





Welcome

Welcome to another edition of Railtalk Xtra, the monthly magazine that predominantly features railways outside the UK.

Well we've made it into the 'Roaring Twenties' although I suspect that in the UK there might not be much time left for the veteran Class 20 locomotives..... However we start with some good news from one of my favourite countries, Czech Republic or Czechia where regular passenger services have returned to the so-called 'Plum Railway' in the Ústí nad Labem region with effect from the December 15th timetable change, after signalling company AŽD Praha reached agreement with the local government to restore services on the Litoměřice horní nádraží – Most line U10. Trains had been withdrawn in 2007 due to the poor condition of the infrastructure, and the government subsequently designated the 38 km line as 'unnecessary'. The railway was purchased by AŽD in 2016 for use as a testbed for its signalling technologies. The company restored the line to operational condition at a cost of around KC100m, repairing the earthworks and drainage and renewing the track as necessary, installing new signalling to increase the line speed to 100 km/h.

Now here's an interesting situation, in Germany a station has been opened with the aim of reducing the use of cars to access the Audi automotive factory in Ingolstadt.

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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 to the right or on the next page.

All images ideally should be provided at a resolution of at least 2048px x 1536px at 150dpi.

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Front Cover

One of the ten dual cabbed YDM4Bs built by DLW India for Bangladesh Railways No. 2803 approaches Dhaka with the Turag commuter train from Joydebpur.
Mark Torkington

This Page

Former KFBE (Köln-Frechen-Benzelrather-Eisenbahn) EMU No. 22.136 working train No. R8255 to Vorchdorf is seen near Bad Wimsbach-Neydharting on November 18th. *Thomas Niederl*

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BNSF Nos. 7218, 7274, 7988 and 3882 approach Hill 582 hauling an intermodal train, whilst a Union Pacific freight train can be seen on the next line across.
Laurence Sly





‘The new station is a milestone for public transport in the region and a clear commitment to a sustainable transport policy’, said Mayor Christian Lösel at the inauguration on December 2, ahead of the start of services with the December 15 timetable change. An estimated 3 000 people a day are expected to board or alight at Ingolstadt Audi station, which as well as having easy access to the factory provides an interchange with other local transport services.

And in the UK we have had many long disputes regarding the getting rid of Guards on trains, but in the Netherlands, national operator NS has carried out its first trials of automatic train operation on the night of December 10-11, when a CAF Sprinter New Generation electric multiple-unit ran under computer control on the Hanze Line. The experiment took place under Grade of Automation 2, with a member of staff in the cab to monitor operators and intervene if necessary. NS said the control system did what was intended, independently controlling the traction and braking systems and stopping the train at the correct place on the platform according to the programmed timetable. ‘This is a first and important step’, said Operations Director Marjan Rintel. ‘We will learn from this and gain experience of what automatic operation could mean for NS.’ So what does this actually mean then..... we await developments but we are guessing that there will always be someone up front in the cab to oversee things.

As always a massive thanks for all the excellent photos, please keep sending them in, and remember if you are going on holiday, don’t forget to take your camera.

**David
Editor**

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Alstom to locally manufacture and maintain PTA's C-series trains for Perth's growing rail network

Alstom has signed a contract with the Public Transport Authority of Western Australia (PTA) to manufacture and maintain the next generation of C-series trains for Perth's growing rail network. Under the contract, worth approximately €800 million (AUD1.3 billion), Alstom will be responsible for the design, supply, manufacturing, testing and commissioning of 41 x 6-car electric (EMU) and 2 x 3-car diesel (DMU) trains, which includes 50% local content, 20 years maintenance of the EMU trains and maintenance support services for the DMU trains. The trains will be manufactured in PTA's Bellevue assembly facility and delivered over a 7-year period commencing in 2022. The contract includes options for an additional 30 EMU trains and a further two options of 5 + 5 years of maintenance.

"The METRONET project provides a unique opportunity for Western Australia to manage Perth's projected future growth while re-establishing its railway manufacturing industry, creating jobs, investing in infrastructure and supporting local manufacturing and supply chains," said Ling Fang, Senior Vice President Asia Pacific at Alstom. "We are delighted to have been awarded this contract and look forward to partnering with the State of Western Australia to deliver this significant project."

The project will see the transfer of the latest railway technologies and manufacturing processes to Western Australia, establishing the most technologically advanced train manufacturing and maintenance sites in Australia. Alstom will provide fast-tracked

training and skills development programmes through dedicated partnerships with local TAFE and training organisations, creating a new generation of skilled railway manufacturing professionals. The project will create more than 120 Western Australian Jobs including 15% apprentices and aboriginal workers. Alstom will deliver an innovative, fully integrated rolling stock and maintenance solution based on the service proven X'Trapolis platform. The C-series trains provide higher levels of passenger capacity and comfort, delivered with advanced, service proven solutions for performance and reliability with an uncompromised level of safety. The trains will be more energy efficient and designed to accommodate future upgrades throughout their operational life. They have a capacity of approximately 1200 passengers and include three double passenger doors per car for enhanced passenger flows. The C-series will be maintained at PTA's Nowergup depot and will utilise Alstom's innovative HealthHub™ predictive maintenance tools that will optimise the performance and reliability of the trains throughout their lifecycle. This contract further strengthens Alstom's position as a leading supplier of railway technology, systems and infrastructure for the Australian market.



Commonwealth Bulk Handling Group's Nos. CBH006 and CBH003 accelerate away from a stop at Forrestfield yard with empty grain hoppers and are heading back to the 'bush' for another load. *Colin Gilderleve*



Sydney Light Rail Commences Revenue Service

On December 14th Alstom congratulates Transport for New South Wales (TfNSW), on the opening of the CBD and South East Light Rail project and the start of revenue service, returning Light Rail back down Sydney's George St, for the first time in more than 60 years.

Alstom, as part of the ALTRAC Light Rail consortium[1], has been responsible for the integrated light rail system that included the design, delivery and commissioning of 60 Citadis X05 Light Rail Vehicles (LRV), power supply equipment including APS – the wire-free ground-based power supply (over two kilometres), the energy recovery substations - HESOP, signalling, communications, depot equipment and 19 years of maintenance.

The new 12km network has been delivered under a turnkey PPP model that will provide the commuters of Sydney with frequent, reliable, high capacity services running from Circular Quay in the city's CBD to Central Station, then south east to Randwick. Each LRV has a capacity of 450 passengers – the equivalent of nine standard buses and will move up to 13,500 commuters per hour (6,750 in each direction) during peak times once fully operational. Normal tram services will operate seven days a week between 5am and 1am.

As part of the contract, the consortium has also taken over the operations and maintenance of the existing Inner West Light rail (IWLR) that connects Sydney's inner west with the Pymont peninsula, Darling Harbour and the southern CBD. Alstom is also responsible for the maintenance of the existing system which includes 12 CAF Light Rail Vehicles.

“Alstom is extremely proud to be a part of this iconic project” said Mark Coxon, Managing Director for Alstom in Australia & New Zealand, “This new Light Rail system will transform Sydney and provide a step change in the city's public transport capability and reliability while protecting the aesthetic appeal of the CBD and improving sustainability of the overall transport network”

[1] Made up of Alstom, Transdev, Acciona and Capella



▶ Aurizon's narrow gauge No. ACN4168 is seen running light engine on the dual gauge single track at Wattleup heading to Forrestfield yard for servicing. *Colin Gildersleve*







ÖBB brings significantly more trucks onto the rails in the new year

The extension of the sectoral driving ban in Tyrol is just about to be introduced. This will also result in the transfer of significantly more trucks on the rails. ÖBB Rail Cargo Group has made all preparations and is increasing the capacities on the Rolling Road (ROLA) at the Brenner Pass. ÖBB has already been a reliable partner of the Federal State of Tyrol when it comes to shifting truck traffic from road to rail and thus relieving the population. Due to the short loading and unloading times of the ROLA trains, quick train turns and high-frequency traffic can be realized, which means that many trucks can be dispatched by rail in a short time. In this way, road transport companies can quickly transfer their trucks to rail without the need to purchase additional equipment and contribute to the protection of the Tyrolean population and the environment. In addition to the Wörgl-Brennersee connection, the Wörgl-Trento connection is also available on the Brenner axis.

