





Welcome

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

We start this month with an apology regarding our recent outage on our websites which might have delayed your reading last months magazine. This was totally out of our control and entirely due to the ineptness of our hosting company. We have since moved to a new host which took up quite a bit of our time but hopefully all is now resolved. Thanks to those who contacted up to let us know of the initial problem.

Anyway on to this months news and we start with Norway where state-owned train operator NSB Group relaunched as Vy on April 24, bringing its rail, bus and electric car-sharing activities together under a single brand. 'The name Norwegian State Railways no longer adequately expresses what we do', explained Chairman Dag Mejdell. Meaning vista or prospect in Norwegian, Vy can also be used as a metaphor for ambition, and is intended to signal that the group has a vision for the future. Freight operator CargoNet will retain its existing name.

In Germany, RheinCargo has ordered two new Vossloh DE18 diesel locomotives for delivery in October, joining its current fleet of six. It has also acquired three ex-DB Bombardier Traxx locomotives, which will be used from May on Köln – Hamburg intermodal services.

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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.

Contact Us

Editor: David

david@railtalkmagazine.co.uk

Co Editor: Andy

editor@railtalkmagazine.co.uk

Content Submissions

entries@railtalk.net

Technical & Subscription Support

admin@railtalk.net

Front Cover

SBB Re 4/4ii No. 420.307 passes Einigen with train No. 62434 17:27 Leissigen to Thun Guterbahnhof on April 5th.

Mark Pichowicz

This Page

NS Class 17 No. 1779 is captured at sunset on March 20th having arrived at Enkhuizen with a peak hour extra from Amsterdam.

Steamsounds

Next Page

Watco Australia's Nos. DR1564 and DR1565 accelerate away from Kwinana after dropping off a load of grain and head back to the bush for a further load, the round trip will take close to 24 hours.

Colin Gildersleve





News from Czech of even more non state run services this month with the Ústí nad Labem regional authority awarding Netinera subsidiary Länderbahn its first passenger train operating contract entirely within the Czech Republic. The contract runs for 10 years from December 2019. It covers the operation of local passenger services on routes U12 RB Osek – Most – Louny – Rakovník and U14 RB Jirkov – Chomutov – Žatec – Lužná u Rakovníka, as well as weekend and holidays services on route T7 RE Chomutov - Vejprty. Länderbahn will use eight refurbished Stadler RS1 diesel railcars which were formerly used on the Vogtland network.

Some good news from Slovenia where the 49km Grosuplje – Kočevje line has reopened to freight traffic, services having ceased in 2009. Work to eliminate 51 level crossings and install barriers and lights at 30 others is scheduled for completion in 2020, when passenger services withdrawn in 1967-70, are to be reintroduced. The line is expected to attract significant commuter traffic, as 30% of the residents of Ribnica and 14% of those in Kočevje work in Ljubljana.

And finally after diesel, electric or battery modes, is the news from Latvia about the prototype conversion of a ČME3 diesel shunting locomotive to dual-fuel gas operation. National railway LDz and Riga-based DiGAS launched the pilot project two years ago, and testing began last summer. LDz expects to make a decision about further commercial deployment this autumn.

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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HAD-PRINT
Unit 6, France Ind. Complex
Vivars Way, Canal Road
Selby, North Yorkshire
YO8 8BE
info@had-print.co.uk | 01757 600211



With Thanks

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Bombardier signs contract to upgrade trains for the Queensland NGR Project

Bombardier Transportation has announced an order from the Queensland Government to deliver modifications to the New Generation Rollingstock (NGR) trains currently being introduced to the South-East Queensland rail network. The order has been signed on March 29th. The total value of the contract is approximately \$361 million AUD (\$255 million US, 228 million euro) which includes design and delivery, as well as ongoing maintenance, over the remaining term of the public-private partnership.

“Bombardier is proud to partner with Queensland Government to deliver the new generation trains to the passenger rail network. This variation order is an important request from our customer, and we will continue to work closely with them to deliver the NGR project in line with the enhanced specifications set out by the Queensland Government,” said Paul Brown, Bombardier Transportation’s Project Director for the Queensland New Generation Rollingstock project.

Bombardier is leading the Qtectic consortium contracted to deliver the NGR project and will undertake the work to modify the trains in line with the government’s revised design specifications with industry partner Downer EDI. The agreement between Bombardier and the Queensland Department of Transport and Main Roads (TMR) will see the previously approved toilet modules upgraded for improved disability access. The changes will also include an additional module added to each six-car train to provide improved access for passengers with limited mobility.

“The significance of the NGR project in Queensland cannot be understated,” affirmed Wendy McMillan, President, Southeast Asia and Australia at Bombardier Transportation. “With 70 percent of Queensland’s future population growth targeted in the South-East region,

the NGR fleet will bring a significant 26 percent capacity increase to the South-East Queensland rail network to meet the growing demand for rail services. It’s a game-changing project for Queensland and Bombardier is proud to be delivering it.”

Features of the new trains include capacity for 964 passengers in each six-car train, onboard WiFi, CCTV throughout the train, LCD infotainment displays, toilet modules, 12 allocated spaces for mobility aids and more enhancements to the passenger experience. Bombardier has created more than 2,000 local jobs across the industry and supply chain throughout this project.

The design and toilet modification activities will support a further 100 local jobs at Downer’s Maryborough facility in addition to the 145 current Bombardier employees at the Wulkuraka Maintenance Facility. The \$4.4 billion AUD NGR project is being delivered under a public-private partnership with the Queensland Government and was awarded to Qtectic, comprising Bombardier Transportation, John Laing, Itochu and Aberdeen Standard Investments. The project includes the design and delivery of 75 new passenger trains, construction of a new maintenance centre at Wulkuraka, Ipswich and 32-years of fleet maintenance.



▶ A Brisbane to Sydney XPT with power cars Nos. XP2016 and XP2018 head past Telegraph Point on March 31st. *Mark Bennett*













On March 7th, SNCB Class 18 No. 1890 is seen on the rear of a service to Essen at Verviers. Class47

New sales location in Antwerp



between Belgium and its neighbouring countries. Antwerp is the starting point for intermodal traffic for the chemicals industry, while Ghent and Zeebrugge are departure points primarily for road transport services. Most of these transports take the Belgium–Netherlands corridor and pass through Aachen-West station on the route to Germany. This corridor's capacity will be better utilized in the future.

The Belgian rail freight market is attractive and, with an expected annual growth rate of 1.5%, it has a great deal of potential. From a strategic perspective, Antwerp, Ghent and Zeebrugge are highly important for freight transport in Europe.

DB Cargo boosts its sales power in Belgium. The new production company DB Cargo Belgium has begun operations in Antwerp, Europe's second-largest seaport. The company is also active in Ghent and Zeebrugge.

DB Cargo Belgium currently has 120 employees, 100 of whom hold operational positions. The team will likely grow in the coming years, and the number of train drivers has already increased considerably.

The new location offers sales services across various industries while also performing its own dispatching activities and providing block train and single freight car transport

Up until now, DB Cargo's activities in Belgium have been coordinated through its Dutch national company; the company held a permit to operate trains there.



NS Class 186. 002 brings up the rear of an ICD working to Amsterdam Centraal at Brussels Midi on March 22nd. Class 186.009 was leading. *Stearnsounds*

EXTENSION OF TRAM SUPPLY CONTRACT FOR LIJN (BELGIUM)

The Flanders Public Transport Operator De Lijn (Belgium), has recently approved the purchase of 23 additional CAF trams for a contractual amount of €44 million. These new 23 trams are part of the third contract batch signed with CAF in October 2017 the scope of which is the manufacture and supply of up to 146 trams in various batches which will be consecutively triggered by the Customer. It is worth highlighting that the first two batches of 24 trams each were triggered in 2017 with the signature of the contract.

De Lijn is the Flemish public operator for buses and tramways, which carries about 530 million passengers per year. The first 48 units will be commissioned for revenue service next year in the tram line covering the Belgium coast; while the third batch of trams will be delivered during the second half of 2022 for providing service in Antwerp.

Over the last 3 years, CAF has secured significant contracts in the Benelux, with the supply of underground units for Brussels, underground and tram units for Amsterdam, as well as trams for Luxembourg and Utrecht to name but a few. Furthermore, last December, CAF signed an extension to the currently contract in operation with the Dutch operator Nederlandse Spoorwegen (NS), to increase the supply of commuter trains to this company to a total number of 206.



Noise measurement on ČD Cargo locomotives

In the past, ČD Cargo has carried out repairs on several locomotives of the 363 series to adjust the internal partitions. This adjustment consists in insulating the interdigitated walls with sound absorbing material. Whether the sound insulation is effective and the noise level is reduced can only be determined by comparing the noise level on the locomotive equipped with the partition treatment and on the locomotive without modification, with measurements being made under completely identical conditions.

Therefore, on April 9th, noise measurements were carried out at SOKV Ústí nad Labem on locomotives of the 363 series, where the noise level at the locomotive site was compared with and without installed soundproofing.

The measured values showed that the noise reduction on the locomotive 363.072 was effective and resulted in a reduction of the noise load. The sound insulation not only reduces the maximum noise penetrating the engine room but also the average noise level that the driver is exposed to during his shift.

Photo: ©CD Cargo



Recently repainted Class 111.011 carries out some shunting of motorail and sleeper stock at Praha hl.n. on March 10th. *Class47*



OBB Class 1063.033 heads a mixed freight working through Breclav on March 9th, heading towards Wien. *Class47*

CD Cargo on the spa route

On April 14th, ČD Cargo arranged transport of hopper wagons after gravel pouring in the section between Krásný Jez and Teplička near Karlovy Vary.

