



**Railtalk** Magazine *Xtra*

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## Submissions & Contributions

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

### Photographic Contributions

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

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

## Welcome to Issue 189Xtra

Well after a successful first trip abroad in just over two years, it really does feel like some kind of normality has returned, well in some European countries at least.

And just in time ad DB have launched a 9-euro ticket from June 1st.

Ten days before the start of the 9-euro ticket, Deutsche Bahn (DB) started advance sales on bahn.de, in the DB Navigator, at ticket machines and in travel centers in the stations. At the same time, preparations have been in full swing at the largest local transport operator. With 22,000 train journeys per day, DB Regio makes 300,000 stops in ordertobringpassengerstotheirdestinationsinacclimate-friendly manner throughout Germany. Around 10,000 buses make a good one million stops per day and ensure public mobility for commuters, schoolchildren and day-trippers, especially in rural areas. DB Regio carried more than 1.5 billion passengers across Germany on trains and buses in 2021, which was still heavily impacted by the pandemic.

Jörg Sandvoß, CEO of DB Regio : “The 9-euro ticket is a unique opportunity for local public transport and climate protection in Germany. At the same time, it is a major experiment for the entire public transport system. We prepare and literally move everything we have – trains, buses, service people. Everyone will benefit from this. Subscription customers as well as passengers who are returningafteralongCoronabreakorwhoarediscovering the attractiveness of trains and buses for themselves. All of this is only possible thanks to our employees, who are doing incredible things these days.”

DB Regio is rolling out more than 50 additional trains for the expected increase in the number of passengers from June 1st. Rail customers will benefit from around 250 additional journeys and an increase in the daily offer of around 60,000 seats in the regional and S-Bahn trains. Since there will be more leisure and excursion trips in particular on the upcoming public holiday weekends and during the summer months, DB is increasing staff in

trains and stations, especially along tourist routes. More than 700 additional service and security staff coordinate boarding and alighting, support travellers with luggage or bicycles and are available to provide information. That's four times as many as in a normal summer. In addition, DB Regio is increasing the maintenance and cleaning of trains in the works and with mobile maintenance teams. All measures are carried out in close cooperation and with the support of the responsible authorities in the federal states.

DB Regional boss Jörg Sandvoß : “Even a maximum of available trains ultimately marks a limit. Above all, taking bicycles with you cannot always be guaranteed, especially since many excursions are decided spontaneously and depend on the weather. Just as a sudden traffic jam on the freeway delays travel, this can also happen on the train when traffic is very heavy. With intensive preparation, a little consideration and mutual understanding, we can all work together to ensure that climate-friendly public transport and millions of passengers emerge as winners from this campaign.”

Parallel to the expansion of the regional transport fleet, DB is pushing ahead with the renewal of its rail network this summer. In this way, it creates more capacity and makes the infrastructure more efficient for further passenger growth on the rails. This work continues unabated and sometimes involves longer travel times. The current travel information is stored in the timetable information on bahn.de and in the DB Navigator app.

So take note UK railways, Germany's DB is increasing services, increasing staff and offering a great deal with this 9-euro ticket. I know that DB isn't perfect, but at least they are trying to help get customers back onto the rail network. The question is - where is the UK rail network heading? As always a massive thanks for all the excellent photos, please do keep sending them in, until next month....

**David**

### This Page

Florida East Coast Nos. 802 and 820 cross Taylor Creek whilsthaulingtrainNo.FEC204fromMiami to Jacksonville on March 11th. *Laurence Sly*

### Front Cover

SSN 3 Cylinder Pacific Class 01.1075 built in 1940 by Berliner Maschinenbau-Actien-Gesellschaft formerly L. Schwartzkopff, Berlin and weighing 192 tons passes Schalkwijk with empty stock movement No. 70453 from Rotterdam to 's Hertogenbosch on April 24th.

*Erik de Zeeuw*





SBB Cargo Re6/6 No. 620.005 (11605) passes Altreu with an eastbound fuel train on April 11th. *Mark Pichowicz*

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Local stopping train No. Os4614 is on its way to Zdar nad Sazavou as it crosses the bridge at Dolni Loucky. The loco is Class 242.227 is painted in the Najbrt blue livery.  
*Thomas Niederl*



In the area around Brno a lot of local stopping services are classic Class 242 loco hauled trains. On May 10th, Class 242.260 with train No. Os4609 is seen at Modrice. The town, about 7 km from Brno, is also served by the tramway system of Brno. *Thomas Niederl*







## Subterra has taken over the first EffiShunter 1000. It will be used in railway construction

The construction company Subterra has become the first Czech private operator of the EffiShunter 1000 locomotive (designation 744.150) equipped with the ETCS security system. Its representatives took it over on April 29th in Jihlava.

“We will increase the work efficiency of the entire railway construction division and qualitatively move it one step higher again,” said Jaroslav Čížinský, Subterra’s production and technical director, who belongs to the

Metrostav group. Miroslav Kadlec, Director of Division 3, Radim Wrana, Head of the Railway Mechanization Operations, and Tomáš Turek, Head of the Machine Rental Center, were present with him.

The company will use the modern vehicle mainly for the transport of building materials and track mechanization on construction sites in the Czech Republic and Slovakia.

Increasing transport independence and flexibility will enable it to better plan and coordinate activities previously provided by suppliers or rentals. The contract with CZ LOKO also includes an option for two other locomotives.

As Subterra’s representatives stated, the decision was made quite logically between the domestic and established manufacturer, which also guarantees trouble-free service and maintenance.

“A comprehensive portfolio of services is part of our long-term business strategy. And we are very pleased that customers hear about this form of cooperation. By leaving the care and care of the locomotive to us, they can fully focus on their core business,” said Michal Schaffer, Head of Marketing and Customer Services at CZ LOKO.

Photo: © CZ Loko



## ČD Cargo and CZ LOKO have signed a contract for upgrade of further locomotives of series 742

The subject of the contract is modernization of a total of 25 locomotives of the 742 series to series 742.71 (EffiShunter 1000M). The modernization will take place in 2023 - 2024. The locomotives are practically of the same type to the previous 50-pieces batch.

“By signing the contract, we build on the previous good cooperation in the supply not only of modernized locomotives of series 742.71, but also of series 744 and 753.6. The upgraded engines are more efficient both in mainline service and in shunting. Improvement in the comfort will be appreciated also by our drivers,” says Tomáš Tóth, Chairman of the Board of ČD Cargo.

“The upgraded locomotives have an output of 1 000 kW and can be operated on lines in the Czech Republic and Slovakia. They are also equipped with the ETCS train control system. This is our classic modernization when only the main frame and bogies remain of the original locomotives.

These will undergo a major overhaul with several modifications,” describes the process Jan Kutálek, Sales Director and Member of the Board of CZ LOKO. “The rest of the vehicle is new with the main structural units - the block of the dynamic brake, the cabin, the engine generator set, cooling, etc.,” adds Mr. Kutálek.

Photo: © Michal Roth ml.



## Grain shipments from the Ukraine



The Ukraine belongs to the main suppliers of cereals and other agricultural crops to the world market. The country is therefore nicknamed the granary of Europe. Due to the Russian blockade of Black Sea ports, the Ukraine is facing major problems in exporting agricultural products.

Trains are a certain alternative to maritime transport.

ČD Cargo has also joined in a new way of helping the Ukraine. After delivering humanitarian aid and military equipment to the Ukraine, we have now taken, in cooperation with other partners, the first train with corn from the Ukraine to the German port of Brake.

From there, the shipment continued by ship to Egypt.

“The train carried about 1,800 tonnes of corn, which was loaded into the Uagps standard gauge wagons at the TKD transshipment depot in Dobrá near Čierna nad Tisou,” explains the chairman of the ČD Cargo Board of Directors, Tomáš Tóth. ČD Cargo is also intensively discussing other transport options. A big advantage is that it is licensed for operation of trains in all neighboring countries and has also experience in providing rail-water transport.

Photo: © CD Cargo

Reusable aluminium cans are the world's most frequently recycled beverage containers. But that wasn't sustainable enough for Dansk Retursystem, the company that operates Denmark's deposit system. So the company drew on DB Cargo Scandinavia's support to make a quick switch from transporting its recyclable cans by road to rail. This rail-based logistics solution for the route from Dansk Retursystem's plant in Høje Taastrup, Denmark, to the recycling plant in Nachterstedt, Germany, sent the firm's CO2 emissions for the transports plummeting by 75%.

#### Dark times for light metals on the road

Most of the beverage cans returned in Denmark through the Dansk Retursystem deposit system come to Hanover-Linden by single wagon. From there, Novelis, the world's leading supplier of aluminium recycling, transports the cans by train to its plant in Nachterstedt, where they are melted down.

"Following a test phase from November 2021 to January 2022, there is now a fixed rail connection between Denmark and Germany in place, which we serve twice a week", says Martin Price, who is responsible for international sales at DB Cargo Scandinavia. "Our next step is to make the transports faster and more frequent to put us in a position this year where we can use trains to move all the cans from eastern Denmark to Germany."

#### New route starting in summer 2022

In light of these plans, Price and his team are currently thinking about stocking up on more equipment for the first mile to create additional capacity. "On the main run we rely on closed double-axle HBB wagons for two reasons", says Price. "Firstly, we have a steady influx of this wagon type in Denmark. Secondly, both the weight and the dimensions of a trailer loaded with 48 aluminium bales fit into these wagons perfectly."

The trains are set to take a new route beginning in July 2022. Instead of traveling the Hanover-Linden route, they will call at Göttingen, 100 kilometres to the south. "This is why we are currently looking for a solution that also allows for service to the Novelis plant in Nachterstedt along the new route."

#### Carbon neutrality by 2030

Dansk Retursystem's goal is to reach a 50% cut in CO2 emissions by 2025. Given that aim, transporting recyclable cans to Germany on rail is of crucial importance. Heidi Schütt Larsen, Deputy Director and Head of the Circular Economy Department at Dansk Retursystem, thinks this has made aluminium's good story even better: "We have already optimised the process so as to drive the management of our deposit system with the revenue from the sale of aluminium cans. As a result, we now have a 100% circular economy for cans, and we've taken a vital step toward achieving our ambitious CO2 targets."

## Aluminium cans make their way on rail



#### Three million deposit cans every day

Every day, Denmark's residents turn in some three million deposit cans, of which slightly over half are transported east of the Great Belt through the factory in Høje Taastrup to be melted down in Germany.

In 2021, Dansk Retursystem succeeded in preventing 210,000 tonnes of CO2 from being emitted during can recycling. What's more, these results are set to improve even more once the switch to rail is completed.

