Railtalk Magazine Xtra

Issue 147x | December 2018 | ISSN 1756 - 5030

Railtalk Magazine Xtra

Welcome

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

The end of the year nearly and what a year it has been. I feel that the magazine, thanks to you the contributors, goes from strength to strength and personally I have had some amazing trips round Europe this year with far too many highlights to mention, but I will just say that my favourite country still has to be Czechia, just for the sheer variety of traffic. Lets hope that 2019 will be just as good, although the prospects beyond that with the recent announcement of Arriva running more services, is of concern.

Some interesting news from the USA this month where the launch of Virgin Trains USA was announced by Virgin Group and private-sector inter-city train operator Brightline on November 16th. Brightline currently operates passenger services between Miami, Fort Lauderdale and West Palm Beach in Florida, with plans to expand to Orlando and Tampa. It has also announced plans to acquire the XpressWest project to develop a federally-approved rail corridor connecting Las Vegas with southern California. Brightline said Virgin Group was 'one of the world's most recognisable brands in travel and hospitality' and the partnership would allow it to leverage Virgin's 'industry-leading expertise and customer experience' to establish a 'powerful' brand.

Content

Submissions & Contributions

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

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

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

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Front Cover
Ludmilla Class 232.690-8 passes Braunschweig hauling a rake of tanks. *John Balaam*

This Page
OBB Nightjet, train No. NJ471 arrives at Berlin Hauptbahnhof to begin its overnight journey to Zurich. *Peter Marsden*

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On October 20th, at Le Chemin the Fer du Bocq in Belgium, shunting locomotive No. 7305 is seen working a photo charter. *Arno Verhagen*

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Railtalk Magazine Xtra is published by HAD-PRINT a trading name of HAD-IT LIMITED.

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With Thanks

Once again many thanks to the many people who have contributed, it really makes our task of putting this magazine together a joy when we see so many great photos.

These issues wouldn't be possible without: Ray Anslow, Brian Battersby, Mark Bearton, Mark Bennett, Tim Blazey, Keith Chapman, Julian Churchill, Nick Clemson, Derek Elston, Mark Enderby, Tim Farmer, Dave Felton, FrontCompVids, Paul Godding, Richard Hargreaves, Keith Hookham, Colin Irwin, John Johnson, Anton Kendall, Jyrki Lastunen, Ken Livermore, Michael Lynam, Peter Marsden, Phil Martin, Denzil Morgan, Thomas Niederl, Peter Norrell, Chris Perkins, Mark Pichowicz, David Pollock, Andy Pratt, Paul Quinlan, Railwaymedia, Alan Rigby, Bryan Roberts, Neil Scarlett, John Sloane, Stephen Simpson, Laurence Sly, Stewart Smith, Steamsounds, Steve Stepney, Mark Torkington, Arno Verhagen, Andrew Wilson and Erik de Zeeuw.

Railtalk Magazine Xtra

'We have had a lot of fun and success creating innovative transport businesses that shake up markets and establish loyal followings', said Virgin founder Sir Richard Branson. 'We transformed domestic air travel with Virgin America. Tens of millions of Americans travel on the railways every day, and we have tried for over a decade to find an opportunity to provide them with that same excellent service experience.

Meanwhile a three way race in Denmark where Bombardier, Siemens and Talgo have prequalified for a contract to supply locomotive-hauled coaches primarily intended for use on international services to Hamburg. The contract covers an initial eight rakes of coaches with a capacity of least 440 passengers per rake, with options for additional vehicles or complete sets. Intended to reduce the operator's reliance on older vehicles and the troubled AnsaldoBreda IC4 trainsets, the coaches would be hauled by Siemens Vectron locomotives which DSB ordered earlier this year

Finally, and it seems a bit early for this, but a very Merry Christmas and a Happy New Year from all of us here at Railtalk.