As the photo of our driver Aleš Bílek shows, the complete trainset was on the photogenic track between the towns of Mariánské Lázně and Karlovy Vary.

Photo: ©CD Cargo





Extension of the ČD Cargo's locomotive fleet

The locomotive fleet of ČD Cargo was extended with TRAXX 187.344 locomotive (type TRAXX F140 AC3) from the Railpool's fleet.

The loco was first deployed on April 11th on the complete train from Pasau to Krems an der Donau.

The locomotive equipped with the "last mile" system is primarily intended for operations on Austrian tracks, including siding service. It is the first TRAXX locomotive in normal operation at ČD Cargo, and the "forerunner" of the TRAXX F140 MS3 series, which will start later this year.

Photo: ©CD Cargo/ Christian Blumenstein



▶ The driver from this pair of Chladek & Tintera Class 740s was obviously prepared for the weather, carrying an umbrella with him as he is seen here upon arrival at Vsetaty. *Class47*



Telemetric cars and pilots for TÚDC

Based on the successful procurement procedure, ČD Cargo is responsible for the transportation of telemetric cars for SŽDC - Technical Center of Infrastructure (TÚDC).

It concerns the transportation of telemetric cars that monitor the superstructure (MV ŽSv) and the radio signal (ERTMS) as well as the carriage of the car with geo-radar for the measurement of the ballast condition (GPR) and the evaluation car of SŽDC. Estimated revenue is CZK 10 million crowns.

For the next three years, ČD Cargo will also provide pilots - ČD Cargo employees, who have valid knowledge of the local conditions for shunting at the respective stations and thus the driver of the relevant telemetric train. Apart from the MV ŽSV and MV GPR, they also cooperate in driving the telemetric track inspection vehicle, the photogrammetric machine and the measuring vehicle of cross-sectional clearance - all according to specific TÚDC orders. The total planned volume of pilots is almost CZK 7 million.

Photo: ©CD Cargo



Well I'm not sure the UKs 'Health and Safety' would approve, but on March 10th, Unipetrol's Class 740.735 was sandwiched between two rakes of tanks with a man up front in radio contact with the driver. Seen here heading through Kolin. *Class47*

Austrian Rail Cargo Carrier has taken over the first of two EffiLiner 1600 locomotives from CZ LOKO

The number of EffiLiner 1600 locomotive operators from the Czech company CZ LOKO was expanded to include the Austrian freight carrier Rail Cargo Group (RCC), whose representatives in Česká Třebová took over the first of two vehicles with the designation 753.613. In the course of May, another 753.614 will follow.

The company, which is part of the state railway Österreichische Bundesbahne (ÖBB), will deploy it in its subsidiaries RCC - Czech Republic and RCC - Slovakia. In the Czech Republic it will be mainly the overhangs of freight train sets in the Czech-Polish border area and also on I and II. transit railway corridor to Břeclav, where RCC CZ has been active for a long time. In Slovakia, then, mainly the transport of container trains to terminals in Bratislava and Žilina.

“One of the biggest advantages of these vehicles is their favorable purchase price. It is a complete modernization of the original “Brejlovci” CKD, which makes them a practically new locomotive. It will do the same job to the owners as a new one. However, the purchase price is almost half lower. Another big advantage is the fast and affordable service at “Czech” prices and the high degree of unification with our other products,” said Jan Kutálek, Commercial Director of CZ LOKO.

The EffiLiner 1600, nicknamed Bizon, is designed for medium-duty freight line service in the Visegrad Four countries, where it is already used by carriers in the Czech Republic, Hungary and Slovakia, including CER CARGO Holding, SD - Kolejová Doprava or Unipetrol Doprava.

In the past, Rail Carrier Cargo also used other locomotives made in CZ LOKO, such as EffiShunter 1600 and 744.001 (the prototype of today's flagship EffiShunter 1000). EffiShunter 600 (723.704) from the CZ LOKO EasyRent locomotive pool is also in his service.

Photo: ©CZ Loko



▶ CDGogglesClass754.051 prepares for departure from Praha hl.n. with the 09:23 service to Cercany on March 10th. *Class47*

▶ An hour earlier, Class 754.044 waits departure time at Praha hl.n. with the 08:25 service to Cercany. *Class47*

ŠKODA TRANSPORTATION HAS SIGNED A CONTRACT FOR THE SUPPLY OF UP TO FIFTY ELECTRIC UNITS

The Škoda Transportation and Škoda Vagonka consortium signed a framework agreement with České dráhy for the supply of electric units. This agreement is for the supply of up to fifty electric, single-decker RegioPanter units. In addition to the framework agreement, a purchase contract for the supply of 31 electric units for 3.6 billion CZK was signed.

“České dráhy are getting a state-of-the-art and technologically advanced train that significantly increases the comfort of traveling on our regional railways. Thanks to the new concluded contract, our modern RegioPanter trains will be operating in most regions of the Czech Republic. Passengers can look forward to the new trains in the Plzeň, Karlovy Vary, South Bohemian and Vysočina regions. A substantial amount of the units will be delivered in 2021.” says Petr Brzezina, Chairman of the Board and President of the Škoda Transportation group.

“We announced the competition for the framework delivery of up to 50 modern electric units last year so that we could offer individual regions further renewal of their vehicle fleet as quickly as possible. This is based on contracts for the provision of transport services from December 2019, which we are gradually concluding with regions,” explains Miroslav Kupec, Chairman of the Board and CEO of České dráhy, adding: “We currently have new contracts for transport service, meaning work for 31 new trains. We commissioned their production as soon as the framework agreement was signed. As a result, we will deploy the first units from the contract in 25 months, namely in the spring of 2021. If we were to have a competition for new trains after all the service contracts are concluded, the first units would be deployed approximately one year later.”

The framework agreement is valid for eight years after the signing of the contract. Its total worth can be almost six billion korunas. Additional subcontracts can be concluded based on this contract. The first four units will be delivered within 25 months of the signing of the contract.

“In contrast to the original RegioPanter units, the new trains have a number of technical changes that are associated with the application of new standards and innovative interior design solutions. The units are also equipped with a modern information system, Wi-Fi, a CCTV system, an automatic train control system and ETCS system.” adds Martin Bednarz, Chairman of the Board of Škoda Vagonka and Vice President Project Manager of Škoda Transportation. The consortium offered modern vehicles with a capacity of 140 seated passengers designed to operate on a 3 kV Dc and 25 kV AC system. The maximum speed of the vehicles is 160 km/h. The train cars are low-floor, which facilitates boarding for people with reduced mobility as well as others, especially wheelchair users and seniors, but also bikers and mothers with children. They are also equipped with multifunctional spaces for bikes and baby prams.



ČD Cargo builds on the positive results of previous years and is gradually achieving its long-term strategy goals

In 2018, ČD Cargo, as, the largest subsidiary of České dráhy, as, and a member of the ČD Group, which deals with rail freight, realized a pre-tax profit of CZK 935 million under International Accounting Standards (IFRS). The freight transport segment contributed to the consolidated result of the ČD Group by net after-tax profit of CZK 663 million.

In 2018, the ČD Cargo Group carried a total of 68.4 million tons of goods for its own licenses, which is 2.3 million tons more than in 2017. The year-on-year progress was even more significant from the transport performance point of view, amounting to 9.4%, which is due to the extension of the transport distance primarily by realized foreign sections.

“We are increasing the share of the Polish transport market, we have created a branch of ČD Cargo Niederlassung Wien, which newly implements transports on our license in Austria, we are active in Slovakia and are preparing to enter other rail freight markets in Europe. I have to say that we also succeeded in the domestic transport market, where for the first time in the independent history of ČD Cargo, as we increased the market share. This was due mainly to increased coal transports to power plants, using modern innofreight technology, but also to a new traffic management model and the company’s overall active business policy. ČD Cargo also significantly contributed to the solution of bark beetle calamity despite the low profitability of these transports. However, we are fully aware of our social responsibility and we coordinate with the Ministries of Transport and Agriculture,” said Ivan Bednárik, Chairman of the Board of Directors of ČD Cargo, as.

The year-on-year decrease in the ČD Cargo Group’s profit was mainly due to higher investment in the renewal and modernization of the railway rolling stock, as well as an increase in real wages for employees, rising electricity, fuel and other inputs.

Ivan Bednárik adds: “I appreciate the results achieved all the more so that in 2018 we invested almost CZK 2.5 billion in renewal, modernization and component maintenance of the truck and locomotive park, which is the most in ČD Cargo’s history. We are also investing heavily in increasing our own repair capacities to ensure that we have sufficient operational trucks and locomotives. We have also expanded the park of modern interoperable locomotives for international transportation and a fleet of universal platform trucks for the transport of a wide range of commodities. “

In accordance with the concept of renewal and sustainability of the railway vehicle park, ČD Cargo will continue to invest more in the years to come. “We have concluded contracts for the supply of new cars and locomotives, as well as for the modernization and repair of the existing railway rolling stock, which will strengthen ČD Cargo’s competitiveness on the European transport market and thus contribute to our long-term strategy. At the same time, it will be necessary to continue to improve the quality of the services offered, optimize the operational processes and use our capacities in order to meet future commitments to our customers, suppliers, shareholders and creditors,” adds the Chairman.

In 2018, the ČD Cargo Group strengthened its position on the domestic transport market and once again increased its share of transport performance abroad.





