battery systems that power the cars in the VW ID. family. With the expansion of production in 2021, volumes are expected to rise to over 50 single wagons in each direction every week.

"Focusing on trains as a means of transporting our battery modules shows that we at the Volkswagen Group see the railway as an important element in our high-performance, sustainable logistics network of the future." Dr Ansgar Hermes, Head of Transport Networks for Material Logistics, Volkswagen Konzernlogistik GmbH & Co. OHG  
Connections from Braunschweig to Zwickau started in summer 2020, and five trains a week now supply the ID.3 and ID.4 production sites with battery systems. In addition, DB Cargo Logistics is planning to expand its Europe-wide network for Original Equipment Manufacturer (OEM) and battery producers. One thing is already clear: throughout central Europe, our Automotive Railnet delivers outstanding flexibility, short journey times and high reliability for freight transport. This is down to several factors, such as overnight connections between suppliers and automotive plants. The new services for battery manufacturers and cell suppliers will improve this network even further.



PKP CARGO Vectron MS Class 370.021-5 (EU46-509) is seen with the CHINA RAILWAY Express from Neuss to China. This new rail service takes an approximate 9.400 km route through Kazakhstan, Russia, Belarus, and Lithuania to Kaliningrad Oblast, a part of the Russian Federation on the south coast of the Baltic Sea, before entering the European Union via the Mamonovo-Braniewo crossing. The final stretch of the route crosses Poland into Germany to the port city of Hamburg and Neuss. *Erik de Zeeuw*



## Boards of gypsum? DB Cargo ships 'em!

Even in times of crisis, we keep transporting goods from door to door sustainably, competitively and reliably, whether or not our customers have their own rail siding. DB Cargo transports gypsum fibre boards from Orejo in Spain to Vamdrup in Denmark for James Hardie, the world's leading manufacturer of fibre cement building materials. Our Danish joint partner H. Daugaard distributes these coveted building materials throughout Scandinavia. Even when crisis comes knocking, construction keeps going. It keeps getting more sustainable, too. In Orejo, Spain, James Hardie manufactures panels out of gypsum and recycled cellulose fibres. The two natural raw materials are mixed, water is added and, without any further binders, the mixture is flattened into stable boards under high pressure and dried.

In 2020, the global company transported 47,000 tonnes of these gypsum fibre boards by rail from Spain to Denmark. Despite the coronavirus and the lockdown, the company saw gains of 25% over the previous year, owing

to far-sighted planning and shrewd warehousing. Given the brisk demand these building materials enjoy even in crisis times, a reliable, competitive and sustainable logistics partner is needed now more than ever.

### Full-Load-Transport with strong partners

When transporting goods for James Hardie, DB Cargo relies on its long-standing service providers, such as Railsider Atlantico in Spain. They organise the pick-up and transport by lorry to the Irun railport and handle the transshipment and storage of the gypsum fibre boards there. Previously, only leased Ha wagons from Transwaggon were used here. Since the end of 2019, however, DB Cargo has also relied on its own Ri wagons to ensure wagon availability. Railsider Atlantico's status as an experienced specialist when it comes to loading Ri wagons with palletised cargo is another plus. On the main leg on rail, one wagon replaces 2.5 lorry loads. This is also an area where DB Cargo can put the full strength of its stable European network to work. In Irun, our subsidiary ECR takes over transport, moving the goods via



the French Railnet system to Mannheim. From there, the journey continues in single wagon transport via Maschen, Fredericia and Vamdrup to the storage terminal of our Danish logistics partner H. Daugaard. The logistics company's warehouse stretches for more than 25,000 square metres. The ability to transport large volumes of goods across Europe by rail is a key measure of James Hardie's transport concept, which dovetails neatly with the firm's sustainability strategy





## Creating an EVplus network

In summer 2020, DB began offering its customers door-to-door EVplus service from Hamburg to Cologne. Now it is stepping things up with new customers and new routes. Seven new lanes are launching in 2021, several of which have already gone into operation: Hamburg-Mannheim, Hamburg-Berlin, Hamburg-Stuttgart and Bremen-Stuttgart. The remaining three routes – Cologne-Berlin, Mannheim-Munich und Cologne-Munich – will be up and running by the end of the year. These routes will form a network that not only connects Germany's main economic hubs via overnight deliveries, but also caters to customers without their own private sidings. EVplus combines the advantages of the dense single wagon network with the flexibility of lorry deliveries. DB takes care of transportation by road and rail while also handling all equipment-related needs. But that's not all: the experts at DB Cargo Logistics organise the entire transport process from start to finish and ensure that the necessary swap bodies are available for each order. In line with DB Cargo's new strategy, they serve as an end-to-end logistics specialist for their customers. Their goal is to remove the payloads of 25 million lorries from the road every year and shift them to eco-friendly rail services. This new rail logistics system will play a major role in our plan. To best serve their customers, they provide them with convenient access to the rail network and with competitively priced products. EVplus is the best example of this. DB brings 45-foot swap bodies straight to the customers' loading bays and then use lorries to transport them to their transshipment points, where they are hoisted onto freight wagons by crane. This does away with the need to move our customers' cargo from lorry to train by hand. Thanks to EVplus

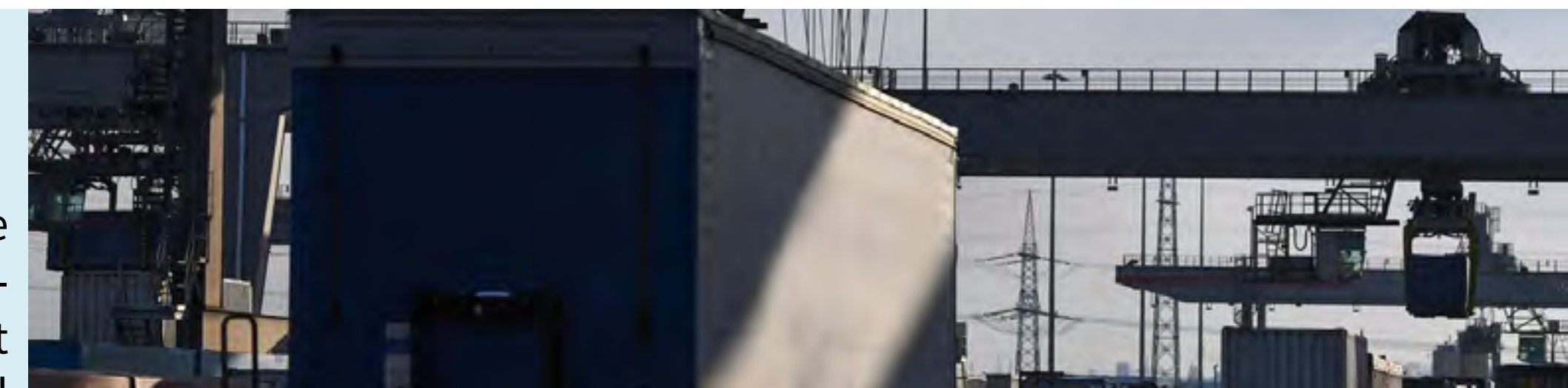
and its unique single wagonload network, the railway now offers a true alternative to road haulage, an alternative which can also handle full stand-alone container loads. Coca-Cola, Carl Kühne and Eckes-Granini are just some of the companies which use our overnight EVplus connections. And then there's the European dimension: DB Cargo wouldn't be the continent's largest rail freight operator if it weren't planning to extend EVplus to cross-border routes as well.

### Overnight operations

Stephanie Reinert, Head of Consumer Goods at DB Cargo, says, "EVplus combines our rapid long-distance services between major train formation yards with transshipment and logistics services, which means we can always deliver cargo overnight, i.e. within a 24-hour period." Once swap bodies arrive at a formation yard, they are simply loaded onto freight trains without having to go into temporary (and inconvenient) storage. This saves time, money and space. Above all, it guarantees a high degree of planning certainty, particularly in the consumer goods sector. The team at DB Cargo Logistics handles sales, bookings, transport and dispatching – the entire logistics process, in other words. As a result, our customers can rest easy in the knowledge that professionals are taking care of it all.

### Booking made easy in our online shop

We wanted ordering door-to-door transport to be as easy as online shopping for our customers, so we did some planning. From April 2021, companies will



be able to book available EVplus transport capacity with just a few mouse clicks.