Prices remain stable

When the extended sectoral driving ban comes into force at the beginning of 2020, the province of Tyrol will further reduce heavy truck traffic. The transit lorries affected by the driving ban will only be able to cross the Brenner Pass by rail. ÖBB has taken precautions early on and in close cooperation with the Federal State of Tyrol in order to be able to handle an increased demand for ROLA. At the same time, the ROLA prices on the Brenner axis will not be increased at the beginning of 2020. Thus, road transport companies affected by the sectoral driving ban will have a simple and attractive alternative to road transport.

The ROLA has been an effective instrument for reducing the traffic burden on the Tyrolean population for years. Even in the current situation, it is an important

contribution to the solution, and capacities are being gradually increased for this purpose. In concrete terms, ÖBB will make available a capacity of 250,000 trucks per year on the ROLA on the Brenner axis from the beginning of the year and will increase this to 400,000 trucks in the course of the year. This ultimately means a doubling of the current capacities. This means that the expected shift of trucks to rail can be managed and trucks can be transported through Tyrol in an environmentally friendly way.

Over 1,000 fewer trucks on Tyrol's roads each day

All in all, this results in one ROLA-train per hour and direction on the Brenner-axis when fully expanded. If the available capacities were fully utilised, this would mean around 1,000 fewer trucks per day on the highway. Successful test runs in spring and autumn of this year have shown that this train programme can be mastered on the route. All ROLA low-floor wagons are already equipped with disc brakes and are therefore low-noise. The remaining freight car fleet of ÖBB Rail Cargo Group already consists of two thirds of quiet wagons and will be running on quiet brake pads to more than 90% by the end of 2021. Another important change for Tyrol will be the so-called "Quieter Routes", which will be introduced throughout the EU from 2024. From 2024 onwards, all freight wagons running on these routes must be "quiet". In Tyrol, the Kufstein-Brenner railway line will become a "Quiet Route", which is in fact equivalent to a ban on "noisy" freight wagons in Tyrol. The required measures will bring about a halving of the perceived noise level in freight traffic.

Salzburger Lokalbahn No. ET58 is working the S32 Train from Lamprechtshausen to Salzburg on November 23rd and has just passed the request stop of Ziegelhaiden. The 'Lokalbahn' is part of the S-Bahn Salzburg system. There is a very frequent train service from Ostermiething and Lamprechtshausen via Bürmoos and Oberndorf to Salzburg. *Thomas Niederl*













Transport of a transformer to Mochov

This autumn, cooperation with the Felbermayr Transport und Hebetchnik company, for which CD Cargo provides transport of heavy transformers, deepened. For example, on November 28th, a 206 tonnes-heavy transformer arrived on the ČEPS siding in Mochov from Croatia. A special 24-axle well-wagon was used for its transport and an added complication was that the speed of the train was limited to a maximum of 50 kph and therefore the transport took place mainly by night. The special train was hauled by an independent traction locomotive of the Class 750 series. Shunting onto the Mochov siding was accomplished by the “tom-cat” locomotive 742.403. In some sections clearance was literally a matter of millimeters.

All of ČD Cargo’s performances were absolutely in line with the customer’s expectations: great, everything exactly on the hour according to the plan, without a “loss” of a point.

Photo: © CD Cargo



IDS Vectron Class 193.747 is seen stabled at Decin hl.n. *Class47*



Alstom's Citadis Dualis tram-trains begin commercial service on the Tram 4 extension between Clichy and Montfermeil

After entering commercial service in September 2019 on the Tram 4 line between Bondy and Aulnay-sous-Bois, Alstom's Citadis Dualis tram-trains are now starting service on the extension of the Tram 4 line between Livry-Gargan, Clichy-sous-Bois and Montfermeil.

In 2016, Alstom received an order to supply 15 Citadis Dualis tram-trains to Île-de-France Mobilités and SNCF Transilien for approximately 75 million euros, with Île-de-France Mobilités covering 100% of the investment cost of the trains.

"Alstom and its teams are proud, with the supply of the tram-trains, both to contribute to a technical challenge - since a rail mode and an urban mode will coexist on the Tram 4 line - and to participate in a human project that will allow the inhabitants of these areas of Seine-Saint-Denis to have a new, reliable and comfortable means of transport," underlined Jean-Baptiste Eyméoud, President of Alstom in France.

Designed to meet the increased need for mobility between urban and suburban networks, the Citadis Dualis tram-train links the centre of town with the suburbs without any break in continuity, by combining the advantages of the train with those of the tram. Based on the design of Alstom's Citadis tram, the Dualis version retains the fundamental characteristics that sealed the tram's success: modularity, accessibility and reliability. Citadis Dualis can run on a tramway network just as easily as on a regional rail network thanks to certain adaptations in power, safety and comfort. This configuration makes it a versatile means of transport: its tram gauge means it can circulate in town, while its performance, the same as that of a train, enables it to transport passengers at speeds of nearly 100 km/h in outlying areas, without the need to change transport modes. Citadis Dualis contributes to sustainable mobility by revitalising urban spaces and highlighting the architectural heritage of cities.

78 Citadis Dualis tram-trains are running in France today, including 30 in Île-de-France, 24 in Auvergne-Rhône-Alpes and 24 in Pays-de-la-Loire. In 2018, Alstom received an order to supply 34 additional Citadis Dualis tram-trains to Île-de-France Mobilités and SNCF Transilien, with Île-de-France Mobilités covering 100% of the trains' investment cost. In total, 23 trains are destined for the Tram 12 Express Massy/Evry line and 11 for the Tram 13 Express Saint-Cyr/Saint-Germain line. These trains are currently being developed and produced at the Alstom site in Valenciennes Petite-Forêt.

Seven Alstom sites in France are involved in the design and manufacture: Valenciennes for the trains and project management, Ornans for the motors, Le Creusot for the bogies, Tarbes for the traction drive equipment, Villeurbanne for the on-board computerised systems and passenger information, Petit-Quevilly for the transformers and Saint-Ouen for the design. In Europe, more than 200 Alstom tram-trains (Citadis Dualis and Regio Citadis) have already been sold and have travelled more than 50 million kilometres. This Alstom technology is also being exported with the Citadis Spirit, adapted to the North American market and adopted by the cities of Ottawa and Toronto in Canada in 2013 and 2017.

Photo: ©Alstom/JeanSchweitzer



▶ A pair of SNCF Grand-Est driving trailers, Nos. 222 and 226, are seen stabled at Strasbourg. *Class47*

Alstom's first Citadis tram for the Tram T9 line inaugurated by Île-de-France representatives

The first Citadis tram for the Tram T9 line, designed and manufactured at Alstom's La Rochelle site, was inaugurated on December 3rd in Orly by Valérie Pécresse, President of the Île-de-France region and President of Île-de-France Mobilités, Christian Favier, President of the Departmental Council of Val-de-Marne, Anne Hidalgo, Mayor of Paris, and Michel Lepêtre, President of the Grand-Orly Seine Bièvre EPT (Établissement Public Territorial).

In November 2016, Île-de-France Mobilités chose Alstom to supply it with 22 Citadis X05 trams. The trams will enter into operation in December 2020, on the Tram T9 line, which connects Porte de Choisy to the town of Orly. Delivery of the trams by Alstom began in November 2019 and will be completed in October 2020 with entry into commercial service scheduled for December 2020.

"Alstom and its teams are proud to be present at the inauguration of the first Citadis trams for line T9. With their particularly innovative design, we have total confidence in the ability of these new trams to meet the high standards of comfort and reliability expected by the residents of Paris and Île-de-France," said Jean-Baptiste Eyméoud, President of Alstom in France. 45 metres long, the Citadis X05 tram for line T9 can carry up to 314 passengers. Special attention has been paid to the design of this new tram, created in partnership between Alstom's Design&Styling teams and the agency Design Saguez & Partners[1]. It has 8 double doors per side as well as enlarged, well-lit interior circulation that facilitates movement and increases the passenger exchange rate[2] by 20%. It features 45% glass surfaces, 100% LED lighting, 8 extra-wide multimedia screens for the dynamic route map, USB sockets and bench seats. The new tram's design is based on signature lighting throughout the entire vehicle, both

inside and out, notably for better visualisation of the opening and closing of the doors. These innovations provide a high level of comfort and an enhanced travel experience.

