





Welcome

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

I have just returned from a sweltering visit to Czech and Germany where temperatures were at an unusual 38c! However unlike the UK there didn't seem to be any heat related failures or excessive speed restrictions due to rail defects. Perhaps mainland Europe is just better positioned to cope with this current mad weather. Anyway I would like to say a big thanks to everyone at CD Nostalgia and at KZC for an excellent couple of days.

Meanwhile elsewhere this month, it's all change at Freightliner again as a consortium of Brookfield Infrastructure, GIC and Brookfield's institutional partners has agreed to acquire Genesee & Wyoming Inc in a US\$8.4bn transaction. With the 'Orange' livery only just appearing, will this be about to change again?

Whilst its days may be numbered in the UK, Virgin Trains USA has held a 'Red Spike' ground breaking ceremony at Orlando International Airport on June 24 to launch construction work on its 275 km Phase 2 extension from West Palm Beach. Contracts were awarded in May for construction of Phase 2, which represents a private-sector investment of \$4bn. The project includes the restoration of double-track on the existing Florida East Coast Railway from West Palm Beach northwards to Cocoa and

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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 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

Henschel built but GM powered JT22 No. 3150 drops down onto its train to Cairo at Aswan under an array of British built lower quadrant signals. *Mark Torkington*

This Page

Having finally reached the port, Lotos' No. BR285-129 is cabbed by many visitors at Kolobrzeg. The photograph was taken from the top of Latania Morska lighthouse on June 2nd. *Jeff Nicholls*

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Trenitalia No. E402.116 passes Alassio whilst working Thello train No. 141/142 from Milano Centrale to Nice Ville. *Laurence Sly*





the construction of a fully segregated 200 km/h alignment from there to the new airport station. Passenger services on the existing Miami – West Palm Beach route are scheduled to be extended to Orlando in 2022. The operator expects to carry more than six million passengers/year once the route has been completed, predicting a ‘direct economic impact’ for the state of US\$6.4bn.

And all change in Germany as a number of passenger services transferred to new operators on June 9th, including routes in Baden-Württemberg which are the first in Germany to be managed by UK-based rail and bus group Go-Ahead. Go-Ahead is taking over the services from DB Regio in phases in June and December. In December, Go-Ahead will also take over Netz 3a services between Stuttgart, Schwäbisch Hall and Nürnberg under a 13-year contract covering 1.3 million train-km/year. Meanwhile NS subsidiary Abellio has taken over Netz 1 Lot 1 (1a, Neckartal) services from Stuttgart to Pforzheim and Bad Wildbard (service RB17a), Heidelberg (RB17b) and Bruchsal (RB17c), which will total 6.8 million train-km/year, and further north, National Express took over from DB Regio as operator of Wesel – Köln – Koblenz Rhein-Ruhr Express service RE5 on June 9, using 12 new Siemens Desiro HC EMUs

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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ČD Cargo locomotives in Austria are using the “last mile” module

The ČD Cargo carrier has hired two TRAXX Class 187 locomotives from Railpool. These are used for shipments contracted by the ČD Cargo branch at Niederlassung Wien. These locomotives are equipped with a “last mile” module, which allows stations, sidings or terminals without an overhead electric system to be operated in.

This module was used for example here on June 27th, in the evening to transport fuel tanks between Stadlau and Wien Hafen Lobau stations. The TRAXX Class 187.341 locomotive was hauling a train with a gross weight of 1,800 tons.

Photo: ©CD Cargo



Regiojet Class 193.206 speeds through Kolin with a service from Praha on a very wet day.
Class47



ČD Cargo's wagon fleet is extended with new tank wagons

ČD Cargo's wagon fleet has been increased with a new fleet of wagons. A total of 80 new Zacns 88m³ tank wagons were ordered for joint transports with their business partners.

Zacns wagons will extend the current state of large-volume tank wagons for transport of liquids, especially fuel. The first group of 12 wagons was delivered in June. The handing over of wagons took place at TATRAVAGONKA Poprad and after their arrival in the Czech Republic they were checked and added to the records.

After branding the wagons according to the RID requirement, the wagons will be used for transport of fuel. Deliveries of other wagons will follow.

Photo: ©CD Cargo



Class 380.003 passes Lysa pod Makytou whilst working train No. EXP124 14:52 Puchov - Praha hl. *Laurence Sly*



ČD Cargo's locomotive called "Six-Axle"

ČD Cargo's Class 182.168 locomotive called 'six-axle' was one of the first locomotives repaired in the range of R1, at the repair center in Přerov. Painting was also part of the R1 repair. Following the media success of the Class 130.027 locomotive in historical colors, this locomotive was also painted in these colors.

In mid June, Class 182.168 locomotive left the repair center, looking as it did in 1965 at the production plant in Pilsen.

The "six-axle" is not the last locomotive, which will be operated in historic colors at ČD Cargo, locomotive Class 122.001 is now in the repair center and should appear at the head of cargo trains soon.

Photo: ©CD Cargo/ Vladimír Hranoš



▶ AWT Class 753.733 arrives at Decin hl.n. with a train of Innofreight containers. *Class47*



An immaculate, gleaming Class 749.250 is seen in the sunshine at Luzna u Rakovník on June 30th. *Laurence Sly*

Interesting transport with ČD Cargo

On Monday June 17th, ČD Cargo transported a Stadler BMU4 R unit with the trade name Flirt UK through the Czech Republic, seen here between Petrovice u Karviné and Kúty. The unit was being transported from the Stadler plant in Siedlce, Poland, to the Railway Testing Center in Faurei, Romania, for various tests before being delivered to British customer.

In Slovakia, the transport was provided by Carborail.

Photo: ©CD Cargo





A rather battered Class 742.247 is seen outside the roundhouse at Breclav on June 29th.
Class47

New from CZ LOKO: EffiShunter 1000 for ČD Cargo and HybridShunter 400

CZ LOKO presented two innovations at this year's Czech Raildays. The highlight of the exhibition was the HybridShunter 400 two-axle locomotive, which is the first hybrid-powered locomotive in the portfolio of this major rail vehicle producer. "The use of hybrid propulsion is based on current trends, whereby clean types of renewable energy are preferred to fossil fuels. The technology used is environmentally friendly and also minimizes noise. These advantages will be fully reflected in the shift in urban agglomerations, industrial halls and other similar operations," says Jan Kutálek, Commercial Director of CZ LOKO.

The hybrid drive is provided by a traction battery with charging mode from the external plug-in socket. The backup engine is a combustion engine CAT C4.4. After presenting to the public, the locomotive will be subjected to a demanding test run, on the basis of which serial production will begin. "We are also planning to use this technology to build a more powerful four-axle hybrid-powered locomotive," adds Jan Kutálek

On the contrary, the tried-and-tested concept was presented by the EffiShunter 1000 locomotive. The 744.110 locomotive from the five-cylinder series for ČD Cargo was also presented. EffiShunter 1000 is the flagship product of CZ LOKO. It has a CAT C32

engine with 895 kW output. It is equipped with all the necessary modern technologies, such as camera system, online monitoring and diagnostics, passive safety boards. All EffiShunter 1000 locomotives for ČD CARGO will also be equipped with the ETCS security system.

ČD Cargo will have all five locomotives available at the turn of this year and next year, after the approval process has been completed. Another five locomotives are part of the option. For CZ LOKO, this is the first success with EffiShunter 1000 in the domestic customer, after it has been pushed through in Italy and Slovenia.

Photo: ©CZ Loko

















Stadler and companies of the SNCF Group present the new generation of six-axle locomotives at Transport Logistic

Stadler presented projects involving the new generation of six-axle locomotives at Transport Logistic in Munich in cooperation with the French rail freight provider VFLI and the German rail freight company ITL Eisenbahngesellschaft mbH (ITL). For VFLI, Stadler is building twelve EURO 4001 locomotives. In addition, VFLI is taking over the prototype of the EURODUAL locomotive. Stadler will deliver four six-axle locomotives of the EURODUAL family to ITL. VFLI and ITL are both subsidiaries of the SNCF Group.