▶ CD Class 754.062 departs Uhersky Brod whilst working train No. R887 11:31 Olomouc hl.n. - Luhacovice on March 31st. *Laurence Sly*

▶ CD Class 754.062 passes Polichno whilst working train No. R888 10:31 Luhacovice - Praha Smichov on March 31st. *Laurence Sly*

▶ CD 'Goggles' Class 754.062 approaches Polichno whilst working train No. R884 14:31 Luhacovice - Praha hl.n. on March 31st. *Laurence Sly*

Alstom commissions the highest-capacity welding robot in the railway industry

Alstom's Le Creusot site has unveiled the highest-capacity welding robot in the railway sector, developed and manufactured by its supplier Farman, a subsidiary of the Galilé group, which specialises in robotic installations.

This investment in innovation of over a million euros is aligned with the development strategy for the Alstom site in Le Creusot, the group's centre of excellence for bogie design and production. The site's expertise is deployed in major rail projects such as the new-generation RER and Avelia Horizon, the fifth generation of TGV. Around thirty projects are currently being developed and manufactured at the site. The new welding robot will help respond to this high level of activity by reducing production times.

The new Farman welding robot is a combination of three robots, custom-built in response to Alstom's specific needs. It automates welding operations for steel or stainless steel parts and the handling of bulky parts that can weigh up to a tonne and measure five metres in length. The new installation will also help improve working conditions by taking the strain in operations previously handled by workers and enabling them to gain new skills in robot programming and operation. Following fine-tuning and operator training, the new Farman welding robot will be fully operational by the end of May.

"We are very proud to be commissioning this welding robot just over a year after placing the order. There are only two other robots of this type in the world, and they are in the aeronautics and automotive industries. The only tool of its kind in the railway sector, the robot will help us meet our current and future industrial challenges," declares Patrick Plichon, director of Alstom's Le Creusot site.

"Although Galilé operates all over the world, Alstom entrusting us with this great project is an opportunity to demonstrate our expertise in Burgundy, the group's birthplace," emphasises Eric Michoux, president of the Galilé group.

Pierre Bureau, Farman's CEO, adds: "For an experienced integrator like us, it was a major technical challenge to demonstrate our team's ability to make robots work together while controlling the heavy loads to be handled and the precision required for high-quality welding."

Alstom's Le Creusot site currently employs over 700 people, who design, approve, industrialise and manufacture 1,500 bogies and 15,000 dampers on average every year for the group's whole range of rolling stock. A major local economic player, the Alstom site in Le Creusot generates about 1,900 jobs for its regional suppliers. It also contributes actively to the employers' grouping for integration and qualification (GEIQ) in industry by welcoming people struggling to access the jobs market.



Alstom and the Auvergne-Rhône-Alpes region unveil the first Coradia Polyvalent for the Léman Express trans-border line



Alstom has presented the first finished Léman Express regional train for the trans-border CEVA[1] line at its Reichshoffen site. Present for the event were Martine Guibert, Vice-President of the Auvergne-Rhône-Alpes region and delegate for transport, Jean-Charles Ogé, Strategy and Finance Director of SNCF TER Auvergne-Rhône-Alpes and Chairman of the Board of Directors of Lémanis SA, and Jean-Baptiste Eyméoud, Senior Vice President of Alstom France. In total, 17 Régiolis trains belonging to Alstom's Coradia Polyvalent range have been ordered by SNCF, fully financed by the Auvergne-Rhône-Alpes region. After nearly 24 months of tests in the Czech Republic (rail test ring), France and Switzerland, the first deliveries will begin in the summer of 2019, with entry into commercial service scheduled for mid-December 2019.

The Coradia Polyvalent Léman Express trains belong to Alstom's Coradia range of trains, 312 of which have been sold to nine French regions. The fleet has already travelled more than 50 million kilometres in commercial service. The trains have been adapted to the requirements of the Franco-Swiss trans-border CEVA line: configured in their suburban version, each 72-metre-long train can transport up to 204 seated passengers at speeds of up to 140 km/h, in accordance with Swiss certification. Designed to ensure cross-border links thanks to ERTMS[2] technology, the trains can run on several types of network voltages[3].

To optimise passenger flows and reduce stopping time in stations, the Coradia Polyvalent Léman Express trains are equipped with low floors, seven doors on each side, all equipped with bridge plates, and a large reception area on the platforms. It is the first train to comply with the PRM-TSI[4] standard. The interior offers enhanced comfort thanks to seats equipped with individual reading lights and electrical sockets, as well as dedicated bicycle and luggage areas. Journey quality is also improved by large windows and reduced noise levels.

"Alstom is particularly proud to present this Coradia Polyvalent train, the first trans-border train from its range. It has mobilised six of Alstom's 13 sites in France, including the site of Reichshoffen for the design and assembly, as well as Alstom's experts based in Auvergne-Rhône-Alpes at our Villeurbanne site, for all on-board intelligence as well as the signalling products," said Jean-Baptiste Eyméoud, Senior Vice President of Alstom France.

In total, the design and manufacture of Coradia Polyvalent generates more than 4,000 jobs in France for Alstom and its suppliers.

[1] Cornavin – Eaux-Vives – Annemasse line

[2] European rail interoperability standard

[3] 25 kV, 1500 V and 15kV for Germany and Switzerland

[4] Technical specifications for interoperability relating to persons with reduced mobility



SIEMENS MOBILITY DELIVERS TEN VECTRON LOCOMOTIVES TO METRANS

Metrans, a.s., a subsidiary of Hamburger Hafen und Logistik AG (HHLA), has ordered ten Vectron MS locomotives from Siemens Mobility Czech Republic. The locomotives will be built at Siemens Mobility's factory in Munich-Allach, and deliveries are scheduled from the end of 2019 until spring 2020. The locomotives will be operated in cross-border freight service in Central and Eastern European countries.

"It is our pleasure to expand the Metrans vehicle fleet by ten multisystem Vectron locomotives from Siemens Mobility. This underlines our ambition to continue growing along the transport streams of the future. The acquisition of additional locomotives will help us to be even more flexible and reliable in responding to the wishes of our customers," said Peter Kiss, CEO Metrans Group.

"We are confident that the new Vectron locomotives enable our customer Metrans to meet current and future transportation requirements and make its long-term plans successful. The Vectron locomotives are writing a great story since their introduction on the European market and we are proud that, together with Metrans, we can celebrate the 900th Vectron sold," said Roman Kokšal, CEO Siemens Mobility Czech Republic.

The locomotives for Metrans have a maximum output of 6.4 megawatts and a top speed of 160 km/h, and are equipped with the required national train control systems as well as the European Train Control System (ETCS). The locomotives are certified to operate in Austria, the Czech Republic, Germany, Hungary, Poland and Slovakia. Future upgrades for Bulgaria, Croatia, the Netherlands, Romania, Serbia and Slovenia are possible.



▶ A pair of Euregiobahn units are seen at Aachen on March 7th working a RB20 service to Alsdorf - Stolberg. *Class47*



 Germany

On April 10th, Rhein Cargo Class 66 No. DE62 crosses the River Rhein with a train of tanks at kilometre post 678. *Michael Lynam*

Dusseldorf U-Bahn unit No. 4243 is seen at Dusseldorf Hbf U-Bahn station on February 25th. *Keith Hookham*

VBZ historic tram No. 1674 stands at Hardturm on March 21st working a line 8 service which will continue for the foreseeable future due to late arrival of new trams. *Keith Hookham*





 Germany



▶ Bombardier built tram type K4000, Nos. 4001 and 4072 depart the Drehbrücke tram stop in Cologne on a route 7 service to Frechen. *Michael Lynam*

▶ Adtranz type GT6M-ZR tram No. 201 is seen at Mainz Hauptbahnhof on April 11th departing on route 51 to Finthen. *Michael Lynam*

▶ On April 11th, Adtranz type GT6M-ZR tram No. 209 approaches Mainz Hauptbahnhof on route 52 to Bretzenheim. *Michael Lynam*

Well under way: Berlin's new S-Bahn is making its rounds at the world's largest test center for rolling stock

required for the train's certification, can also be started then. Parallel to these proof tests of

The new S-Bahn trains for Berlin must complete 160,000 kilometers of extensive tests and measurements – next milestone reached

The new trains of the Berlin S-Bahn have become something like a teenager: fully grown, fit, ready for anything, yet still a bit inexperienced. To reach the maturity needed for carrying passengers, they must currently pass extensive tests.

The first five trains have been making their rounds at the Test and Validation Center (PCW) of Siemens Mobility in Wegberg-Wildenrath (North Rhine-Westphalia) since last fall. Before being allowed to undertake their first test runs on the Berlin S-Bahn network, the trains are being thoroughly tested at the world's largest test center for rail vehicles.

These tests include:

So-called "developer tests" to check the interaction of traction drives and brake systems

Weighing and distortion tests to protect against derailment

Electromagnetic compatibility tests (EMV)

Brake tests for measuring braking distances

Testing and fine adjustment of wheel slide protection and skid control under various load conditions and speeds

The type tests of the traction drive are used to verify the train's acceleration rates and travel times. Tests are also conducted on the functioning and interaction of the current collectors with the Berlin S-Bahn power rail, the accurate detection of power rail gaps, and the capability to maintain electrical system operation while crossing section interfaces in the Berlin infrastructure.

Peter Buchner, CEO of S-Bahn Berlin: "Beginning in 2021, we want to provide our passengers a train that brings them reliably, quickly and comfortably to their destination. To ensure this, the new trains will be tested intensively over a period of two years. As DB AG, we will closely support the manufacturer consortium in their work."