### Sustainability strategy

While the first customers for EVplus are from the consumer goods sector, the service is available to any company that takes its sustainability seriously, no matter the industry. Thanks to our tailored logistics solutions, our customers can eliminate up to two-thirds of the CO2e emissions that would otherwise be generated by reliance on road haulage alone. For a growing number of customers, this tremendous difference in CO2 emissions is precisely what makes rail transport so attractive. After all, it aligns with the sustainability strategies most companies have now implemented. Much like other firms, Eckes-Granini takes protecting the environment seriously. Steffen Riedel is head of logistics at Eckes-Granini Germany, and he says, "Sustainability is firmly integrated into our daily operations. We spent a long time trying to transfer part of our domestic German cargo transport to the railway, and DB Cargo's new EVplus product has allowed us to now put this plan into action. The results have been great. Our initial concerns about inflexibility and long journey times proved completely unfounded, and we are very happy with the partnership."





## Record capital expenditures to return DB to profitability • Pandemic-related losses extremely high

DB saw losses in the billions last year but has initiated a systematic response to return to profitability with record capital expenditures. The Covid-19 pandemic hit DB as it did so many companies in 2020, causing revenues and profits to fall sharply. DB closed out the year with an operating loss of EUR 2.9 billion. The company expects business to improve in 2021 but is still likely to see heavy losses this year before operating profits return in 2022.

“I am confident that people will start taking our trains again and transporting more freight by rail than ever before,” said DB CEO Dr. Richard Lutz. “We are an eco-friendly option – a vaccine for climate change.” DB posted profits (adjusted EBIT of EUR 1.8 billion) and record passenger numbers in 2019, and 2020 also got off to a good start. When the pandemic hit, however, millions of people stopped traveling and cargo volumes fell. DB’s long-distance business alone accounted for EUR 1.7 billion of DB’s EUR 2.9 billion in total adjusted operating loss before interest and taxes in 2020. DB also had to account for EUR 1.8 billion in extraordinary items, including in particular an impairment loss at its subsidiary DB Arriva announced in the first half of 2020. Total after-tax loss (which also includes net interest and financial result) amounted to EUR 5.7 billion. DB Group revenues fell 10.2% year on year to EUR 39.9 billion. Rail is a climate-friendly option, and despite the pandemic, DB and the German government have remained committed to the long-term program they instituted to upgrade rail in Germany. In 2020, they increased capital expenditures in the rail system once again. Gross

capital expenditures rose 10% last year to a new record of EUR 14.4 billion. Net capital expenditures rose 4.3% year on year to EUR 5.9 billion. And capital expenditures are set to increase again in 2021. The funds are slated first and foremost for use in upgrading rail infrastructure but will also be invested in new trains and ICE maintenance depots. DB CEO Lutz stressed that expanding, upgrading and digitalizing the rail system on a broad scale was the right path to take. “This strategy is making rail noticeably better,” said Lutz. “Despite Covid-19, we have made progress. Our Strong Rail strategy works.” Customer satisfaction at DB Long Distance reached an all-time high in 2020. And DB also raised its punctuality: 81.8% of the long-distance trains were on time last year, an increase of about six percentage points. This increase was due to better operating quality and less traffic on the rail network. The pandemic caused key performance indicators to fall at nearly all DB’s business units in 2020. A total of 1.5 billion passengers took DB trains in Europe in 2020, roughly 42% fewer than in 2019. DB Long-Distance, which had seen years of record passenger numbers prior to 2020, had roughly 81 million passengers, a decrease of some 46%. DB Regional saw a decrease of some 38%. Volume sold fell roughly 47% year on year in 2020 to approximately 52 billion passenger kilometres.

DB Arriva, DB’s local transport operator in Europe, was hit especially hard by Covid-19 in the first half of the year and has felt the effects ever since. It does business in countries such as the UK and Italy, where the toll from the

pandemic was particularly high. DB Cargo, DB’s rail freight subsidiary, adopted a strategy for growth in 2020 and will implement this strategy in the coming years. It saw higher cargo volumes for groceries and the like, but lower volumes in key industries such as automotive, steel and ore. Total freight carried fell more than 8% year on year.

DB Schenker, DB’s international logistics subsidiary, bucked the trend and performed extremely well, ensuring stable supply chains for essential goods around the globe. Despite the pandemic, DB Schenker generated EUR 711 million in adjusted EBIT, higher than ever before in its history. DB is responding to the pandemic with a program to cut spending and cover a large portion of its Covid-19 losses itself. This program generated savings of some EUR 1.7 billion in 2020 alone. “The DB Group aims to be profitable again from 2022 on,” said CFO Dr. Levin Holle. “To this end, we need to implement an extensive, systematic program to respond to the financial effects of the pandemic. Our climate-friendly mobility business has a promising future and is still set to grow.” However, DB will need some time to counter the impact of the pandemic, which is still ongoing. The company currently expects to remain in the red in 2021. At roughly EUR -2 billion, however, adjusted losses before interest and taxes will be much less than in 2020. Revenues are expected to increase to at least EUR 41 billion. Due to the ongoing pandemic, forecasts are still subject to a high level of uncertainty.











On March 2nd, DB Class 185.166-6 works an Oberhausen-Osterfeld to Oberhausen West light engine movement. *Erik de Zeeuw*



## ETCS Retrofit: Siemens Mobility and DB Systemtechnik are levelling up

Siemens Mobility and DB Systemtechnik have signed a cooperation agreement to modernize a locomotive of the series 101 with an upgraded Siemens ETCS solution Trainguard 200 Onboard Unit system.

The locomotive is part of DB Systemtechnik's fleet and is used for test- and acceptance runs. It will now be upgraded to the European train control system ETCS level 2. At its core, the project aims to develop an interface solution that can be easily implemented for subsequent retrofitting and integration of ETCS and LZB into the vehicle architecture, independent of the train manufacturer. With this technical integration solution, a major step towards the successful retrofitting of entire fleets in the context of the Digital Rail for Germany program is made.

Siemens Mobility has demonstrated its retrofit experiences and capabilities already in various retrofit projects throughout Switzerland, Great Britain, Spain and Germany.

Photo: ©Deutsche Bahn AG







## New innovative Brake Monitoring System for freight trains

Siemens Mobility GmbH and VTG Rail Europe GmbH signed a contract to test the innovative Brake Monitoring System (BMS) for automated brake testing of freight trains to prove the system's operational capability. The BMS ensures an automatic brake test on each wagon of a train. The expected efficiencies generated for freight operators will result in a great market potential across Europe. Reduction of CO2 emissions is on top of the global agenda. A shift of transport volumes from road to rail is an important enabler to achieve climate targets. Hence the need to make rail freight transport more efficient becomes more important.

"The Brake Monitoring System, developed by Siemens Mobility, is a crucial step towards a further automated and digitalized freight railway. Reduced time-consuming manual processes, increased efficiency and guaranteed availability, are key drivers to make sustainable rail transport more competitive," said Anne Fischer, Head of Rail Automation Products, Siemens Mobility.

"The idea for a brake monitoring system was born at VTG back in 2016 and first developments started early. With Siemens Mobility we have found a strategic technology partner with whom we can continue to drive innovations forward and develop smart cutting-edge rail technology. The overriding

premise of the project is to have direct productivity and efficiency effects for the industry. With the implementation of the Brake Monitoring System, the network capacity can be used more efficiently, train staff will benefit from reduced workload and overall safety will be enhanced," said Dr. Hanno Schell, Head of Technical Innovations at VTG.

As part of the one-year trial, individual components of the system are being tested and optimized. The first out of two wagon sets has been fully equipped with the BMS and tests have been running since November 2020. The system provides train staff with status data visible on each side of the wagon, as well as automated reporting of complete wagon-status, and live updates of all wagon-settings on a display in the locomotive. BMS also improves overall security, allowing for detailed visualization of incorrect settings, tightened hand brakes or other problems with wagon components upon inspection by the wagon inspector and directly before the departure. The data obtained helps to prevent unexpected outages, reduces maintenance costs and provides early indication of wear and tear. The initial concept of the BMS was developed already at the end of 2016. After one year of successful field tests all over Europe and some enhancements of the system until 2019, the results of the current joint trial operation are an essential input for development of a series product by Siemens Mobility.