The rolling stock supplier Stadler and the French rail freight operator VFLI signed the purchase contracts for thirteen six-axle locomotives one year ago. The contracts include the supply of twelve diesel-electric locomotives type EURO4001, thereof three were acquired directly by VFLI and nine were acquired by Alpha Trains to be operated by VFLI. Succeeding the acclaimed EURO4000 locomotive, the EURO4001 locomotive boasts equally high levels of performance and reliability. This powerful interoperable and cross-border locomotives offers flexibility, high hauling capability, low energy consumption and reduced operational costs. The EURO4001 is fitted with ETCS on-board equipment and an engine rated at 2800kW that meets the EC 26/2004 Stage IIIB emission levels as prime mover.

The contracts also included the acquisition by VFLI of the prototype of the EURODUAL locomotive that Stadler has used for the homologation of this new platform in France and Belgium which is expected in the next weeks. It can run on electrified lines at 25kV AC and at 1.5kV DC but it is also powered by an IIIB engine rated at 2.8 MW to run on non-electrified lines. German rail freight operator ITL Eisenbahngesellschaft mbH (ITL), a subsidiary of Captrain Deutschland, ordered also four six-axle hybrid locomotives of the EURODUAL family at the end of 2018. The powerful locomotives will be operated in freight transport services in Germany with a speed up to 120 km/h combining both operating modes: electric on AC electrified lines (15 kV 16.7 Hz and 25 kV 50 Hz) and diesel. The new generation of Co'Co' locomotives developed by Stadler Valencia maximizes performance and reliability

resulting in greater profitability of the rail transport services. The improved adhesion control system and a tractive effort up to 500kN boast the greatest load-hauling capability in the European market, permitting the transport of longer and heavier trains with a single locomotive. The powerful locomotives, in both traction modes, are able to run at high speed through the European corridors with mixed traffic. The latest bogie technology results in lower wear and tear on the infrastructure and decreased track access costs.

Regarding traction, the family includes diesel, electric multi-system and hybrid versions. The hybrid locomotive is more than just a «last mile» locomotive, offering two solutions in one. They can be used on both electrified and non-electrified lines. While driving, it is possible to switch from the electrical overhead line to diesel. It offer the flexibility to optimise transport routes avoiding journey disruptions and many environmental benefits.

«We make our decisions fully aware of their impact on society as well as on the environment. Therefore, increasing the energy efficiency and minimising the use of energy are the main components of our operational activity», says Jérôme Méline, managing director, Captrain Deutschland GmbH.

«Always on the lookout for ways of reducing its environmental impact, VFLI has launched a fleet renewal program to meet the challenge of energy transition. Such strengths undoubtedly give VFLI an additional competitive advantage by providing its clients, ever more sensitive to environmental issues, with a cleaner freight transport solution. We want to be the «new freight generation»», adds Alain RIBAT, CEO, VFLI.



SNCF Infra No. 469487 heads through Dijon Ville with an inspection train. *Class47*





Alstom to supply 32 additional DT5 metros for Hamburg

Alstom, in consortium with Bombardier Transportation, will supply 32 further DT5 metro trains to Hamburger Hochbahn AG (Hochbahn) for a total amount of 186 million euros. Alstom's share of the contract amounts to over 100 million euros. As part of this contract, Alstom will supply the mechanical part, the bogies and the mechanical braking system, while Bombardier will supply the electrical equipment, the driving system, the passenger information system and the vehicle control system. The trains will be assembled at Alstom's site in Salzgitter, Lower Saxony. The new trains are to be put into service from January 2021 onwards.

"For many years now, our vehicles have been shaping mobility in Hamburg. This order confirms that customers and passengers are satisfied with our vehicles and will continue to rely on the DT5 trains in the future. With this order we will have delivered a total of 163 vehicles to Hamburg. This is a proof of our long-standing, trusting and sustainable cooperation with Hochbahn", says Dr. Jörg Nikutta, Managing Director for Alstom in Germany and Austria. The DT5 metro fleet has been in operation in Hamburg since autumn 2012. The Hochbahn has now ordered a total of 163 metro trains of this generation in order to cope with the increasing number of passengers in the city. In the past, Alstom had already delivered the DT2, DT3 and DT4 fleets - a total of 462 trains - to the Hamburg subway system.

Hamburg is the second largest city in Germany and the eighth largest city in the European Union. In order to meet the needs of such a large urban population, the DT5 was designed as a modern, spacious subway with wide corridors, a continuous interior and multi-purpose areas adapted to new passenger needs. Each of the 40 meter long three-car trains has 96 seats, 240 standing spaces and two additional wheelchair spaces. The DT5 also offers high passenger comfort, such as air conditioning, passenger information and monitoring systems as

well as automatic door closing.

The DT5 subways are environmentally friendly. Their lightweight stainless steel car bodies and regenerative braking system contribute to improving energy efficiency. The vehicles are very quiet, which makes the Hamburg subway one of the quietest in the world.

As part of the Hamburg Senate's bidding offensive, Hochbahn is expanding its range of services by an average of around five percent per year over the next three years. The new services include significantly tighter metro intervals and a massive expansion of the bus service with new express and area buses. The latest subway generation (DT5) is now to be increased by 32 vehicles and up to 163 vehicles at a later stage.



▶ HSL Logistik's Class 187.500 stands at Pirna, waiting to gain access to the yard. *Class47*



Alstom to deliver eight Coradia Lint regional trains to ODEG in Germany



novel engine management system, and reach a maximum operating speed of 140 km/h. The vehicles are equipped with a new engine management system. The two-part trains have a network-tailored boarding height and seating capacity for a total of 140 passengers as well as 12 bicycles or 6 pushchairs for children. Four doors on each side of the vehicle with automatic boarding aids enable fast passenger changeover times. People with reduced mobility benefit from spaces for wheelchairs and universally accessible toilets. Passengers will also be offered additional features such as WLAN, increased seat spacing, seat sockets, luggage racks, tables between face-to-face seats and extra-large, real-time information displays.

RTB Cargo's Vossloh G1206 No. V158 hauls a rake of wagons into Duren. *Class47*

Alstom has received an order for the delivery of eight Coradia Lint regional trains from Ostdeutsche Eisenbahn GmbH (ODEG). The trains are the world's first diesel multiple-unit trains with a Stage 5[1] Powerpack and are therefore particularly environmentally friendly. They will be built at Alstom's site in Salzgitter, Lower Saxony, and delivered in the second half of 2022. In December 2022 they will start operation on the Netz-Elbe-Spree. The value of the contract is close to €45 million.

Alstom's Coradia Lint trains have been operating in more than 30 networks in Germany, Europe and Canada since the year 2000. Thanks to continuous improvements, they offer the highest standard of safety, noise reduction and low emissions and can boast very high availability. The trains belong to Alstom's Coradia range of modular trains, which benefits from over 30 years of expertise and proven technical solutions and includes the world's first hydrogen passenger train, the Coradia iLint. More than 2,900 Coradia trains have been sold so far and around 2,400 are currently in service.

"Parallel to the development of new emission-free technologies, we at Alstom are also consistently developing the proven diesel technology in an environmentally friendly manner. The Coradia Lint regional trains for ODEG comply with the EU Stage 5 emissions standard. This makes them the most environmentally friendly diesel trains in the world," says Jörg Nikutta, Managing Director of Alstom in Germany and Austria.

[1] European emission standards define the acceptable limits (Stages 1-5) for exhaust emissions of new vehicles sold in the European Union and EEA member states.

The modern and environmentally friendly vehicles are powered by three 400 kW engines, which for ecological and economic reasons can be switched off individually by a

Train drivers donate money to children's hospice



Hospice manager Rüdiger Barth is delighted by the donation: "It is fantastic to see that people want to support us however they can. The money donated by the train drivers at DB Cargo's Gremberg base will help us continue to be a second home to families who need us."

Jan Schmidt is team leader of the Gremberg train drivers: "The members of staff have shown a great sense of responsibility and done a lot for sick children, teenagers and their families. It is difficult to find enough praise for this gesture." Together with his colleagues, Schmidt took part in Deutsche Bahn's Germany-wide competition for energy-efficient driving.

The team achieved second place.