"The Berlin public expects S-Bahn trains that operate smoothly from day one. With our state-of-the-art infrastructure, our highly qualified experts and the innovative testing services provided in our Testing and Validation Center, we are making a decisive contribution toward ensuring such service. The PCW makes it possible to carry out tests 24 hours a day, 365 days a year," says Sabrina Soussan, CEO of Siemens Mobility. "The rounds on the test ring are another important milestone after each system has been activated step-by-step. This ensures that all these systems – from the traction drive and brakes to the air conditioning system, windscreen wipers and door system – function flawlessly before the trains are permitted to begin their subsequent test rounds in the Berlin S-Bahn network," explains Jure Mikolčić, CEO of Stadler Deutschland.

So far, the trains have completed around 2,000 test kilometers out of a planned total of roughly 160,000. After completing the developer tests, it is expected that the proof and driving technology type tests can begin on special sections of the Berlin S-Bahn network in the late summer of 2019. The test program for the Berlin train stop or tripper (a metal rail for automatically triggering an emergency braking),



individual trains in the Berlin network, the S-Bahn trains will continue making their test rounds at the PCW to confirm that all specified functions and requirements for certification have been fulfilled.

The new trains will be used on the Berlin Ring/Southeast subnetwork as of 2021. The pilot series production consists of five half- and five quarter trains which will be delivered in 2020 and begin service on Line S 47 (Spindlersfeld-Südkreuz) in January 2021. The remaining 96 trains will enter service on the Ringbahn (S41, S42) and on the S46 and S8 lines by the end of 2023.

The Siemens Test and Validation Center

Virtually all types of trains and rail vehicles operating on standard-gauge and metergauge tracks as well as systems and components can be subjected to typical railway tests at the PCW. With facilities such as a high-voltage test system, an acoustic measuring rig, turn-tilt table, tipping equipment to determine rolling characteristics, and a vehicle weighing system, the PCW provides a full range of testing options. Trains, rolling stock and systems are tested under real-life conditions or simulated extreme conditions, with static or dynamic tests. Since the Test and Validation Center is certified and accredited by independent bodies for its testing procedures, the results of the tests can be used for regulatory approval.

Photo: ©Siemens





FRED app sparks enthusiasm among train drivers

The train drivers of DB Fernverkehr were the first to use the FRED app, and now all of DB Cargo's train drivers in Germany can use the app on their company-issued tablets. A previous pilot phase had produced solid results.

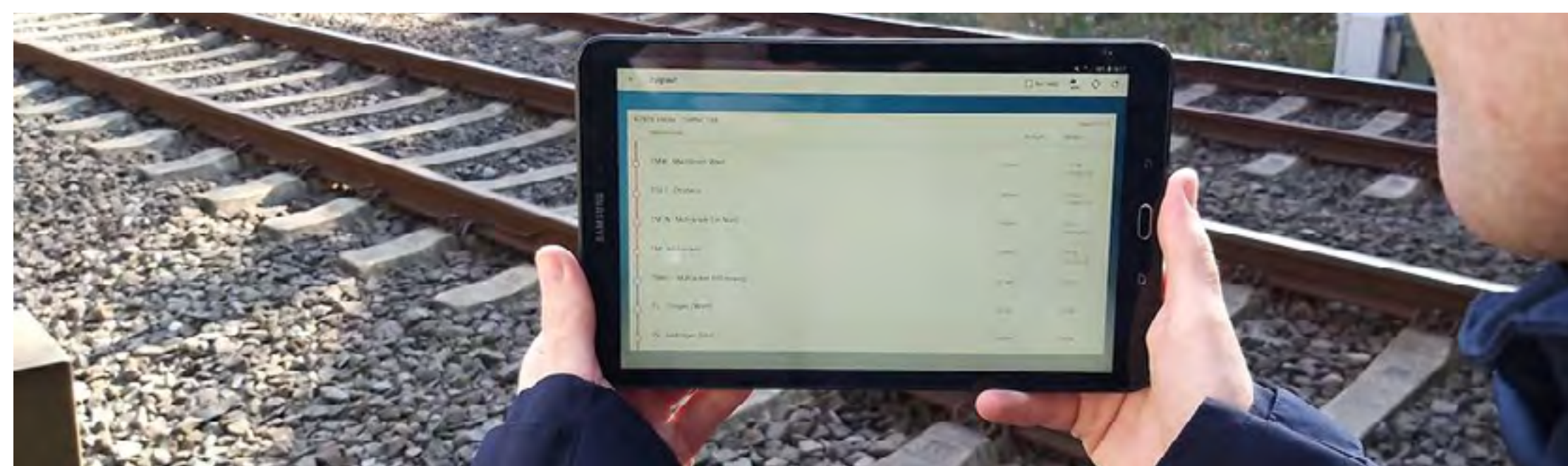
FRED, an Android app, has been in use at DB Fernverkehr since 2017 and has met with success. It is a mobile means of providing train drivers with information about the current operational situation. Using the app helps avoid telephone calls, waiting periods and the associated delays. In January 2019, DB Cargo also gave its train drivers access to the app, initially in an expanded pilot phase as part of the "OPEX@DB Cargo" quality initiative, the company's lean management programme. The app is expected to pass over into regular operations in May 2019.

The acronym FRED comes from a German word meaning vehicle resource usage planning and dispatch. The app helps employees manage personnel changes on locomotives. Train driver Andreas Meissner took part in the pilot project in the German city of Seddin, located south of Potsdam, and is excited about the app. "Thanks to FRED, I can see exactly where my train is on its route and, when it arrives at the station, I can make sure the driver switch happens swiftly and smoothly so the train can leave the station on time", says Meissner. He

uses the app at the beginning of his shift and at different points through it when he changes trains. He likes how easy it is to use the app and how reliable the data is.

Before train drivers had the app, they were reliant on monitors at their deployment site to tell them where their next train would be. In the past, there was no means to view this type of information on the rails; it was available only over the phone. Additionally, employees can use the app to see exactly what kind of locomotive is hauling their train.

DB Cargo and DB Fernverkehr intend to continue development on the FRED app to make rail operations even more efficient and reliable.



Rurtalbahn Cargo's Class 185.684 storms through Plattling with a lightly loaded container train. *Class47*



DB Class 111.012 stands at Mönchengladbach Hbf with an RE4 service to Dortmund Hbf on March 21st. *Steamsounds*

Expansion of the BOGESTRA city rail fleet

Stadler to deliver six further city rail vehicles of the type TANGO and will be overseeing the modernisation of the existing B80D fleet.

BOGESTRA has commissioned the Swiss rail vehicle manufacturer Stadler to build 6 new city rail vehicles and completely modernise the 25 B80D vehicles already in use. The new high-floor TANGOs will be operating on the U35 route from spring 2021. The three-part bidirectional vehicles offer space for up to 172 passengers, 66 of which on seats, over a stepless accessible length of 28 metres. Four wide doors on each side allow smooth entry and exit. The bright, spacious and barrier-free passenger areas have wide gangways and an open design.

The complete accessibility boosts the sense of safety among the passengers. Specially marked multifunctional areas facilitate the transportation of pushchairs and bicycles; two areas are reserved for wheelchair users. The passenger information system and the vehicle's WLAN technology allow precise minute-by-minute updating of individual travel schedules.

The modern wide-screen TFT displays provide information about the terminal stop, line number and route.

“The TANGO rail vehicles of the 2nd generation are equipped with WLAN and, for the first time, also with USB slots, so that the almost 94000 customers that use the underground

trains during the week can surf free-of-charge at a download speed of up to 100 MBit per second and a data volume of up to 5 gigabytes“, says Andreas Kerber, member of the board at BOGESTRA. As soon as the new vehicles are operational, the 25 city rail vehicles of the type B80D will be modernised from spring 2021 onwards. These vehicles, some of which are 30 years old, will be given an extensive facelift and technical overhaul. For instance, the carriages will be repainted and the passenger areas completely refurbished. The driver's cab will also be redesigned in line with the latest ergonomic research. Also, modern passenger door systems that meet the standards for new vehicles will be fitted into the vehicles. The control and drive equipment will also be exchanged and replaced. “The order for the additional TANGO city railways increases the number of BOGESTRA's city rail and tram vehicles made by Stadler to 99. Our trams have been used for more than 10 years in Herne, Bochum and Gelsenkirchen. We are delighted to have signed this contract because it allows us to continue with our successful working relationship also in the field of modernisation,” says Patrick Sefzik, head of LRV Sales Stadler Pankow GmbH.