Abellio Flirt 3XL working a S9 service (Recklinghausen/Haltern - Bottrop - Essen - Wuppertal – Hagen) is seen departing Haltern am See on March 2nd. *Erik de Zeeuw*



## Siemens Mobility launches “MoComp” - An initiative to market its diverse portfolio of rail vehicle components

Siemens Mobility is pleased to announce the launch of MoComp, a consolidated and single source that will for the first-time display and make available to all customers the diverse Siemens Mobility portfolio of rail vehicle components. MoComp will offer the complete range of electrical and mechanical components, and system solutions for modern rail vehicles. This includes pantographs, propulsion systems, bogies, brakes, and onboard power supplies. The offerings showcased by MoComp will provide rolling stock producers, OEMs, and operators the opportunity to take advantage of the very best products on the market, as they look to maintain their rail vehicles over the entire life cycle.

“Our many years of experience with trains and locomotives gives us the ability to offer the rail industry a comprehensive portfolio of components and systems. This Portfolio is specifically developed for the needs of the industry from the perspective of a vehicle manufacturer,” said Albrecht Neumann, CEO Rolling Stock at Siemens Mobility. “MoComp will provide rolling stock producers, OEMs, and operators the opportunity to conveniently acquire individual components and entire systems that will help them optimize and improve the performance of their rail vehicles.”

Siemens Mobility brings a wealth of diversity in its offerings. This includes providing reliable systems and components for light rail vehicles and

trams, metro systems and APMs, regional, and high-speed trains, as well as locomotives, and passenger coaches. This allows for the portfolio to address all possible voltages, line supply types and gauges for all segments of railway market.

Siemens Mobility’s regional framework and familiarity with specific transportation systems and regulations will allow customers to customize components that meet all market-relevant certifications and standards. Furthermore, the Siemens Mobility global presence, network of production facilities and experience will provide customers with a fast, flexible, and efficient service.



Germany

# Complete solution from a single source: Siemens Mobility digitalizes interlocking in North-Rhine Westphalia by end of 2021

Siemens Mobility will fully digitalize the Finnentrop interlocking in the state of North-Rhine Westphalia within one year for DB Netz AG. A total of 404 interlocking units will be replaced, including signals, switch points and derailleurs. In addition, 15 level crossings will be equipped with digital interfaces and four of them will also receive new safety systems.

“The new digital interlocking will reduce disruptions in operations and provide the basis for rail automation and improved rail mobility. Passengers, freight, and

the environment will benefit from this upgrade,” said Gerhard Greiter, CEO of Region Northeast Europe at Siemens Mobility. “We’re ready to apply our extensive know-how to make an important contribution to the digitalization of Germany’s rail network.”

The Finnentrop interlocking controls around 60 kilometers of rail line. Once the interlocking system is installed, the section’s entire control and safety technology will be digitally operated from a control center. As general contractor for the project, Siemens

Mobility is covering the entire value chain from planning to completion. By relying on a complete solution from a single source, the project can be quickly implemented by the end of 2021.

Siemens Mobility is one of the world’s leading companies in the field of rail infrastructure digitalization. In Germany, for example, the company has already done important pioneering work with its digital interlockings in Annaberg-Buchholz and Warnemünde. Siemens Mobility will also digitalize Norway’s complete rail

network, comprised of around 4,200 kilometers of track and 375 railway stations, by 2034.

In September 2020, Deutsche Bahn, the German Railway Industry Association (VDB), and the Federal Railway Authority (EBA) agreed to accelerate the implementation of Germany’s digital interlocking projects by 2021. This accelerated program is being financed with funds from the federal government’s corona economic stimulus package. The Finnentrop interlocking is part of this program.





On March 14th, the 2454 crew are on their way from Amersfoort to the HSL (High Speed Line) on a rust removal run. The Plan U151 (Diesel powered) runs along the tracks to get rid of the rust and the reason why this historic train is used is that the train is heavier than modern trains, removing the rust quicker and also this train is more available than other trains. The Plan U is only used for a few times a year and the money they receive for these runs will be spent to maintain this train and also some other historical trains the 2454 crew have. *Andre Pronk*





Railexperts No. 9901 hauls a rake of gas tanks through Eempolder on March 11th.

*Mathijs Kok*





Rail Force One Class 189.213 leads Nos. 1837 and 1830 with a tank train through Eempolder on March 11th. *Mathijs Kok*





# Netherlands

HSL logistik's Class 186.381 with a train loaded with fuel-oil is seen at Barneveld on March 7th. The storks obviously enjoying the trains too.

*Mathijs Kok*













DB Cargo's Class 193.356 with a mixed consist is on its way to Koln-Gremberg(D), passing Sevenum on February 20th. *Mathijs Kok*





LTE Class 186.355 is seen hauling a container shuttle near Hegelsom on February 20th. *Mathijs Kok*





On March 23rd, the second Vectron with NS livery, Class 193.766, is seen working a Berlin to Amsterdam service passing Spiekerweg Soest. The loco had worked the train from Bad Bentheim.

*Andre Pronk*

















# Netherlands

On March 24th at Baarn station there was an instruction of the ERMTS (The European Rail Traffic Management System) using Class 193.524 from SBB Cargo for the purpose of training train drivers on the ERMTS system. Platform one at Baarn is not used often and its main purpose was for use by the Dutch royal family, on the station there is a special waiting room for the Royals before they board the train, but hasn't been used for several years. However company SVO-rail has its training room on the top floor. *Andre Pronk*









On February 25th, LINEAS Class 186.457-8 passes Griendtsveen with a rake of tank cars on their way from Antwerpen North (Belgium) to Koln Eifeltor (Germany). *Erik de Zeeuw*





















After maintenance in Zuphen, IRP No. 2102 is being transferred by IRP No. 101003 to Kijfhoek Yard, passing Barneveld on March 5th. *Erik de Zeeuw*

























On March 16th, two coaches were transported from the Dutch railway museum to Roosendaal from where they would head to Belgium. Locomotive No. 1768 from the railway museum is seen with the two Belgium coaches, (the rear two in the photo) together with two coaches from the museum. The yellow/brown coach so called 'Stuurstand' formally used by the train service from Amsterdam to Brussel and rear coach is the Plan-W. The train is seen here passing on the 'Soesterlijn' from Den Dolder to Baarn which is a single-track line. From there the journey proceeds on the main line via Hilversum, Schiphol, Rotterdam to Roosendaal (Dutch-Belgium border station). *Andre Pronk*













# Netherlands

DB Cargo Class 193.367 with an ICTS-trailer train passes Hegelsom on February 20th. *Mathijs Kok*









# Netherlands

Railexperts No. 9901 and HSL logistik's G2000 No. 1324 are seen hauling an empty military train.  
*Mathijs Kok*















India

## Alstom wins €220 million contract to design and manufacture 234 metro cars for Mumbai Metro Lines 4 & 4A

Alstom has been awarded by Mumbai Metropolitan Region Development Authority (MMRDA) the contract to design, manufacture, supply, test and commission 234 metro cars, including personnel training for Line 4 and the extension corridor (Wadala-Kasarvardavali-Gaimukh). The order is valued at €220 million (INR 1854 Crores).

New products have been added to Alstom's portfolio as part of the acquisition of Bombardier Transportation (BT) on January 29, 2021. The combined portfolio of products, signalling, engineering and services allows a significantly increased offering for customers across India and the Asia Pacific Region.

“These are exciting times, and this first order, following our merger with Bombardier Transportation demonstrates our continued commitment towards partnering in the country's Make-in-India mission. We are glad to have been awarded this prestigious project by MMRDA and look forward to commencing work on this. Alstom is proud to play a part in strengthening the country's infrastructure and providing world-class mobility solutions to the commercial capital of India,” said Ling Fang, Region President, Alstom Asia Pacific.

The Line is a 35.3-kilometre-long elevated corridor with 32 stations. It will provide interconnectivity among the existing Eastern Express Roadway,

Mono Rail, the ongoing Metro Line 2B (D N Nagar - Mandale), and the proposed Metro Line 5 (Thane - Kalyan), Metro Line 6 (Swami Samarth Nagar - Vikhroli). Mumbai Metro Line 4 & 4A is expected to reduce the current travel time by 50% to 75%, depending on road conditions.