DB Cargo train drivers at Gremberg in Cologne are making a big-hearted gesture: after winning a prize for energy-efficient driving, they have decided not to spend their prize money of EUR 5,000 on an expensive team event but are instead donating it to a good cause. The money went to the Balthasar hospice for children and teenagers in Olpe. The organisation cares for young people with incurable medical conditions and provides their families with support. When it opened in 1998, the hospice was the first of its kind for children in Germany. It expanded in 2009 by adding facilities for teenagers and young adults – once again, this was a pioneering move and saw the institution address the things that had been lacking at hospices providing adult care.

Rail is already the most environmentally friendly way to transport freight. DB Cargo is nevertheless doing everything it can to further improve its carbon footprint. By the end of this year, it wants to upgrade all of its 650 electric locomotives with an assistance system that promotes power-efficient driving. By 2030, it also aims to halve its specific CO2 emissions, i.e. emissions per person and tonne, compared to 2006 levels.

Next stop: Romania!



located in the historically important region of Oltenia, some 200 km west of the Romanian capital, Bucharest.

From Craiova, the freight wagons are then distributed throughout the country. At present, there is one train per week on the southbound leg. Departing on Saturday, the train arrives at its destination on Monday and makes the return journey on Tuesday. Speaking about the new direct link, Helena Petkau from Single Wagon Offer Management says, "The high level of market acceptance and positive growth in volumes mean that we are planning

From now on, a new rail freight shuttle will allow faster deliveries to Romania. The direct link sees DB Cargo expand its single wagonload network. The new service links the Ruhr region and northern Germany with the growing economy in Southeastern Europe and takes three days in each direction. In addition, this regular direct connection cuts the turnaround time for freight wagons by two thirds, noticeably improving wagon availability levels for customers.

Within DB Cargo's single wagonload network, the Romanian shuttle provides a fast link with a wide geographical reach and is open to all types of freight. The single wagonload train is formed in Schwandorf, located in eastern Bavaria, and then crosses Austria and Hungary on its way to Craiova. With a well-equipped freight station, this town is

additional departures." DB Cargo and its national subsidiaries DB Cargo Hungaria and DB Cargo Romania supply all the locomotives used and thereby act as a single service provider.

At present, the main freight type is steel. Southbound trains frequently transport coiled steel, while northbound services transport semi-finished steel products. For Helena Petkau, this is where the route's strengths lie: "We have established a reliable link, and each of our wagons can transport heavier loads than a truck." What is more, the shuttle not only hauls heavier loads but generates less CO2.



▶ A DB Class 101 hauling an IC service to Mainz, heads along the side of the River Rhine near Bingen. *Class47*

Alstom to supply 18 Coradia Lint regional trains to Baden-Württemberg

Alstom has received an order for 18 Coradia Lint regional trains from Landesanstalt Schienenfahrzeuge Baden-Württemberg (SFBW). The trains will be built at Alstom's site in Salzgitter, Lower Saxony, and delivered in the second half of 2020. They will then start operation on the Zollernalbbahn network in southern Germany. The value of the contract is close to €80 million.

“Following the delivery of these trains there will be a total of 33 of our proven and reliable Coradia Lint vehicles in operation in Baden-Württemberg. With this order we will once again prove our delivery reliability, accommodating an extremely tight timeframe. As with the delivery for the ‘Ulmer Stern’ network, we will manufacture and deliver the trains in less than a year and a half,” said Jörg Nikutta, Managing Director of Alstom for Germany and Austria. The Coradia Lint 54 is a fuel-efficient diesel multiple-unit train that can reach a maximum operating speed of 140 km/h. The two-part trains have low floors and have a seating capacity for a total of 150 passengers, as well as 18 bicycle parking spaces. They are characterized by a comfortable, spacious seating arrangement in which almost every fixed seat is equipped with tables for laptops. The trains are all equipped with WLAN, an entertainment and passenger information system with monitors for static and dynamic information and video surveillance to ensure a high level of passenger safety.



Alstom's Coradia Lint trains have been operating in more than 30 networks in Germany, Europe and Canada since the year 2000. Thanks to continuous improvements, they offer the highest standard of safety, noise reduction and low emissions and can boast very high availability. The trains belong to Alstom's Coradia range of modular trains, which benefits from over 30 years of expertise and proven technical solutions and includes the world's first hydrogen passenger train, the Coradia iLint. More than 2,900 Coradia trains have been sold so far and around 2,400 are currently in service.



HectorRail Class 162.004 hauls a rake of tanks through Coswig. *Class47*

Stadler is to supply further trams for BOGESTRA

BOGESTRA is ordering an additional eight VARIOBAHN trams from Stadler for the expansion of its fleet. This will give the transport company a total of 107 Stadler vehicles, making it the first German local public transport operator to have a fleet size reaching three digits. The Swiss rail vehicle manufacturer had only just received an order in April for the supply of further light rail vehicles for the U35 Bochum/Herne campus line.

The new low-floor trains are intended for use on the metre-gauge network in the urban areas of Bochum, Gelsenkirchen, Herne, Hattingen and Witten and, according to the contract, are due to be delivered from mid- 2021 onwards. The five-car bidirectional vehicles can carry more than 165 people. They have a constant low floor along their entire length of around 30 metres, as well as being step-free throughout. The comfortable cars offer a bright, friendly passenger area. An optimum passenger flow is achieved thanks to five external swinging-sliding doors on each side.

«We are very pleased to have received an order for eight VARIOBAHN option vehicles following on from the contract signed in April of this year for six more TANGO vehicles. It makes us proud to have been chosen to provide almost the entire light rail and tram fleet for BOGESTRA after more than 14 years of successful, close cooperation», says Patrick

Sefzik, Head of Tram Sales at Stadler in Berlin.

«Counting the eight new VARIOBAHN trams, we will then have a total of 95 of these vehicles. This means that we will be well equipped to meet future demands in terms of vehicle requirements. With video protection, fold-up ramps and air conditioning, the trains have equipment that passengers appreciate», explains Arndt Hartmann, Vehicles Division Manager at BOGESTRA.



Stadler wins contract to supply 16 FLIRT trains for the Bremen/Lower Saxony regional S-Bahn network



Stadler and Transdev GmbH are continuing their successful cooperation. The German subsidiary of the French Transdev Group has commissioned Stadler with the development, construction and delivery of 16 FLIRT electrical multiple units for use on the Bremen/Lower Saxony regional S-Bahn network. The order is valued at approx. 100 million euros. Stadler is to build trains for Transdev GmbH once more. The Transdev subsidiary NordWestBahn GmbH is expanding its existing fleet with the addition of 16 FLIRT vehicles for operation on the Bremen/Lower Saxony regional S-Bahn network in and around in the city of Bremen. Thanks to this order, from December 2022 Transdev's German fleet will comprise a

total of 118 FLIRT trains in various configurations and with different equipment. The four-car trains for the Bremen/Lower Saxony regional S-Bahn network have a total vehicle length of 86.9 metres. Their 7 passenger doors on each side allow for rapid passenger changes. 527 passengers can be transported in the fully video-monitored passenger area, with seats for 260 of them.

The multiple units are fitted with an accessible universal toilet and a standard toilet according to PRM TSI guidelines and, like all FLIRT trains, have bright, friendly passenger areas as well as being accessible and step-free throughout. The particularly large multi-purpose areas offer space for transporting up to 30 bicycles, bulky luggage and prams or pushchairs. They are equipped with power outlets for charging e-bikes in addition to wheelchair places according to PRM TSI guidelines. The on-board wireless network and the modern passenger information system, which displays data in real time on monitors in each boarding area, make it easier for passengers to update their journey to the minute. The vehicles can travel at a maximum speed of 160 kilometres per hour.

«We are delighted to be able to continue our constructive and successful cooperation with Transdev by supplying FLIRT trains for the Bremen region for the first time,» says Jure Mikolčić, CEO of Stadler in Germany. «We are very proud that Transdev, one of the largest rail transport companies in Germany, is once again opting for our tried and tested product and has awarded a new tender to Stadler after just a few months.»

According to the contract, the vehicles will be put into operation on lines within the Bremen/Lower Saxony regional S-Bahn network in December 2022.

Stadler wins order for 18 KISS for DB Regio

DB Regio and Stadler sign a contract for the development, construction and delivery of 18 double-deck trains of the KISS type for use on the East electrical network. The order volume is approximately 220 million Euro. Once again, DB Regio AG has been commissioned to operate the East electrical network to the north-east of the Hamburg region. Starting in 2022, 18 KISS vehicles (a German acronym for comfortable innovative speedy suburban train) by Stadler will be used here for the first time.