“We have worked successfully with Stadler in the new vehicle field for many years, which is why we decided to enhance our collaboration with this contract to include the modernisation of our existing fleet of B80D vehicles,” says Andreas Kerber, member of the board at BOGESTRA



Germany

▶ Duewag / Siemens type M8C tram No. 276 calls at Mainz Hauptbahnhof on April 11th on route 50 to Hechtsheim. *Michael Lynam*

▶ Bombardier built K4000 tram Nos. 4086 and 4055 depart the Severinsbrücke stop on route 7 for Zündorf. *Michael Lynam*

▶ Two pairs of Bombardier trams cross the River Rhine in Koln working routes 3 and 4 on April 10th. *Michael Lynam*





Stadler Variobahn tram No. 219 approaches Mainz Hauptbahnhof on route 53 to Hechtsheim, April 11th. *Michael Lynam*



Adtranz type GT6M-ZR tram No. 201 departs Mainz Hauptbahnhof on route 51 to Finthen. *Michael Lynam*



Duewag/Siemens type M8C tram No. 273 calls at Mainz Hauptbahnhof on route 51 to Lenchenberg, April 11th. *Michael Lynam*

 Germany



▶ A pair of Eurobahn Flirts are seen ready to depart Venlo with a service to Dortmund Hbf on March 21st. *Stearnsounds*



▶ Former London Docklands Light Railway unit, now running as part of the Essen U-bahn and renumbered to No. 5225 is seen at Essen Hbf on February 24th. *Keith Hookham*



▶ Flexity Swift GT8-100D/2S-M No. 843 stands at Vaihingen an der Enz on February 22nd. *Keith Hookham*





 Hungary

▶ H-CER Softronic Class 610.102 hauls a rake of Wascosa tanks through Heygeshalom on March 9th. *Class47*

▶ Gysev's Class 470.003 calls at Gyor on March 9th with a service to Budapest Keleti. *Class47*

▶ AWT Goggle Class 753.738 hauls a timber train through Heygeshalom on March 9th. *Class47*













Trenitalia Class E402.152 and an ETR470 Frecciabianca set are seen at Santa Margherita.
John Sloane

CAF SECURES HIGH-SPEED FLEET MAINTENANCE CONTRACT IN ITALY

Trenitalia S.p.A., Italy's national railway operator, has awarded CAF, through the Group's subsidiary CAF Italia, the preventative and corrective maintenance project of its fleet made up of 59 high-speed ETR500 trains called "Frecciarossa" (Red Arrow), which provide service in the Italian railway network. The basic contract price amounts approximately to €120 million, for a contractual term of 6 years with the option of extending this term by 6 additional years.

ETR500 trains are part of the Trenitalia Long-Haul Division which operates the high-speed line "Turin-Milan-Salerno" and can reach up to 300 km/h (190 MPH), linking the cities of Turin, Milan, Reggio Emilia, Bologna, Florence, Rome, Naples and Salerno, among others. Furthermore, these trains offer services to traditional connections out of the high-speed line, reaching other major cities such as Padua, Venice, Rimini, Ancona, Pescara, Foggia and Bari.

The maintenance activities covered by this contract will mainly be carried out in Trenitalia workshops which to provide high-speed servicing in Naples and Milan, as well as the operator's facilities in the cities of Venice and Rome. In addition to maintenance, the contract caters also for technical support both on-track and at the main stations of serviced by the high-speed units.

All tasks will be performed by CAF's subsidiary, CAF Italia, whose personnel are qualified according to the local regulation requirements set by the ANSF - Agenzia Nazionale per la Sicurezza delle Ferrovie (Italian National Railway Safety Agency). It is worth highlighting that this project will employ over 300 people, who will join CAF Italia's current staff which performs other servicing contracts in Italy for clients such as Trenitalia, ATM S.p.A (Milan), ATAC S.p.A (Rome), Ferrotranviaria (Bari) and ARST (Sardinia).



▶ Trenitalia Class E402.135 departs Santa Margherita with a service to Milano. *John Sloane*



▶ FS Class E464.629 arrives at Camogli with a Savonna service. *John Sloane*

▶ FS Class E464.712 stands at Santa Margherita. *John Sloane*







 Netherlands

▶ A Siemens Vectron from RTB Cargo is seen stabled in the Westport in Amsterdam on March 27th. *Erik de Zeeuw*

▶ Railexperts No. 1251 runs through Naarden-Bussum while returning a special train from Amsterdam to Bad Bentheim (Germany) on March 30th. *Erik de Zeeuw*

▶ Lineas Class 186.384 with the Sweden Express from Malmö (Sweden) to Antwerp (Belgium) heads through Amersfoort on March 30th. *Erik de Zeeuw*







 Netherlands



On March 29th, RTB Cargo Class G2000 (Vossloh, Kiel Germany) with an asymmetric cab pushes a container shuttle to the Combi Terminal Twente in Rotterdam. *Erik de Zeeuw*



On March 30th, Metrans Class 386.038-4 is seen at the height of Loenersloot with a Prague to Rotterdam RSC container service. *Erik De Zeeuw*

Railexperts No. 1251 runs slowly through Amersfoort on March 30th, with a special from Bad Bentheim (Germany) to Amsterdam. *Erik de Zeeuw*





 Serbia

▶ Serbian Railway's Stadler FLIRT EMU No. 413.015 is seen at Nis. *Brian Battersby*



▶ AESA built JŽ Class 441 electric locomotive, originally built for Yugoslav Railways, No. 441.707 waits departure time at Belgrade. *Brian Battersby*

▶ Metrovagonmash diesel unit Class RA-2 No. 711.060 stands in Belgrade, and the destination shows Van Sluzby which isn't a place but means out of service. *Brian Battersby*





 Slovakia

▶ ZSSK Cargo Class 240.042 heads through Bratislava hl.st. with a rake of cargo vans, heading for the Czech border at Kutý. *Class47*

▶ Class 742.629 stands at an unusually quiet Bratislava Petržalka due to the line from here to Parndorf being closed for engineering work. *Class47*

▶ ZSSK Vectron Class 383.102 stands at Bratislava hl.st. with an IC service to Kosice. *Class47*









 Slovakia



▶ Metrans Class 386.014 passes Bratislava Vinohrady whilst hauling a container train on March 30th. *Laurence Sly*



▶ Class 242.223 and 742.348 approach Bratislava Lamac on March 30th. *Laurence Sly*



▶ CD Cargo Class 230.091 passes Bratislava Lamac whilst hauling a mixed freight train on March 30th. *Laurence Sly*



Slovenske Železnice offers a Motorail service between Bohinjska Bistrica (dt. Feistritz Wocheinersee), Podbrdo, Most na Soci and Nova Gorica. The train uses the 6,327m long Bohinj Tunnel. There is no good road connection between Bohinjska Bistrica and Podbrdo and the journey by car takes about 45mins crossing the pass using a narrow road, but the train journey takes about 10mins through the tunnel. Here SZ Class 644.020 arrives at Podbrdo, and in this picture you can see the southern portal of the Bohinj Tunnel.
Thomas Niederl



 Slovenia



Autovlak train No. 859, hauled by SZ Class 644.020 is seen here near the station at Grahovo. The former composite passenger coach, has been adapted for use on these Motorail services with several information boards and photos inside about the history of the railway. The four former 1st Class compartments are now converted for cycle transport. *Thomas Niederl*

Class 644.020 arrives with train No. AVT857 at the final destination of Most na Soci on April 21st. *Thomas Niederl*

SZ DMU Class 813.102 arrives with train No. RG601 from Jesenice to Nova Gorica at Grahovo on April 20th. *Thomas Niederl*









MGB Deh 4/4 No. 52 is seen at Fiesch with a service from Visp to Andermatt. *Steamsounds*

Wire rod from Spain bound for Switzerland

Wire rod is used to make reinforcing steel, a component in reinforced concrete. Spaeter AG, a Swiss company, purchases wire rod from Spain, which DB Cargo delivers flexibly and on time. The large coils of wire rod travel only a short distance on the road – from Nervacero’s manufacturing facility in Bilbao to the Spanish border town of Irun, a distance of some 120 kilometres. The advantage of this arrangement is that the goods can then be loaded directly onto standard-gauge wagons that can travel in France and Switzerland. The broad-gauge track most commonly used in Spain is avoided, making it unnecessary to reload the goods or change the gauge.

Spaeter AG, based in the Swiss town of Sins in the canton of Aargau, is located directly across from a train station and has its own private siding, keeping road use to a minimum on this route. This is important from an environmental standpoint because of the company’s plan involving 5,000 tonnes of product annually.

DB Cargo cooperates with the Spanish joint venture Railsider, its own Railnet France and the Swiss company SBB Cargo, the latter of which transports the product from Basel at the end of the four-day route. DB Cargo is also responsible for handling customs formalities on behalf of the client.







Ge 6/6II No. 702 approaches Preda with a southbound freight. *Steamsounds*

DB Cargo renews Alpine transit contract with SBB Cargo

DB Cargo and SBB Cargo of Switzerland reaffirm their successful cooperation. The Alpine transit contract was renewed early for an additional three years.

At the contract signing in Frankfurt am Main, DB Cargo CEO Dr Roland Bosch said, “For five years now, DB Cargo and SBB Cargo have had a joint undertaking to provide transit across the Alps. This has helped us shift freight from the road to the rails. We introduced transport in three-hour intervals between Mannheim and Chiasso, creating a high-capacity transport system from the Rhine valley in Germany all the way to Italy. There have been ups and downs, but the experience has shown that our alliance works even in difficult circumstances.”

Nicholas Perrin, CEO of SBB Cargo: “Trans-Alpine services through Switzerland are very important to us and our owner, SBB – and by extension to the Swiss government. Our partnership means that we can create added value for DB Cargo because we have higher volumes and can therefore design more efficient production processes. This also helps the shift to rail-based transport.”

On behalf of its German partner, SBB Cargo operates approximately 130 freight trains per week from the German city of Mannheim or the Swiss city of Basel across the Alps to Chiasso on Switzerland’s border with Italy – and it does so with an ambitious on-time arrival target of 95%. Freight trains are considered to be late if they arrive more than 60 minutes behind schedule.



The Giruno Gotthard train has been granted an operating licence

The Swiss Federal Office of Transport (FOT) has issued an operating licence for Stadler's new SMILE high-speed train, called Giruno by SBB, to run at 200 km/h in single traction on the Swiss network. According to this recent announcement by SBB, it is planned to put the Giruno into operation gradually from early summer 2019.