As always 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

Australia

On November 10th, Pacific National's No. NR38 takes train No. 7PX4 through Herne Hill in the Swan Valley, within the consist are 24 Mineral Resources hopper wagons which will be shunted out of the train at Kalgoorlie ready for a mining contract start up and the rest of the train will continue on to the eastern states of Australia.
Colin Gildersleve

Australia

Pacific National's Nos. NR92 and NR2 pass through Midland with only a few kilometres to go to their destination at the freight terminal in Forrestfield just outside of Perth, after their marathon three day trip from Sydney. *Colin Gildersleve*

Aurizon's narrow gauge No. ACN4174 creeps around one of the many "S" bends on the Beela line with loaded Alumina from the Worsley mine site enroute to Bunbury Dock. *Colin Gildersleve*

Under a gloomy sky with rain just starting to fall Aurizon's narrow gauge No. P2504 has just crossed the Collie River bridge and is heading to the Worsley Alumina refinery with loaded chemical tanks. *Colin Gildersleve*

Commonwealth Bulk Handling Group's Nos. CBH023 and CBH010 accelerate through Midland with a long train of empty grain hoppers. *Colin Gildersleve*

Austria

On October 22nd, DB Class 101.063 heads toward Bischofshofen with train No. EC216 Graz to Saarbrücken, seen here between Öblarn and Stein a. d. Enns. *Thomas Niederl*

Austria

OBB Class 1116.197 has just passed the halt at Niederöblarn with an EC Transalpin service between Graz Hbf. and Zürch Hbf. In the background is the 2351m high Grimming mountain. *Thomas Niederl*

Due to engineering works on the Tauern Line, some freight trains were using the line from Selzthal to Bischofshofen via the scenic Ennstal! Here Lokomoton's Vectron pair Class 193.774 and 193.771 pass Pruggern with train No. STEC41856. *Thomas Niederl*

On October 22nd, OBB Class 1116.269 with diverted freight train No. SDG45808 passes Öblarn. *Thomas Niederl*

Austria

Wiener Linen tram No. 121 is seen heading along the street near Wien Meilding working a service to Wien Oper. *Paul Godding*

Ski Austria liveried OBB Railjet Class 1116.251 approaches Wien Meilding. *Paul Godding*

OBB Cityjet Class 4746.010 is seen departing Wien Meilding. *Paul Godding*

Austria

OBB Class 1144.255 approaches Wien Praterkai with a short rake of GATX tanks. *Paul Godding*

A new era in freight traffic begins

With the total completion of the significantly expanded ÖBB freight centre, Wolfurt is now offering even more capacity, efficiency and service. The new terminal logistics ensure even faster handling of all handling processes: Enormous added value for the economy and the environment.Expansion commenced in December 2014; an inevitable step resulting from increasing demand and the changed market needs. The work was carried out during running operations in three major construction phases.

A major driver for the local economy

The new freight centre creates huge added value for the highly export-oriented Vorarlberg economy and for the Lake Constance region as a whole. It ensures that ÖBB will once again live up to its role as Austria's largest construction and business force. Just over 60 million euros were invested in the project through the Austrian Federal Ministry of Transport, Innovation and Technology (BMVIT) framework. In addition, 50% of the planning was funded by the European Union. Today, the Wolfurt goods centre offers 1700 full container storage spaces in the immediate crane area along with 3500 empty container storage spaces in the northern area of the goods centre. The surface area was extended by around 50% to 106,000 m^2. This provides enough capacity for the future challenges in rail freight transport.

New container loading tracks and new cranes

One essential feature of the expansion measures carried out at the Wolfurt freight centre is the complete redesign of the track configuration. The aim was to bring all container trains to the craneable area without moving the wagons. With the total completion, the container trains can enter the facility directly from the open track. This completely eliminates the time required for the shift. At the heart of the facility are the four container tracks, measuring up to 750 metres in length, which are each installed every 600 meters from the two giant container cranes in the latest "Made in Vorarlberg" design. The new container crane guarantees the fast and efficient manipulation of the container from the road and rail as well as from one train to another. In total, the potential capacity in the field of container handling was increased to around 190,000 transport units per year.

Eco award for new ÖBB building in Wolfurt

The ecological design of the logistics zone was particularly important during the expansion. Building sustainability was incorporated into every step of the planning, with fantastic results: the entire planning process along with the construction of the workshop were presented with an award from the "Austrian Society for Sustainable Construction". Through their initiative, the ÖBB also contributes to attaining the Austrian climate goals in Wolfurt.
Photo: © OEBB-Rail-Cargo-Austria/David-Payr

SNCB Class 13 No. 1353 arrives at Namur with an IC train to Bruxelles Midi. *John Balaam*