Jure Mikolčić, CEO of Stadler Germany, and Torsten Reh, Head of DB Regio Nord, signed the contract recently. The four-part double-decker trains, which comprise two driving cars and two central cars, can transport up to 880 passengers quickly, safely and comfortably to their respective destinations. Each double-decker set has 405 seats, 38 of which in first class. The first class areas are located in the upper area of the vehicles and offer plenty of leg space thanks to the 2+1 arrangement of the seats. All vehicles have WiFi, power sockets and CCTV of the passenger areas. A modern passenger information system and electronic reservation system further enhance travel comfort.

The lower level of the double-decker trains has spacious and easily accessible multi-purpose areas for transporting wheelchairs, prams or up to 36 bicycles, as well as wheelchair-accessible toilets. The trains are accessed without steps as the doors are equipped with a gap bridge, and are optimised to a platform height of 76 centimetres. There are eight entrances along the 106 m long vehicle to facilitate speedy and smooth passenger changes at the stations.

Thanks to four driven bogies, the vehicles have impressive driving dynamics with a top speed of 160 km/h. Up to three railcars can be connected to each other to allow up to 2,640 passengers to be transported per connection. The use of Stadler's own new train control system, GUARDIA, marks a further important milestone for Stadler in its efforts to expand its signalling business. The train control system will be retrofitted when the

fixed link across the Fehmarnbelt is expanded. This order from Schleswig-Holstein means that DB Regio AG now uses Stadler vehicles in seven federal states, although the KISS vehicles are being used for the first time in Germany.

«We are delighted with this order from the Schleswig-Holstein region because it means we can continue our successful working relationship with Deutsche Bahn. This contract confirms that railway companies need modern, reliable and smooth-running double-decker vehicles that can transport a high number of passengers

easily and quickly,» says Jure Mikolčić. Torsten Reh adds: «We are also very proud to be the first company in the north to use these new Stadler vehicles for DB Regio. This is a very attractive, future-oriented rail offer for our passengers.»

According to the contract, the new vehicles will be tested as of June 2022 to ensure a smooth operational start when the timetables change in December 2022.







Hitachi and Bombardier will supply 14 very high-speed Frecciarossa 1000 trains to Italy

Hitachi Rail SpA and Bombardier Transportation, in a partnership expected to involve company participation of 60% and 40% respectively, will supply 14 Frecciarossa 1000 (also known as ETR 1000) very high-speed trains to Trenitalia (Italian Railways), as well as a ten years maintenance service agreement for the new trains. The contract overall value is around 575 million euros (\$ 643 million US) with the Bombardier share valued at 233 million euros (\$261 million US) and the Hitachi share valued at 342 million euros (\$382 million US).

Maurizio Manfellotto, CEO at Hitachi Rail SpA and Group COO Service and Maintenance Hitachi Rail said: “We worked closely with Trenitalia to deliver a train which has dramatically enhanced the performance and customer experience of the Italian high-speed rail network. The Frecciarossa 1000 is a perfect example of how suppliers and customers working together towards a common goal can deliver for passengers. This order for 14 new trains and the related maintenance services are proof of the success we have achieved.”

Luigi Corradi, Managing Director, Italy, Bombardier Transportation, said: “As a full solution provider, Bombardier is looking forward to demonstrating continued excellence in the Italian rail market, supporting Italian customers in the realization of their long-term mobility plans, across a range of speeds and vehicle sectors, strengthened by our partnership approach.”

Giuseppe Marino, Corporate Officer Hitachi Ltd and Group COO Rolling Stock Hitachi Rail said: “Expanding the Italian high-speed train fleet is an achievement we are proud of. Developing new and innovative rolling stock is a challenge but this order for 14 new Frecciarossa 1000s shows we have realised a highly successful and competitive train. We are pleased to also be working on a new generation of modern regional trains for Italy and on our ground-breaking trams.”

Marco Biffoni, Head of Sales Italy for Bombardier Transportation, said, “With this order for 14 high-speed trains deriving from the V300ZEFIRO platform plus maintenance services, we are delighted that Trenitalia has put its confidence in Bombardier and Hitachi once again, a proven partnership now also bidding for projects in the United Kingdom. These high-comfort, high-technology and high-speed trains have already proven to be very popular with Italian passengers and this order highlights our continuing leadership in the exciting high-speed market segment.”

As with the current Frecciarossa 1000 fleet, all 14 of the new very high-speed trains will be built in Italy. The Frecciarossa 1000 has set new standards in performance, operating efficiency and passenger comfort. Each train has a total length of around 200 meters, capacity for around 460 passengers and is capable of commercial speeds of up to 360 km/h. State-of-the-art aerodynamics and energy saving technologies give the train unmatched operating efficiency. There is WiFi onboard a meeting room and bistro area.

Not only is the Frecciarossa 1000 the fastest ever service high speed train in Europe, but it is also the quietest, with minimal vibration. The trains are designed and built in Italy, and operable on high-speed rail networks equipped with multi-voltage technology fulfilling all TSI requirements.



▶ Trenitalia Class E412.019 leads another classmate into Verona Porto Nuova with an intermodal working. *Class47*











 Montenegro

▶ Near to Vranjina, the railway line crosses Lake Skadar by an embankment. There is castle ruin on the island at Lesendro which gives you a perfect possibility for photographing the train passing there. *Thomas Niederl*

▶ The station of Bioče is served by three trains each direction daily and is in the middle of nowhere. There is only a very narrow, steep, dirt and bumpy road down to the village which is more than four kilometres away. *Thomas Niederl*

▶ No. 461.039 crosses the viaduct at Sutomore on May 30th. This is one of three daily stopping trains from Bar to Bijelo Polje, the border to Serbia. *Thomas Niederl*







Montenegro



On June 1st, train No. IC430 hauled by Class 461.035 is seen here near Bioče station, north of Podgorica. *Thomas Niederl*

Passengers to Beograd Topčider can choose between the daytime Intercity service 'Tara' or the overnight train 'Lovcen'. In this photo the night train has just arrived at the station of Topčider on the morning of June 3rd. The train offers both sleeper and couchette carriages, the sleepers were bought second hand from SNCF in 2007. *Thomas Niederl*

The freight operator of Montenegro is called Montecargo. In this image an empty car carrier heading from Bar to Kragujevac in Serbia, passes Šušanj hauled by Class 461.031. *Thomas Niederl*



 Netherlands



▶ NS 'VIRM' No. 9409 with train No. 3541 is seen near Loenersloot working a service from Schiphol Airport to Venlo on June 18th. *Erik de Zeeuw*

▶ Railpromo No. 9908 runs through Hilversum station with a special train (Müller Dancetrain) from Bad Bentheim to Amsterdam and Zandvoort on June 15th. *Erik de Zeeuw*

▶ DB Class 6400 No. 6430 passes Assel with an infrastructure train on June 8th. *Erik De Zeeuw*





 Netherlands



▶ On June 15th, NS Nos. 4058 and 4212 depart Hilversum with a service from Enschede to Schiphol Airport. *Erik de Zeeuw*

▶ NSM No. 1312 has just departed the Dutch Railway Museum in Utrecht with 3 museum carriages for a ride to the event 'Tracks to the past' in Goes on May 29th. *Erik de Zeeuw*

▶ On May 25th, SSN Class 23 No. 23.023 passes Haarlemmerliede with a special train from Rotterdam to Tata Steel in Beverwijk where the passengers visited the steel works. *Erik de Zeeuw*





 Poland



- ▶ Deep in the woods of Kolobrzeg on June 2nd, Lotos' No. BR285-129 makes its way towards the port area with a Turkol special train from Poznan. The train was delayed by half an hour in the port area by a 4x4 which was parked too close to the track! *Jeff Nicholls*
- ▶ PKP Cargo Class ET22-944 undergoes some heavy maintenance work inside Poznan Franowo depot on May 31st. *Jeff Nicholls*
- ▶ On June 2nd, with pantographs still lowered, PKP Intercity Class EP07-301 waits in the sun at Kolobrzeg at the head of a train to Przemysl Glowny which included three sleeping cars at the rear. *Jeff Nicholls*