On April 4th, the FOT granted Stadler's new SMILE high-speed train an operating licence to run at 200 km/h in single traction. This clears the way for the new Gotthard train to travel with passengers on the Swiss rail network for the first time. The SMILE has successfully reached all the project milestones so far. Since April 2017, several hundred test journeys have taken place in the four intended operating countries – Switzerland, Italy, Germany and Austria.

The Giruno offers a high level of comfort and large luggage racks

The Giruno has a total of 810 seats for passengers, covering a length of up to 400 metres in double traction. The trains are equipped with a low-floor entrance for the different platform heights in Switzerland, Austria and Italy (55 cm) in relation to Germany (76 cm). This is an SBB première for a single-decker, multiple-unit train. The Giruno exceeds the requirements of the Law on Equal Rights for Persons with Disabilities; it has around twice as many wheelchair-accessible places and toilets as legally stipulated. The trains can also provide a great deal of comfort: they offer good reception for mobile devices, power outlets at all seats, large luggage racks, gender-separated toilets and a modern lighting concept with energy-saving LED lights. The whole interior is spaciouly and brightly designed.

29 new trains for increased demand on the new transalpine routes

The Gotthard Base Tunnel, the longest railway tunnel in the world, was opened at the end of 2016. At the end of 2020, the Ceneri Base Tunnel will complete the flat railway through the Alps.

To meet the increase in demand expected as a result, SBB has ordered 29 multiple units with an option for up to 92 additional trains from Stadler, which can travel



at speeds of up to 250 km/h. The vehicles are eleven-part electric multi-system units. Stadler developed and built the new train in just 23 months from the order date in October 2014 – only three months later it has been commissioned. It was presented to the public for the first time at InnoTrans 2016. Stadler calls the high-speed train family «SMILE», while the SBB has given them the name «Giruno», derived from the Rhaeto-Romanic word for buzzard.

Photo: The Giruno on Lake Zug ©

MOB GDe 4/4 No. 6006 stands at Zweisimmen. Note the interlaced standard and metre gauge tracks to the right ready for future gauge changing rolling stock. *Stearnsounds*













 Switzerland

▶ Transports Publics du Chablais units Nos. 82 and 26 are seen at Villars sur Ollon on January 31st. *Keith Hookham*

▶ Transports Publics du Chablais unit No. 547 is seen upon arrival at a snowy Champéry on January 31st. *Keith Hookham*

▶ SBB EMU Class 522.220 waits departure time at Lancy south of Geneva on January 9th. *Keith Hookham*





 Switzerland

▶ Transports Publics Genevois (TPG) tram No. 1820 is seen at Servette working a line No. 14 service. *Keith Hookham*



▶ TPG Bombardier Flexity Cityrunner tram No. 870 heads through Servette on line No. 14 service. *Keith Hookham*

▶ Lausanne Metro unit No. 255 heads uphill towards Lausanne Gare on January 7th. *Keith Hookham*



▶ Transports Publics Genevois (TPG) preserved tram No. 67 is seen working a fondue special on February 2nd. *Keith Hookham*

▶ Lausanne Echallens Bercher (LEB) unit No. 27 stands at Lausanne Flon before working a peak service on January 31st. *Keith Hookham*







▶ USSC GP11 No. 304 and EMD GP40-2 No. 503 cross the canal at South Bay whilst working BT1, empty sugarcane cars to Bryant on March 4th. No. 304 will remain at Bryant for several days working the fields whilst No. 503 will return with a loaded train. *Laurence Sly*

▶ Florida East Coast GE ES44C4 Nos. 808 and 823 cross Cypress Creek whilst working the late running FEC121-26 22:00 Jacksonville Bowden - Miami Hialeah. *Laurence Sly*

▶ USSC GP40-2 No. 506 approaches Belle Glade whilst working BT4 from Bryant to Clewiston on March 4th. After several days outbased at Bryant, No. 501 is being hauled back to Clewiston for maintenance. *Laurence Sly*













▶ USSC GP40-2 No. 505 arrives in Clewiston with a train of sugarcane from Moore Haven on March 3rd. *Laurence Sly*

▶ USSC GP40-2 No. 503 approaches Belle Glade whilst working train BT1, loaded sugarcane from Bryant to Clewiston on March 3rd. *Laurence Sly*

▶ USSC GP11s Nos. 307, 305, 308 and 310 stand outside Clewiston shed on March 3rd. *Laurence Sly*





Alstom's innovative solutions for Line 2 of Panama Metro start commercial service

Alstom, leader of Grupo de Empresas (GdE), celebrates together with Consorcio Linea 2 (formed by Odebrecht and FCC) the entry into commercial service of Line 2 of Panama Metro. The Group has been in charge of supplying an integrated metro system which includes 21 Metropolis trainsets as well as traction substations including Hesop reversible substation, and Urbalis – Alstom Communication Based Train Control (CBTC) solution which controls the movement of the trains and enables trains to run at higher frequencies and speeds in total safety.

“We are honored and grateful to be providing an integrated system that both improves the operation of the metro line and reduces the environmental impact. As the commercial service starts, these technologies will allow the residents of Panama to have a reliable, comfortable and environmentally friendly means of transportation in the city”, said Ludovic d’Hauthuille, Managing Director of Alstom North Latin America.

In order to optimize energy consumption, the electrical power supply system will be equipped with substations with Hesop technology, the Alstom solution for reversible substations that allows recovering and transferring more than 99% of the energy generated by the braking of the trains. This energy can be reused in the electrical network of the stations for services such as escalators, lighting and ventilation. The Hesop

reversible substation is available and operational since 2015, in a wide range of voltage and power configurations. One hundred twenty-four Hesop substations have been installed in various railway networks, including the metros in Milan, Riyadh, London and Dubai, as well as the Sydney and Milan trams.

Additionally, Alstom’s CBTC Urbalis consists of a train control system based on radio communication, a proven and reliable signaling technology for metros. The Urbalis solution allows to precisely control the train path to efficiently and safely manage traffic. In the case of Line 2 of the Panama Metro, the system will allow a frequency between trains of only 90 seconds. The Alstom’s CBTC Urbalis train control solution is used in 23 countries, including Mexico, Italy, Singapore and Canada, and has been implemented in 1,500 km of metro lines in operation.

Alstom has been present in Panama since 1957, actively contributing to the development of urban transport in the country since 2010. During this time, Alstom has signed different transport contracts, such as the development, construction and implementation of the Integral Rail System of both Line 1 and 2 of the Panama Metro, the maintenance of Metro Line 1, including an innovative train driving simulator.



Siemens Mobility installs intelligent signalling in three of South Africa's busiest rail stations

Modern signaling and interlocking systems Increases operational capacity and reduces delays

Siemens Mobility and the Passenger Rail Agency of South Africa (PRASA) have successfully installed and operationalized a new signaling system in Johannesburg Park Station, Braamfontein and Pretoria station. To date, new interlocking systems have been installed in 40 of the 92 stations in South Africa’s Gauteng province as part of PRASA’s drive to deliver a world class commuter railway. Gauteng is the country’s most populated province, home to three of the five largest cities in the country. The new system will increase operational capacity, allow the system more flexibility and reduce delays, improving overall operations for the transit system.

“Since 2011, Siemens Mobility and PRASA have been working together to commission and install new signaling and control systems throughout the Gauteng region. The latest installations are in three of the country’s busiest stations and will help the transit operator improve passenger experience and guarantee availability,” stated Michael Peter, Siemens Mobility CEO. The project is part of a multi-billion rand re-signaling program. Outside of the 40 stations with new signaling installed, much of the network has systems that are beyond their life expectancy, dating as far back as the 1930s.

Johannesburg Park Station is also one of the largest stations in Africa, consisting of 114 sets of points, 129 signals and 16 operational platforms. Braamfontein consists of 87 signals and 67 sets of points. Pretoria consists of 105 signals and 69 sets of points. Johannesburg Park and Braamfontein stations were installed and tested after intensive pretesting of soft- and hardware in the Interlocking Test Facility at Siemens Mobility in South Africa. The stations were put into service with minimal disruptions to commuter service.

Gauteng is the smallest, yet most densely populated province in South Africa and, as home to the cities of Johannesburg and Pretoria, the economic center of South Africa. Around ten percent of Africa’s gross domestic product is generated in the region. In 2015, Siemens Mobility built the state-of-the-art control center for rail traffic in the province called the Gauteng Nerve Center. The new signaling systems will be monitored from the center for any operating issues.





Stadler wins in Finland: 60 locomotives from VR Group

Finland's VR Group and Stadler have signed a contract for the supply of 60 new diesel-electric locomotives to improve the operational efficiency in marshalling yards, freight terminals and on non-electrified lines which make up 45 percent of the Finnish rail network.

The contract signed by Rolf Jansson, CEO VR Group and Iñigo Parra, CEO Stadler Valencia, includes the supply of 60 diesel-electric locomotives and an option for up to 100 additional locomotives, as well as the possibility to buy locomotive maintenance from Stadler. The contract's value is approximately 200 million Euro.

The new central-cab locomotives can be used as shunting locomotives and for hauling freight and passenger trains in single and multiple traction (up to three locomotives). In addition to improving the efficiency of shunting work, they will boost operations on non-electrified railway sections. According to the contract, the first five locomotives are expected to enter into service in 2022, and the remaining locomotives will be gradually delivered until the end of 2025. These new locomotives clearly outperform the old diesel locomotives to be replaced in terms of emissions, energy efficiency, innovation, safety and reliability.