Supporting the government's modernisation initiatives, Alstom has been at the forefront of introducing several breakthrough technologies in India with world class rolling stock, rail equipment & infrastructure, signalling and services. The company has successfully delivered metro trains for the cities of Delhi, Chennai, Lucknow, Kochi and is currently executing the Mumbai Metro Line 3 project.

Alstom currently employs nearly 8000 people in India and has 6 industrial sites across the country - Bihar (Madhepura), Andhra Pradesh (SriCity), Tamil Nadu (Coimbatore), Gujarat (Savli & Maneja) and West Bengal (Kolkata).



U.S.A.

## Alstom to supply 200 multilevel commuter rail cars to Chicago's Metra for €650 million

Alstom has received an initial order from Metra, the commuter rail system in the Chicago metropolitan area serving the city of Chicago and surrounding suburbs, to supply 200 push-pull commuter rail cars. This follows Metra Board of Directors' approval in January 2021 to award Alstom a vehicle procurement contract for up to 500 rail cars. This initial order of 200 rail cars is worth approximately €650 million.

“Alstom is pleased to have been selected by Metra to provide the latest in multilevel car design,” said Jérôme Wallut, President, Alstom Americas. “Alstom continues to invest and support investment in U.S. railroad infrastructure, and these new cars will allow Metra to extract maximum value from their fleet investments by increasing fleet reliability, enhancing overall passenger experience and ensuring maximum accessibility for all passengers.”

The multilevel cars incorporate new design features to improve passenger experience, including: a streamlined, modern and welcoming interior, equipped with USB plugs and boasting large windows and a layout to improve passenger flow and traveller comfort; seating and spacing to allow

for additional ridership and physical distancing; touchless doors; improved bogie design for improved ride quality; and multiple wide doors on each side of the cars to reduce passenger boarding times and improve access to passenger areas. The new cars will also meet all Americans with Disabilities Act (ADA) and accessibility requirements, including the addition of wheelchair lifts on each side of the vehicles. Fleet reliability will be enhanced through modern, service-proven components and enhanced maintenance and diagnostic system capabilities that will allow Metra to have greater visibility on fleet operational performance and increase fleet availability. Moreover, the new eco-designed cars will be energy efficient, boasting improvements and developments such as full LED lighting and climate control regulation based on passenger load. The new rail cars will also be 90% recyclable.

The new cars will be built at Alstom's rolling stock Centre of Excellence, and North America's largest rolling stock manufacturing facility in Hornell, New York. The Alstom Hornell site will lead the project. Other Alstom sites will support the project including, Rochester, New York, for the automatic train control system.

Since Metra's inception in 1984, Alstom and its predecessor companies have supported Metra in its endeavours to deliver safe, reliable, and timely passenger service to millions of riders over 11 routes totalling nearly 500 route miles and approximately 1,200 miles of track and over 240 stations throughout the greater Chicagoland area. Today, Metra relies on Alstom technologies for its signalling & train control systems, and Alstom continues to support Metra in its focus on implementing signalling and wayside data analytics solutions that will continue to deliver the highest level of safety service to customers. In addition, Alstom has been Metra's wheel supplier since 2013, and won a contract in July 2020 to provide up to 50 overhaul kits with spare parts for Metra's locomotive overhaul program.

Alstom is a mobility technology leader in the U.S., with a history dating back more than 160 years, steeped in experience building and repairing rail cars and locomotives, and in supplying signalling solutions for America's great cities and agencies, such as New York City, Chicago, Los Angeles, Atlanta, Boston, Washington, D.C., San Francisco, Atlanta, New Jersey Transit, Caltrans, and Amtrak, as well as America's freight railroads. To date, Alstom has delivered more than 7,000 new or renovated vehicles, more than 8,000 traction cases, and more than 50% of signalling for North America's rail network.



# Coronavirus defines business year: slump in demand, financial setbacks, customers more satisfied.

SBB looks back on an extremely challenging year. After a good start to the year, the coronavirus pandemic hit SBB very hard. An average of 843,000 passengers were transported per day—more than a third less than in the previous year (1.32 million passengers per day). Passenger kilometres fell by 40.6%—in long-distance traffic, they dropped by 43.7%, and in regional traffic by 32.4%. The sharp drop was due the measures imposed by authorities to combat the pandemic: many commuters worked from home, while leisure passengers from Switzerland and abroad also travelled significantly less because of restrictions.

In international passenger traffic, demand fell even more sharply, i.e. by 51.2% in passenger kilometres compared to the previous year, due to the travel restrictions and reductions in services. Fewer passengers and the imposed closure of shops led to a sharp decline in customers at stations—a third less than in the previous year overall.

In 2020, the same number of passengers held a Half Fare Travelcard as in the previous year, i.e. 2.72 million in total. By contrast, 439,000 people still held a GA Travelcard, 12.2% fewer than in the previous year (500,000). Significantly more than half of all tickets were purchased via the SBB.ch and SBB Mobile digital sales channels (61.4%; previous year: 52.8%). The marked increase in comparison to previous years therefore continued in the pandemic year.

## Very tense economic situation

The decline in demand has had severe financial consequences; compared to the previous year, there were lower passenger revenues (–28.9%), lower third-party revenues in stations (–26.8%), lower train path revenues for infrastructure (–12.1%) and less freight transport (–2.4% in freight tonne kilometres). During the lockdown, SBB waived or reduced rents and, together with the public transport industry, implemented extensive goodwill measures for travelcard customers.

All this is reflected in the consolidated result of CHF -617 million (previous year: CHF +463 million). It is the biggest loss since SBB was extracted from federal administration and became a public limited company. Despite the very tense financial situation, SBB wants to keep ticket prices stable and thus ensure the attractiveness of public transport.

The interest-bearing net indebtedness increased by CHF 1.5 billion. Due to the low operating cash flow (EBITDA) and the increased debt, SBB's debt coverage ratio is 21.6 and thus clearly above the maximum limit of 6.5 required by the Confederation.

## Cost-cutting measures and support from the Confederation and the Cantons.

In spring 2020, SBB reacted to the revenue shortfalls with cost-cutting measures, such as a hiring freeze or similar restrictions in administration, the reduction of flexitime and holiday credit, and the postponement or cancellation of projects and investments. These measures saved hundreds of millions of Swiss francs. The operation of rail services and safety are not affected by the cost-cutting measures.

To safeguard solvency, the Confederation has increased SBB's credit limit by CHF 550 million. In addition, in the second half of 2020, the Confederation and Parliament approved support for public transport in order to cushion the coronavirus-related revenue losses for transport companies in the areas of infrastructure and regional traffic eligible for compensation, as well as in freight transport. In its own commercial areas of long-distance traffic and real estate, SBB has to bear revenue losses itself.

## Customers are satisfied with SBB quality.

With the provisionally reduced service offer, SBB implemented four timetable changes last year, a feat of strength by its employees. SBB continued to work intensively on the quality of its services under difficult conditions. The opening of the Ceneri Base Tunnel concluded the “New Rail Link through the Alps” (NRLA)—a historic moment for Switzerland and for Europe.

Safety, punctuality, customer satisfaction, and image (2020: 66.6 points, 2019: 64.7 points) have also improved. SBB recorded fewer occupational, shunting and train accidents in 2020 than in the previous year. Customer punctuality was 93.4% (previous year: 90.6%) and train punctuality 95.7% (previous year: 94.2%). Cargo consignment punctuality also improved compared to the previous year (93.5%, previous year: 91.9%). In addition to lower demand, improved construction-site planning had a positive effect on punctuality.

At 76.3 points, overall customer satisfaction is higher than in the previous year (+0.5 points). Customer satisfaction has improved in passenger traffic (+1.5 points), as well as in stations (+1.0 points). The satisfaction of freight traffic customers decreased (-3.4 points). Staff satisfaction (2020: 70, 2019: 66) and staff motivation (2020: 77, 2019: 73) for SBB employees have increased compared to the previous year, as has the number of full-time employees (2020: 33,498, 2019: 32,535).