Photo: A wagon full of recycled aluminium cans: Dansk Retursystem, which operates Denmark's deposit system for bottles and cans, successfully relies on sustainable rail to transport its cans bound for recycling. © DBC Scandinavia

On April 27th, Rhein Cargo Smartron Class 192.055 is seen in Leutesdorf working a rake of Tads from the Neuwied Yard to Südmühle/Münster.  
*Erik de Zeeuw*



DB Class 101.019 passes Sechtem with Eurocity train No. EC7 from Hamburg-Altona to Interlaken Ost (Switzerland) on April 27th. Operated by SBB/DB Fernverkehr AG it has a route length of 1137.8km. *Erik de Zeeuw*



On April 27th, Infraserve logistics No. DE12 passes the Solvay factory in Bad Hönningen with a chlorine train from Troisdorf to Frankfurt-Höchst. *Erik de Zeeuw*



DB Cargo Class 185.067 is seen at the height of Neuwied-Feldkirchen with a rake of tankers, following the Rhine downstream. *Erik de Zeeuw*



# Premiere: Deutsche Bahn and Siemens Mobility present new hydrogen train and hydrogen storage tank trailer

Deutsche Bahn (DB) and Siemens Mobility are continuing to drive the climate-friendly transportation transition in rail. The two partners have premiered elements of their innovative complete system at the Siemens plant in Krefeld: The newly developed Mireo Plus H, the next-generation hydrogen-powered train, and a newly designed mobile hydrogen storage trailer. The train and its new infrastructure are intended to replace diesel multiple-unit trains in commuter and regional transport and reduce rail-related CO2 emissions to zero.

## Mireo Plus H

The “H2goesRail” project is being funded as part of the National Innovation Program for Hydrogen and Fuel Cell Technology (NOW GmbH) with €13.74 million by the Federal Ministry for Digital and Transport (BMDV). The funding guideline is coordinated by NOW GmbH and implemented by project lead Jülich.

“In its coalition agreement, the federal government agreed to electrify 75% of the country’s rail network by 2030,” said Michael Theurer, Parliamentary State Secretary in the BMDV. “Here, alternative drives can help reduce emissions from diesel rail transport. This way, we’ll be able to operate virtually climate-neutral on rail routes where full electrification is not possible. The H2goesRail project will not only test the use of hydrogen for rail, but substantially advance the technology.”

“Only with a strong rail system and alternative types of drives will we be able to make a significant contribution to the fight against climate change. The Mireo Plus H enables climate-friendly and emission-free passenger transport,” commented Michael Peter, CEO of Siemens Mobility. “With the Mireo Plus H, we’ve developed the next generation of hydrogen-powered trains that offers a particularly long operating range and faster acceleration. Each delivered train can save up to 45,000 tons of CO2 over its service life of 30 years compared to corresponding travel with cars.”

“For Deutsche Bahn, hydrogen trains are an important component on our way to achieving climate neutrality,” said Dr. Daniela Gerd tom Markotten, Member of the Management Board for Digitalization and Technology at Deutsche Bahn. “With our development of the mobile hydrogen filling station and the related maintenance infrastructure, we are showing that we not only can do mobility, but technology as well. And exactly that is what is needed for providing the climate-friendly transport of tomorrow. Together with Siemens and the newly developed hydrogen train, we are creating an overall system which will take us another step towards phasing out diesel and enable the greening of the fleet.”

As a two-car train, the Mireo Plus H for the H2goesRail project has an operating range of up to 800 kilometres, is as powerful as its electric multiple-unit counterpart, has 1.7 MW of traction power providing up to 1.1 m/s<sup>2</sup> acceleration, and a top speed of 160 kilometres per hour. A three-car version has a range of up to 1,000 kilometres.



One key element needed to make hydrogen technology competitive with diesel fuel in daily operation is a fast refuelling process. To provide this, DB has developed a new method that, for the first time, enables a hydrogen train to be refuelled as fast as a diesel-powered train. This is an especially important factor considering the closely timed scheduling of DB’s regional passenger service. The fast refuelling of hydrogen trains will make the technology competitive in daily operations.

Hydrogen trains have a particularly climate-friendly drive technology, since it operates emission-free with green hydrogen and emits only water vapor. In the H2goesRail project, for example, the hydrogen train will save around

330 tons of CO2 in one year on the Tübingen-Pforzheim route, compared to a diesel-powered train. In general, the Mireo Plus H can save 520 tons a year depending on the route profile (calculated on mileage of 200,000 kilometres). The hydrogen will be produced in Tübingen by DB using green electricity taken directly from the overhead power line. To service the train, the DB maintenance depot in Ulm will be equipped accordingly.

The Mireo Plus H will start testing in Baden-Württemberg in 2023. During its planned passenger service in 2024, the hydrogen train for the H2goesRail project with Deutsche Bahn will provide regular passenger service between Tübingen, Horb and Pforzheim and replace a diesel train.





## The new BahnBonus: Faster access to status benefits

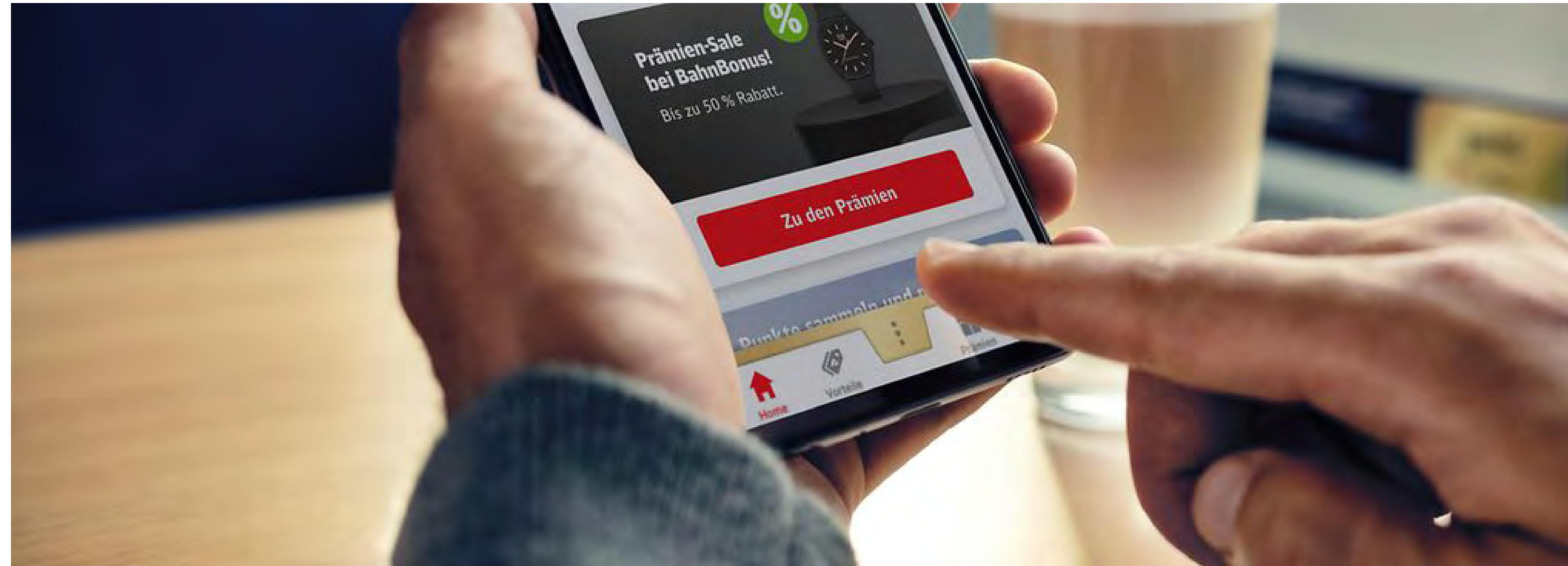
Deutsche Bahn (DB) is lowering the threshold for status benefits in its BahnBonus benefit program. Previously, 2,000 status points had to be collected within a period of twelve months. In the future, 1,500 points will be sufficient for the new silver status level with its advantages. The BahnBonus benefit program is becoming more digital, more sustainable and even more attractive thanks to more benefits. With the innovations, DB is creating more incentives to opt for the climate-friendly railway more often. This is the first comprehensive relaunch since the BahnComfort status program was introduced in 2002.

Michael Peterson, CEO DB Fernverkehr: “With around 5 million DB customers, BahnBonus is one of the most popular benefit programs in Germany. Every train journey is worth it. And it’s doing that even more now: The more frequently travellers choose the climate-friendly train, the more and more exclusively we reward them - with the three status levels silver, gold or platinum.”

The new BahnBonus program will look like this from June 13, 2022: BahnBonus is becoming more precise: from one to three status levels. In the future, DB will introduce the three status levels silver, gold and platinum. Previously there was only BahnComfort (from 2,000 status points). So far, only BahnComfort customers have benefited from exclusive advantages. The three status levels make the status benefits accessible to more participants and even more attractive in the additional levels.

BahnBonus now for more travellers: Status benefits from just 1,500 points. In the future, even more customers will benefit from the BahnBonus status benefits. DB has significantly lowered the entry threshold for status benefits. Previously, 2,000 status points had to be collected within a period of twelve months. In future, 1,500 points will be sufficient for the silver status level and its advantages.

BahnBonus is becoming more digital and simpler: just a click away from exclusive benefits



The newly designed BahnBonus app will be the key to all status benefits in the future. It combines all BahnBonus applications in a modern and intuitive interface: Digital BahnBonus card, points overview and use of status benefits. For example, passengers can play codes directly from their mobile device, scan them and redeem them, for example, in the on-board service. In this way, DB simplifies and standardizes the use of status benefits. With the new BahnBonus app, DB saves around 180,000 plastic cards.

### BahnBonus offers even more exclusive advantages

Depending on the status level, the BahnBonus program will offer its customers even more exclusive benefits in the future, including the well-known ones:

- Silver (from 1,500 status points): 8 day passes for access to the DB lounges, preferential treatment in the DB travel centers.

- Gold (from 2,500 status points): Access to the exclusive seating area in long-distance traffic.

- Platinum (from 6,000 status points): access to the premium area of the DB Lounge, exclusive reservation options.

In addition, there are also new status benefits in each status level, such as free drinks in the on-board catering in the silver and gold levels, discounted rides with Call a Bike in all levels or free rides and a 30% discount in the on-board catering in the platinum status level.