The top-of-the-line locomotives are fitted with radio control equipment and ETCS Baseline 3, with the local STM ATP safety system and the latest generation of vehicle control system including remote diagnosis features. An efficient AC traction system with one inverter per axle provides better adhesion performance. They have a maximum starting tractive effort of 346 kN and can reach a top speed of 120 km/h. This makes them capable of hauling a two thousand ton train.

Stadler has well proven experience in customizing locomotives for the demanding climatic conditions in Finland. The locomotives will be manufactured to withstand the effects of the snow and ice and to operate at temperatures as low as -40° Celsius. Iñigo Parra said: "We are proud of having been selected by VR Group as supplier for the new multipurpose diesel locomotives for Finland. This represents a major milestone for Stadler. It strengthens our position in the shunting segment, a market niche, which is expected to grow considerably in Europe in the forthcoming years. This versatile vehicle will be



designed principally for yard operations as well as for hauling freight trains in main lines, in an efficient and reliable way under extreme temperature and weather conditions." Rolf Jansson said: "This investment shows VR's commitment to improve the quality of customer service in freight traffic and provide our customers with environmentally friendly and energy efficient transportation service. Stadler was selected as supplier after a thorough tender process and we are confident that they will deliver the high quality locomotive VR and our customers are expecting."



Alstom joint venture Gibela's first trains presented by PRASA in Cape Town

Alstom is pleased to announce that its South African joint venture (JV) Gibela, has seen two of its X'Trapolis Mega trains successfully revealed by the Passenger Rail Agency of South Africa (PRASA) to the residents of the City of Cape Town, the country's legislative capital. The President of South Africa, Mr Cyril Ramaphosa unveiled the trains at Cape Town Station in front of more than 1,000 guests.

Also present to celebrate this reveal were the South African Minister of Transport, Dr Blade Nzimande and his Deputy, Ms Sindisiwe Chikunga, the city's Premier, Dr Helen Zille, Chairperson of PRASA, Khanyisile Kweyama, acting CEO of PRASA, Dr Nkosinathi Sishi, Group Executive: Strategic Asset Development for PRASA, Piet Sebola, CEO of Gibela, Thierry Darthout, and Alstom Managing Director for Southern Africa, Xavier Boisgontier, along with Gibela's minority shareholders representing Ubumbano Rail and New Africa Rail.

These trains are part of the 600 new, state-of-the-art fleet being built by Gibela for the Passenger Rail Agency of South Africa (PRASA). The first 18 trains, currently operating in Pretoria, north of Johannesburg, were manufactured at Alstom's Lapa factory in Brazil. Gibela's new, modern train manufacturing facility located in Dunnottar (Gauteng Province) has started the production of the first trains made in South Africa by South African people – the first three such trains having been delivered to PRASA between

December 2018 and March 2019.

"Alstom is very pleased to be participating in the country's railway transport revitalization. The success of this project with Gibela positions us as a reliable partner, established for the long-term in South Africa," commented Xavier Boisgontier, Managing Director for Alstom Southern Africa and CEO of Alstom Ubunye. "Indeed, Gibela is consistently receiving recognition through various industry bodies, the latest being from the South African government's Transport Education and Training Authority for excellence in Skills Development and Training."

The Gibela plant, inaugurated last October by the President of South Africa, has been built with the capacity to produce 62 trains a year at peak production (each trainset comprises six cars). Local suppliers involved in the supply chain in line with local content contractual commitments will gain manufacturing expertise which will enable them to compete in global markets, opening up real potential for significant exports and foreign exchange earnings for South Africa.



The project will boost the country's economy as it creates jobs, develops new skills, prioritises local economic development and local content and promotes black economic empowerment.



Reveal of Alstom's Metropolis vehicle for Greater Montreal's Réseau express

The Alstom-led consortium, Groupe des partenaires pour la mobilité des Montréalais (Groupe PMM), has revealed the design of the Réseau express métropolitain (REM) train. The external livery, chosen by the public, was inspired by the new Samuel De Champlain Bridge, with the vehicle's headlights directly recalling the shrouds of the new bridge. Designed to perfectly fuse with the green spaces of the city, the green-and-white vehicles offer passengers breathtaking views via panoramic windows and large bay windows at either end. Alstom will supply 212 Metropolis cars, or 106 trainsets, for the completely automatic light-metro system. Recognized as the supplier of choice for reliable and efficient metros, Alstom has more than 65 years' experience and sold more than 850 driverless metros worldwide. Over 17,000 Alstom metro cars in 55 cities worldwide, carry 30 million passengers every day. Alstom puts the passenger at the heart of its design process. The Metropolis is, therefore, built with the comfort of passengers in mind, offering wide doors and spaces to facilitate passenger flow, acoustic comfort, vibration mitigation and passenger information in real time. Awarded to the Groupe PMM consortium in early 2018, the project will be the largest transit project in Quebec's history since the Montreal metro was built over 50 years ago. Upon completion, REM will be one of the world's largest automated transport networks - 67 kilometres long with 26 stations - connecting downtown Montreal to the South Shore, the North Shore, the West Island and Pierre Elliott Trudeau International Airport.



Siemens Mobility to upgrade more than 11,000 communication radios for Network Rail

**36 million Euro contract awarded
Upgrade Network Rail's entire Great Britain rolling stock fleet
Interference Resistant**

Remote Condition Monitoring (RCM) and Connected-Driver Advisory System (C-DAS) capability

Siemens Mobility has been awarded a 36 million Euro contract by Network Rail, one of the largest rail infrastructure providers in Great Britain, to upgrade the GSM-R cab radios of the entire Great Britain rolling stock fleet. The upgrade will begin in October with each of the 9,052 driving cabs being upgraded over the next 30 months and will be completed in March 2022. In addition, Siemens Mobility will deliver 1,948 spare communication radios, for a total of 11,000. Each train will be equipped with Siemens Mobility's V4.0 model cab radio, which will provide train operators with improved interference resistant, communication quality and performance.

"Our program to upgrade over 11,000 GSM-R cab mobiles to V4.0 will deliver significant benefits to passengers and the railway. It will resolve the rail safety risk and performance impact attributed to interference on the railway from public mobile network operators and enable them to improve their coverage for passengers at locations where we have asked them to turn down their coverage or power," stated Simon Atterwell, Director, Network Rail Telecom.

"The program also provides the opportunity to explore additional railway applications such as GPS location data for train positioning location and the trial of a track remote condition monitoring application. We look forward to working closely with train and freight operating companies, and Siemens Mobility, in the delivery of this nationally important program," Atterwell added.

"We're proud to support one of the Great Britain's largest rail networks with the latest communication upgrades. With digitalization, we're enabling Network Rail's intelligent infrastructure and increasing value sustainably over the lifecycle of the radios. The system will not only improve communications, but also has the potential for sustainability benefits as well," stated Michael Peter, CEO of Siemens Mobility.

Siemens Mobility has completed a series of trials with Network Rail to demonstrate and prove the GB version 4.0 software and Nexus hardware. Covering more than 100 trains, the trials were undertaken over a 2-month period and successfully concluded in January 2019. They achieved an average mean time between failure in excess of 50,000 hours. At the same time, Network Rail has been working with Siemens Mobility to evaluate the use of Nexus RCM, an application that effectively creates a digital representation of the condition of the track assets, gathering data on the condition of the rail, in real-time, to enable targeted preventative maintenance to take place.



Eurostar mobile tickets can now be saved on Google Pay

Eurostar, the high-speed passenger rail service linking the UK with mainland Europe, is offering travellers a new way to organize and manage paperless tickets, by adding the ability to buy and save mobile tickets on Google Pay in a world first for any international rail company. Travellers using Google Pay on Android L or higher devices can now simply save their mobile ticket to Google Pay from the Eurostar app, and proceed directly to ticket gates at Eurostar stations for a more seamless start to their journey. The new option for travellers aims to further increase the use of mobile tickets, as part of Eurostar's plans to reduce paper usage by 50% by 2020. Since 2018, the amount of paper tickets printed in stations has been reduced by one third, and now accounts for just 10% of all Eurostar tickets.

Perrine Allain, Head of Digital, Eurostar, said: "We are working to provide an effortless travel experience for all our customers, and by enabling paperless tickets to be stored on Google Pay, we hope that more travellers will be encouraged to switch from printing paper. High-speed rail is already an environmentally friendly option for short-haul international travel and encouraging more of our customers to use paperless tickets helps further reduce our impact on the environment."

Enabling mobile tickets to be saved via Google Pay is the latest in a range of digital improvements from Eurostar. Earlier this year, Eurostar also made updates to the Eurostar app to help provide users with a new 'arrival' state. The update added features including public transport maps for the destination city and the ability to book tickets to attractions. Travellers can now find the lowest available fare using Eurostar's Fare Finder available on Google Home and Google Assistant.



ŠKODA TRANSPORTATION GROUP WILL DELIVER NEW RESTAURANT CARS FOR VR PASSENGER SERVICES

Škoda Transtech of the Škoda Transportation Group will deliver seven new restaurant cars for Finnish Railways. The total value of the contract is approximately 600 million crowns. The cars will go into service in 2021-2022. The cars will be manufactured in Kajaani, Finland.

“We have strengthened our position as a leading supplier of rolling stock in the Scandinavian market. I’m happy that this order will allow us to continue our collaboration with VR Passenger Services and the 290 cars we have already built for them,” says Petr Brzezina, Chairman of the Board and President of the Škoda Transportation Group.