 Poland

▶ The driver of PKP Cargo's Class ET22-207 videos a passing steam special on his mobile phone at Pila on June 2nd. *Jeff Nicholls*

▶ On June 2nd, Nos. SM42-922 and SM42-1602 gingerly make their way into Poznan Franowo depot for servicing. Note that the nearer loco has had the bonnet tops reduced in height to give better visibility from the cab. *Jeff Nicholls*

▶ Consecutively numbered Class EP07-1055 and EP07-1056 bask in the evening sun waiting to depart north on regional trains at Bialogard on June 2nd. *Jeff Nicholls*











 Sicily



▶ Class E646.046 is seen arriving at Siricusa on May 6th with the empty stock for the evening sleeper. *John Sloane*



▶ ALn No. 668.1060 is seen arriving at Siricusa with a service from Ragusa. *John Sloane*



▶ A view of the old steam loco shed at Modica. *John Sloane*







 Sicily

▶ Trenitalia Class 464.001 and 464.008 top'n'tail a Siracusa bound train out of Catania on May 13th. *John Sloane*

▶ Steam loco No. R370.012 is seen plinthed at Catania station. *John Sloane*

▶ Shunter No. 245.2206 goes about its duties at Catania on May 13th. *John Sloane*







▶ A pair of Class ALn 668 units are seen about to cross at Ragusa Ibla. *John Sloane*





▶ ZSSK Class 757.020 passes Risnovce whilst working train No. 172208:28 Prievdza - Bratislava hl.st. *Laurence Sly*



▶ Class 754.086 passes Turcek whilst working train No. 32343 11:20 Martin - Zvolen. *Laurence Sly*



▶ ZSSK Class 757.017 approaches Horna Stubna whilst working train No. 32945 06:55 Zilina - Zvolen. Due to engineering work this train was diverted via Turcek. *Laurence Sly*





 Slovakia

▶ ZSSK Class 754.052 approaches Turcek whilst working train No. 32945, the diverted 06:55 Zilina - Zvolen. *Laurence Sly*

▶ European Locomotive Leasing Class 193.730 gets put in the loop at Lamac whilst hauling a lengthy rake of VTG hoppers. *Laurence Sly*

▶ Class 350.002 approaches Bratislava, with a Praha bound service. *Laurence Sly*

















SBB Cargo Re420 No. 420.276 waits for a clear path through the myriad of lines at Olten.
Class47

Alstom supplies ETCS for maintenance vehicles in Switzerland

Alstom will equip eleven maintenance vehicles from Harsco Rail Europe for the Schweizerischen Bundesbahnen (SBB/Swiss) with the ETCS system ATLAS 200 Baseline 3. The vehicles are to be fully equipped by the end of 2020 and then used on the SBB network in Switzerland.

“We are constantly developing our signaling systems and look forward to providing Harsco and our long-standing customer SBB with a future-proofed solution. As the market leader in the field of on-board ETCS systems in Europe, we are pioneers in today’s digital rail world,” says Gian Luca Erbacci, Senior Vice President of Alstom in Europe.

ETCS is a vital part of the European standard for an interoperable and safer railway system in Europe. It enforces compliance by the train with speed restrictions and signalling status. The ETCS system ATLAS 200 from Alstom optimises line capacity in complete safety by anticipating and adapting the speed of the trains through continuous train control and supervision via a radio-based signalling system.

Alstom is a global railway player working with international expertise: Project lead is situated in Berlin, Germany; System-design, equipment, as well as commissioning and warranty is led by the Alstom site in Charleroi (Belgium); components will be delivered from Villeurbanne (France).

To date, Alstom has a total of 8,200 vehicles awarded worldwide with ETCS with over 3.200 in commercial service and 18,000 km of track contracted with over 7.000 in commercial service. In Switzerland alone, Alstom has equipped around 500 existing SBB vehicles with ETCS in recent years. For Deutsche Bahn, Alstom has fitted ETCS to the majority of the high-speed ICE fleet in Germany.







▶ BLS Brownie No. 191 is seen on a car shuttle at Goppenstein. *Steamsounds*



▶ High on the mountain, a Pilatusbahn train descends below the Eselwand Tunnel. *Steamsounds*

▶ One of MGB's EMUs stands at Bitsch with a service for Andermatt. *Steamsounds*





Alstom participates in an infrastructure smart maintenance innovation project

Sentinel project developed in partnership with Adif, Ferrovial and Insitu, aims to develop a new prototype of a smart system for managing and maintaining railway infrastructure

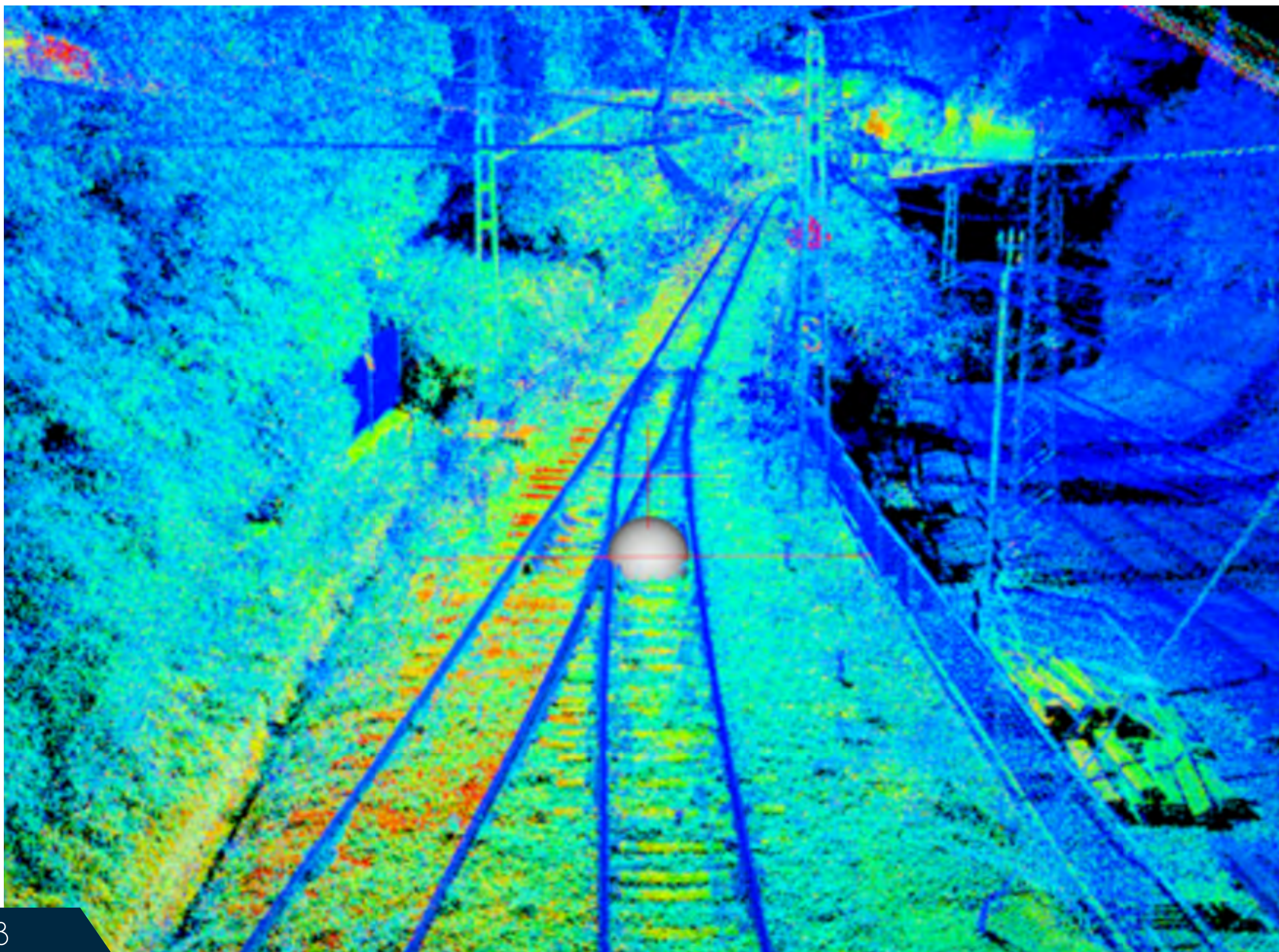
Alstom, together with Adif, Ferrovial and Insitu, has successfully developed the Sentinel project, an innovation program that aims to create a new prototype of a smart system for managing and maintaining railway infrastructure by using structured big data to get a fast, full picture of the state and evolution of the railway line. The Sentinel project has been co-financed by the Center for Industrial Technological Development and by the European Union through the Structural Funds for Regional Development, through the program FEDER-INNTERCONECTA 2016.