## NEW CONTRACT IN GERMANY TO SUPPLY LRV UNITS FOR BONN

CAF has been selected by the companies Stadtwerke Bonn Verkehrs GmbH (SWBV) and Elektrische Bahnen der Stadt Bonn und des Rhein-Sieg-Kreises GmbH (SSB), operators of the transport services in the city of Bonn and its outskirts, to supply 22 LRV units, and also the spare parts for this fleet. Likewise, the agreement contemplates the possibility of increasing the number of units by a further 10.

The fleet of vehicles of SWB Bus und Bahn and SSB operate on the entire network, while also running on part of the intercity lines connecting the nearby city of Cologne. The new CAF LRVs will boost the capacity of this fleet of vehicles in order to cover the customer’s planned increase in frequencies

of service, as well as the rise in the number of passengers.

These high-floor bi-directional units have a length of 28 metres and are similar in design and dimensions to the units called “Stadtbahnwagen B”, a vehicle type that has been in service for many years now on a number of networks in the German state of North Rhine-Westphalia. In this case, beyond the design similarities, the CAF vehicles feature the latest innovations with regard to comfort and safety, for this type of urban transport unit.

This project is on top of the one to supply 51 LRVs to operator Ruhrbahn GmbH for the nearby city of Essen, awarded to CAF in June 2021 and which

is currently underway. These units are similar, confirming the success of this vehicle model made by CAF.

Both contracts are for the federal state of North Rhine-Westphalia, with a population of close on 18 million, the most populous state in the country, accounting for approximately 22% of the gross domestic product of Germany.

On April 27th, BLS Cargo Class 475.005 follows the Rhine on the right bank working a Domodossola (Italy) to Kaldenkirchen intermodal service. *Erik de Zeeuw*



## Alstom to supply 130 Coradia Stream trains to SFBW in Germany



Alstom, global leader in smart and sustainable mobility, has signed a contract to supply 130 Coradia Stream High Capacity (HC) electric double-deck trains to Landesanstalt Schienenfahrzeuge Baden-Württemberg (SFBW) for the Baden-Württemberg network, in Germany. In addition to the delivery of the trains, Alstom has been contracted to provide full-service maintenance for a period of 30 years to ensure the trains' seamless availability. Furthermore, the contract reserves an option to order up to 100 additional trains. The total contract value is almost 2.5 billion euro for the first 130 trains and their maintenance for over 30 years.

"This contract undoubtedly marks a milestone in the cooperation between Alstom and the state of Baden-Württemberg. State-of-the-art trains like our Coradia Stream High Capacity are the best answer to the question of how to meet the growing need for sustainable and future-proof mobility solutions in Germany," said Müslüm Yakisan, President of Alstom Region DACH. "I am extremely pleased that our high-capacity concept is appealing to SFBW and that Alstom was selected as the preferred partner for the future of mobility in Baden-Württemberg. This decision is proof that our green and digital solutions optimally address today and tomorrow's needs for regional mobility in Germany."

"When awarding the contract, we set very high standards for the performance and technology of the vehicles. In terms of passenger comfort, we are setting new standards in regional rail transport that have not yet been achieved in

Germany. These trains are sprinters in local transport. We want to attract many additional passengers with these trains," said Winfried Hermann, Minister of Transport Baden-Württemberg. "Alstom has to ensure seamless operational capability of the trains on a daily basis within the framework of the so-called life cycle model (LCC model). Care was also taken to ensure that, despite very powerful vehicles with a top speed of 200 km/h, we also get very energy-efficient vehicles. Alstom will also be responsible for energy consumption for the duration of the contract."

"Regarding the vehicle design, we have paid particular attention to passenger comfort. There will be reclining seats, well-designed seating landscapes, areas for people with reduced mobility, as well as an innovative lighting concept and strong Wi-Fi," adds Volker M. Heepen, Managing Director Landesanstalt Schienenfahrzeuge Baden-Württemberg.

The four-car trains consist of two double-deck control cars and two single-deck middle cars, for a total of 380 seats. They have a length of 106 metres and can operate in multiple traction. The trains are built according to SFBW requirements and contribute to modern transport in the region. Air conditioning, free Wi-Fi, numerous charging options for mobile phones and laptops, as well as reading lamps contribute to a pleasant travel experience. Additionally, lounge areas, conference and family compartments offer a high level of comfort, whereas multi-purpose compartments offer space for large luggage, prams, and bicycles. Wide single-leaf doors and optimised opening and closing times allow for a quick entry and exit. As for passengers with reduced mobility, they can enjoy the luxury of travelling with the same comfort as other passengers. For example, the doorsills of the vehicles allow step-free access from the standard platform with 760 mm above the top of the rails, and for stations with different platform heights, there are special lifts in the car for passengers in wheelchairs.

The trains are also equipped with modern signalling and automation technology in the scope of the lighthouse project known as "Digital Node Stuttgart" (DKS), Germany's first digitised railway node. They will start operation in 2025 at the same time as the first two sections of the DKS. The subsequent upgrading of the vehicles to TSI CCS 2022, the future evolution of the European standard for cross-border traffic in the European Economic Area, will be deployed until mid-2027. This will allow all three sections of the DKS to be used.

Alstom has already been awarded the retrofitting contract for the existing SFBW Talent 3 and Flirt 3 vehicle fleets. The new Coradia Stream High Capacity trains will also be equipped with the European Train Control System (ETCS) level 2 and 3, as well as vehicle devices for Automatic Train Operation (ATO) at Grade of Automation (GoA) 2. This will be the first time in Germany that newly built vehicles will be equipped with a Train Integrity Monitoring System (TIMS) and ETCS Level 3 and, in partial stages, the Future Railway Mobile Communication System (FRMCS). This allows tighter, denser and more energy-saving driving through digitally predictive signalling and driving commands. It increases the efficiency and reliability of regional transport, especially on highly frequented lines. With a smoother rail service overall, passengers can look forward to more frequent and safe connections. In this way, Alstom combines sustainability, capacity and comfort with the Coradia Stream High Capacity and thus contributes to making regional transport greener, smarter, and more comfortable in the long term.

Coradia Stream is a state-of-the-art, low-floor, high-performance electric multiple unit (EMU), with a maximum speed of up to 200 km/h that offers a modular design, allowing operators to choose their best configuration and interior. Developed for the European market, Coradia Stream can operate on all the main European power supply systems. In total, over 730 trains based on the Coradia Stream train family have been ordered in Italy, Luxembourg, the Netherlands, Germany, Denmark, and Spain, ensuring a well-proven product. The train family also offers emission-free traction solutions such as battery or hydrogen for non-electrified lines.

Image: Exterior view of the Coradia Stream High Capacity electric double-deck trains for SFBW – Non-contractual design for illustration purposes. ©Alstom Advanced & Creative Design

## From overloaded infrastructure to a high-performance network: DB wants to make rail fit for growth and modal shift

DB CEO Dr. Richard Lutz has spoken out in favour of a paradigm shift in infrastructure in view of the rapidly increasing demand for passenger and freight transport and a rail network that is both heavily used and prone to disruption. In a telephone press conference in Berlin, he described the rehabilitation of the rail network as a key task in the coming years.

Lutz mentioned interview statements by Federal Transport Minister Dr. Volker Wissing, who pointed out the common goal of a high-performance network. With regard to the conceptual considerations, one is in close contact with the BMDV, says Lutz. The detailing of the concept and the concrete implementation steps in the next few years are to be tackled in close cooperation between the federal government, the railways and the entire industry. The goal is an infrastructure oriented towards the common good from a single source. Lutz: "For me, an infrastructure geared towards the common good means above all an alignment with the transport and climate policy goals of the federal government. DB has made these goals its own as part of its Strong Rail strategy, and the entire industry has made them its own as part of the Rail Transport Master Plan.

Lutz continues: "The current operational situation shows, both clearly and painfully, that we have a dilemma that can hardly be resolved in the short term: growing and modernizing at the same time is no longer possible with good operational quality and punctuality on many days and in many corridors. All rail transport companies and thus all passengers, transport authorities and freight transport customers are feeling the massive effects. We are aware of that." Deutsche Bahn is trying everything to minimize the negative effects on transport companies and customers in passenger and freight transport. Lutz especially thanked all railway workers in the operational area for their tireless efforts. In the interest of everyone, a fundamental change of course and work on sustainable solutions are now needed, that got to the heart of the problem. "Keep it up" is definitely not an alternative.

Such a sustainable solution, according to Lutz, lies in the infrastructure. It is critical to success not only for growth and modal shift, but also for operational quality and punctuality. "80 percent of the quality of the railway system is decided on the rail network. The current problems in terms of reliability and quality in rail transport are essentially capacity and aging problems in the

infrastructure. This applies in particular to the heavily used network of currently around 3,500 kilometres of track, where the average utilization is around 125 percent even without construction activities and can quickly rise to well over 150 percent in the case of construction work." To make the rail network fit for growth and modal shift, the heavily loaded network in particular must be developed into a high-performance network - with a permanent and sustainable improvement of all trades relevant to punctuality.

According to Lutz, the core of the implementation includes a general renovation of the heavily used corridors. All necessary construction measures for the coming years are to be bundled. Although longer track closures are necessary for this, these are accompanied by better pre-planning with greater reliability and longer lead times for everyone involved. It is important that after the implementation of the corridor measure, there is freedom to build for several years and that this creates positive impetus for capacity and quality in the entire network. The specification of these concepts should be part of the joint work of the federal government, the railways and the industry.

## New design for new demands: feel comfortable in the ICE like in your own living room

Deutsche Bahn is opening a new chapter in rail travel: the interior of the future ICE fleet is being completely redesigned. With redesigned seats, even more functionality, new colours and modern, durable materials, the long-distance trains are getting contemporary equipment. Travellers can experience the new design for the first time in December 2023 on the 17th train of the new ICE 3neo. From this point on, this equipment will be installed in all newly procured long-distance trains.

DB boss Richard Lutz said at the premiere of the design model in Berlin: "Travel, work, relax - and feel as comfortable at 300 km/h as in your own living room: The new design is tailored to the needs of our passengers of modern travel comfort, significantly more individuality and genuine sustainability. We are sure that we will get even more people excited about climate-friendly rail and that the climate will benefit as well."

The new seats are designed as a personal place of retreat: a harmonious design, modern materials such as wood decor and covers made of high-quality fabric with 85 percent wool in nuanced colours determine the new appearance. Warm grey tones are planned for the seat covers in 1st class, blue tones in 2nd class and burgundy in the on-board restaurant. Elements such as a tablet holder or coat hooks in each backrest offer more functionality.

DB long-distance manager Michael Peterson: "We always focus on people and their needs on the journey. When developing the new design, we attach great importance to privacy, the design of personal space and a completely new colour and material concept."