Škoda Transtech has already produced 26 restaurant cars for the Finnish Railways. Company has several types of double-decker carriages in its portfolio. These are passenger, control and sleeper cars. The first passenger car was deployed on Finnish tracks in July 1998.

“The restaurant cars from Škoda Transtech offer complete service for passengers. The restaurant section on the lower floor of the car has a kitchen, counter and dining room. At one end of the car is a café that offers open space for passengers to get together in or it can provide the venue for a cultural program. There is a kiosk at the other end of the car, which also provides service for the upper floor. The passenger section on the upper floor can also be used as a conference room for up to 41 people,” adds Zdeněk Majer, Chairman of the Board of Škoda Transtech and senior Vice-President of the Škoda Transportation Group.

All of the cars are pressure-tight in design and excel in thermal insulation, something that is ideal for operations in the severe conditions of the north where temperatures get as low as -35 degrees Celsius. Even the transitions are pressure-tight, allowing movement between the cars to be safe and comfortable. The vehicles comply with TSI and their maximum speed is 200 km/hour. All cars have a rugged aluminum

structure designed in accordance with existing safety standards so that in the event of an accident the deformation zones absorb any crash and so keep passengers safe from the effects of the collision.

“Customers appreciate our renewed restaurant services and their popularity is growing, by 20% over the last couple of years. At the same time we are continuing to increase the capacity of our cars. Since 2015 we have invested €235 million to our



rolling stock including the new restaurant cars,” says Maisa Romanainen, Senior Vice President of Passenger Services, VR Group.

The Škoda Transportation Group has made a name for itself on the demanding Scandinavian market. There are currently more than fifty ForCity Smart Artic trams operating in Helsinki. The first Artic trams in the Finnish capital went into passenger service in 2013. In recent years close to one hundred Škoda trams worth roughly eight billion crowns have been ordered for Helsinki. More trams are heading to Tampere in Finland and the company will share in delivering modern trams to the German cities of Mannheim, Ludwigshafen and Heidelberg.

Skoda Transtech is the largest manufacturer of rolling stock in Scandinavia. The company was founded in 1985. In 2015 it became a member of the Škoda Transportation Group and in 2018 the company was completely taken over by the Škoda Transportation Group. Its main products include double-decker electric cars (operated as PushPull trains), trams and engineering products. It currently employs more than 700 people.



Alstom to deliver traction electrification & sectioning posts for Pune Metro Line 1

Alstom continues to expand its footprints in Pune as it wins a contract worth €15 million towards traction electrification and sectioning posts for 28kms corridor of Pune Metro Line 1 &2 from Maha-Metro[1]. This is the second contract win for Alstom in the city of Pune after CBTC signaling contract for Pune Metro line 1 and 2. The scope of the contract awarded includes design, supply, installation, testing and commissioning of 25KV flexible & rigid overhead catenary system (OCS/OHE) and sectioning posts for Pune Metro Rail Project. The execution of this project will be completed in four phases with the commissioning of 28 kms stretch to be completed by 2023.

Mr. Alain Spohr, Managing Director, India & South Asia said, “We would like to thank Maha Metro for their trust and confidence on Alstom. We are committed to deliver world class deliveries to help strengthen India’s urban mobility infrastructure and look forward to more such opportunities. Our footprint in systems and infrastructure is growing rapidly, and this project will give us an opportunity to extend our cutting-edge capabilities and solutions to the customer.”

Globally, Alstom designs, builds, delivers, tests and commissions all types of rail electrification infrastructure with a strong focus on customer needs and ensures maintenance of the entire system. The company’s feeding systems capabilities are constantly enhanced through continuous R&D and innovation efforts, which have produced breakthroughs making Alstom more responsive to customer needs and market changes.

[1] Maha Metro Rail Corporation Ltd. Pune Metro project has been undertaken by MAHA Metro, a SPV (Special Purpose Vehicle) of Government of India and Government of Maharashtra



PKP CARGO signs a contract with Polska Grupa Energetyczna companies

PKP CARGO S.A. has won a tender for transportation of coal and limestone sorbents to PGE Group companies. The gross value of the contract is more than PLN 665 million. The contract consists of five transport agreements signed with: PGE Górnictwo i Energetyka Konwencjonalna S.A. in Bełchatów, PGE Energia Ciepła S.A. in Warsaw, Zespół Elektrociepłowni Wrocławskich KOGENERACJA S.A. in Wrocław. The main destinations of the transports are: the Dolna Odra Power Plant and the Opole Power Plant.

Under the agreements, from 2019 to 2021, PKP CARGO S.A. will deliver about 15.2 million tons of coal and 1.5 million tons of limestone. The estimated gross value of the deliveries is PLN 665.7 million. The new agreements are an extension of the current contracts, under which PKP CARGO S.A. provided services to the PGE Group in 2013-2018. The transports will be carried out in full sets of railway cars. To perform the contract, PKP CARGO S.A. will use standard Ea-series goods wagons and specialized Fa-type dumper wagons. The PGE Group is one of PKP CARGO S.A.'s key clients, which requires several dozen trains a week to handle its requirements. The tender for coal transport for the PGE Group is one of the largest coal tenders resolved recently.

“Coal represents more than 40 percent of cargo transported by the PKP CARGO Group, so we are also committed to improving the quality of service for our clients, becoming even more competitive as a rail operator, which is reflected in the tenders we win” Warsewicz adds.



“The agreements that we signed show that we are a solid and reliable partner for the largest producer of electricity in Poland” emphasized Czesław Warsewicz, CEO of PKP CARGO S.A.



Stadler wins first contract for multiple unit trains in Canada

The City of Ottawa and SNC Lavalin Group have declared Stadler as the winner of the contract for seven four-unit diesel electric FLIRT trains, as part of the Stage 2 O-Train Trillium Line extension project. The contract is valued at approximately 80 million Swiss Francs (106 million Canadian Dollars). Canada is now the 18th country to purchase Stadler FLIRT trains. According to the contract, Stadler will deliver the vehicles starting in mid- 2021 to Ottawa, where they will undergo extensive testing. This is Stadler's second contract in Canada. Stadler is currently building double-deck dome cars for Rocky Mountaineer, which will take passengers on scenic routes northeast of Vancouver.

The seven four-unit trains for Ottawa are equipped with four 480 kW diesel engines. Parts of the traction equipment system and the diesel engines are housed in power pack units. With the current design the trains comply with the emission standard Tier4 final, with the North American Track Class IV, with ADA and are fully compliant with AODA (Accessibility for Ontarians with Disabilities Act) standards as well as with the North American fire safety standard NFPA 130.



With speeds up to 120 kilometres per hour, the Stadler FLIRT trains will service the extended Trillium Line. The Stage 2 Trillium Line extension is a public-private-partnership project which will extend the existing Trillium Line by adding 16 kilometres of rail and 8 new stations, including a link to the Ottawa Macdonald-Cartier International Airport. TransitNEXT, a wholly owned subsidiary of SNC-Lavalin, will design, build, finance and maintain the Stage 2 Trillium Line Extension. The Stadler site in Bussnang, Switzerland is building and assembling the FLIRT trains for Ottawa. Here, Stadler has ample experience with projects for countries with requirements for extreme winter weather conditions. In Estonia, Norway, Finland and Sweden the Stadler FLIRT trains are already in service with high operational availability, even under tough cold-weather conditions.



Delhi's Blue Line Showcases Siemens Mobility's Intelligent Infrastructure Technology

The latest expansion of Delhi Metro Rail Corporation's (DMRC) Blue Line signifies the city's commitment to modernizing mass rapid transit and features Siemens Mobility's signaling and electrification technology. As one of the world's largest metropolitan areas, India's National Capital Region of Delhi has grown from 6.2 million residents in 1981 to approximately 25 million residents in 2018. With more than 2 million riders per day, the network is expanding rapidly. From just 87 kilometers in 2010 to 375 kilometers today, the network continues to grow. The latest expansion adds 6.6 kms for a total of 65 kms. The signaling, electrification and automatic train control systems on this portion of the line ensure optimum headway between two consecutive trains on the same line during peak hours, resulting in capacity of up to 30,000 riders per hour on one line.

“Siemens Mobility has been working with Indian mass transit operator DMRC for more than 15 years and understands their commitment to ensure it offers passengers modernized intelligent infrastructure that will meet the capacity demands of their growing working populations. These enhancements on Delhi's second longest and busiest line will provide not only increased capacity and drastically shorter commute times, but also will provide environmental benefits, making the cities a better place to live and work,” stated Michael Peter, CEO Siemens Mobility.

The Government has been taking steps to reduce emissions from mass transport and encourage residents to take greener forms of transport, the ongoing metro project being an important component. This expansion also makes it easier for hassle-free commuting between Delhi Metro's Blue Line and Noida Metro's Aqua Line. The Siemens Mobility technology includes Automatic Train Protection system for trains, Central Operation control center with Automatic Train Control & Supervision, Electronic Interlocking and Trackside equipment.

From the UK

Great Central Railway

Back to the Great Central Railway in Leicestershire again this month for their diesel gala, with the star of the show being the recently acquired Class 50 017.

▶ On April 13th, Class 50 017 is seen running round its train at Leicester North. *Richard Hargreaves*

▶ Class 33 No. D6535 approaches Quorn and Woodhouse with a 'local' working to Rothley Brook. *Richard Hargreaves*

▶ Class 47 No. 1705 (47117) departs Loughborough for the sidings on April 13th. *Richard Hargreaves*