The tram is also energy efficient thanks to improved energy consumption linked to the traction and auxiliaries (100% lighting and air conditioning offering respectively -25% and -15% of energy consumption). The overall cost of preventive maintenance has been reduced by 18%. The materials are 99% recoverable.

[1] <http://saguez-and-partners.com/>

[2] Exchange rate: ratio that measures, for the side of a tram, the number of times the passenger doors have been opened and the total length of the passenger area.



Alstom delivers 17 Coradia Polyvalent trains and implements on-board digital solution for the French-Swiss Léman Express rail service

On December 12th, Alstom's Coradia Polyvalent regional trains transported their first passengers at the official inauguration of the Franco-Swiss CEVA[1] line, Europe's largest cross-border regional express network. Alstom deployed the complete on-board digital solution on all 17 trains delivered by Alstom and on 23 other trains ordered in Switzerland. Full commercial service by the Auvergne-Rhône-Alpes region begins on 15 December.

"We are proud to be travelling for the first time on board the Léman Express version of our regional train, Coradia Polyvalent. This event marks the operational launch of our Baseline 3 digital solution ensuring the increase of traffic capacity between the Auvergne-Rhône-Alpes French Region and the Geneva Canton in Switzerland. I am sure that this day is one of many for the future of Europe and a necessary increase of rail connections between countries" said Jean-Baptiste Eyméoud, President of Alstom in France.

The Coradia Polyvalent electrical regional trains will run on the four lines of the Léman Express, providing a comprehensive service from Bellegarde to Saint-Gervais (East-West), Annecy to Evian (North-South) and of course the connection with Switzerland (Cantons of Geneva and Vaud).

The Coradia Polyvalent Léman Express trains (Régiolis contract) belong to Alstom's Coradia range, of which 326 trains have been already ordered in the world by 9 French regions and 61 Coradia Liner by the French state, the authority responsible for France's TET (intercity) trains. Nearly 95 million kilometres have already been covered by Régiolis in commercial service. The trains have been adapted to the specific characteristics of the Franco-Swiss cross-border CEVA line: configured in their suburban version, each 72-metre-long train can carry up to 204 seated passengers at a maximum authorised speed of 140 km/h in Switzerland. Designed to ensure cross-border connections with ERTMS technology, the Coradia Polyvalent Léman Express trains can run on 3 types of network voltages.

Alstom's Atlas ETCS Baseline 3 on-board signalling solution complies with the latest European standards for rail interoperability. It enables trains to travel from one country to another in completely fluid, safe and reliable fashion. Alstom already commissioned it last summer for the cross-border link between France and Luxemburg using Alstom's regional trains. This was a first for Baseline 3 in cross-border mode in the signalling market. Implementing this solution on Léman Express takes into account this first successful return on experience.



To optimise the fluidity of exchanges and reduce stopping time in stations, the Coradia Polyvalent Léman Express trains are equipped with a full low-floor, seven doors on each side to facilitate passenger flows, all with bridge plates, and a large reception area on the platforms. Coradia Polyvalent complies with the PRM TSI[2] standard. The interior offers increased comfort thanks to seats equipped with individual reading lights and electrical sockets, as well as spaces dedicated to bicycles and luggage. Large windows and reduced noise levels also improve the quality of the journey.

[1] Cornavin – Eaux-Vives – Annemasse (230 km / 45 stations)

[2] Technical Specification for Interoperability - Persons with reduced mobility.







Deutsche Bahn boosts rail from the sky

Deutsche Bahn invests in Skyports

Investment aimed at exploring potential for linking rail with cargo and passenger drones

DB Digital Ventures, Deutsche Bahn's vehicle for fostering new digital business models, is investing in Skyports. The young UK company intends to grow the industry for transporting goods and passengers using innovative aerial devices. DB aims to explore the vast potential that drone technology has for its customers. The two companies will test the integration of drones into logistics supply chains.

"Drone technology is developing at a rapid pace," said Dr. Sabina Jeschke, DB Management Board Member for Digitalization and Technology. "And DB can benefit. It has to. In collaboration with Skyports, we intend to research how to participate in this dynamic development for passenger and cargo transport."

"As an environmentally minded provider of mobility services and a leader in electromobility, Deutsche Bahn is the perfect partner for us, a company promoting the use of

electric, zero-emissions aircraft," said Duncan Walker, Chief Executive of Skyports.

The company was founded in 2017 in London, where it develops and operates landing sites for aircraft. Additionally, Skyports' services touch on all aspects of innovative air transport, including arranging charging infrastructure and passenger handling as well as advising on legal and safety issues. DB will conduct a joint pilot project with Skyports to test the use of drones in a logistics supply chain for the first time. The project aims to make cargo transport faster, more flexible and more efficient.

On a test field in the German city of Ingolstadt, DB has already been researching how to improve drone technology as part of Urban Air Mobility, a model project sponsored by the EU. Since the project began in 2015, DB has been sending multicopters soaring on a regular basis to explore possibilities such as managing vegetation along railway lines and inspecting bridges and other structures.

The Group is investing venture capital through DB Digital Ventures to promote innovation in technology and disruptive business models. Skyports is the twelfth start-up Deutsche Bahn has invested in through this fund.







10 years of DB Navigator: 105 million mobile phone tickets

Germany's number 1 among travel apps
Over 42 million downloads since 2009 • 100 million hits per month
36 transport associations integrated
Bicycle cards booked from January

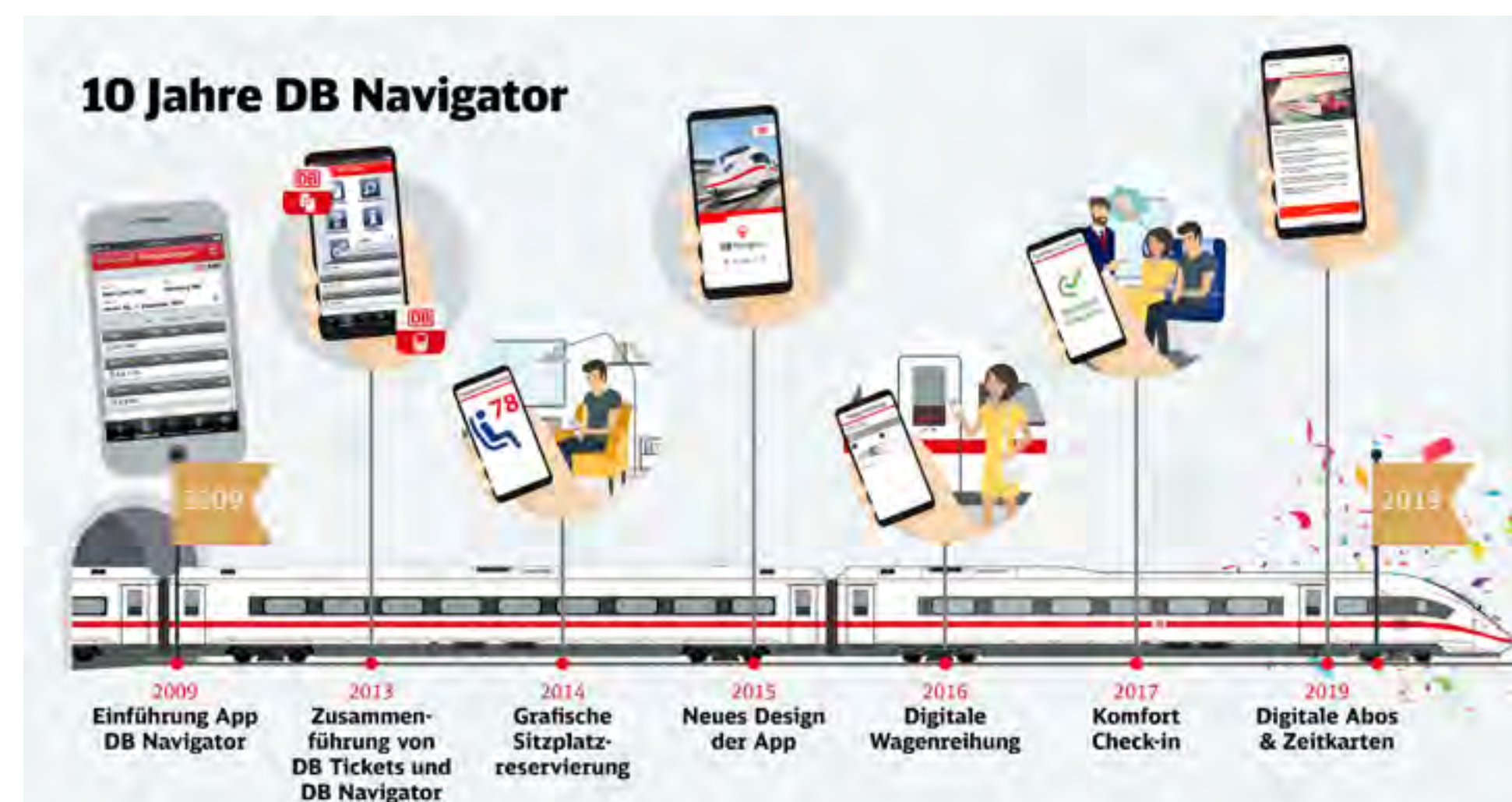
When does the next train leave? From which track? Is there a direct connection? The DB Navigator app was launched in December 2009 as a mobile travel advisor - with information for 5,700 train stations nationwide and 275,000 public transport stops as well as 54,000 other stations in Europe. The app has been downloaded over 42 million times within ten years and is now the number one travel app in the App Store. Around 105 million mobile phone tickets have been sold since mobile booking was introduced. In 2019 alone, the number of mobile phone tickets increased by 80 percent compared to 2018. The DB Navigator currently records around 100 million hits per month.