Trains have been in use for several decades. In addition to a timeless design, durable, hard-wearing materials are required. On average, four travellers use a seat on the ICE every day - that's 1,500 people taking a seat a year.

The new materials - extensively and intensively tested for abrasion, light resistance and cleaning results - meet this requirement.



## Women on the train! First “Female ICE” travels through Germany



Deutsche Bahn wants to become more female and continue to significantly increase the proportion of women in the group. Numerous measures are already having an effect: more than 3,000 women received a job offer in the first quarter, almost three percent more than in the same period last year. The proportion of women in applications is also higher than a year ago.

The job market is picking up significantly, and at the same time Deutsche Bahn is still hiring at a very high level as part of the Strong Rail strategy. This year alone, DB again wants to bring 21,000 new employees on board. Among them are 5,200 junior employees – that is another record.

More women for the railways - that's why it's also part of making DB women and their jobs more visible - and nobody can do that better than the employees themselves. From Munich to Berlin. From the engine driver to the head of the train – only women were responsible for the specially branded train. The organizers offered a special program for dozens of DB colleagues in a special car. Employees were also increasingly deployed along the route – in signal boxes, at stations and on construction sites. At events in Halle and Nuremberg, DB colleagues also informed interested parties about job profiles and exciting projects. A total of more than 500 DB women wanted to set an example with the campaign and encourage other women to also strive for jobs in male domains and in management positions.

Martin Seiler, Board Member for Human Resources and Legal Affairs at DB: “We need significantly more women in technical professions and management positions. The ‘Female ICE’ is a great project with which we are once again drawing attention to DB as an attractive employer. I would like to thank the numerous colleagues who have worked with a lot of heart and soul to get this special train on the rails. We have a wide range of measures in our portfolio to increase the proportion of women at DB.

This is a central concern for the DB Group Board of Management. And: Every candidate is important to us! The fact that the number of hires is increasing is already a great success.”

Franziska Giffey, Governing Mayor of Berlin: “Our working world should encourage everyone to take up the job they want. Unfortunately, role models and gender clichés are often a major hurdle. The ‘Female ICE’ with exclusively female staff is a great, nationwide campaign by Deutsche Bahn. It shows in an exemplary manner that women can pursue any profession and are supported by the company and the state - regardless of whether in the technical area or in management. It is a great pleasure for me to welcome the train to Berlin – the city of women.”

Ulrike Scharf, Bavarian State Minister for Family, Labor and Social Affairs: “We will only overcome invisible advancement hurdles when women are represented in all sectors and positions. There are many strong women who do great work and are role models for others. They must also be visible! Deutsche Bahn’s ‘Female ICE’ initiative supports women who are independent of outdated role models. As Minister of State, it is very important to me that women seize the opportunities that are available to them. We need more women in all professional fields and we have to work on it every day!”

Ulrike Haber-Schilling, Board Member for Human Resources, DB Regio and member of the “Women at DB” network: “Women should dare, should make themselves visible - you can’t stress and demand that often enough. With this lighthouse project ‘Female ICE’ we want to encourage girls and women to always go their own way. The train is now firmly in the hands of women – and that also shows how much women move on the railways.”

The “Female ICE” project also attracted attention in Brussels, where DB recently received the “European Women in Rail Award” as the “best employer for women in the European rail sector”.

Adina Vălean, Commissioner for Transport: “Less than a quarter of those employed in the EU transport sector are women. And less than five percent are female train drivers. That’s not good enough. For more people – and women in particular – to choose a career with the railways, the sector needs to become more attractive to a broader workforce – including through flexible working arrangements, part-time work, job sharing and childcare facilities. At the same time, gender balance, diversity and inclusion ensure improved service for all rail passengers. Deutsche Bahn has recognized this and I am confident that other companies will follow suit.”

Around 50,700 women currently work at DB in Germany, which corresponds to a share of 23.4 percent. The proportion of women in management is currently 25.5 percent. It is expected to increase to 30 percent by 2024. The “30 measures for 30 percent” package of personnel recruitment includes, among other things, that more female candidates are put forward through early succession planning. At least one woman will be shortlisted for management positions. The Management Board has the right to veto appointments to management positions. And: Every manager is called upon to make a performance contribution for more women in management.

## Groundbreaking for the structural change: construction of the new railway depot in Cottbus begins

On May 10th, Deutsche Bahn (DB) started construction of the new railway depot in Cottbus. With the groundbreaking, the first of what will later be two workshops is being built. The first ICE 4 trains will be maintained in this hall in two years. On the construction site, 500 red balloons made the floor plan of the new workshop visible. They also symbolized the first 500 new jobs and apprenticeships that will be created here by 2024.

The project is one of the first and most important structural strengthening projects in the Lausitz coal region. Together with the federal government and the state of Brandenburg, DB is supporting change and creating new, high-quality industrial jobs. After the completion of the second workshop in 2026, there will be a total of 1,200 new jobs. DB is fully committed to digitization and automation: Cottbus will be DB's most modern maintenance facility.

Olaf Scholz, Federal Chancellor : "The construction of the new railway depot in Cottbus shows how structural change can succeed. Such innovation projects not only create good jobs - they also bring new economic power and future viability for the entire region."

Richard Lutz, CEO of Deutsche Bahn: "The new plant in Cottbus is being built at record speed. Today we are breaking ground - and in two years we will be waiting for the first ICE 4 here. At the same time we are creating exciting and ultra-modern jobs in a promising area. We need this new plant so that our ICE fleet can continue to grow and so that more people can take the train. This is the only way to achieve our climate goals."

Dietmar Woidke, Prime Minister of Brandenburg: "A lighthouse project for structural change in Lusatia is starting today. Deutsche Bahn and the federal government have kept their word. Thank you for that. This strengthening of the location is a central element for the development of Lusatia into a model region for climate protection and economic growth. Also because up to 1,200 new industrial jobs will be created here. It's clearly progressing - especially when you consider that just a few years ago this railway station was threatened with closure. Compensating for lost jobs with new sustainable jobs is an absolutely necessary prerequisite for successful structural development in the course of the phase-out of lignite. The plant is scheduled to go into operation two years earlier than originally planned."

Michael Theurer, Federal Government Commissioner for Rail Transport: "Rail secures more than half a million jobs in Germany. New technologies with highly qualified jobs make the environmentally friendly mode of transport more and more attractive. With a clear focus on this mode of transport, we not only pursue active climate protection but also comprehensive employment and structural policies. This plant is another positive contribution to structural change in the Lausitz lignite mining area. Because the investments made



here strengthen both the region and rail transport throughout Germany." As part of the "Strong Rail" group strategy, DB is continuously expanding its ICE fleet. By the end of the decade, around 450 ICE will be on the rails. By 2024 alone, the number of ICE 4 will grow from currently almost 100 to 137 vehicles. More trains require more maintenance capacity. The new plant in Cottbus makes an important contribution to this and ensures that the trains get back on track quickly and that more people can travel in a climate-friendly and comfortable way.

The new workshops are being built on the site in front of the existing DB location in Cottbus. The first hall has two tracks and is 445 meters long; the rest of the hall will have four tracks and be 570 meters long. This will make it DB's first heavy maintenance facility for ICE 4 trains. The trains are partially dismantled and heavy components such as bogies are replaced.

What is special about the factory halls: the 374 meter long XXL ICE with 13 cars and 918 seats can also enter in full length. Of the shorter ICE, two trains each around 200 meters long, each with seven carriages, fit on the tracks one behind the other. Employees can work on all cars at the same time, which

speeds up the maintenance of the trains. The revision of an ICE 4 with all the necessary work steps should take less than two weeks in the new plant. So far, such a revision of an ICE takes up to five weeks.

New: Elevated rails ensure ergonomic workplaces in the factory halls, where employees can easily work on side flaps and wheel sets. Bogie changers specially developed by DB are installed in the hall floor. This allows the employees to move the bogies out to the side for further processing without having to lift anything heavy. The components can also be changed much faster, which is why the trains have to be in the factory much shorter than usual and are back in action for the customers faster.

Investments of one billion euros are planned on the basis of the investment law for coal regions. With this law, the federal and state governments are supporting the regions affected by the phase-out of coal in Brandenburg, the Free State of Saxony, Saxony-Anhalt and North Rhine-Westphalia in creating sustainable jobs and new economic structures.

Image: Visualisation of the new depot. © DB





On March 16th, NS Class 1700 No. 1746 approaches Holten with train No. IC148 from Berlin Ostbahnhof in Germany to Amsterdam CS (NL). *Erik de Zeeuw*



# Netherlands

NSM Nos. 386 and 273 arrive in Utrecht with former streamline mail car Pec No. 1902 inbetween them, being transferred from Blerick to Utrecht Maliebaanstation on May 6th. *Erik de Zeeuw*









# Netherlands

On March 26th, DB Cargo Class 193.378 passes the Rail Service Center in Rotterdam on a Waalhaven to Botlek Yard light engine move.

*Erik de Zeeuw*



# Netherlands

In Venlo, DB Cargo Class 189.047 and 189.035 are seen climbing and scattering sand, heading a Rotterdam to Dillingen/Saar (Germany) ore train. *Erik de Zeeuw*







# Netherlands

On May 14th, NSM Nos. 273 and 386 are seen with a ride for invited guests from the Utrecht Maliebaanstation (Dutch railway museum) heading to Hilversum. *Erik de Zeeuw*





On May 24th, HTM tram No. 3122 on a line 16 service, is seen in the terminal loop through the Statenkwartier. Within a short time, the terminal loop through the Statenkwartier will be out of use because a new head terminus is being created on Statenlaan. *Gerard van Vliet*







In the morning of May 2nd, Intercity train No. 85106 from Szczecin Gł to Olsztyn departs Runowo Pomorskie hauled by Class EP07-1054 and passes the disused water tower. *Thomas Niederl*





On May 2nd, Intercity train No. 58102 from Olsztyn to Szczecin arrives at Runowo Pomorskie. It's quiet amazing that Intercity trains stop at this village with less than 500 inhabitants. The junction station was once much more important than it is now. *Thomas Niederl*





On May 2nd, PKP Cargo Class ET22-1005 and ET22-676 pass Worowo with a freight train.  
*Thomas Niederl*









CP Class 1400 No. 1429 approaches Covelinhas whilst working train No. IR862 07:08 Pocinho - Porto Campanha on March 24th. *Laurence Sly*









# Portugal



Several passengers seize the opportunity at Ermida for a quick smoke on the platform while CP No. 1438 working train No. IR869 13:20 Porto Sao Bento to Pocinho waits to pass train No. IR868 13:08 Pocinho to Porto Campanha which will be worked by classmate No. 1429 on May 14th. *Andy Pratt*

Ex Renfe Class 313 Alco No. 313.204, now privately owned and based in Portugal stands alongside Medway owned No. 1444, still carrying it's CP orange livery at Vila Nova de Gaia on May 15th. *Andy Pratt*

CP No. 2611 arrives at Vila Nova de Gaia on May 15th with train No. IC721 09:30 Lisboa Sta Apolonia to Braga. The Class 26 was being used in place of the regular 56 to commemorate 40 years since Pope John Paul II's visit to Portugal when the same locomotive was used to haul the Pope's train. *Andy Pratt*















U.S.A.