Belgium

On October 20th a group of photographers organized a photo evening on Le Chemin the Fer du Bocq in Belgium. During the night shunting locomotive No. 7305 and diesel unit No. 4602 were used in different small scenes. Both are resident on the preserved line and kept in working order by Patrimoine Ferroviaire et Tourisme. This section of line reopened in 1992 and it is hoped that eventually the line will connect at Ciney with Yvoir. *Arno Verhagen*

Belgium

Europorte Vossloh EURO 4000 No. 4006 stands at Diest, Belgium between duties on November 27th. *Keith Hookham*

Belgium

SNCB Class 18 No. 1863 waits departure time at Gent working train No. P8999 17:39 Gent St. Pieters - Kortrijk on November 27th.
Keith Hookham

De Lijn tram No. 7063 on route 11 calls at F. Rooseveltplaatz in Antwerpen on November 25th. *Keith Hookham*

SNCB EMUs Nos. 751 and partner 738, wait to depart with train No. IC3338 16:40 Antwerpen Centraal - Halle on November 25th.
Keith Hookham

Withdrawn ‘Ludmilla’ No. 07.073 is seen at Varna. *Brian Battersby*

Bulgaria

Steam loco 0-6-0 No 47.05, built by Maffai, works No. 2133/1900 is seen plinthed at Sofia station. *Brian Battersby*

Another steam loco at Sofia station is 0-4-0 No. 479 built by Henschel. *Brian Battersby*

Former Basel BVB tram No. 928 heads through central Sofia working a line No. 6 service between Ivan Vazov and Obelya. *Brian Battersby*

China

On October 13th, No. DF4D-0062 departs from Beijing at sunset with train No. K603 to Yungcheng. *Mark Torkington*

Nos. DF11G 0195 and 0196 await departure time on October 14th at Fenghuangcheng with train No. K27 Beijing - Dandong, which they've worked from Shenyang. *Mark Torkington*

China

No. DF4D 3131 stands at Nanjing on October 10th, about to be removed from train No. K46 to Beijing which it has worked from Yingtan. *Mark Torkington*

On October 18th, No. DF11 0102 has a quick pause at Jiaohe whilst working train No. K216 from Tumen to Beijing as far as Shenyang. *Mark Torkington*

CSR Zhuzhou Electric Locomotive Co., Ltd Nos. HXD1D 0394 and HXD1D 0226 pause at Hangzhou Dong on October 8th. HXD1D 0226 is working train No. K1371 Shanghai Nan - Jiu Jiang. *Mark Torkington*

Czechia

CD Class 843.015 stands at Hradec Králové hl.n.
Steamsounds

Training loading in Liberec

On November 20th/21st another training loading of military equipment took place at the handling area in Liberec.

Even in unfavourable weather the soldiers trained how to get on a wagon platform provided for this purpose by ČD Cargo.

Part of the training was also the fixing and securing of military equipment on a wagon.

Photo: © CD Cargo

CD Cargo Class 240.050 approaches Brno Zidenice hauling a rake of timber wagons.
Paul Godding

ČD Cargo train was the first in the Ejpovice tunnel

On November 15th, the first train passed through the new tunnel at Ejpovice, specifically its southern tube. It was the CD Cargo No. Pn62600 train from Plzeň to Prague-Libeň.
The pair of locomotives Nos. 363.509 and 363.516 were at the head of the train and had to observe a speed limit of 30 kilometres per hour.

Trains currently run through the tunnel at a speed of 50 km/h, but by the end of the year the speed of 120 km/h should be allowed.

Each bore of the new tunnel is 4150 meters long and the tunnel is now the longest in the Czech Republic. The tunnel construction started in January 2015.

Photo: © CD Cargo

Czechia

CD Class 242.234 arrives at Brno Zidenice working an Os service. *Paul Godding*

CD Cargo Vectron No. 9 arrives in the country

Early Morning on October 25th, locomotive Class 383.009 entered the Czech railway network.

Subsequently, it was transported to Kolín and onward to the test ring in Velim.

All necessary tests were performed there and at the same time, the locomotive was equipped with a promotional livery which will evoke this year's 100th anniversary of the birth of the Czechoslovak Republic and also of the Czechoslovak State Railways.