DB Passenger Board member Berthold Huber: "The DB Navigator is one of the most important digital everyday helpers. The rapidly increasing number of users is also a reflection of the recent success story of the railways and local public transport."

Within ten years, the app has become much more than a "mobile travel center" for smartphones. It is the general key to public mobility and digital travel companion for everyone who chooses the environmentally friendly train - whether in long-distance, regional or city transport. Viewing real-time information on arrival and departure times or the car line-up, buying tickets, reserving your preferred seat, storing a public transport subscription,

receiving push messages on the booked connection or changing personal BahnCard data - all of this is now conveniently and naturally swiped 24/7 on everyone anywhere in the world. Since the winter timetable came into effect on December 15, the real-time wagon order according to the ICE fleet has also been available for IC / EC trains. At the same time, comfort check-in was expanded to six IC lines. The 36th transport association was also integrated. All major transport associations are covered in the DB Navigator, with more to follow in 2020. No other app in Germany combines so many tariffs and ticket types under one roof. From January, bicycle maps can also be booked in the DB Navigator.

LEG operated Class 232.238 runs light engine into Leipzig Hbf. *Class47*



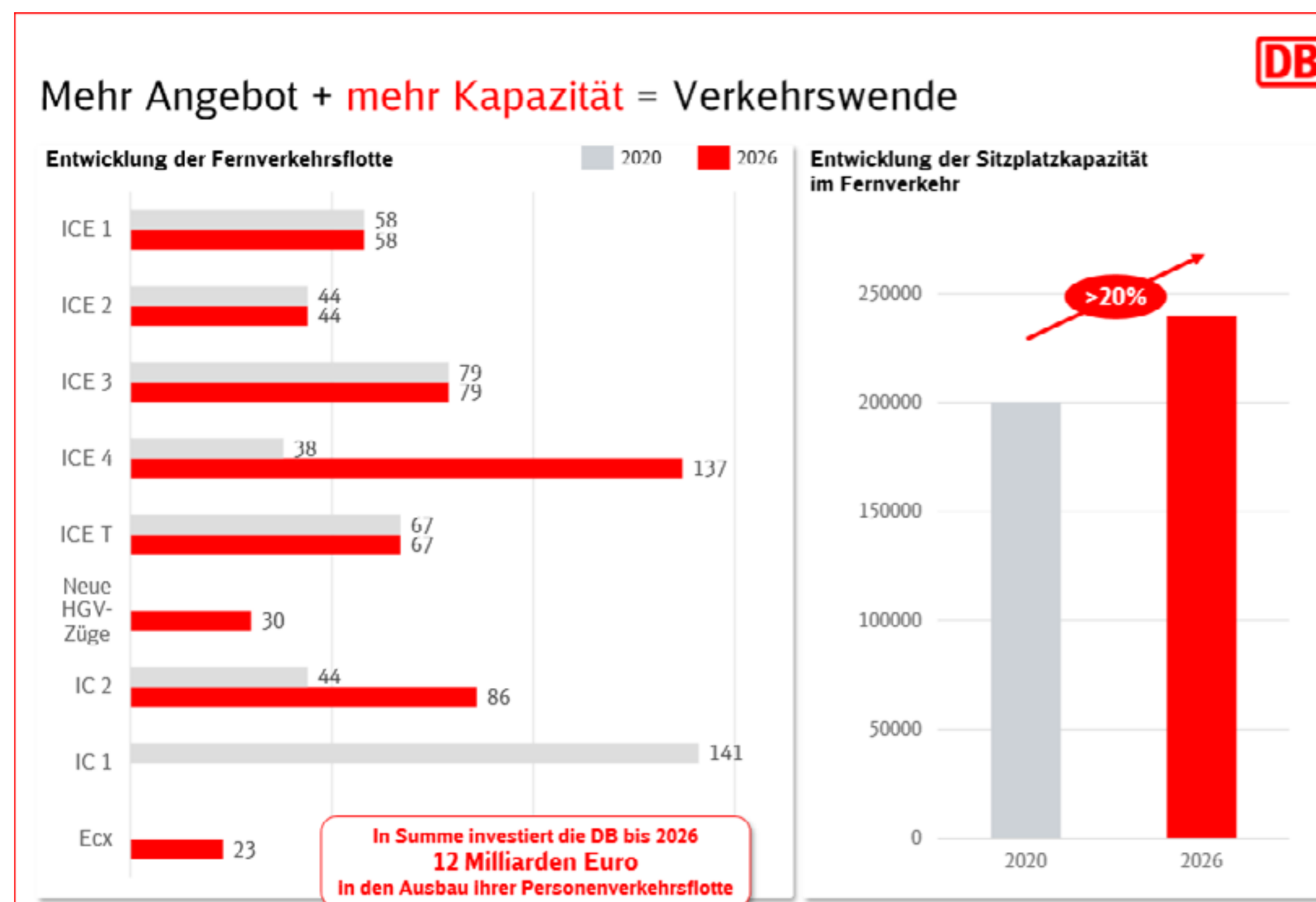


Twelve billion euros for new vehicles

DB passenger transport with record investments in rolling stock
Berthold Huber, DB Group board member: “Every euro for more rails and modern trains is well invested.”

Deutsche Bahn (DB) will invest more than twelve billion euros in its vehicle fleet in the coming years. “This is a record sum in the history of DB,” said Berthold Huber, Board Member for Passenger Transport. The procurement volume for the ongoing modernization of DB long-distance transport alone will amount to 8.5 billion euros by 2026. In addition, DB Regio will also be investing heavily in new vehicles in the coming years: around 2.7 billion euros will be invested in the fleets of Germany’s five major S-Bahn trains for the redesign and new vehicle procurement. In addition, DB Regio will continue to bring modern fleets to regional rail. Over the next two years, DB Regio will invest around one billion euros in modernizing its fleet with over 350 new vehicles.