The shortage of skilled workers increased in 2020 because of coronavirus. Train connections were cancelled due to a shortage of locomotive staff, for which SBB apologises. From mid-2021, the situation will ease, as training classes are currently full. Locomotive drivers will be trained for more routes and more vehicle types in future, which will increase flexibility.

## SBB continues to focus on quality while the financial situation remains very tense.

In 2021, SBB will continue to focus on quality for its customers. Timetable stability and better construction-site planning remain key. SBB is investing in its core business, in particular in new rolling stock. SBB's financial situation will remain constricted in the coming years. SBB will consistently continue to implement cost-cutting measures and raise cost awareness at all levels.

Demand will pick up again after the crisis; SBB is preparing for it. Mobility remains a basic requirement for professional and social life, and climate-friendly railway remains a popular means of transport. SBB will therefore continue to strengthen its environmental advantage; with its goal of becoming climate-neutral by 2030, and with the modal shift from road to rail, SBB is making a significant contribution to achieving the Confederation's climate targets.

## Coronavirus a burden on all SBB Divisions.

The annual result for Passenger was CHF -661 million (previous year: CHF +215 million). Both regional and long-distance traffic recorded negative results (regional: CHF -26.1 million, long-distance: CHF -626.7 million). In ticket sales, the self-service rate increased from 90.6% to 93.4%. This includes digital channels (SBB.ch and SBB Mobile), automatic travelcard renewals and purchases at ticket machines and via partner sales organisations.

The result from Real Estate before compensation payments to infrastructure (CHF 150 million) and the payment for the pension fund (CHF 84 million) was CHF 244 million (previous year: CHF 339 million). Third-party rental income amounted to CHF 541 million (previous year: CHF 552 million).

The result for SBB Cargo Switzerland was CHF -34.7 million (previous year: CHF 0 million). SBB Cargo International Ltd closed with CHF 4.6 million (previous year: CHF 5.5 million). Net tonne kilometres in freight services decreased by 2.4% (15,978 million, previous year: 16,377 million net tonne kilometres). The two companies developed in opposite ways: while SBB Cargo Switzerland recorded 11.9% fewer net tonne kilometres, SBB Cargo International Ltd showed a slight increase of 1.6%.

SBB Infrastructure posted an annual result of CHF -45.8 million (previous year: CHF +22.5 million). Due to the slump in train path revenues and productivity losses as a result of coronavirus, the network area recorded a significantly negative result of CHF -63.6 million (previous year: CHF -24.7 million). The energy area also posted a lower result (CHF 17.9 million) than in the previous year (CHF 47.1 million); this amount is reinvested in energy facilities.



# Germany

## 185-Kilometre Range: Stadler Successfully Concludes “Battery Technology” Research Project with the FLIRT Akku

Stadler has successfully completed the research project launched in 2018 to develop and test battery technologies in the railway vehicle sector after a three-year research phase. The project was funded by the German Federal Ministry for Economic Affairs and Energy and developed jointly with TU Berlin and EWE AG. The vehicle, designed as a test carrier, far exceeded initial expectations during the three-year trial phase with a proven range in battery-only mode of 185 kilometres.

54 percent of the European rail network has an overhead line. In Germany, the figure is currently around 60 percent, with 70 percent of lines to be electrified by 2025. For the remaining lines, the use of CO2 emission-free railway vehicles is a fundamental building block for achieving the EU climate targets. Stadler had specific approaches to making rail transport environmentally friendly and energy-efficient on all routes at an early stage. As part of the three-year project funded by the German Federal Ministry for Economic Affairs and Energy entitled “FLIRT (battery) joint project – grid integration and grid-serving charging of a battery-electric railway vehicle for bridging extensive non-electrified or partially electrified route sections in regional transport”, the company developed the FLIRT Akku, a three-part test carrier based on the FLIRT vehicle type for testing battery technology.

“During our joint project work, we were able to gain valuable insights into the further development of battery technology”, explains Evelyn Thiel, technical manager of the research project at Stadler. Since its unveiling in the autumn of 2018, the vehicle, which is fully approved for passenger operation, has covered 15,000 kilometres in battery-only mode. The project team placed particular emphasis on testing in passenger service possible scenarios such as making up for unplanned delays on the line and operation in extreme weather conditions to test the response of the batteries.

“In the summer of 2019, we tested the FLIRT battery during a heat wave at

40 degrees outside temperature and full use of the air conditioning system, as well as in the winter of 2021 during double-digit sub-zero temperatures. Use in battery-only mode was possible without restriction at all times, without us hitting the lower limit of capacity”, says Evelyn Thiel.

### 185 kilometres of proven range

The technical feasibility of battery technology in rail transport and the limits of the installed battery capacity were explored on test runs set up specifically for this purpose together with the manufacturer of the batteries for the test vehicle, the German company Initilion GmbH, in order to gain valuable experience for the design of future vehicles. The operational constraints that transport companies must take into account when making the necessary and desired switch from diesel to battery-electric traction were also investigated. In the process, the calculated maximum range of the vehicle on routes without overhead lines could be corrected upward in the verification with 185 km.

“At Stadler, we are continuously working on making rail transport even better and free of emissions with good ideas and their rapid and practical technological implementation, in order to convince even more people to switch to rail. We are proud to have developed an environmentally friendly,



flexible vehicle to market readiness with the FLIRT Akku and not only to have proven our assumptions within the framework of the research project with the support of our project partners and the project sponsor, but to have exceeded them. Together with the FLIRT H2, Stadler offers CO2-emission-free solutions for every route”, says Steffen Obst, Head of Sales for Regional Trains Stadler Germany.

# Italy

## Stadler to produce the new trains for the Vesuvian lines

Following the decision of the Council of State published on March 8th, Ente Autonomo Volturno (EAV) has awarded Stadler the 8-year Framework Agreement for the production, supply and maintenance of 40 electric trains for metropolitan and suburban service on the 950 mm narrow-gauge Vesuvian lines.

With the acquisition of the new fleet, the oldest vehicles will be progressively replaced and the quality and range of transport services will be increased, improving the travel experience of passengers by usage of modern vehicles that meet the latest standards in terms of reliability and safety.

EAV President Umberto De Gregorio expressed his “satisfaction with the start of the collaboration with Stadler which will finally allow for the construction of forty new trains enriching the fleet of Vesuvian lines. We are therefore launching the process of renewing the fleet which will allow us, in the coming years, to respond adequately to the demand for mobility of a particularly significant territory for the Campania region such as the Vesuvius”.

Iñigo Parra, CEO of Stadler Valencia, said: “We are proud to have been appointed to deliver the modern trains to operate urban and suburban services on one of the most characteristic and iconic networks in the Italian railway panorama. We are pleased to contribute with our technology and

know-how to this important mobility project, improving travel experience for both residents and tourists.”

The new electric trains consist of three cars made of aluminium and designed to reduce the overall weight of the vehicle, in order to significantly reduce energy consumption. With an overall length of around 40 metres, the new trains offer five doors on each side to allow rapid passenger interchange in stations; an optimal passenger flow on board will be granted by a modern and flush design of the interiors. These features are particularly advantageous for people with reduced mobility, who will be able to move easily throughout the interior of the train thanks to the wide corridor.



Spain



## Alstom to manufacture 152 high-capacity X'Trapolis commuter trains for Spanish operator Renfe



Alstom has won a contract to provide Renfe, the Spanish national railway operator, with 152 high-capacity trains for a total amount of more than €1.4 billion. The trains will come from Alstom's X'Trapolis range of suburban trains. The contract also includes the maintenance of 56 of the trains for a period of 15 years and the supply of parts for the fleet, as well as the initial stock of spare parts and their tooling.

The new trains, which rely on proven platforms, will allow Renfe to transport at least 20% more passengers per hour in the country's most congested railway hubs, including Madrid and Barcelona. They will each be 100 metres long and have a capacity of over 900 passengers. The X'Trapolis boast an innovative mixed-configuration design, with both single and double-decker cars, designed specifically to meet the evolving mobility needs of major urban centres.

"We are immensely proud to have been selected by Renfe to supply this large fleet of latest-generation trains. Our solution is the result of long experience in design, engineering and industrialisation on a global level, and over 30 years of manufacturing trains in Spain. Furthermore, the fact that more than 80% of our suppliers are local Spanish companies, makes us very proud. The size and importance of this contract

bears witness to the trust and confidence that has been built in the enduring relationship between Alstom and Renfe," said Gian Luca Erbacci, President of Alstom Europe.