Seminole Gulf No. 580 is seen stabled in a siding in Sarasota on March 7th.

*Laurence Sly*



U.S.A.

Florida East Coast Nos. 811 and 814 approach Stuart whilst hauling FEC train No. 103 from Jacksonville to Miami on March 10th.

*Laurence Sly*



U.S.A.

Bright Blue crosses the St. Lucie River in Stuart whilst working train No. BL500, a crew training train from Cocoa to West Palm Beach on March 10th. *Laurence Sly*





U.S.A.

Florida East Coast No. 433 crosses Taylor Creek whilst hauling train No. FEC920, the Fort Pierce local to Pineda on March 11th.

*Laurence Sly*



U.S.A.

Bright Blue crosses Taylor Creek whilst working train No. BL500, a crew training run from West Palm Beach to Cocoa on March 11th.

*Laurence Sly*



Austria

## ÖBB-Infrastruktur has begun planning for its double-track expansion of the Vorarlberg monastery arch on the Arlbergbahn line in Austria

The mountain railway connects Vorarlberg with the rest of the country and is one of the main lines in Austrian Federal Railway's (ÖBB) 5,000-kilometre Austrian network.

This large-scale project is part of ÖBB's ongoing work to ensure increasing

timetable stability and punctuality in long-distance traffic on the Arlbergbahn. It entails the double track expansion of the 1.4 kilometre section starting from the eastern entrance to Bludenz station in the direction of Arlberg.

As part of the project, new noise protection walls will be installed to lower

sound pollution for local residents. Work on the project begins with surveys to determine the boundaries of adjacent properties. Further investigations are also being planned, including an environmental impact assessment (EIA).

Egypt

## Digitalization at record speed: Modernized Siemens Mobility finalizes contract for 2,000 km high-speed rail system in Egypt

Siemens Mobility and its consortium partners Orascom Construction and The Arab Contractors have signed a contract with the Egyptian National Authority for Tunnels (NAT), a governmental authority under the jurisdiction of the Ministry of Transport of Egypt, to create the sixth largest high-speed rail system in the world. The Siemens Mobility share of the combined contract is 8.1 billion EUR and includes the initial contract of 2.7 billion EUR for the first line signed September 1, 2021.

The contract was signed by His Excellency, Lieutenant General Kamel Al Wazir, Minister of Transport Egypt, and Dr. Roland Busch, President and Chief Executive Officer (CEO) of Siemens AG, as well as Osama Bishai, CEO Orascom Construction and Sayed Farouk, President and CEO Arab Contractors. This was witnessed by His Excellency, Abdel Fattah El-Sisi, Egyptian President, Dr. Essam Wally, Chairman of Egypt's National Authority for Tunnels, His Excellency, Frank Hartmann, German Ambassador, as well as Michael Peter, Siemens Mobility CEO. German Chancellor Olaf Scholz sent a video message, underlining Germany's support for the project and its importance for German-Egyptian bilateral relations and global climate protection.

The 2,000-kilometre state-of-the-art high-speed rail network will connect 60 cities throughout the country, with trains that can operate at up to 230 km/h. This means that approximately 90 percent of Egyptians will have access to this modern, safe, and integrated rail system. With a modal shift to train transport, the fully electrified network will cut carbon emissions by 70 percent compared to current car or bus transport, further supporting Egypt's efforts in transforming its mobility to a more sustainable one. Together with civil works partners Orascom Construction and The Arab Contractors, Siemens Mobility will provide its comprehensive turnkey services to design, install, commission, and maintain the entire system for 15 years.

"The new electrified train network comes as a consolidation of the fruitful cooperation between Egypt and Germany in the field of infrastructure and will represent a valuable great addition to Egypt's transportation system, marking the beginning of a new era for the railways system in Egypt, Africa,

and the Middle East," said His Excellency, Egyptian President Abdel Fattah El-Sisi.

"The opportunity to provide Egypt with a modern, safe, and affordable transportation system that will transform the everyday for millions of Egyptians, create thousands of local jobs and reduces CO2 emissions in transport, is an honour for us. Not only will it promote economic growth, it will also enable Egypt to take a leap forward in rail transportation. With our latest technology in rolling stock, signalling, and maintenance services, Egypt will have the sixth largest and most modern high-speed rail network in the world," said Roland Busch. "In addition, it is the biggest order in the history of Siemens!"



"This landmark transportation project is truly historic for both Egypt and Siemens and we are honoured to partner with the Ministry of Transport to re-imagine the future of transportation in Egypt. The extensive 2,000 km high-speed rail network will connect 60 cities and enable around 500 million journeys a year. It will link the country like never before, fight pollution and global warming, while also providing an effective and reliable method for the movement of goods," said Michael Peter. "Together with our partners,

we will develop from scratch a complete and state of the art rail network that will offer a blueprint for the region on how to install an integrated, sustainable, and modern transportation system."

The Egyptian high-speed network will consist of three lines: The already announced "Suez Canal on rails," a 660-kilometre line connecting the port cities of Ain Sokhna on the Red Sea to Marsa Matrouh and Alexandria on the Mediterranean. And the two rail lines signed recently. The second line will be about 1,100 kilometres and run between Cairo and Abu Simbel near the Sudan border, linking the mega city to rising economic centres in the south. Furthermore, it will allow for the development of communities up and down the Nile, which will subsequently provide additional opportunities for small and family-owned businesses to flourish. The third line will cover 225 kilometres. This line will connect the world heritage archaeological sites in Luxor with Hurghada by the Red Sea. In addition, this rail link will significantly improve the efficiency and sustainability of freight transport for goods and materials between Safaga harbour and inland locations.

To support the installation of the rail network, the consortium will directly create up to 40 thousand jobs in Egypt, with an additional 6,700 at Egyptian suppliers and indirectly through the wider Egyptian economy.

To equip the entire rail network, Siemens Mobility will deliver trains based on its proven product platforms. This includes 41 Velaro eight car high-speed trains, 94 Desiro high-capacity four car regional train sets, and 41 Vectron freight locomotives. On all three lines, Siemens Mobility will install a safe and reliable signaling system based on the European Train Control System (ETCS) Level 2 technology, as well as the power supply system that will deliver efficient and continuous energy.

Siemens Mobility will provide its latest digital products and platforms that will optimize operations throughout the network for the trains, rail infrastructure and subsystems. The digital application Railigent will be used to provide comprehensive asset management and maintenance to guarantee the highest availability. Digitalized depots will enable seamless processes from problem identification to correction. Automated Ticketing, Digital Station and Power Management solutions will help to meet the challenges surrounding capacity and efficiency in stations.

Spain



## Alpha Trains' diverse locomotive fleet continues to grow

Alpha Trains' locomotive fleet is becoming more diverse and rejuvenated. With the latest order, the company now has a total of 30 powerful EURO6000 locomotives in its portfolio; that means 30 modern and reliable Stadler EURO6000s that will support the increase of rail freight in Spain.

The state-of-the-art locomotives are homologated for Spain (on both Iberian and UIC gauges) and France. 17 locomotives have been put into operation already and in the coming weeks and months more EURO6000s will leave the Stadler factory in Valencia.

With more than 440 locomotives from a wide range of manufacturers, series and registrations in a total of 22 European countries, Alpha Trains offers its customers one of the largest and most diverse fleets on the leasing market.

Photo: EURO6000 homologated for Spain and France. © Diego Sanchez



Spain



## Talgo initiates dynamic testing of Spain's first dual hydrogen train

On May 31st, Talgo initiated the dynamic tests of its dual Vittal-One renewable hydrogen train at its factory in Las Matas, Madrid, which is a key milestone in applying hydrogen to the railway. These tests carried out in a laboratory train named TPH2, seek to ensure the correct functionality of the main composition systems developed in previous stages and to check the train's traction with batteries and hydrogen, that is, to validate hydrogen technology in motion, applied to the railway sector. In this first phase, Repsol will provide the infrastructure for generating renewable hydrogen and supplying the energy to power the train.

In a second phase of the dynamic tests, Talgo and Repsol will validate the technology on a general track, first in the surroundings of Madrid and then in Extremadura.

The TPH2 test train consists of a Talgo Travca multi-system locomotive designed as a prototype vehicle capable of changing various gauges and adapting to various electrification voltages. It consists of five cars equipped with hydrogen fuel cell and battery technology and a laboratory car to control and analyse the test results.

In the words of Carlos Palacio Oriol, President of Talgo: "This is a fundamental milestone for Talgo and for the Spanish railway, which today sees the start of dynamic

testing of the first hydrogen train in Spain. The Vittal One will facilitate emission-free mobility in the country, linking provinces, cities and towns, as part of Talgo's commitment to helping operators decarbonise the railway network".

The exterior design of the TPH2 train was the winner of the Talgo TPH2 Train Exterior Design Competition, created by a group of students from the Degree in Industrial Design and Product Development Engineering at the University Centre of Mérida, part of the University of Extremadura.

### Vittal One green hydrogen self-propelled train

The Vittal One dual hydrogen train is Talgo's commitment to sustainable mobility in the short and medium radius. It is based on the Talgo Vittal technology platform for Cercanías and Media Distancia, adding hydrogen traction, which will be produced with 100% renewable energy sources. Therefore, it is the perfect solution to replace diesel traction and decarbonise those railway lines that are not electrified by a catenary.

The system is complemented by batteries that increase the power available when starting, taking advantage of the train's braking to recharge, further proof of the sustainability of this type of train.

It will be designed to run at a maximum speed of 220 km/h in electric mode and 160 km/h in hydrogen mode.

The hydrogen fuel cell will consume only 0.25 kg/km and give the train a range of 800 km without electrification.