In addition to the large fleet investments, the focus for DB is on expanding the range. Since the end of 2018, for example, additional journeys and an additional 3000 seats per day have been offered between Munich and Berlin. As a result, demand on this connection increased further in 2019 - by fourteen percent more than in the previous year. DB is expanding the offer between Munich and Berlin in the 2020 timetable. DB Group CEO Huber: “Every euro for more rails and modern trains is well invested. Attractive connections between the metropolises, high-performance mobility in our cities and in the country are the pillars of the traffic turnaround.” DB is currently increasing travel comfort on numerous connections. Instead of the intercity cars used to date, some of which are over 40 years old, modern ICE trains are increasingly being used. Passengers benefit from free WiFi, the ICE portal, quiet and family areas and toddler compartments.



Graphic: © DB Group

HSB dampflokomotive No. 99.7232 ist zu sehen kurz nach dem Abgang von Schierke. *Stearnsounds*





ANOTHER SUCCESS OF ŠKODA TRANSPORTATION - TRAMS FROM PLZEŇ ARE ON THEIR WAY TO BONN, GERMANY

Škoda Transportation has won a contract for the supply of trams for the transport company of Bonn. The Plzeň-based company will supply a total of 26 modern vehicles from the ForCity Smart platform for the German city. An important part of the contract is the exclusive supply of spare parts for 25 years. As part of the order, the customer can use an option for up to twelve extra vehicles. The total value of the contract may therefore reach almost four billion CZK. The first trams will appear in Bonn in 2022. The Plzeň-based company succeeded in a very challenging competition.

“The new contract confirms that Škoda trams are able to succeed competing against the world’s largest companies, even in the most demanding world markets. Our long-term strategy to strengthen our company’s position in Western Europe is confirmed,” says Chairman of the Board of Directors and President of the Škoda Transportation group, Petr Brzezina. “We are increasing our capacity to optimize our fleet, improve the quality of our services and increase passenger comfort,” says Anja Wenmakers, General Manager of the transport company in Bonn, on the successful outcome of negotiations with Škoda. “The new contract with our partner, Škoda Transportation, will significantly reduce maintenance costs and increase the reliability of our urban tram lines,” adds Hansjörg Spielhoff, CEO of the transport company in Bonn.

The trams for Bonn are modern bi-directional, three-section, 100% low-floor vehicles with swivel bogies. Comfortable operation is enabled by full vehicle adhesion, which ensures reliable driving characteristics even in bad weather. The transport company will appreciate the low operating costs of the product from the Škoda ForCity Smart platform. The interior is designed in the spirit of the future of tram transport. Passengers can look forward to comfortable spacious barrier-free vehicles, inside of which there will be two large multifunctional spaces for wheelchairs, prams, or bicycles. The new trams will also offer a straightforward information system with screens and panels, as well as a camera system, which will significantly contribute to ensuring traffic safety and preventing vandalism. The tram will be 30 meters long and will accommodate 180 passengers.

“For the Škoda Transportation group, the contract for Bonn is not the first such success in Germany. A total of eighty new modern trams will head towards the lines between Mannheim, Ludwigshafen and Heidelberg in the coming years. In addition, our modern ForCity trams were inaugurated with passengers a few weeks ago in Chemnitz, Germany, and others are already in operation in Schöneiche. The local transport company is gradually receiving a total of fourteen bi-directional 100% low-floor vehicles of a new design,” adds Zdeněk Majer, Member of the Board of Directors and Senior Vice President for Sales of the Škoda Transportation group.

▶ A busy time at Eisfelder Talmühle with No. 99.7240 waiting departure time with the Brocken - Nordhausen train, No. 99.6001 ready to depart for Quedlinburg and DMU No. 187.018 having arrived from Nordhausen. *Steamsounds*

















On the Nilgiri railway, steam loco No. X37398 takes water at Avavankadu on December 9th. *Mark Enderby*



YDM4 No. 6681 is seen on Coonoor depot on December 9th. *Mark Enderby*

YDM4 Nos. 6706 and 6730 are seen at Coonoor depot on December 9th. *Mark Enderby*



Alstom commences manufacturing of rolling stock for Mumbai Metro Line 3

On December 10th, Alstom, leader in sustainable and smart mobility, commenced the manufacturing of metro trainsets for Mumbai Metro Rail Corporation (MMRC) at its factory in SriCity, Andhra Pradesh. The ceremony was preceded by Mr. Alain Spohr – MD, Alstom India & South Asia. The first metro train after testing will be delivered by November 2020.

Alstom's overall contract with MMRC for Line 3 is worth €452 million. The order includes manufacturing of 31 lightweight, fully-furnished modern metro trains of 8 cars each. Along with rolling stock, Alstom will also execute the power supply contract and equip Line 3 with Urbalis 400, its latest generation of CBTC signalling technology. The scope of the signalling contract includes unattended train operation (UTO), computer-based interlocking and centralised train supervision; an integrated telecom solution comprising of CCTV, passenger information, passenger announcement and Giga bit network; platform screen doors, as well as the electrical and mechanical supervisory control and data acquisition system (E&M SCADA).

Speaking on the occasion, Alain Spohr, Managing Director of Alstom India and South Asia said, "This will be the new face of transportation for the commercial capital of India. Mumbai is a global city and it is set to get a world-class metro experience. The trainsets are custom-designed for Mumbai. Themed on Dynamic Fluidism that takes inspiration from the city, the train prioritises high interior density layout to maximise space efficiency. The trainsets will be able to accommodate at least 3000 people on a single trip, easing daily commute for

Mumbaikars."

He further added, "As announced earlier, we are on track to double our manufacturing capacity at SriCity – from 240 to 480 trainsets per annum. The factory is currently executing orders for Chennai Metro, Montreal Metro (Réseau Express Métropolitain) and Mumbai Metro Line 3. Alstom recently won a contract with Sydney's NRT to supply the rolling stock and signalling system for the next stage of Sydney Metro. 23 six-car fully-automated Metropolis trains for the project will be manufactured at our SriCity facility."

The Aqua Line trainsets will feature a host of safety elements including CCTV cameras, smoke detectors, emergency intercoms, fire extinguishers with wider detrainment doors to quickly evacuate passengers in case of an emergency. The inclusive design of trainsets will serve to the differently-abled individuals with ease of travel and includes dedicated space for wheelchair in every car. The overall exterior and interiors of the trainset are inspired by the undying energy of Mumbai and its people who are always on the move and hustle all day long. Alstom will also train maintenance and operations staff for the project. It is also the first time that any metro train in India will have 75% motorization, enabling quick acceleration and deceleration thereby bringing about greater efficiency in operations. The trains will also be equipped with regenerative braking system aiding significant reduction in carbon emissions. In addition to the above features, it is the first UTO (Unattended Train Operation) project in Mumbai.

Chittaranjan Locomotive Works WAP4 No. 22249 is seen at Kochuveli on December 11th.
Mark Enderby









Trenord Class E464.457 approaches Stresa with a service from Domodossola. *John Sloane*

Alstom's Avelia AGV reaches 100 million kilometres milestone in Italy

Alstom's fleet of 25 Avelia AGV very-high-speed trains operating in Italy has travelled a total of more than 100 million kilometres since entering service in April 2012, owned and operated under the service name Italo by Italo-Nuovo Trasporto Viaggiatori, the first private high-speed operator in Europe.

Italo, with its fleet composed of Avelia AGVs and Avelia Pendolinos, covers the entire national area served by high speed line, connecting a total of 25 Italian cities and 30 railway stations with 116 daily services.

"We are immensely proud that our trains have covered such a distance and transported so many passengers since beginning service. Add to that the Avelia Pendolino trains more recently delivered to NTV, and we have proof of the importance of high-speed rail services and Alstom's unique ability to accompany its customers in the domain," said Laurent Jarsalé, Vice-President of Alstom's Mainlines Platform.

The Avelia AGV trains themselves run at speeds of 300km/h with the highest level of safety and comfort, thanks to an articulated architecture designed for very high speeds. The eleven-car configuration results in trains that are over 200 metres in length.

Passenger experience is at the centre of the Avelia AGV design. The train offers 100 mm of additional interior body width compared to conventional non-articulated very-high-speed trains and a bright interior thanks to the largest windows on the very high speed market. Passengers experience quiet and smooth travelling conditions - a result of bogies being placed between the cars.