The design of the new X'Trapolis trains maximises capacity for passengers thanks to innovative interior configuration and flexible spaces. Numerous access doors and large distribution halls facilitate the entry and exit of passengers, allowing a decrease in station stop times. The trains offer universal accessibility, Wi-Fi connectivity and dedicated areas for bicycles and pushchairs. The X'Trapolis also maximise availability and line usage via more efficient traction systems and the latest generation of train control technology. The X'Trapolis is a sustainable train, fully developed in line with eco-design criteria, from the raw materials selection to traction systems. It offers optimal energy efficiency during operation and a recyclability rate of over 98% at the end of its service life. The conception of this innovative train is the result of two years of intense work by a team of over a hundred professionals from across Alstom's many domains of expertise and parts of the world. The team was led and coordinated by engineering and industrialisation experts from Alstom's Santa Perpètua site near Barcelona and the Madrid centres of excellence. The trains will be manufactured at Santa Perpètua.

Alstom's X'Trapolis is a modular train platform that allows a large range of flexible, high-capacity solutions for suburban and regional transit designed to meet the needs of both operators and passengers. The range benefits from over 30 years' experience. In the past ten years, over 5,000 X'Trapolis cars have been sold to major cities in Australia, Chile, Spain, South Africa and France.

Poland

## PESA WILL DELIVER MORE ELECTRIC MULTIPLE UNITS FOR WIELKOPOLSKA

On February 14th, in Poznań, a contract was signed for the supply of 5 pieces of five-car EMU Elf2 intended for the Poznań Metropolitan Railway.

The total value of the main contract is PLN 127.45 million gross. Deliveries of new vehicles are planned for June -- December 2020. Wielkopolskie Voivodship will also be able to take advantage of the option right to purchase additional two EMUs.

Elf2 for PMR will be adjusted to handle the agglomeration traffic (2 pairs of doors per unit) at a speed of 160 km/h, will have min. 240 seats, 5 ticketing machines, two toilets in a closed system, air-conditioning, Wi-Fi, dynamic passenger information system, monitoring, places for disabled persons and for carriage of bicycles, induction loops for people with hearing impaired persons, automatic air fresheners, defibrillators.

Pesa has so far delivered to Wielkopolska 22 Elf EMU of the first generation, 15 diesel vehicles, and currently implements an order for the supply of 10 Elf 2 vehicles.





## Alstom Morocco signs a protocol with ONCF (Office National des Chemins de Fer) covering the maintenance of new-generation electric locomotives

Alstom has signed a protocol with the Moroccan railway operator ONCF (Office National des Chemins de Fer) through its joint venture MALOCO (Alstom – ONCF). Through this protocol, Alstom Morocco becomes officially responsible for maintaining the fleet of new-generation PRIMA M4 electric locomotives. These locomotives are in addition to those already being maintained by the MALOCO joint venture, thereby strengthening Alstom's role as the preferred partner of ONCF.

This protocol follows a contract won by Alstom Morocco in 2018 for the supply of 30 locomotives. Since then, fifteen PRIMA M4 locomotives have been delivered to Morocco, of which 10 have entered commercial service, transporting passengers and freight.

The 30 PRIMA M4 locomotives have a nominal power of 5.5 MW. They have a maximum operating speed of 160 km/h and are supplied with 3 kV DC voltage. They are equipped with ETCS. They require minimal maintenance and offer high reliability and a low lifecycle cost thanks to their modular design.

“The signing of this protocol consolidates our partnership with ONCF and strengthens the mutual trust between us. I am sincerely grateful for the dedication that the project team has shown throughout this period, particularly given the very complicated context of public health. We will pursue our long-standing partnership with our customer and in the country

in order to contribute to the development of Morocco's railway infrastructure,” said Nourddine Rhalmi, President of Alstom in Morocco.

Alstom has been manufacturing locomotives for over 100 years, with the first electric locomotive dating back to 1926. Over 3,000 locomotives from the Prima range have been sold in the last 20 years. Alstom offers a full service of operational support for Prima locomotives, including the supply of parts, heavy maintenance, and comprehensive service packages. Alstom has been present in Morocco for a century. With more than 500 employees, Alstom has carried out several key projects, including signalling, the delivery of 190 Citadis X02 trams to the cities of Rabat (66 trams) and Casablanca (124 trams), 12 Avelia Euroduplex trains for the high-speed line between Tangiers and Casablanca, and 50 Prima locomotives providing the best solutions for freight, passenger and mixed transport services. With the new plant in Fez, Alstom will increase the production of wiring harnesses for railway applications as well as the production of electrical cabinets which are supplied to its European plants, then installed on trains for global export.



## Sustainable operation of trains: Power-efficient on-board electrical system uses technology developed by Siemens Mobility and Infineon

As the global population experiences rapid growth, more people around the world are moving from the countryside to the city. In addition to the inner-city challenges posed by the urbanization megatrend, there is also an increase in the average traveling distance. As a result, the challenges for train systems are also increasing. To meet these demands, Siemens Mobility and Infineon Technologies AG (FSE: IFX / OTCQX: IFNNY) have jointly developed new auxiliary converters to improve the efficiency of on-board power systems using power semiconductors based on silicon carbide (SiC).

“Our vehicles should not only offer the highest level of passenger comfort but also enable our customers to operate them sustainably over the entire product life cycle. Energy-efficient on-board train power systems can make a major contribution to economical and environmentally-friendly train operations,” said Albrecht Neumann, CEO of Rolling Stock at Siemens Mobility.

Siemens Mobility uses the new converter for various train platforms. As a result, the platforms are maintenance-friendly, reliable, economical and, above all, power efficient. “With SiC, we achieve higher switching speed as well as efficiency to reduce the size of transformers, capacitors, cooling elements and the housing unit. The advantages of this semiconductor material are evident and are now being leveraged in rail-bound vehicles,” said Dr. Peter Wawer, President of Infineon's Industrial Power Control Division.

In addition to providing the AC voltage (e.g., 3 AC 400 V 50 Hz) required for the vehicle power system, auxiliary converters also deliver the required battery voltage (e.g., 110 V DC). To achieve this, they convert the DC voltage provided at the converter input. They ensure that train passengers can charge laptops and smartphones; the air conditioning and ventilation systems are running; and the on-board restaurant can offer hot and cold drinks and food. Without them, connectivity, information or entertainment services on trains would not be available.

As part of the system, SiC reduces the overall costs in the on-board electrical system and the energy consumption of the auxiliary converter. It also enables more compact and lighter converter designs, along with a modular and service-friendly design to ensure lower maintenance costs.

The auxiliary converter makes use of power semiconductors in a half-bridge topology that are based on Infineon's CoolSiC™ MOSFET 1200 V technology. Depending on the design, 8 to 16 half-bridge modules are installed for each converter.



## Netherlands

Alstom has signed a purchase agreement for the acquisition of Shunter, a leading services company in the area of maintenance of rolling stock for freight and passenger transport in the Netherlands.

Shunter, headquartered in Rotterdam, employs approximately 110 skilled people across three maintenance workshops and three services locations. The group offers its customers a broad and integrated package of services in the field of management and maintenance of rolling stock for freight and passenger transport and on-board signalling solutions, including the performance of maintenance, damage repair and modifications. This is done both in its workshops and on location. Each year, Shunter carries out maintenance, overhaul and damage repair on more than 1,000 cars. Shunter's annual turnover in 2020 was around €20 million.

## Alstom expands its maintenance expertise with the acquisition of Dutch services company Shunter

This transaction will reinforce Alstom's position in the Benelux maintenance market by combining both companies' capabilities, solutions and products to the benefit of railway operators. It will also reinforce Alstom's global maintenance services with a physical presence in the Port of Rotterdam.

"We are very enthusiastic to integrate Shunter's expertise which is widely recognised by the operators," says Bernard Belvaux, Alstom Managing Director Benelux. "Shunter's full maintenance expertise will complement Alstom's knowledge and installed base in products and solutions. It will enable us to become an even stronger maintenance partner to our customers, increasing availability and reducing the total cost of ownership of their fleets."