During this three-year-project, innovation teams have worked to integrate a data-capturing device into maintenance vehicles for railway lines and feed a database with a corresponding system of geographical information. That way, it can update an automatic or semi-automatic inventory of railway assets, at the same time as it reviews and evaluates parts of the railway, thereby optimizing maintenance operations.

This automated inventory of assets gives a fast, dynamic, combined panorama of all the pieces of infrastructure and parts of the network, such as lanes, tap bolts, railroad ties, markers, signals... The system's characteristics are continuity and precision, such that continually updating the inventory lets changes in the infrastructure parts be analysed and tracked over time in order to predict changes, failures, or emergency situations, as well as allowing for monitoring of digital maintenance and inspection by maintenance personnel.

Technology related to Industry 4.0 was used to develop it, including big data, machine learning, artificial intelligence and vision, models and simulations, European GNSS, and satellites.

The prototype's validation tests have been done on the high-speed Amussafes – Javea line and then in November of the same year on the high-speed Madrid – Chamartín y Torrejón de Velasco line which is currently under construction, consisted in integrating Lidar systems (which obtain 3D maps and images of the railway through dynamic scans by using technology called mobile mapping systems), GPS, cameras, and high-precision recorders, lighting...



CAF WINS DRIVERLESS TRAINS CONTRACT IN LONDON

CAF has been awarded the contract to design, manufacture and supply a fleet of 43 trains for the Docklands Light Railway (DLR) by Transport for London (TfL). The contract will include a Fleet Support Agreement to provide technical support services and spares supply.

The state-of-the-art 5-car trains will be based on CAF's hugely successful Metro vehicle design, with the first entering passenger service from 2023. Thirty-three trains will replace DLR's oldest rolling stock which is nearly thirty years old and 10 will increase frequency and capacity across the network.

The new trains will be a similar length to the current 3-car trains currently operating on the DLR but providing a number of customer improvements. This includes the latest audio and visual real-time travel information, air conditioning, mobile device charging points, multi-use areas - which can accommodate pushchairs, bicycles and luggage - and dedicated wheelchair spaces.

Richard Garner, CAF's UK Director comments: "We are delighted to be awarded such a significant contract by Transport for London to supply trains for the UK's busiest light railway.

"CAF's Metro vehicle design is ideally placed to meet the specific demands of this unique operation, not only increasing passenger capacity, but delivering the very latest in comfort, convenience and safety for passengers. These trains will support the Mayor of London's Transport Strategy to make London a greener, more accessible place to live, work and visit as well as supporting new jobs and homes.

"It is the latest in a number of recent awards including the supply and maintenance of DMU's for the Wales and Borders Franchise, the rehabilitation of 43 RER MI2N units for the Paris Metro network and the supply and maintenance of 29 regional diesel-electric units for the Australian state of New South Wales."

Jon Fox, TfL's Director of Rail and Sponsored Services, said: "Replacing the oldest trains on the DLR and introducing a new modern fleet will ensure the railway continues to support the current and future growth in the Docklands area. With walk-through carriages, real time travel information, air conditioning and mobile device charging points, the new trains will provide customers with a more comfortable and reliable service, replacing rolling stock that are nearly 30 years old and coming to the end of their operational life."

The modernisation of the DLR is a key part of the Mayor's Transport Strategy to make London a greener, more accessible place to live, work and visit as well as supporting new jobs and homes. The investment in improving public transport will help reduce reliance on the car and contribute to the Mayor's target of 80 per cent of journeys made by public transport, cycling or walking by 2041.





Milestone for the UK: First Stadler FLIRT train receives approval

The British railway regulatory authority, the Office of Rail and Road (ORR), has granted Stadler approval for the 24 four-car bimodal FLIRT (BMU) for Greater Anglia. For Stadler, this is an important milestone in the project. It is the first FLIRT in the UK to receive an authorisation for placing the train into service (APIS). The test runs with the train for use in the UK only began at the beginning of 2019. Thanks to the excellent cooperation between Greater Anglia, Abellio, Rock Rail, Stadler and the authorities, the approval was obtained in record time.

The end-to-end low-floor trains are now undergoing the remainder of the testing and commissioning programme which needs to be completed before the trains can enter passenger service later this summer.

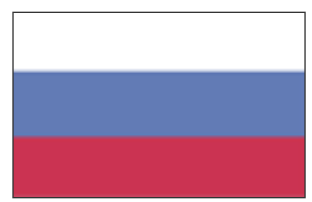
Meanwhile, the train type approval for the 14 three-car bimodal FLIRT (BMU) and the 20 twelve-car electric FLIRT (EMU) is expected towards the end of summer 2019. Faster and more comfortable rail travel in East Anglia

Stadler is manufacturing 58 new trains, to be leased to Greater Anglia and financed by Rock Rail East Anglia, a joint venture between Rock Rail, Aberdeen Standard Investments and GLIL Infrastructure. The Swiss rail manufacturer will also be responsible for maintaining these units at Crown Point depot in Norwich. This contract, awarded in 2016, sees Stadler build and deliver 14 class 755/3 three-car and 24 class 755/4 four-car BMUs, ten 12-car class 745/0 EMUs and ten 12-car class 745/1 EMUs. The new fleet will replace Greater Anglia's existing Intercity, rural and Stansted Express trains.

With 20 per cent more seats, which have been designed to be as comfortable as possible, trains will feature low flooring to make them accessible for people in wheelchairs and with pushchairs. Windows will be bigger and 'picture style' to improve the passenger experience and create a

more airy and spacious feel.

Mobile phone reception will be better and plug and USB sockets will be installed at every seat. Wifi will be free and faster than previously. All trains will be fully air-conditioned and have disabled toilets and bicycle spaces.



Siemens Mobility awarded billion-euro order for high-speed trains

Russian Railways (RZD) has ordered 13 high-speed Velaro RUS trains from Siemens Mobility and Ural Locomotives, a joint venture of the Sinara Group and Siemens AG. The order has a volume of around €1.1 billion. The contract also includes maintenance of the trains for a period of 30 years. RZD originally ordered eight Velaro trainsets from Siemens Mobility in 2006 and placed a follow-up order for an additional eight trains in 2011.

Sabrina Soussan, CEO of Siemens Mobility, Joe Kaeser, CEO of Siemens AG, Oleg Belozarov, General Director and Chairman of the Management Board of RZD and Dmitry Pumpyansky, Chairman of the Board of Directors of the Sinara Group. The contract was signed on the sidelines of the St. Petersburg International Economic Forum (SPIEF) by Oleg Belozarov, General Director and Chairman of the Management Board of RZD, Dmitry Pumpyansky, Chairman of the Board of Directors of the Sinara Group, Joe Kaeser, CEO of Siemens AG, and Sabrina Soussan, CEO of Siemens Mobility.

“By signing this agreement, we are taking the long-standing and highly successful partnership with Russian Railways to a new level. The Moscow-St. Petersburg route is already one of the most efficient high-speed connections in the world. We will continue to work together to expand this network and thus make an important contribution to the development of modern infrastructure in Russia and create qualified jobs in the country,” said Joe Kaeser, President and CEO of Siemens AG.

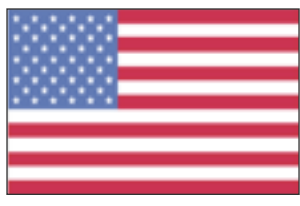
“The fact that RZD is relying on Siemens Mobility for the third time in expanding its high-speed fleet reflects the strong performance of our Velaro platform, which increases value sustainably over the entire lifecycle, enhances



passenger experience and optimizes availability. The Velaro has already proven its reliability in Russia after covering more than 50 million fleet kilometers since 2009,” said Sabrina Soussan, CEO of Siemens Mobility.