The train also boasts long-term operational and financial benefits for the operator. This includes 15 to 30% less energy consumption compared to conventional non-articulated very-high-speed trains thanks to its lightweight, aerodynamic design and braking energy recovery. Maintenance costs are also up to 10% lower than non-articulated trains. The Avelia AGV is fully adaptable to operating needs: flexible configurations from 7 to 14 cars, and trainsets designed like a hollow tube that can be effortlessly fitted and refitted according to changing passenger requirements throughout the train's 30-year lifespan.













 Netherlands



▶ An NS Intercity service consisting of 2 ICM trainsets passes a German bunker from World War II near Weesp working a service from Amersfoort to Schiphol Airport on November 29th. *Erik de Zeeuw*



▶ GVB Combino tram No. 2096 runs across the 'Leidse Plein' in Amsterdam working a service from Central Station to Amstelstation on December 12th. *Erik De Zeeuw*



▶ On the second day of operation, two linked trams of line 22 departs the stop at Utrecht Galgwaard on one of the most expensive tramline of the world (64.375 euros per metre). *Erik de Zeeuw*





 Netherlands

▶ VolkerRail No. 203-4 'Cris' runs through the station at Naarden-Bussum with an empty ballast train on November 29th. *Erik de Zeeuw*

▶ On December 12th, a new CAF tram is seen on the 'Leidsebrug' in Amsterdam with a test run. *Erik De Zeeuw*

▶ On December 12th, Eurostar No. 4018 is ready for departure from Amsterdam to Brussels, where passengers have to transfer to another train that will take them onwards to London. *Erik de Zeeuw*





▶ A RET metro has just departed the station at Vlaardingens Centre working a service from Hook of Holland harbour to Rotterdam Nesselande on December 14th. *Erik de Zeeuw*

FIRST AUTOMATED DRIVING TESTS SUCCESSFULLY COMPLETED BY CAF SIGNALLING ON NS UNITS IN THE NETHERLANDS

CAF Signalling has successfully tested its own ATO (Automatic Train Operation) over ETCS (GoA2) in SNG trains from CAF, together with the Dutch operator NS (Nederlandse Spoorwegen). It is a very important milestone as it is the first time ATO over ETCS is tested in passenger trains running on high density lines.

Due to the high occupancy of Dutch rail lines and as part of the analysis that NS is doing to optimize their operation, NS asked CAF Signalling to experiment with this new technology and understand the benefits they can obtain.

A pilot test was carried out (without passengers) during the night of 10th December where an SNG train drove automatically from Swifterbant to Kampen Zuid, in Hanzelijn, stopping automatically and at scheduled time in Dronten station, where some people of the NS management board, CAF Signalling and Dutch media was present.

These tests (defined also in the frame of Shift2Rail) are part of a test campaign that will allow NS to test different functionalities of the ATO over ETCS during the next months.











 Switzerland



BLS locos Nos. 465.007, 465.011 and 475.412 are seen stabled at Spiez. *John Sloane*



SBB Class 420.243 stands at Spiez with a freight from Interlaken. *John Sloane*



SBB Class 460.082 approaches Spiez with a service to Brig. *John Sloane*





▶ BNSF GE C44-9W Nos. 5521 and 4739 pass Post Office Road whilst hauling a double stack container train. *Laurence Sly*



▶ Arizona and California Railroad SD40-2 Nos. 3999, 3997, 3998, 4001 and 4002 pass Hope whilst hauling the Mathie Job to Parker. *Laurence Sly*

▶ BNSF GE ES44DC Nos. 7665 and 7607 approach Ludlow whilst hauling a double stack container train. *Laurence Sly*







Union Pacific SD70M No. 4807, C44AC No. 6075 and AC44CW No. 6259 approach Yuma whilst hauling an eastbound intermodal train. *Laurence Sly*



Freeport McMoRan EMD GP38-2 Nos. 50, 49, 52, 55 and 59 make their way down the steep gradient from Morenci to Clifton. *Laurence Sly*

San Pedro & SW Railroads EMD GP30 No. 2426 is seen stabled by their yard in Benson. *Laurence Sly*







▶ Arizona Eastern Railroads' GE B40-8 Nos. 4011 and 4002 are seen stabled at Clifton interchange sidings. *Laurence Sly*



▶ Alco S2 No. 23 rests between duties at the San Francisco Bay Railroad. *Laurence Sly*

▶ Union Pacific ES44AC-H No. 8218, GE C40-8W No. 7898, AC45CCTE No. 7874 and EMD SD70ACe No. 8421 pass Vail whilst hauling a westbound double stack container train. *Laurence Sly*







ŠKODA TRANSPORTATION AND SINARA GROUP HAVE FOUNDED A JOINT VENTURE FOR THE PRODUCTION OF VEHICLES IN RUSSIA

Škoda Transportation and Sinara Group signed an agreement to establish a joint venture for the production of subway trains, trams and trolleybuses. In accordance with the signed agreement, both parties will have the same share in the new business, and the products of the joint venture will be marketed under the Sinara-Škoda brand.

“Russia is a huge and promising market in which we want to establish ourselves in the long term. The local fleet requires a massive renewal, entailing large investments and opportunities. In Sinara Group we see a stable and reliable partner with whom we will be able to develop the production of electric vehicles for public transport in Russia. Škoda has supplied many high-quality products to the local market in the past, and I firmly believe that we will be able to build on our previous successes with a strong partner,” says Petr Brzezina, Chairman of the Board of Directors and President of the Škoda Transportation group.

“Through our partnership with Škoda Transportation we will create high-quality, modern vehicles for public transport, such as next-generation trams. Our experience in development, production and service will enable us to create products that will outperform existing vehicles in terms of comfort, ergonomics, energy efficiency and environmental friendliness,” adds Viktor Leš, CEO of Sinara - Transport Machines. Sinara Group is a Russian investment company based in Yekaterinburg founded in 2001, investing primarily in real estate, transport engineering and financial services. Its subsidiary Sinara - Transport Machines, is mostly engaged in the production and full service of locomotives and other vehicles. The company was founded in 2007 and has 30,000 employees.



“We’ve teamed up with the current number two in the local rail vehicle market, which has experience, a modern manufacturing base and subcontracting facilities. Combined with the know-how of Škoda Transportation, we will offer our customers the best product and service on the market. We offer new energy-efficient modern next-generation subway trains and low-floor ForCity trams for St. Petersburg. The company also offers trolleybuses with bodywork from a local manufacturer for the local market,” adds Zdeněk Majer, Member of the Board of Directors and Senior Vice President Sales of the Škoda Transportation group. Sinara-Skoda will be headquartered in St. Petersburg, Russia, with the second largest and most rapidly expanding transport system in the country.

In recent years, OOO VAGONMAŠ from the Škoda Transportation group has supplied Russia with a total of 24 NėVa subway trains for St. Petersburg, which have significantly increased passenger safety and comfort. The history of this new subway project dates back to 2007, when a prototype of the NėVa vehicle was developed. The train also received a prestigious award in the category of best innovative project of St. Petersburg. These modern vehicles have replaced the original trains that were over thirty years old.



First line in Denmark equipped with full ERTMS by Alstom now in commercial service

Successful milestone for Danish signalling program

The Early Deployment Line North that runs from Roskilde to Køge in Eastern Denmark opened for commercial service in mid December. It is the first line in Denmark equipped with both ERTMS trackside, on-board signalling solutions and fully integrated with the Traffic Management System from Alstom. The line is a little over 20 km long and the fleet running on the line consists of 12 trains, owned by DSB.

Denmark is underway to replace their current railway signalling system with ETCS level 2 baseline 3 to further gain passenger capacity and reduce delays. Banedanmark is the first infrastructure owner in Europe to apply this baseline version on a national scale. The opening of the line marks a significant milestone for the Danish signalling program run by Banedanmark, the Danish infrastructure owner.

“We are extremely proud to have delivered this milestone for the Danish signalling program roll-out. Alstom has supplied a fully digital system, providing a more efficient rail system, allowing larger capacity while guaranteeing the highest levels of safety” says Emmanuel Henry, Managing Director of Alstom Denmark.