"The collaboration between Shunter and Alstom is not new: we have been working together for over

14 years. The integration of Shunter into an international group will bring us new possibilities with access to new markets. I am delighted to join Alstom and convinced that with our combined expertise we can satisfy our customers even better," says Jos Toes, Managing Director of Shunter.

The completion of transaction is subject to the satisfaction of mutually agreed conditions. It is expected to occur by the 2nd quarter 2021. Alstom operates in Benelux with two global competence centres dedicated to signalling and power electronics, two manufacturing sites – one for rolling stock and one for components – and several signalling project offices. The service activities are carried out through a network of locations to support customers with proximity.



## Germany

## Freight forwarders and railways pull together: new cooperation will save around 50 million tons of CO2 by 2030

More than 230 freight forwarders want to work with DB Cargo AG to move more trucks from the autobahn to the rail. The transport companies involved in Kombiverkehr KG and DB Cargo are relying on the expansion of the joint network towards real regular traffic. In addition, digitization and automation should make the handling processes much easier and faster. By better linking freight trains and trucks, Deutsche Bahn and Kombiverkehr expect a CO2 reduction of around 50 million tons in the next ten years.

In a cooperation agreement with a 9-point plan for so-called combined transport, both companies have spoken out in favor of a joint growth strategy and defined concrete expansion steps. Existing terminal locations will be supplemented by further ones and expanded into a "Metro-Net". A regular schedule links the important German and European economic centers even more frequently. In addition, the scheduling and billing of so-called intermodal transports are organized in a much more digital and less bureaucratic manner. This makes it even easier for logisticians to switch to the climate-friendly train over long distances. According to the Federal Statistical Office, the share of intermodal transport is currently 36 percent in rail freight transport. The growth potential of this type of transport is the highest in the logistics industry. It is rated at 150 percent plus for the next 10 years. Because: Combined transport is ideal for globalized supply chains because it is not the freight but standardized loading vessels such as containers, semi-trailers or swap bodies that are transferred from the truck

directly to a freight train. At the destination, a truck tractor brings the container to the destination over the last kilometer of the road. At the destination, a truck tractor brings the container to the destination over the last kilometer of the road. At the destination, a truck tractor brings the container to the destination over the last kilometer of the road.

Statement DB Freight Transport Board Member Dr. Sigrid Nikutta: "Kombiverkehr is the ICE in our environmental network for freight trains. With an intelligent network and terminal expansion, with many more direct connections and significantly easier handling for our customers, we are bringing more traffic to the rails. The potential is huge: We save the environment as much CO2 as if we were to take an entire hard coal power plant off the grid every year. Kombiverkehr is thus making a very important contribution to ensuring that we can meet European climate targets in the transport sector in the long term, even beyond the Corona crisis."

Statement by Federal Transport Minister Andreas Scheuer: "We want to get more goods off the road and onto environmentally friendly rails. This new cooperation between rail and road fits perfectly into our master plan for rail freight transport, with which we are strengthening the competitiveness and innovative strength of the sector. Forecasts predict that the volume of freight traffic in combined transport will increase by almost 80 percent by 2030. We expect CO2 savings of 50 million tons from this project alone.



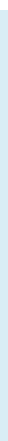
That shows me:

Combined transport makes a significant contribution to our achieving our climate goals in transport."

Statement by the Chairman of the Board of Directors of Kombiverkehr KG Hermann Lanfer: "Today road and rail, freight forwarders and DB Cargo are sending out a strong signal: We are serious about the turnaround in freight traffic. As Kombiverkehr, we bring all those involved to one table in order to jointly expand the existing cooperation and to give combined transport new, decisive impulses. We focus on the needs of our customers. The freight forwarders should be able to shift transports to the railways more easily and quickly. Because only through a specific shift can we change the modal split and make the traffic turnaround a reality: Specifically, we are strengthening the synergies that have been built up since 2001 with a 9-point plan for strong and climate-friendly combined transport: We will optimize service, networking and digitization as best as possible, so that we can also win the freight forwarders for the railways, who previously only used the road. In this way, we are sustainably reducing the CO2 emissions of freight transport together with DB Cargo and the BMVI."



U.K.



## TfL and Siemens Mobility unveil detailed design of new Piccadilly line trains

Transport for London (TfL) and Siemens Mobility have unveiled the detailed design of the new generation Tube trains for the Piccadilly line, which will soon be in production to replace the existing 1970s fleet. The trains currently running on the line have become increasingly unreliable and expensive to maintain and will be 50 years old by the time they are replaced. Despite the devastating impact that the coronavirus pandemic has had on its finances, TfL is continuing to replace these assets, meaning that from 2025, new spacious ‘Inspiro London’ trains will serve customers on the Piccadilly line, future-proofed to ensure they are suitable for many years to come. As the new trains are introduced to the Piccadilly line, the current fleet will be gradually withdrawn from passenger service and the frequency of trains in peak hours will rise from 24 to 27 trains per hour from mid-2027. This is a train every 135 seconds at the busiest times and represents a 23 per cent increase in peak service capacity. The state-of-the-art Tube trains will significantly improve the experience of millions of customers, with wider doors and longer, walk-through, air-conditioned carriages for more comfortable journeys. The new trains optimise space to boast 10 per cent more capacity, as well as being significantly lighter than existing designs, meaning energy efficiency is increased and damage to tracks is reduced. This is achieved by using an innovative articulated design, meaning fewer bogies (the structures containing the wheels, motors and suspension to support and power the train) are required per full-length train. This provides the additional benefit

of a smoother ride. The new trains have also been designed with sustainability in mind. They are 95 per cent recoverable and also offer regenerative braking capability, cutting-edge traction systems, LED lighting throughout and advanced energy management. This means energy consumption is reduced by 20 per cent compared with the existing fleet. The longer, more spacious, air-conditioned trains will be fully walk-through, boosting accessibility and ensuring customers can move easily to quieter areas of the train. The train design has been developed with regular feedback from TfL’s Independent Disability Advisory Group (IDAG) and the TfL Accessibility Forum.

The Mayor of London, Sadiq Khan, said: “These much-needed new trains will be a great step forward for our city, improving frequency, reliability and capacity on the Piccadilly line. The continued modernisation of the Tube - which has seen a transformation over the last two decades - is a key part of my Transport Strategy to make London a greener, more affordable, more accessible place. But we need investment to continue this work. I will keep lobbying the Government to deliver a long-term, viable funding model for

TfL, which would enable us to carry out more upgrades to the network’s ageing infrastructure, boost our economy and deliver a green recovery for London and the wider country.”

The new trains are a good example of how investment in TfL is an investment in the UK’s economy, with 55p of every pound invested in improving London Underground being spent outside of London. Fifty per cent of the new train fleet will be built in Goole, East Yorkshire, employing up to 700 people in engineering and manufacturing roles, 250 in the construction phase and 1,700 in the broader supply chain. Last month Siemens Mobility announced £50m of related contracts for UK suppliers, including a number for train components. These included almost £6m in contracts for Yorkshire-based LPA Lighting to provide the interior train lighting, and Midlands-based suppliers Baker Bellfield to supply cab partition wall and I M Kelly for driver seats and footrests. The order for the new Piccadilly line trains, together with a further investment in signalling which has not yet been funded, would support 25,000 new jobs in the capital, as well as supporting the next generation of transport workers through apprenticeship places created both by Siemens Mobility, TfL and the wider supply chain.

Andy Lord, Managing Director of London Underground, said: “The introduction of new, desperately-needed modern and reliable trains on the Piccadilly line, and the capacity they will provide, will be a boost for the capital. We’re pleased that our investment in new trains is helping the UK economy and assisting with the recovery from the pandemic, and we look forward to seeing them on the network in years to come. Sustained long-term investment would enable us to introduce more modern trains over time to replace other ageing fleets alongside new signalling, improving the journeys of millions more Tube customers and reducing the costs of running the Tube.”

William Wilson, CEO of Siemens Mobility Limited, added: “The state-of-the-art trains will transform the Piccadilly line passenger experience. They are lighter, more environmentally-friendly and future-proofed for a long life. But the benefits are not just confined to London. Building the new trains creates new UK jobs and extensive supply chain opportunities. A great example of levelling up in action.”