The locomotive appeared at the head of regular trains in the second half of November.
Photos: © CD Cargo

Czechia

Kometa Expres liveried Class 380.014 stands at Praha hl.n. having just arrived with a Eurocity service from Bratislava. *Brian Battersby*

IDS Class 121.041 passes Ústí nad Orlicí with a northbound tank train. *Steamsounds*

ZSSK Class 350.002 speeds through Choceň, with a Praha bound service. *Steamsounds*

France

A Basel BLT Stadler Tango tram approaches Leyman on September 24th on its short journey through France on route No. 10 to Rodersdorf station in Switzerland. *Peter Marsden*

Bombardier to supply 19 OMNEO Premium trains for the Hauts-de-France region

OMNEO Premium train for the Hauts-de-France region OMNEO Premium train for the Hauts-de-France region's intercity lines

Bombardier Transportation has announced that it received an order for 19 BOMBARDIER OMNEO Premium double-deck trains from the French National Railway Corporation, Société nationale des chemins de fer français (SNCF) on behalf of the Hauts-de-France region. This call-off order is part of the contract signed in 2010 with SNCF to provide up to 860 double deck-trains to French regions and is valued at approximately 256 million euro ($291 million US), including price escalations based on best faith assessment of assumptions. This order is the result of an agreement signed on 16 March 2017 between the State and the Region to take over the management of the Balance of Territory lines (Trains d'Equibilibre du Territoire) and investment fund of 250 million euro for the renewal of rolling stock for these lines.

The Hauts-de-France region plans to roll out these new spacious, highly comfortable trains on the high-frequency Paris to Amiens and Paris to Saint Quentin – Maubeuge / Cambrai lines. The first trains are scheduled for delivery in 2022.

"Passengers riding on the new OMNEO train will discover a new level of rail mobility combining high capacity, greater comfort, and increased accessibility, " said Laurent Bouyer, President of Bombardier Transportation France. "These trains are designed and produced by Bombardier's Crespin site in the Hauts-de-France region, a region highly committed to the rail industry and its local rail ecosystem."

Bombardier's engineers have developed a new interior design which optimizes available space to the benefit of passengers and seating arrangements. The train will feature a newly developed wide seats with integrated lighting, power and USB plugs. The interior design and configuration will be fine-tuned in a color scheme matching the region's colors in the coming months in cooperation with the client. In addition, the train offers improved access via large, platform-level doors, wide corridors and gangways for easy movement throughout the length of the train.

The 135m-long trainset for Hauts-de-France will offer a seating capacity reaching 463 seats, with large baggage racks, a dedicated area for two wheel-chairs and space for twelve bicycles. It will be capable of operating in multiple units of two offering up to 926 seats per-train.

The OMNEO platform, which includes the OMNEO Premium and the Regio 2N, is a family of extra-large double deck-trains which brings greater capacity, comfort and accessibility to urban, regional and intercity services.

To date, ten French regions have ordered a total of 401 OMNEO/Regio 2N trains. The OMNEO platform offers trains for suburban, regional and intercity services. Orders per region are as follows: 91 OMNEO Premium trains for Centre-Val de Loire (32), Hauts-de-France (19) and Normandy (40); and 310 Regio 2N for Auvergne-Rhône-Alpes (40), Brittany (26), Centre-Val de Loire (14), Hauts-de-France (25), Île-de-France (134), Nouvelle Aquitaine (24), Occitanie (18), Pays-de-la-Loire (13), Provence-Alpes-Côte d'Azur (16). Renowned as France's first industrial rail site, about 2,000 people work on Bombardier's facility in Crespin (Nord), including 500 engineers and managers.

The company designs, builds and commissions different types of equipment and is specialized in double deck platforms. Three emblematic projects are now in production: 1) OMNEO (in the Premium and Regio 2N regional versions) is an extra-capacity, double-deck train for the various French regions, which ordered 401 train sets in a contract signed in 2010. 2) Francilien is an ultra-modern commuter train for Greater Paris. Île-de-France Mobilités has ordered 313 trains. Operating since December 2009, it is the best performing train of the SNCF Transilien network, servicing the P, L, J, K and H lines 3) RER NG, under a contract signed in 2017 as part of a consortium for Île-de-France Mobilités, will operate on the E and D lines of the RER.