The ten-car Velaro trains will operate between Moscow and St. Petersburg and help meet the growing demand for service on the 650-kilometer line with the highest passenger volume in Russia. The Velaro is called the “Sapsan” (Peregrine Falcon) in

Russia and is specially designed for the country's broad gauge and extreme temperatures (ranging from -40 C° to +40°). The Sapsan trains are equipped with Russia's national train control system and can accommodate around 550 passengers. The train's state-of-the-art equipment, high-quality design and a varied passenger entertainment program offer passengers special features and comfort. The trains are serviced and maintained at the Siemens Mobility depot in St. Petersburg.



Stadler wins contract for eight FLIRT for Texas

The Dallas Area Rapid Transit (DART) has awarded Stadler for the contract to assemble and build eight FLIRT and for the design of an Equipment Maintenance Facility (EMF) for the Cotton Belt Regional Rail Project. The contract for the diesel multiple unit trains is valued at approximately 119 million US Dollars. According to the contract DART anticipate the trains to go into passenger service by the end of 2022.

The new vehicles Stadler is designing for DART have the ability to transport 240 seated passengers and 225 standing passengers and are fully compliant with the Americans with Disabilities Act (ADA). To ensure safety for all guests, Stadler plans to install a comprehensive CCTV system on each train. In addition, the trains are to be equipped with an automatic passenger counting system, which can count the number of passengers boarding and alighting the train at each stop, can detect huddling of passengers in certain areas of the train as well as blockages of boarding areas.

The FLIRT for DART is self-propelled by a diesel multiple unit (DMU) and meets both tier 4 EPA emissions standards and FRA Standards. Each train set consists of 4 units, plus a power pack in the middle, which houses the power unit. This setup includes four powered axles and eight unpowered axles. This puts the trains at approximately 267 feet in length.

According to the contract, Stadler will provide input and past experiences to engineering company Urban Engineers, who is contracted for their design services for the planned EMF. This is the fourth contract for Stadler in Texas so far. Operators such as CapMetro in Austin, Denton County Transportation Authority in Lewisville and TEXRail in Fort Worth are already successfully in revenue service with Stadler trains.

«After completing several projects in Texas already, Stadler is honored to now also supply DART with new state-of-the-art trains. We are proud that DART has chosen our FLIRT and know that we will be able to deliver a product that satisfies the customer to the highest degree», said Martin Ritter, CEO of Stadler US Inc.

«It's been a pleasure working with Stadler US, Inc. on the design and specifications of our new Cotton Belt regional rail project trains», said John Rhone, DART VP of Capital Design and Construction. «Their focus on technology innovation and design promises to provide our customers with the safe and enjoyable ride they've come to expect from DART.»



Bombardier to provide 74 additional TWINDEXX Vario double-deck coaches to Israel Railways

Mobility solution provider Bombardier Transportation has signed a contract to provide 74 additional BOMBARDIER TWINDEXX Vario double-deck coaches to Israel Railways (ISR). This call-off is part of a framework agreement signed in October 2010 and is valued at approximately 147 million euro (\$166 million US). The delivery of the new coaches is scheduled to be completed by December 2021.

Michael Fohrer, President Central and Eastern Europe and Israel at Bombardier Transportation said, "We are very proud to have signed a seventh consecutive order with Israel Railways, a result of exemplary collaboration and customer satisfaction. It is testimony to the superior quality and reliable performance in customer service of all coaches delivered up to this point."

Eran Cohen, Chief Country Representative Israel at Bombardier Transportation, said, "Sustainability over the entire lifecycle, safety, reliability, higher capacity and performance; those are the ingredients that make our double-deck TWINDEXX Vario trains so successful. We are grateful that Israel Railways has once more decided to put their trust into this well-proven product and the team behind it."

"This order will strengthen and also benefit from the ongoing transformation of our two sites in Saxony, Germany," added Michael Fohrer. "Görlitz, as the competence center for carbody production, and Bautzen, as our industrial lead site for serial production, will decisively contribute to the successful execution of this order. In addition, we will continue progressively developing our local supply base and the railway industry in Israel, in particular through the increased involvement of our final assembly site of M.T.R. Dimona, Israel."

The new order consists of eleven control cars for operation with TRAXX electric locomotives, also compatible with diesel locomotives, eleven intermediate coaches with dedicated space for people with reduced mobility and 52 trailer cars. Additionally, the driver's

desk in the control car will be re-designed to be identical to one in the TRAXX electric locomotives.

This single-car concept enables ISR to configure the loco-hauled trainsets according to the required capacity. Each of the eight-car trains currently in-service feature seating capacity for 1,000 passengers. The popular trainsets, based on a proven platform concept in operation across Europe, are in daily service in Israel and compliant with all current safety, comfort and efficiency standards. They represent great strides in helping alleviate congestion in Israel. As a full solution provider, Bombardier Transportation operates a service depot in Haifa where 293 double-deck coaches out of ISR existing fleet are being upgraded for a speed of 160 km/h and for electric traction.





Alstom unveils proposed HS2 train design

An iconic new design from the world speed record holders

On June 5th, Alstom unveiled its proposed design for HS2 Ltd. The train is designed to meet all of HS2 Ltd's requirements for a world class, modern and flexible train which is as comfortable on the conventional network as it is on the new HS2 infrastructure. Alstom has market-leading high-speed rail expertise, from iconic train designs such as the TGV in France, Avelia Liberty in the USA and AGV in Italy, combined with 20 years' experience working with Pendolino trains on the UK's West Coast Mainline.

This proposed train for HS2 Ltd builds on Alstom's unmatched experience in high speed rolling stock which includes being:

- the holder of the world speed record for high speed rail, at 574 km/h
- the only rolling stock manufacturer to win high speed train contracts on four different continents, from Korea to Italy, Morocco to the US
- the manufacturer whose technology has been proven on everything from France's first TGVs to the UK's first very high-speed train, the original Eurostar e300
- The designer of a new generation of Avelia high speed trains including Avelia Liberty in the USA, Avelia



By integrating HS2 infrastructure and the conventional network from Scotland all the way down to the south of England, HS2 will become the critical driving force in revitalising towns and cities all across the country, and especially in the midlands and the north.

"Alstom's vision is to make HS2 trains a timeless design classic, with a passenger experience that is as smooth, calm and spacious as it is high speed. Alstom is excited to unveil this proposed train for HS2, which is the most important economic regeneration project in Britain for decades. It will knit together the great cities of the midlands and the north as never before, and turbo-charge our regional economies." said Nick Crossfield, Managing Director for Alstom in UK and Ireland.

Horizon in France and the Avelia AGV in Italy. Alstom's track record in the UK includes

- a history in Britain dating to the dawn of the railway and involvement in some of the most significant and innovative rail projects such as building the UK Pendolinos, original Eurostar and infrastructure and railway systems on HS1
- being the first manufacturer to create a partnership with the National College for High Speed Rail to deliver training on a UK site
- being a key investor in UK rail expertise with Alstom's new Transport Technology Centre in Widnes.

HS2 Ltd intends to make a decision on the rolling stock contract award in 2020. Alongside London, Birmingham, Manchester and Leeds, HS2 services will also serve destinations beyond the core network, including York, Newcastle, Liverpool, the North West, Glasgow and Edinburgh.



Arrival of the first two Alstom Citadis trams for the Rabat - Salé tramway network

The Rabat Salé Tramway Company (STRS) has received the first two of the 22 Alstom Citadis trams ordered on 25 September 2017 to address the continuous rise in passenger numbers on the Rabat Salé tramway network ahead of the upcoming entry into service of the 7 km extension of line 2 at Rabat and Salé.

The Citadis trams for the Rabat-Salé tramway lines combine flexibility, reliability, comfort and respect for the environment. 32 metres long, they will be coupled together to transport up to 606 passengers. Low flooring throughout the trams as well as 12 doors per side facilitate passenger



circulation and accessibility for all, in particular mobility-impaired passengers. Their design, customised for perfect integration into the urban landscape of the city, will be the same as that of the vehicles already in circulation.

The 22 new trams will be kept at the Hay Karima maintenance centre in Salé and will be added to the 44 Alstom Citadis trams already in circulation since May 2011. The new trams will ensure a continued frequency of one tram every eight minutes for line 1 and one every nine minutes for line 2.