Alstom is currently replacing the existing signalling system in the Eastern part of Denmark with ERTMS on approximately 800 km of tracks. So far, Alstom has equipped over 100 km with Alstom ERTMS trackside solutions. During the homologation of the Denmark’s first high speed line from Copenhagen to Ringsted in November last year, Alstom set a new railway speed record for Denmark at 255 kph.

Alstom also holds the contract to equip the entire Danish fleet of approximately 350 trains with Atlas On-board equipment. Already, 20 percent of the fleet is successfully installed and several main operators including DSB, Arriva, Nordjyske Jernbaner, are running commercial operations with the ERTMS system installed on-board the trains. On lines where there is no Trackside ERTMS yet installed, the fitted trains run with a Legacy Systems deployed by Alstom.

Alstom’s deliveries also include a national Traffic Management System to support the planning of journeys on all lines, both with and without ERTMS, across Zealand, Fyn, and Jutland. The system includes several advanced functions especially developed for mainline railway lines, making it the first of its kind world-wide.

With 15 years of experience putting into service ERTMS Level 2 digital signalling solutions, Alstom is a global pioneer in its development and implementation. With projects in 30 countries, Alstom has installed nearly 40% of the Trackside ERTMS Level 2 equipment in service in Europe and equipped over 8,000 trains of 200 different types with its Atlas On-board ERTMS solution. Atlas is a scalable solution that can be adapted to all types of traffic and operational needs: passengers and freight, high-speed or suburban.



Alstom to provide maintenance for 46 trains to the Bulgarian national railway company BDZ

First contract for Alstom in Bulgaria

Alstom has signed a five-year contract for rolling stock maintenance for the Bulgarian national railway company BDZ Passenger Services. The contract is worth approximately 70 million Euros.

The scope of the contract includes full maintenance services, consisting of preventive and corrective maintenance as well as overhauls for 46 non-Alstom trains, including 22 diesel and 24 electric multiple units, totaling 126 cars.

“Alstom extends to Bulgaria with a new maintenance contract,” said Gabriel Stanciu, Managing Director for Alstom in Romania, Bulgaria and Republic of Moldova. “This contract builds on our unique expertise in non-Alstom trains maintenance, consolidated and fully proven during our 15-year contract for the Bucharest metro trains and other maintenance projects worldwide. We have started the preliminary preparations in order to be able to provide maintenance. This is our first contract in Bulgaria and we are proud and grateful that the customer chose our expertise and extensive know-how”, Gabriel Stanciu concluded.

The trains started operation in 2006-2007, in regions with high circulation. The diesel ones operate on the Sofia-Kyustendil line and in Varna region. The EMUs are servicing traffic in the Sofia and Plovdiv areas.



Alstom to supply 20 additional Citadis trams to Angers Loire Metropole

Alstom is to supply Angers Loire Metropole with 20 additional Citadis trams for a total sum of nearly 55 million euros. These extra trams come in addition to the 17 Citadis trams which entered commercial service in June 2011 on line A. The new trams will run on lines B & C from 2022 onwards.

“With these 20 additional trams, Angers Loire Metropole will own a total of 37 Citadis trams. We are extremely proud that the city of Angers has placed its trust in us again. This is a fine example of the performance of our products,” said Jean-Baptiste Eyméoud, President of Alstom in France.

33 metres long, with 6 double doors per side, the Citadis tram for Angers will be able to carry more than 210 passengers.

The platform-height floors and double doors facilitate access and passenger boarding at the stations. Everything has been designed for a pleasant travelling experience: large bay windows covering 40% of the tram, LEDs with diffusers for soft even lighting, a state-of-the-art information system, large seats, air conditioning and a video protection system.

These new generation Citadis trams have standardised, proven and more accessible components, providing residents of the conglomeration of Angers with reliable, readily available material. This Citadis tram is particularly energy-efficient and more than 99% recyclable. It is equipped with APS ground-level power supply and is fully interoperable with existing trams and on the 3 lines of the Angers conglomeration.

Nine of Alstom’s thirteen sites in France will be involved in designing and manufacturing the tram for Angers Loire Metropole: La Rochelle (design and assembly of the trams), Ornans (engines), Le Creusot (bogies), Tarbes (traction drive equipment), Valenciennes (interior layout), Aix en Provence (tachometry system), Saint-Ouen (design and infrastructure activities), Vitrolles (APS ground-based power supply system) and Villeurbanne (on-board electronic systems).

To date, more than 2,600 Citadis trams have been sold to over 50 cities worldwide, of which 23 in France, representing nearly 20 years of experience and more than a billion kilometres covered.





DB Cargo is uniquely different

A colourful locomotive will shortly tour Germany, illustrating the diversity at the country's largest rail freight operator.

The DB Group has established an initiative demonstrating the extent of its diversity, and DB Cargo is at the heart of this undertaking. Dubbed "Einziganders" in German, the initiative's name can be translated as "uniquely different". It encapsulates what employees bring to the Group: different points of view, different values and skills, a host of languages, a range of identities and religions, colleagues of different ages working side by side, and women in what are often considered men's jobs.

At DB Cargo, we strongly believe that our diversity helps to improve our customer focus because, in a diverse environment, we can develop new products by looking at issues from different perspectives. We can also bridge the gap between tradition and innovation by passing knowledge from one generation to the next.

Though diversity is already part and parcel of our working lives, it is still worth putting in the

spotlight. To raise awareness, we celebrated our Diversity Week at the beginning of November. A new locomotive sporting an Einziganders livery also marked the occasion and will be an eye-catching sight on its future travels.



New metro trains now running on Bangkok's BTS Skytrain System

In Bangkok, Thailand, all 22 metro trains delivered by the consortium of Siemens Mobility and Turkish railway manufacturer Bozankaya are now in operation on the existing BTS (Skytrain System) Green Lines including its extensions. The last train entered service on the inaugurated Green Line extensions in October 2019. By the 4th of December 2019, Bangkok Mass Transit System Public Company (BTSC) will commence passenger service on the newly completed section of the Green Line from Kheha Station to Kasetsart University Station. In total, 22 four-car trains have been delivered with the scope of Siemens Mobility delivering bogies, drive and brake systems, auxiliary services as well as the project management, engineering, design and commissioning of the trains. The trains were built at the Bozankaya plant in Ankara, Turkey. Siemens Mobility will maintain the trains over a period of 16 years.

The opening of the extended line to Kasetsart University station is part of the BMA's initiative to alleviate traffic congestion, with the further extension to Kukot planned to be completed by the end of December 2020.

"The BTS Skytrain System is a very special success story for us: It's the first public rail transport system to be completed in the Thai capital and Siemens Mobility has delivered the elevated system as a turnkey project. We've provided full service for the system since its commissioning nearly 20 years ago and will continue to do so until 2029, ensuring that over 99 percent of the existing trains are available for service every day. With the addition of our new trains, capacity on the Green Lines will increase to over one million passengers a day while at the same time, offering users optimal passenger experience" explained Sabrina Soussan, CEO of Siemens Mobility.

In May 2016, the BTS Skytrain System operator BTSC awarded the consortium a contract to deliver the 22 trains. Siemens Mobility is also supplying the traction power supply for the Green Line extensions. The order was placed as part of BTSC's expansion plans to provide more trains on the existing route and its extensions. The southern extension inaugurated in December 2018 connects the provincial capital Samut Prakan, which lies around 25 kilometers south of city center of Bangkok, with the capital. The elevated extension to the south begins at the current Skytrain terminus at Bearing, is around 13 kilometers long and consists of nine stations. The extension to the north starts at MoChit Station, consists of sixteen stations and is appr. 18.4 km long.





Alpha Trains orders regional trains for Mecklenburg-Vorpommern

Alpha Trains, the European continent's largest leasing company for rail rolling stock, has ordered seven Desiro Mainline (ML) regional trains from Siemens Mobility. Ostdeutsche Eisenbahn GmbH (ODEG) will lease the trains for service in the rail network Baltic coast east operated from December 2019 onwards by the ODEG on behalf of Verkehrsgesellschaft Mecklenburg-Vorpommern (VMV). The production has already started at the Siemens Mobility train manufacturing facility in Krefeld. "Alpha Trains ordered the Desiro ML as its first customer many years ago and we are pleased that this proven and reliable platform is also used for this project" said Thomas Schmidt, Managing Director of Alpha Trains Europa GmbH

added over the train's entire lifecycle," said Sabrina Soussan, CEO of Siemens Mobility.