TfL remains committed to upgrading its network as part of its wider plans to support the UK’s recovery. Plans for new Bakerloo, Central and Waterloo & City line trains remain ‘shovel ready’ and could quickly be progressed were a long-term funding deal agreed with Government. TfL is uniquely placed to help drive a strong and resilient future for London in line with Government’s clear direction for a more efficient, productive and sustainable city – but it is dependent on investment to achieve this. As part of its Financial Sustainability Plan, which it is currently discussing with Government, TfL is requesting £1.6bn in capital funding per year between 2023 and 2030, to support a new funding model less reliant on fares income. This capital funding would deliver improvements such as state-of-the-art trains and signalling – the single biggest contributor to achieving the Mayor’s target for 80 per cent of journeys to be made by public transport, walking and cycling – and supporting the Mayor’s ambition for London to be carbon neutral by 2030.





From the  
Archives

GE U12 No. F616 approaches Lugano  
on November 14th 2011.

*Mark Torkington*

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Argentina





# From the Archives

On November 10th 2011 No. B822  
approaches San Miguel with an  
evening train towards Pilar.  
*Mark Torkington*

## Argentina





From the  
Archives

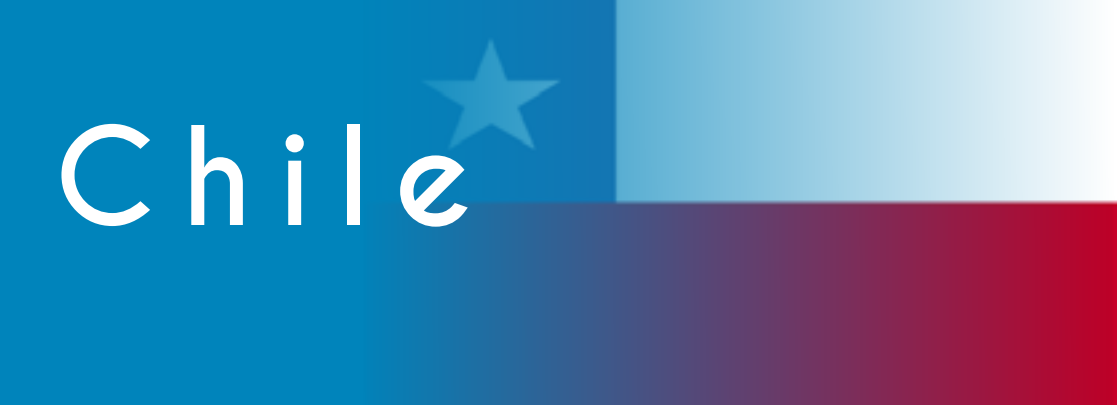
Argentina

TBA ALCO No. C654 is seen at Las  
Herras on November 3rd 2011 en  
route to Lobos. *Mark Torkington*





# From the Archives



4-8-2 No. 851 working an evening freight from Temuco to San Rosendo catches the last rays of sunlight at Quillon on December 5th 1981. *John Sloane*





# From the Archives

Chile

On March 31st 2013, No. D16012, a 1954 built GE/ALCO 'Shovelnose' locomotive stands at Temuco with the occasional night train back to Santiago, alongside a local unit.  
*Mark Torkington*

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# From the Archives

On March 29th 2013, No. 2360 (an EMD SD39 sold second hand to Chile from the USA) is seen on a freight at Temuco.  
*Mark Torkington*

Chile





# From the Archives

Cuba

On February 10th 1992, No. 52436  
passes Jovellanos West Jct. with a  
Havanna express. *John Sloane*

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From the  
Archives

Class 749 182 stands at Cercany station  
on June 28th 2007. *John Sloane*

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Czech  
Republic





From the  
Archives

France

SNCF CC-7145 is seen at Villeneuve St.  
Georges roundhouse on October 31st  
1986. *John Sloane*

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From the  
Archives

SNCFBB-9482 (nicknamed 'Vespas' by French railwaymen) stands amongst other classic locos at Dijon Perrigny depot on April 13th 1992. *John Sloane*

France





# From the Archives

A view inside the remarkable cathedral  
like roundhouse at Chambéry on April  
22nd 1992 with locos Nos. CC-6544  
and BB-25187 in evidence.

*John Sloane*

## France





From the  
Archives

Germany

One of the large 2-10-2 tanks, No. 99.7236-5 brews up ready for action outside the depot at Wernigerode on October 7th 2008. *Jeff Nicholls*





# From the Archives

Germany

On the amazing Schwebbahn at  
Wuppertal, car No. 19 hangs high  
above the streets on October 9th  
2008. *Jeff Nicholls*





From the  
Archives

Germany

DB Class 110.141 arrives at Köln Hbf  
with a regional service on November  
3rd 2000. *John Sloane*





From the  
Archives

Germany

An electric hauled freight crosses the  
amazing Hangviadukt near Punderich  
in the Mosel Valley on July 17th 2015.  
*Jeff Nicholls*





# From the Archives

## India



India (Southern Railway) XD 2-8-2 No.  
22408 departs Bangalore City with  
empty stock on November 17th 1977.

*John Sloane*





# From the Archives

## India



India (Northern Railway) WP Pacific No. 7290 is seen leaving Delhi Junction with the 18:10 to Ambala on March 18th 1976. *John Sloane*





From the  
Archives

Ireland

CIE Nos. 192 and 153 working a  
Kingscourt - Platlin gypsum train are  
seen at Tara Mines on March 24th  
1998. *Mark Enderby*

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# From the Archives

Italy

FS Class E656.289 is seen ready to depart Milano Centrale with a train to Switzerland on August 4th 1994. *John Sloane*

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# From the Archives

An unidentified Class E444 sweeps through Framura with a train heading for Genoa on August 17th 1996. *John Sloane*

## Italy





From the  
Archives

FS Class E656.409 stands at Sestri  
Levante with a train to Venice on  
August 13th 1996. *John Sloane*

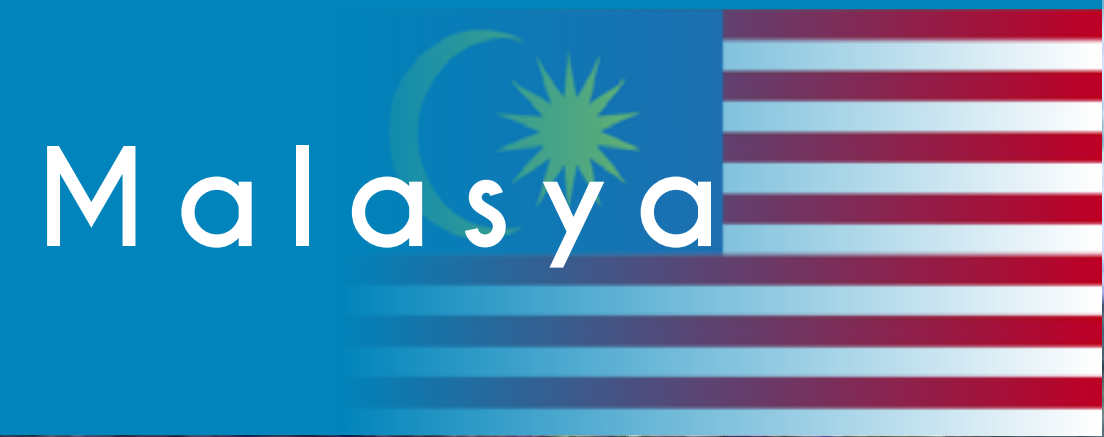
Italy





From the  
Archives

No. 25108 is seen arriving at  
Tapah Road on November 21st  
1999. *Mark Enderby*





# From the Archives Netherlands

NS Class 1200 No. 1220 is seen arriving at Utrecht on March 31st 1989. *Mark Enderby*

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A busy scene at Amersfoort on March 30th 1989. *Mark Enderby*





# From the Archives

Switzerland

One of the amazing and ancient little electric  
locos pushes its train towards the summit at  
Schynige Platte on July 25th 2013. *Jeff Nicholls*





# From the Archives

## Ukraine

On May 2nd 1993, No. Te3-6721 stands at Debalchevo shed in what is now the Russian rebel held part of the country.

*John Sloane*