After eight years in operation, the tram has become an essential means of transport, meeting the growing demand for mobility in the conurbation of Rabat Salé Témara in a fitting manner and cumulating nearly 240 million passengers to date.



CAF UNVEILS BID TO SUPPLY OARIS TRAINS FOR THE HS2 HIGH SPEED PROJECT IN THE UNITED KINGDOM+

CAF submitted a bid for the HS2 project proposing the high speed Oaris platform to meet the exacting requirements of this contract to design, build and maintain at least 54 trains for Phase One of the project, amounting to a volume in excess of €3bn. HS2 Ltd intends to make a decision on the contract award over the course of the next year.

The train proposed by CAF will be equipped with the latest technology and pioneering solutions in the high speed travel segment, meeting the most exacting international standards for reliability and safety, passenger comfort, noise reduction and environmental sustainability.

The HS2 project is one of the most important projects currently underway in the rail sector and will be instrumental to the future of the UK economy. Alongside London, Birmingham, Manchester and Leeds, HS2 will also serve destinations beyond the core network, including York, Newcastle, Liverpool, the North West, Glasgow and Edinburgh.



The Alstom/Cosider consortium and EMA celebrate the entry into commercial service of part 1 of the Constantine tramway line extension

On June 3rd, Alstom participated in the entry into commercial service of the first phase of the project to extend the tramway line of the city of Constantine with its customer, Entreprise du Métro d'Alger.

In July 2015, EMA (Entreprise du Métro d'Alger) awarded the turnkey extension of the tramway line belonging to the Constantine agglomeration, representing a total length of 10.3 kilometres, to the consortium of companies consisting of Alstom (consortium leader) and Cosider Travaux Publics. The first phase of this extension, 6.9 km long, will connect the existing Zouaghi station to the entrance of the new city of Ali Mendjeli.

Constantine's first tramway line currently transports around 30,000 passengers per day. As part of the project, Alstom, consortium leader, is providing the integrated system, tracks, catenaries, telecommunication and signalling systems, substations and ticketing equipment. "We are pleased to contribute, with our customer EMA, to the development of the country's sustainable mobility networks. It is an honour to celebrate, today, the culmination of a long period of work conducted with teams of experts. We continue to work on finalising the line and remain mobilised to offer the best service to Constantine's inhabitants," says Mahdy Rouibi, Managing Director for Alstom in Algeria.

The first part of the Constantine tramway line extension will be reinforced with 24 new trams, in addition to the 20 trams already in operation on the first line. They have been provided by CITAL[1] from the Annaba plant in Algeria.

Present in Algeria for over 30 years with more than 250 employees, Alstom has already supplied the integrated tramway systems of Algiers, Oran, Constantine L1, Ouargla and Sétif.

[1] CITAL is a JV dedicated to tram assembly. The plant is 41% owned by Ferroviaria, 10% by EMA, 6% by Alstom Algeria and 43% by Alstom Transport SA.





Alstom will develop a driving simulator for Barcelona Metro

Alstom has been awarded a contract by TMB (Transports Metropolitans de Barcelona), Barcelona Metro operator, for the development of a S9000 train driving simulator dedicated to lines 9 and 10, currently the only driverless lines in operation in Spain.

The solution will consist of a training system that incorporates the latest simulation technologies for routes, conditions and obstacles. The simulator will create realistic scenarios employing virtual

Metro de Barcelona Lines 9 and 10 connect the city centre with other locations in the metropolitan area and the airport. The trains running on these lines belong to the Alstom's Metropolis platform and use an automatic driving system based on CBTC technology.

The project for TMB will be carried out jointly by Alstom's Services platform and the local Alstom Services team in Barcelona.



reality technology commonly used by video games developers.

This simulator, which includes a full-scale cabin reproduction of the Alstom's Metropolis S9000 train, will train technicians in the rapid and efficient resolution of incidents on automatic lines, where the reaction time is key to preventing an impact to service. Simulated conditions and situations can include train faults, signalling conditions, environmental incidents, and even passenger density.

Technicians will be able to practice the skills required to solve incidents and maintain railway safety, without needing to stop traffic or perform power cuts on the metro lines. The tool will faithfully reproduce specific sections of the railway network with exact replicas of stations, junctions, signals, cables, points of interest, etc.



Siemens Mobility awarded €80 million overhaul contract by Portland's TriMet

Siemens Mobility has won a mid-life overhaul service contract for TriMet's Type-2 and Type-3 Light Rail Vehicle (LRV) fleet, which is made up of 79 Siemens Mobility SD660 LRVs. The project order has a volume of approximately €80 million with options for up to €25 million more. The initial project will be complete in 2025.

Through the overhaul, TriMet will be able to maintain a State of Good Repair for the fleet and retain its fleet safety, performance and passenger comfort standards throughout vehicle life. The LRVs are among 119 Siemens Mobility Light Rail Vehicles that are currently being used by TriMet, an ongoing relationship that started in 1995 and has continued to this day. Refurbishing LRVs not only prolongs the life of vehicles, many of which have been in service since the mid- to late 1990's, but also saves expensive energy and resources used in manufacturing new vehicles. The decreased waste and energy support environmental sustainability goals for both TriMet and Siemens Mobility.

"Midlife overhauls of LRVs such as this are an industry standard and vital as TriMet works diligently to provide world-class transit service that our customers can enjoy and rely on," said TriMet General Manager Doug Kelsey. "We look forward to renewing these vehicles so they can continue to provide reliable and on-time service for riders throughout our growing light rail system for decades to come."

"We are excited to expand our longstanding relationship with Portland TriMet. Since their first order of 46 LRVs in 1995, we have watched the city sustainably grow and provide transit options for their riders that not only meet the demands of the city's growing population, but also increase availability," stated Sabrina Soussan, Siemens Mobility CEO. "This mid-life overhaul adds current technology and functionality to improve the customer experience while also increasing the value of the LRVs sustainably over their lifecycle."

Two pilot LRVs will be overhauled at the Siemens Mobility West Coast Rail Services Hub, located in greater Sacramento, Calif. The remaining overhauls will then take place at a newly opened Siemens Mobility Rail Services facility in Clackamas, Oregon. The work will ramp up in Clackamas next year and is expected to provide a backlog of work through 2025. This facility is expected to hire more than 15 employees over the course of the overhaul project. In 1995, TriMet placed an order for 46 SD660 vehicles, which were manufactured at Siemens Mobility's North American Rail Manufacturing Facility. This was followed by orders for another 33 SD660 vehicles over the next five years. In 2009, TriMet began procuring Siemens S70 vehicles, with an initial order of 22, followed by another order for 18 in 2012.

Siemens Mobility is the market leader for Light Rail Vehicles in North America with more than 1800 awarded LRVs. With the majority of Siemens Mobility's installed base LRV's not yet at the midlife overhaul point, Siemens Mobility Rail Services business is strategically positioned to support our present and new customers with innovative service solutions in the most responsive manner.



From the UK

Crewe Open Day

On June 9th, Crewe Diesel Depot Charity Open Day (Operational Base Of Locomotive Services Ltd - LSL) took place and drew quite a substantial number of people from all over the country. Whilst the weather wasn't at its best, a good day seemed to be had by most and here are just a few of the many highlights.

▶ Much patience was needed to capture 'Robin of Templecombe' a.k.a. 56049 without the intrusion of visitors to LSL's Open Day at Crewe on June 8th. *Jeff Nicholls*

▶ Freightliner's contribution for the event was Class 66 503, and is seen outside in the wet conditions. *Paul Godding*

▶ One of the latest acquisitions to the LSL fleet, Class 37 190 is seen outside during the event. *Paul Godding*





From the UK Crewe Open Day



▶ ROG's Class 37 608 'Andromeda' is seen inside the carriage shed. *Paul Godding*



▶ Class 47 712, no stranger to the depot having visited here many times in its working life, is seen inside the shed. *Paul Godding*

▶ Network Rail provided a test train bookended by Class 73 951 and 73 952, the latter of which, named 'Janis Kong' is pictured here. *Jeff Nicholls*





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Xtra



France

SNCF BB No. 8262 is seen stabled at Narbonne depot on March 31st 1972. *John Sloane*