# Finland

## ŠKODA GROUP TO DELIVER MORE TRAMS TO TAMPERE, FINLAND

Tampereen Raitiotie Oy has ordered five more modern and sustainable ForCity Smart Artic trams from Škoda Group. The Finnish tram operator has used an option to the contract that was signed with the manufacturer in 2017. The option is worth almost €34 million. The cars ordered now are identical to the 20 trams delivered in 2020-2021.

“ForCity Smart Artic Tampere (Tampereen Ratikka) is the largest tram car in terms of size produced in the Nordic countries. In addition to its size and intelligent features, it is also exceptional because it was designed in collaboration with the people of Tampere. The cars have proven to be reliable in operation and we are pleased to continue our good cooperation with the Škoda Group,” says Pekka Sirviö, CEO of Tampereen Raitiotie Oy.

The Škoda ForCity Smart Tampere X34 is a low-floor, spacious, air-conditioned, modern tram designed specifically for the demanding Nordic conditions. Designed for a track gauge of 1435 mm, the two-way tram is 37.3 m long, has a completely flat floor and can accommodate up to 264 passengers. The tram is also easily accessible for wheelchairs and prams.

Tampere has previously ordered twenty trams with ten years of maintenance. The original contract also included three additional options for up to 46 new cars.



# Switzerland

## SWISS and SBB intensify their strategic partnership: Munich-Zurich Airport to be the first international 'SWISS Air Rail' route

The 'Airtrain' is going international: SWISS is expanding its collaboration with SBB Swiss Federal Railways on its intermodal transport service, which will in future be known as 'SWISS Air Rail'. From July 2022 onwards, SWISS customers can take advantage of the first-ever international rail/air connection in the form of a new train service between Munich Hauptbahnhof and Zurich Airport. SWISS Air Rail services in Switzerland are also set to be further expanded in collaboration with the SBB.

Swiss International Air Lines (SWISS) is intensifying its collaboration with SBB Swiss Federal Railways to expand its intermodal rail/air travel product under the new name of 'SWISS Air Rail'. To further enhance its customers' train connections to and from its Zurich Airport hub, SWISS is adding Munich Hauptbahnhof in Germany to its intermodal SWISS Air Rail network. The new Munich-Zurich Airport route joins the existing rail/air services between Zurich Airport and the SBB stations of Basel SBB, Lugano and Geneva which have been gradually established over the past few years under the 'Airtrain' name. The new Munich service is the first such rail/air connection between Zurich Airport and a point in a neighbouring country.

From July 1st 2022 onwards, travellers holding a SWISS flight ticket can thus take advantage of rail services between Munich Hauptbahnhof and Zurich Airport which can be seamlessly combined with their flight. “Together with the SBB, we're taking a big further step forward in offering our customers complementary travel options,” says SWISS Chief Commercial Officer Tamur

Goudarzi Pour. “We are jointly seeking to provide smarter combinations of rail and air transport wherever these make sense. And we're marking a particular milestone here in offering – with Munich – our first-ever international SWISS Air Rail connection.”

“I am delighted that it will now be easier to combine rail and air travel on the Munich-Zurich Airport route, too,” adds Véronique Stephan, the SBB's Head of Passenger Services Markets. “This new service will enable SWISS customers living a short or a medium distance away from SWISS's Zurich hub to make greater use of rail connections to get to and from the airport. And with these quick and direct new rail services, they'll enjoy the best possible connections with their SWISS flights.”

### Six trains a day in both directions.

The timetable for the new SWISS Air Rail service between Munich Hauptbahnhof and Zurich Airport offers SWISS travellers a choice of six SBB trains a day in each direction. Trains may also be boarded or left in Bregenz en route. The rail ticket is included in the SWISS air fare, and can be booked now together with the flight ticket on [swiss.com/Link](https://www.swiss.com/Link) opens in new window. or at any travel agency. As on all its other SWISS Air Rail routes, SWISS offers users of the service guaranteed connections in the event of a delay.

SWISS customers using SWISS Air Rail who are Miles & More members will earn status and award miles on their SWISS Air Rail ticket, too, with the

number of miles earned depending on their connecting flight and class of travel. SWISS First and SWISS Business travellers using SWISS Air Rail will also travel in first class on the train; and both they and HON Circle and Senator status customers can make use of the Munich Hauptbahnhof DB Lounge. All travellers using SWISS Air Rail from or to Munich will also enjoy automatic seat reservation and free WiFi access.

### Further expansion planned in Switzerland from this summer onwards.

The range of SWISS Air Rail options in Switzerland is also to be further expanded together with the SBB. The plans here include selected new intermediate stops on existing SWISS Air Rail routes from summer 2022 to enable even more SWISS travellers to take advantage of these seamless rail connections to and from SWISS's Zurich Airport hub. The Geneva-Zurich Airport service will also allow travellers holding a SWISS flight ticket to join or leave the train in Lausanne, Fribourg or Bern; and the Lugano-Zurich Airport service will offer a similar boarding/leaving option in Bellinzona. SWISS and the SBB further plan to introduce improved baggage collection and delivery services for SWISS Air Rail users. SWISS and the SBB continue to work steadily to further enhance the rail-and-air-travel combination by further expanding their joint product and service portfolio. In addition to ensuring the best possible connections between SWISS's global network and further (above all tourist) destinations, the partners are putting a particular focus on offering direct rail services and on optimizing their customer assistance in the event of operational irregularities.

# Hong Kong

The East Rail Line Cross-Harbour Extension in Hong Kong successfully commenced passenger service on May 15th, 2022, with Siemens Mobility's Communications-Based Train Control system (CBTC). This completes the automation of the 46 km long East Rail Line connecting the Chinese Mainland border to the central business areas on Hong Kong Island and becomes the fourth railway line crossing Victoria Harbour. The Siemens Mobility digitalized signalling system helps provide passengers with the ability to reach the commercial, convention and financial hubs in the Wan Chai North and Admiralty areas in a faster, safer, and more seamless way.

"The opening of the East Rail Line Cross-Harbour Extension is a significant milestone for public transportation in Hong Kong, which provides the people of Hong Kong with a fourth cross-harbour rail connection. Our state-of-the-art signalling solutions will increase the reliability, availability, and efficiency of the entire 46 km and 16 station East Rail Line," said Andre Rodenbeck, CEO of Rail Infrastructure at Siemens Mobility. "We have successfully implemented more than 40 CBTC systems across the world. This important project further underscores our leading position in the field of urban mobility."

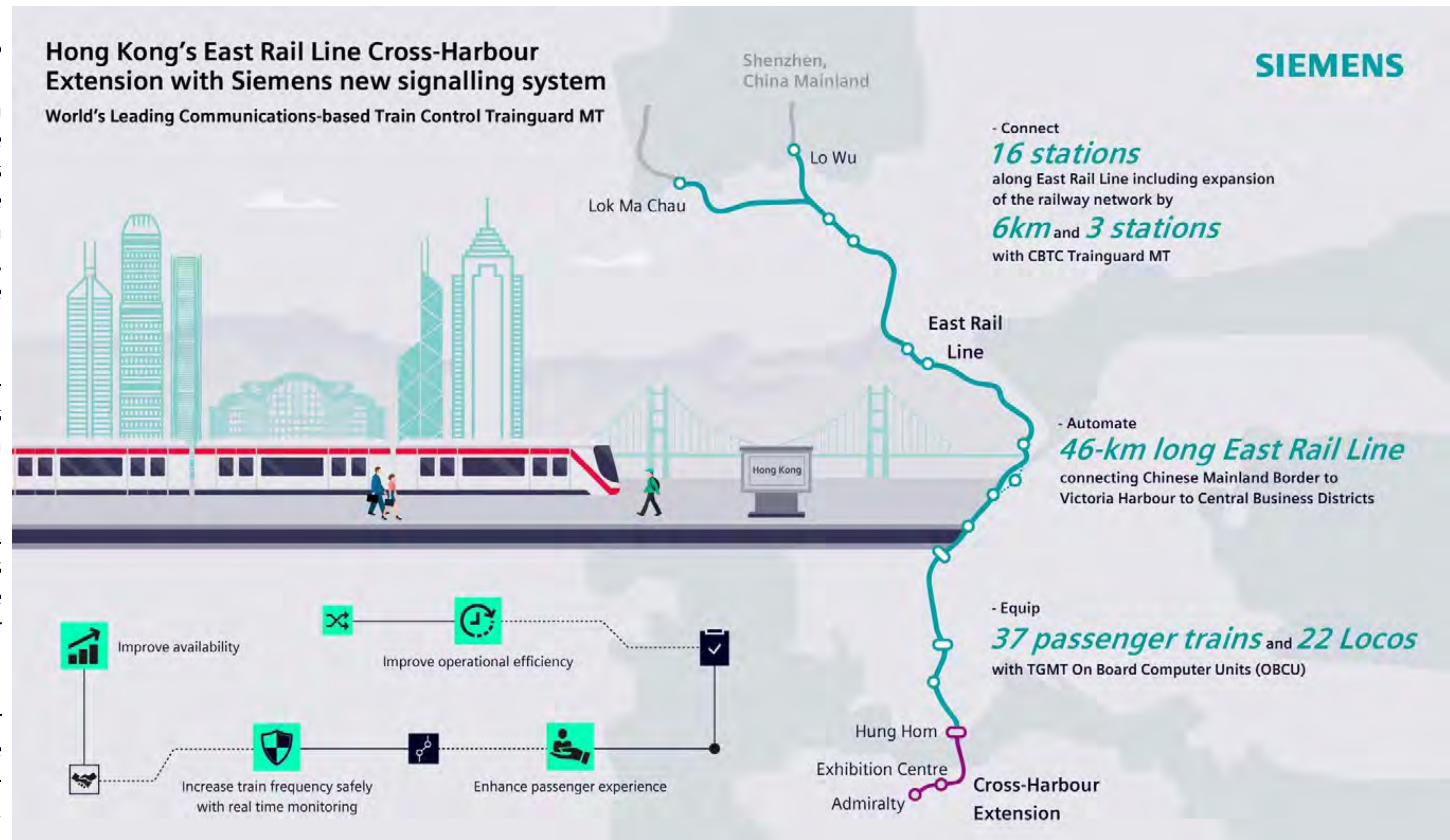
Siemens Mobility equipped CBTC at 16 stations on the East Rail Line, while also modernizing and expanding the railway network by 6 km and three additional stations. The radio-based technology enables real-time data to be captured on vehicle position and speed conditions.

This allows the East Rail Line to safely accommodate an increased number of vehicles on the line at a greater frequency. Additionally, the upgraded digitalized system provides the ability to continuously receive updates on system status which improves operational efficiency, resulting in fewer delays and more up-to-date travel information.