Expansion of the train's capacity is facilitated by the flexible single-car concept of the Desiro platform, which allows simply adding an extra intermediate car to the trainset. By optimally utilizing the train's entire length for seats, operators benefit from a higher transport capacity. Over 90 percent of the Desiro ML's length is available for passengers.

Railway operator ODEG provides regional passenger services on behalf of the federal states of Berlin, Brandenburg, Mecklenburg-Western Pomerania,



The trains will initially be delivered in three parts and will be used on the Rostock-Sassnitz, Stralsund-Binz and Rostock-Züssow lines. Capacity will be expanded to the four-part vehicle shortly after delivery. "The Desiro ML impressed us with its dynamic driving capabilities, excellent driving comfort and with the powerful impellent thanks to its four bogies. Our drivers also confirm that we have solid technology and a very well thought-through operating concept in the driver's cab" says Arnulf Schuchmann, Managing Director and spokesman for ODEG.

"We are providing a train for our customer in record time. This speed is made possible by the high flexibility of our Desiro ML platform, which allows the easy addition or removal of an intermediate car depending on the required transport capacity. This creates sustainable value-

Saxony and Saxony-Anhalt. ODEG is the largest privately operated railway system in eastern Germany, with a total of eleven lines and 1,200 kilometers of routes. The company transports around 18.2 million passengers a year, covering a total distance of roughly eleven million kilometers.



Competitive single-wagon transport to Albania

For over 20 years, DB Cargo's PowerRailer has provided a fast, competitively priced rail link to south-eastern Europe. The service can also handle special, one-off transports. One recent example saw a used storage tank make the journey from Germany to Albania.

These tanks play a major role in the property market and are used extensively at industrial companies. Some tanks are produced at the manufacturer's facilities, while others are assembled on site at the customer's plant. There is also a market for used tanks. Not long ago, the PowerRailer transported one from the German town of Kornwestheim to Albania.



Manufactured by Tank & Apparate Barth GmbH, a company based in the town of Forst near the southwestern German city of Karlsruhe, the tank had a capacity of 80 cubic metres and weighed 15 tonnes. It could have been moved by truck, but the manufacturer opted for a train because of DB Cargo's competitive price for comprehensive service using the PowerRailer link. Additionally, a previous transport contract with DB Cargo and DB Schenker had left the customer with a very positive impression of the companies.

"This job makes it clear that we also welcome one-off orders and that we take as much care with them as we do bigger or more regular deliveries", says Martina Harrer of DB Cargo Regional Sales in Mannheim. Harrer worked with her colleagues to organise the transport.

The Rs wagons used on the Albanian run were fitted with wagon intelligence sensors for GPS tracking, as are over half of all DB Cargo's freight wagons. GPS technology made it possible for all involved parties to monitor the train's progress through Austria, Hungary, Serbia and Montenegro until it arrived at its destination, a station in the Albanian town of Shkodër. Albania is currently an EU accession candidate, so the tank had to go through customs clearance at the very end of its journey.

Using the railway to cover the portion of the route between Kornwestheim and Shkodër generated over 1.1 tonnes less CO2e than would have been emitted using truck transport.



Vectron receives ETCS Baseline 3 approval

ETCS approval for Baseline 3 in Germany and Sweden Improved availability thanks to intelligent infrastructure Approval for other countries to follow

Germany's Federal Railway Authority (EBA) has approved the Vectron locomotive for operating in Germany with the European Train Control System (ETCS) Baseline 3. Approval for Sweden has already been received. Additional countries will follow.

"The approval for operating with ETCS Baseline 3 marks an important milestone for our locomotive business. Siemens Mobility is pioneering the system's early implementation in the rail industry. By driving digitalization, we are enabling our customers to make their infrastructure and their trains intelligent and to guarantee availability," said Sabrina Soussan, CEO of Siemens Mobility.

ETCS enables the standardization of train control systems in place of many different national systems and provides the basis for interoperability between trains and trackside infrastructure. ETCS has in the meantime become the global standard in the industry. ETCS Level 2 enables

communication between the locomotive and rail route. With the system, train drivers receive their driving commands, such as permitted speed, targeted speed and distance, directly on their display rather than from trackside signals as in the past. All data required for operation is transmitted to the locomotive from the rail line's control center – the Radio Block Center (RBC) – via the GSM-R digital railway radio system and is monitored. The train's speed, position and direction are provided by the locomotive's computer and continually reported to the control center.

Compared to ETCS Baseline 2, which is currently used in most countries, ETCS Baseline 3 has many new features, including a universal braking curve model. This will simplify the deployment of an ETCS on-board equipment throughout Europe.

To date, Siemens Mobility has sold over 980 Vectron locomotives to a total of 48 customers. The locomotives have already covered more than 260 million fleet kilometers in service and are currently approved for operation in Austria, Bulgaria, Croatia, the Czech Republic, Finland, Germany, Hungary, Italy, the Netherlands, Norway, Poland, Romania, Serbia, Slovakia, Slovenia, Sweden, Switzerland and Turkey.



Sweden is closer than ever

Kombiverkehr KG has joined forces with DB Cargo Scandinavia and ferry operator TT-Line to launch its first regular-interval direct service within Sweden.

Trailers and containers will make the round trip between Trelleborg and Hallsberg by train three times a week. The three departures per week represent a "starter" schedule following the launch of the service at the beginning of November. Next year, this figure could increase to five round trips per week, with additional connections possible if there is demand for them. Spedition Bode is one of the parties behind the launch of the connection. The company is involved in transporting foodstuffs, consumer goods and wood products within Sweden.

Together with its customers in the industrial sector, Bode is very keen to reduce CO2 emissions, and this motivated its decision to go with combined transport. Bode shouldered the entire economic risk on its own when it booked its first company train from Kombiverkehr KG in 2015. The company will now be one of the main clients using the new Trelleborg-Hallsberg link.

Stev Etzrodt, an authorised representative at Bode in Reinfeld in northern Germany, says, "Multimodal accounts for around 50% of our total transport mileage. This is why business partners like Kombiverkehr are so important for us, and we have been a customer for no less than 10 years now."

Depending on the day of running, a consignment that starts in Duisburg and travels via the Skandinavienkai dock in Lübeck can take an average of two days to reach Hallsberg. Going by train enables a load weighing 25 tonnes to cut CO2 equivalent by almost 1.2 tonnes – a reduction of some 60% on the figure for road-based transport.



Peter Dannewitz, Head of Sales at Kombiverkehr, says, "We can always rely on Spedition Bode when performing a transport. It is important to us that customers supply the agreed transport volumes for every planned departure, particularly when dealing with newly established connections like the Trelleborg-Hallsberg service. We really appreciate how well our companies work together."

Other customers can access the new direct train to and from Hallsberg via a host of gateway connections, and deliveries can be booked to run from door-to-door. Transports cross the Baltic on TT-Line's ships sailing between Travemünde in northern Germany and Trelleborg in southern Sweden.

From the UK

LNER HST Finale

Something a bit different this month, in December 2019 LNER bid a fond farewell to the Inter-City 125 High Speed Train (HST). These loyal work horses of the railway system have been serving East Coast commuters and communities for over 30 years but are now about to enjoy a well-deserved retirement. So for four days in December, a specially liveried HST set out on a tour of the route ending at London Kings Cross. Here are a few photos from its progress.

End of an era as the last LNER HST arrives at London Kings Cross with the special train from Leeds on December 21st. *Richard Hargreaves*

Power car No. 43006, originally a Western Region one when delivered back in the mid 70s is seen at London Kings Cross on December 21st. *Richard Hargreaves*

Having deposited all its passengers at London, the HST then ran empty stock back to Edinburgh to have a rest before performing a staff special the following week around the Edinburgh area. Seen here at Peterborough. *Richard Hargreaves*