Akiem and Bombardier sign contracts to supply a total of 33 TRAXX locomotives

Orders include TRAXX AC3, DC3 and MS2 locomotives

Designed for operation under Europe's main voltages, the locomotives offer Akiem and its customers more flexibility and efficiency

Rolling stock leasing company Akiem and mobility technology leader Bombardier Transportation have signed two contracts under frame contracts to deliver a total of 33 BOMBARDIER TRAXX locomotives. Based on their list price, the two firm orders are valued at a combined total of €112 million ($128 million US). Scheduled for delivery between 2019 and 2021 at the latest, the 33 TRAXX locomotives will consist of a mix of TRAXX MS 2 (multi-system), TRAXX AC 3 (alternating current) and TRAXX DC3 (direct current) locomotives.

Fabien Rochefort, CEO of Akiem Group, said, "This additional batch of 33 TRAXX locomotives meets our customers' demand across Europe. With a fleet of 180 TRAXX by 2020, we are strengthening our ability to deliver reliable, efficient, safe and cost-effective traction services expected by both passenger and freight operators. This fruitful partnership with Bombardier Transportation enables Akiem Group industrial teams to design and deliver tailor-made services and maintenance solutions across Europe. We are making our Group a major long-term, reliable partner and added value provider for the railway transport industry in Europe."

Peter Ammann, Head of Ecosystem Freight Corridors, Bombardier Transportation, added, "We are very pleased to have received these additional locomotive orders from Akiem, further strengthening our partnership with this important customer. We introduced our versatile TRAXX locomotives platform 18 years ago and since then have continuously innovated and improved its features. With over 2,200 units sold, the platform has demonstrated its success. With these recent orders, Akiem will own a fleet of 180 TRAXX locomotives; the customer continues to benefit from this mixture of performance, experience and permanent evolution."

The BOMBARDIER TRAXX 3 platform is the most modern four-axle locomotive platform in Europe. Its three models, TRAXX AC3, TRAXX MS3 and TRAXX DC3, all offer optional Last Mile function, a support diesel engine which bridges non-electrified sections. The TRAXX MS locomotive plays a crucial role in the development of economies in Europe. Designed to operate on Europe's four main rail supply voltages – 15 kV and 25 kV AC as well as 1.5 and 3 kV DC – it offers the necessary flexibility and interoperability to manage international rail transport across the continent.

Germany

ŠKODA TRANSPORTATION RECEIVED TSI EUROPEAN CERTIFICATION FOR HIGH-SPEED TRAINS FOR GERMANY

Škoda Transportation has received the TSI certificate from the EBC agency for both 109E3 locomotives and modern bilevel, high-speed MNE (Munich - Nuremberg Express) trains for Germany. The trains will start replacing the old InterCity units next year in spring. The full launch of the entire fleet of new trains is expected in June 2019.

“Škoda is therefore part of the world’s elite in high-speed railroad transport. By issuing this certificate, we celebrate the extraordinary success of the homologation process, which we expect to be finalized in the beginning of 2019 when the train should be finally approved. Completing this technically and financially challenging project is priority of the new board of the company under the new owner - investment and financial group PPF - and will in the future support our business plans on the European market,” says Petr Brzezina, Chairman and CEO of Škoda Transportation.

Škoda Transportation has manufactured six modern, high-capacity bilevel trains, including six locomotives, for the German operator Deutsche Bahn Regio. These push-pull trains are designed for operation on the most important Bavarian railways Nuremberg - Ingolstadt - Munich. The trains can cover the distance between Munich and Nuremberg in an hour and 45 minutes, so they will be only 30 minutes slower than the ICE high-speed trains. The train was successfully presented at the Innotrans international transport trade fair in Berlin this September.

“The supply of the trains has been postponed by more than two years. The main reason for the delay was the challenging development of pressure-tight wagons, as well as tests of whole trains, which will be in close proximity to ICE trains moving at a speed of 300 km/h in normal operation. Now the project for high-speed, bilevel trains for DB Regio users is almost finished, and the first passengers will be riding in Škoda trains in the spring of next year, “ adds Zdeněk Majer, Vice President of Sales in Škoda Transportation.

The trains consist of a control car, end wagon, four wagons and the Škoda Emil Zátopek 109E3 locomotive. They are designed for a maximum speed of 200 km/h and will be operated at a maximum speed of 190 km/h. Škoda Transportation is the first supplier to Germany that offers a barrier-free entrance from the platform at a height of 760 mm. The push-pull train naturally meets the strictest German and European standards. The units are equipped with a special pressure-tight cabin that allows it to pass other trains in tunnels at high speeds, contributing to comfortable and undisturbed travel.
The interior of the train is classically divided into first and second class, and there is also a new children’s section. As requested by the customer, the train contains 676 seats. Each train also offers 37 places for bicycles and a few places for people with reduced mobility, including places for people accompanying them. The trains also offer barrier-free entry, multifunctional pram and bicycle areas, wi-fi and, last but not least, significantly improved passenger comfort.