Along the East Rail Line and its Cross-Harbour Extension, the Siemens Mobility solution Airlink has been installed for radio transmission, and automatic train supervision is realized through the operations control system. Electronic interlockings and Trainguard MT (TGMT) Wayside Control Units have been installed for efficient train control.

Eventually, a total of 37 passenger trains and 22 locomotives will be equipped with Siemens TGMT On-Board Computer Units (OBCU). The new system is controlled and monitored by the Operations Control Center in Tsing Yi.

## Hong Kong's East Rail Line extension opens with Siemens Mobility CBTC technology



The Siemens Mobility CBTC solution Trainguard MT is the most extensively deployed automatic train control system in the world and is used by many operators,

including Paris, Beijing, New York, London, and Copenhagen.

# Eurostar

Eurostar, the high-speed rail service linking the UK and mainland Europe, is launching a new partnership with Trees4Travel which offers passengers the opportunity to plant trees when they book their journey via the Eurostar for Business platform.

The new initiative comes after growing demand from Eurostar business travellers to further support sustainable travel initiatives. Passengers can now choose to plant a tree when booking on the Eurostar for Business platform at a cost of £3 (€3.50) per tree and Eurostar has pledged to match each tree purchased.

Launched in September 2020, the Eurostar for Business platform offers organisations of any size seamless start to their travel experience with all bookings easily accessible in one place, as well as access to promotional fares. Trees4Travel will facilitate the activation for Eurostar, undertaking reforestation projects in developing countries to restore eco-systems, biodiversity and support indigenous communities through employment. Nico Nicholas Co-founder and Chief Eco Officer at Trees4Travel said, "We are so delighted to be working with this most sustainability forward-thinking transport provider.

## Eurostar launches new partnership with Trees4Travel

This Eurostar initiative will not only draw down more than double the carbon created by any of the journeys it represents, but also should inspire other carriers to recognize that so much can be done, if we only work together on climate action."

Eurostar's Head of Indirect Sales & Distribution, Paul Brindley, said, "We are proud to be the greener way to go between the UK and the continent and we are committed to reducing our own impact on the environment. We know that sustainability is at the heart of business travel policies and we are always looking for more ways we

can help our business travellers to be part of creating a more sustainable future. We are pleased to partner with Trees4Travel to bring this to the Eurostar for Business platform and look forward to growing our relationship and many trees on behalf of our travellers."

With a passenger's carbon footprint from one flight being the equivalent of 13 Eurostar journeys, there are significant carbon savings to be made when choosing to travel by train rather than plane. To find out more about Eurostar's partnership with Trees4Travel, visit Eurostar for Business portal and click on the 'offers' section: <https://www.eurostar.com/uk-en/eurostar-for-business>

# Poland

## TESTING OF METRO VARSOVIA

Testing of Varsovia metro: The first six-car metro set Varsovia for Metro Warszawskie, which is 119 metres long, has just started its test at STP Kabaty.

It is now entering into the next verification phase of functions and individual tests. In addition, this is the first opportunity for the drivers to start training and getting familiar with the driving characteristics of the new metro.

The metro trainsets for Warsaw are produced at two sites in the Czech Republic – Ostrava and Pilsen. In Ostrava, Škoda is manufacturing carbodies, while in Plzeň Škoda, the completion and activation are carried out.

A total of 37 trains are being manufactured with an option for a further 8, which makes a total of 270 cars.



# Denmark

## Siemens Mobility to supply first battery powered Mireo Plus B trains to Denmark

Siemens Mobility has been awarded a contract to supply seven battery powered Mireo Plus B trains to the Midtjyske Jernbaner in Denmark. This is the first contract for battery powered rail in Denmark and is part of a pilot project to replace all diesel trainsets throughout the country. The Mireo Plus B combines all the benefits of the Mireo platform with a high-performance battery system that enables trains to operate on routes with or without overhead power lines thanks to their battery hybrid drive. The seven two-car electric trainsets will be delivered by the end of 2024 and are scheduled to operate on two lines in the Midtjylland region of Denmark.

“The battery trains are expected to enter service at the end of 2024. This is a crucial step in our own green transition, but also a significant step towards the goal of CO<sub>2</sub>-neutral train traffic throughout Denmark,” said Martha Vrist CEO Midtjyske Jernbaner Drift A/S.

“With the acquisition of the Mireo Plus B trains, Midtjyske Jernbaner replaces conventional diesel vehicles with state-of-the-art, and locally, completely emissionfree trains. This will significantly contribute to the local area by offering a sustainable and environmentally friendly mobility option. We are delighted that Midtjyske Jernbaner has chosen the energy-efficient Mireo Plus B trains from Siemens Mobility, which will also offer a high level of driving comfort and an improved passenger experience,” said Albrecht Neumann, CEO Rolling Stock at Siemens Mobility.

The Mireo Plus B two-car trainsets can accommodate 120 seated passengers, travel up to 140 km/h and has a range of around 80 kilometers when in battery operation. The batteries can be charged via the 25 kV overhead line in electrified sections and by recuperating the train’s braking energy. The battery system is mounted underfloor and is installed in two battery containers. Lithium-ion batteries with a long service life are used in this

system. This is the third order Siemens Mobility has received for the Mireo Plus B and the first outside of Germany. The Landesanstalt Schienenfahrzeuge Baden-Württemberg (SFBW) ordered 20 Mireo Plus B trains in 2020 and Niederbarnimer Eisenbahn (NEB) ordered 31 in 2021.

This technology has been extensively tested for over one year through a preliminary version on a prototype train, the Desiro ML ÖBB Cityjet eco in Austria.



# Denmark

## Europe's hub for Scandinavia

Operated by DB Cargo Scandinavia, the Taulov intermodal terminal in central Denmark is one of the most important hubs for intermodal transport services to and from Scandinavia. It handles all kinds of cargo: ammonia from the Netherlands, steel from Sweden and waste from Italy.

Jan Andersen, location manager at DB Cargo Scandinavia, explains how the base has come to acquire this status: "It's largely down to our specific logistics portfolio in conjunction with our additional services. These benefit our Taulov customers."

All kinds of services are available at Taulov, such as dedicated depot space for the intermediate storage of containers and wagons, along with the rapid provisioning of empty containers. The company also handles the planning and management of loading and transportation. And it doesn't stop there: quality assurance, picking and (if required) packing and repacking are also on offer. "The bottom line is that we develop tailored logistics solutions for customers. The strategies we have followed for more than ten years when providing this kind of support have become an integral part of our daily business," says Andersen.

### Great location for rail and road transshipment

One of the terminal's other advantages is its location, right in the centre of Denmark where north-south and east-west transport corridors meet. Andersen says, "Our terminal is located on the Scan-Med Corridor, or RFC3 for short. This is the rail freight route linking the Nordic countries and the Mediterranean region, and it gives us outstanding access to DB Cargo's European network of rail links running between southwest Europe and Scandinavia."

The Taulov site has another strength: it is only ten kilometres from Fredericia. This is the second largest freight port in Denmark and the perfect base for linking short-sea shipping to high-frequency, eco-friendly rail connections.

Northbound rail services are booming, with new digital processes enhancing efficiency and quality. "Our digital lorry and train dispatching processes enable us to cut throughput times at the terminal and deliver greater quality for our customers," says Andersen.

### Taulov's multimodal terminal is on course for growth

The terminal's optimised operations are attracting new customers and higher volumes, so DB Cargo Scandinavia is planning to start negotiations about the site's expansion. The last modernisation entailed installing 450 metres of new track and improving road access in addition to a storage facility covering 5,000 sqm and an access port. "Thanks to these features, we can accept and forward between 100 and 150 containers by rail, water and road every day," says Andersen. In addition, FS Logistics ApS, based in Fredericia, has created the Taulov Tank Terminal just next door. This transshipment base for chemicals is the only one of its kind in Denmark. Erik Koning, senior account manager at DB Cargo BTT, says, "The tank terminal is a unique facility for safely and efficiently moving hazardous freight in gas form from tank wagons to lorry tankers for onward transport. All of this gives Taulov advantages that are unparalleled at any other site in Scandinavia."

### Customers benefit from cooperation at Taulov

One important DB Cargo BTT customer to benefit from this is OCI Nitrogen, a Dutch chemical company that supplies ammonia to Scandinavia. DB Cargo's Taulov employees shunt its tank wagons to the adjacent tank terminal.

"A dangerous substance like ammonia requires a reliable transport service with very high safety standards," explains Koning. "Taulov offers OCI Nitrogen multiple advantages: efficient and reliable shunting management courtesy of our colleagues at DB Cargo Scandinavia, and the safe transfer of ammonia from tank wagons to lorries at the tank terminal."

# Eurostar

## Raymond Blanc celebrates the taste of summer with a new Eurostar Business Premier menu

Designed by Michelin star chef and Eurostar Business Premier Culinary Director, Raymond Blanc OBE, the summer range will delight customers' palates with light, refreshing flavours inspired by the wonderful city destinations that Eurostar travels to. In line with Eurostar's commitment to sustainability, the menu champions seasonal, local and responsibly sourced ingredients including courgettes grown in the French village of Charbuy, 15km from our Burgundy kitchen; beef from Aldens, an Oxfordshire butcher founded in 1793 and run by the same family for eight generations; and delicious goats' cheese from the Yonne region.

Raymond Blanc OBE, Eurostar's Business Premier Culinary Director for the past nine years, said: "Travel is back on the menu, and we want to celebrate with new summer dishes that offer our Business Premier passengers fresh, seasonal flavours, whilst on the move. All the recipes are full of flavour, designed to complement each other and bring the best locally sourced ingredients to the plates of our Eurostar Business Premier travellers."

With a selection of salads, meat, fish and vegetarian dishes and sweet treats, customers will have a full range to choose from. Here is the full menu of handpicked dishes from Eurostar's Business Premier summer menu designed by Raymond Blanc OBE:

### Starters:

- Roasted asparagus custard with pea shoots and chilli
- Bulgur, kalamata olives, tomato and rocket salad with ciabatta and croutons
- Bulgur with fresh herbs, chickpeas and roasted red pepper, roasted almond paste, red pepper, pumpkin seeds

### Mains:

- Sustainable cod loin, lemon verbena hollandaise, crushed potato, steamed broccoli
- Beef tagine, couscous with courgettes, peppers, apricots and sultans
- Falafel, aubergine puree, lentils, tomato and vegetable chilli with Swiss chard
- Salmon flakes, lemon coriander butter, basmati and wild rice, cooked egg, carrot, courgette, and shrimp paste
- Chicken fillet, roti, pepper coulis with smoked paprika, rosemary and spinach organic spelt poelee
- Quinoa salad, mange tout, tomato confit, roasted red pepper hummus, red and yellow peppers, chickpeas, coriander, parmesan shavings

### Dessert:

- Goat cheese from Yonne region with apricots and rosemary
- Creamy chocolate cake with lime caramel and ginger
- Chaource from Champagne-Ardenne, sour cherry chutney
- Pistachio and apricot tartlet

Eurostar is proud to be the first transport provider to receive Sustainable Restaurant Association (SRA) accreditation as a Three-Star Sustainability Champion for its commitment to sourcing local and sustainably produced ingredients and for pursuing a socially and environmentally responsible approach. Eurostar's Business Premier aims to offer the highest standards in cross-channel train travel and a superior experience for passengers.

With fully flexible fares, Business Premier customers can enjoy exclusive access to the business lounges, plus complementary drinks and fine dining all served in the comfort of their own seat.





## Contract signed: Stadler to deliver up to 510 FLIRT trains for Switzerland

Swiss Federal Railways (SBB), Thurbo, RegionAlps and Stadler have signed a framework agreement for up to 510 single-decker FLIRT multiple units. This is the largest tender in Swiss rail history. In an initial call-off order, Stadler will deliver 286 vehicles, representing an order volume of around two billion Swiss francs.

In October 2021, Swiss Federal Railways (SBB), Thurbo and RegionAlps awarded Stadler a framework agreement for the manufacture and delivery of up to 510 single-decker FLIRT multiple units. The Swiss Federal Administrative Court has rejected the objection of an unsuccessful bidder from last year. Consequently, Stadler has come out on top in another hard-fought international tender with its proven FLIRT vehicle concept, and has emerged as the winner of the largest tender in Swiss rail history. Now that the contract has been signed, Stadler can start building the 286 FLIRTs from the initial order. In an initial call-off order, SBB, Thurbo and RegionAlps are ordering 286 vehicles, representing an order volume of around two billion Swiss francs. The new trains will gradually replace old rolling stock. Stadler will produce 155 four-car FLIRT trains for SBB, 24 four-car FLIRT trains for RegionAlps, and 19 four-car and 88 three-car FLIRT trains for Thurbo. The first trains are expected to be in service from December 2025. Delivery of the last vehicle from the initial call-off order is scheduled for 2034. The framework agreement includes an option for up to 224 additional FLIRT vehicles.

### More comfort for passengers

The three-car FLIRT vehicles are 57.8 metres long and can accommodate a total of 256 passengers, with seating space for 134 of them.

The length of the four-car trains is 73.5 metres. There is room for up to 370 passengers, with seats for 146 of them. The vehicles offer step-free boarding and step-free accessibility throughout, from the front to the rear door. The new FLIRT trains are to be approved for Switzerland, Germany and Austria.

The most recent FLIRT trains provide numerous improvements for passengers. Compared to the vehicles in use today, they have more storage space for bicycles, pushchairs and large items of luggage. There is now even room for winter sports equipment such as skis in the multifunctional zones. The trains also ensure good mobile phone and data reception on the move and have power outlets in all compartments. They take into account the requirements for passengers with reduced mobility, with two places per train for wheelchair users and a wheelchair-accessible toilet. Wheelchair spaces are also available in 1st class. In addition, the new multiple units make an important contribution to improving punctuality thanks to increased motorisation.

“We are incredibly proud to be able to build these new trains to help expand Swiss regional transport. In 2002, SBB was the first rail operator to order the FLIRT model shortly after its development. It is a great honour for us that after a 20-year success story, the 2,500th FLIRT train sold will now also run on Swiss rails. We would like to thank SBB, Thurbo and RegionAlps for the trust they have placed in us and look forward to deepening our long-term cooperation even further,” says Peter Spuhler, Chairman of the Board of Directors and Group CEO ad interim of Stadler.

### Proven bestseller for customers worldwide

The FLIRT model from Stadler is a single-decker multiple unit for local and long-distance services. Taking into account the framework agreement for SBB, Stadler has now sold its best-selling vehicle over 2,500 times in 21 countries – from the Arctic Circle to Africa. FLIRT trains combine intelligent, innovative design with tried- and-tested technology. They are also extremely versatile thanks to Stadler’s proven module concept. The FLIRT’s drive system, acceleration and braking characteristics as well as its ergonomic driving properties, comfortable interior design and its modular set-up make it a cost-effective response to urbanisation and increasing pressure in the transport market. The FLIRT train builds on tried and tested system modules, making it a cost-effective vehicle concept that can be optimised to meet customer needs. One of the major benefits of this concept is that every train can be adapted to the requirements of regional and intercity transport.

In addition to models with a purely electric, diesel or mixed drive, Stadler also produces FLIRT vehicles with alternative drives such as battery and hydrogen. For example, Stadler is supplying 55 battery-powered FLIRT trains to Nahverkehrsverbund Schleswig-Holstein (NAH.SH) and 58 battery-powered FLIRT trains to DB Regio in Germany, as well as developing the first hydrogen-powered FLIRT train for the American San Bernardino County Transportation Authority (SBCTA). With its battery-powered FLIRT, Stadler also holds the world record for the longest journey in a battery-powered train in battery-only mode.



U.K.



## London's Elizabeth line enters passenger service utilising Alstom's state-of-the-art Aventura fleet and critical infrastructure

On May 24th, London's new Elizabeth line officially opened to the public. This project, valued at £19 billion, is not only a big milestone for the British railway industry but for all Londoners. Alstom, global leader in smart and sustainable mobility, has supplied trains, technology and infrastructure for this new line and will also maintain the trains. The transformational railway will reduce journey times, create additional transport capacity, improve accessibility and provide a huge economic boost to the capital and beyond. The Elizabeth line will be operated by MTR Elizabeth line as a concession of Transport for London.

Alstom's Managing Director (UK & Ireland) Nick Crossfield, Chief Operating Officer Danny Di Perna and Managing Director Services Peter Broadley were present at the official opening event on May 17th, 2022 along with Her Majesty The Queen, UK Prime Minister Boris Johnson MP, London Mayor Sadiq Khan, Transport for London's Commissioner Andy Byford, the Transport Secretary the Right Hon. Grant Shapps and Crossrail Chief Executive Mark Wild.

"The Elizabeth line is set to transform London and become one of the world's leading urban transport operations. I'm immensely proud of the leading role Alstom has played in the Crossrail project, and will continue to do so delivering reliable, high-quality trains for Londoners," states Nick Crossfield, Alstom Managing Director, UK & Ireland.

The new railway through central London uses Alstom's Class 345 Aventura fleet between London Paddington and Abbey Wood station. The state-of-the-art trains, already in service between Paddington, Heathrow Airport and Reading on the west, and also run between London Liverpool Street and Shenfield on the east. The seventy 7- and 9-car trains have been designed and built at Alstom's Derby factory and are maintained by Alstom at Old Oak Common depot in West London. Alstom will maintain the trains for the next 32 years as part of the rolling stock and services provision contract.

The Alstom-led ATC joint venture, formed with partners TSO and Costain, has designed, constructed, tested and commissioned critical infrastructure works for the new 55-kilometre line. ATC has delivered the traction power supply for the trains, incorporating Alstom's in-house feeding systems, non-traction power supplies for the stations, shafts and portals, tunnel ventilation systems and other electrical and mechanical systems, laid the track (including 5500 HAS sleepers), and built a new maintenance depot at Plumstead. ATC has been the Principal Contractor for the entire railway construction, managing safety, logistics, testing and commissioning between more than twenty interfacing contractors.

Andy Byford, London's Transport Commissioner, said: "Alstom UK has been a key delivery partner in the Elizabeth line and played a major part making it possible to open this transformational railway today. Providing trains, technology, infrastructure and maintenance, they will help ensure Londoners and visitors benefit from reliable and more accessible journeys across the capital."

Building on Alstom's expertise in the UK rail sector over the last 20 years, the Aventura solution has been developed to meet both urban and mainline rail requirements. Thanks to its modular vehicle design, the Aventura trains offer high configuration flexibility to maximise capacity and accommodate different operational needs such as high-capacity metro, commuter, regional and intercity services. Train customisations include various car lengths with one to three doors per car side, three different front ends and different seating arrangements and comfort levels.

The Aventura solution features digital capabilities such as full colour displays for modern passenger information delivery, fast 4G WiFi and smartphone integration, improving passenger comfort and convenience. More than 2,600 Aventura cars have been sold in the UK since 2014, making it the UK's leading train.

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# From the Archives

Belgium

SNCB No. 5166 is seen hauling a freight near Dam on the Antwerp freight avoiding line on June 11th 1994.  
*John Sloane*



From the  
Archives

China Rail DF4B No. 0606 is seen at  
Chengde on December 8th 1992.  
*Mark Enderby*

China 



# From the Archives

France

SNCF Fret No. 7242 stands at the head of a service to Beziers at Toulouse Matabiau on July 23rd 2007. *John Sloane*



From the  
Archives

Germany

DB Class 218.329 and 218.399 head  
through Hamburg Harburg on April  
30th 2006. *Mark Enderby*



# From the Archives

## Germany

DB Class 218.451 is seen at Bad Harzburg on April 30th 2010.  
*Mark Enderby*



From the  
Archives

HVLE Class 185.641 passes through  
Huttenrode on April 27th 2010.

*Mark Enderby*

Germany





# From the Archives

## Germany

Czech Class 371.004 is seen at Dresden Hbf on April 27th 2008. *Mark Enderby*



From the  
Archives

Germany

A DB Class 143 is seen at Ediger-Eller  
on May 7th 2005. *Mark Enderby*



# From the Archives

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

India



From the  
Archives

PKP electrics Nos. EU07-382 and  
EU07-044 stand at Katiwice on March  
14th 1990. *John Sloane*

Poland



# From the Archives

SZ Class 664.120 is seen with a freight at Nova Gorica on June 1st 2007.

*John Sloane*

Slovenia



# From the Archives

## Ukraine

VL 8-1022 is seen working freight near  
Donetz West on May 2nd 1993.

*John Sloane*



# From the Archives

## Ukraine

Steam loco No. Su 251.86 is seen working a charter between Fastov and Zhitomir on April 27th 1993. *John Sloane*



# From the Archives

## Ukraine

Industrial diesel hydraulic Bo-Bo No. TGM6a  
2486 is seen at Vatutino coal mine on April  
30th 1993. *John Sloane*





From the  
Archives

A convoy of BNSF light engines  
are seen at Seattle on October  
19th 1976. *Mark Enderby*

U.S.A.