Berlin BVG Bombardier Flexity tram No. 4034 on the service M2 to Am Steinberg passes double Adtranz GT6N set led by No. 1250 on the M4 service to Hackescher Markt, diverted due to track replacement around Alexanderplatz.
Peter Marsden

DB Class 185.209-4 takes a freight train through Braunschweig.
John Balaam

Germany

HSB railcar No. 187.011-2 stands at Alexisbad, working the 11:05 Eisfelder Talmuehler - Quedlinburg service. *John Balaam*

Nordhausen tram No. 201 heads onto the HSB line with a service to Ilfeld. *John Balaam*

DB Class 110.469 having arrived with the NatEx Ersatzzug from Wuppertal Oberbarmen and 146.264 ready to depart with an RE6 service to Minden are seen at Köln Hbf. *Steamsounds*

RTB Cargo Class 66 No. 1216.014 (No. V266) heads through Düsseldorf Hbf on September 7th. *Steamsounds*

One year after the start of the high-speed line Berlin-Munich: train is number one

Passenger numbers more than doubled • Above-average punctuality • More ICE trains with more seats from 9 December • Climate gains: CO2 savings of over 188,000 tonnes

One year after the opening of the high-speed line Berlin-Munich, the train has replaced the aircraft as the number one mode of transport between the two metropolises. This results in a joint study of Deutsche Bahn (DB) and Telefónica Deutschland.

Modal split

46 percent of all travellers use the train, 30 percent the plane and 24 percent the car or bus. Before the start of the route, the share of the railway was still 23 percent. The aircraft led with 48 percent. Overall, the DB has so far counted 4.4 million travellers between Berlin and Munich, twice as many as in the previous year. Around 1.2 million passengers flew over the plane during the period, around one million from the car. The switch to environmentally friendly rail is a contribution to climate protection: projected to two people in the car and all air travelers, the CO2 savings amount to around 188,000 tonnes. This corresponds to the annual output of a city like Meiningen with around 21,000 inhabitants.

DB Passenger Transport Director Berthold Huber: “The fact that we were able to persuade so many passengers to change places exceeds our expectations, and we sincerely thank our customers for doing so. In addition to the pride of being the market leader on this route, we also see this success as an incentive to further improve the offer for our passengers. Rail is the key to the much-needed shift in transport and makes a significant contribution to human mobility and the recovery of the climate and the environment. “

Railway most environmentally friendly

The new connection is also a success: the punctuality of the ICE Sprinter is 86 percent above the national average. The utilization of the trains over the high-speed line is on average 18 percent higher than in the remaining long-distance service. In the newly created railway hub Erfurt, the number of transfer passengers between long-distance trains has quadrupled. Also, the Halle (Saale) station has gained in importance as a transfer node. Here, passengers often use the connection from the Intercity from Braunschweig / Magdeburg to the ICE to Erfurt / Munich and back.

Extension of the offer from timetable change

Due to the strong demand, DB is expanding its offer on the route from the timetable change on 9 December as follows: First use of the ICE 4: The newest ICE offers 830 seats more space for travellers than the trains there so far; Expansion of the ICE Sprinter: Five ICE per day and direction connect the cities in under four hours. So far, there have been three; First international connection: With the connection Berlin-Erfurt-Nuremberg-Vienna, DB introduces the first international offer on the route. The travel time between the two capitals is reduced by about half an hour compared to today.

With the use of the ICE 4 and the expansion of the ICE Sprinter, passengers will have access to 3,000 additional seats per day from the timetable change.

Germany

DB Class 152.168 approaches Bonn Hbf on September 7th with a southbound freight. *Steamsounds*

Hannover tram No. 6228 approaches Hauptbahnhof working a line No. 17 service. *John Balaam*

Railpool's Class 186.436-2 heads through Braunschweig with a tank train. *John Balaam*

Germany

DB Class 120.147 departs Vaihingen (Enz) hauling train No. IC2160 09:39 Nürnberg - Karlsruhe on November 13th. *Keith Hookham*

Bahn Touristik Express's Class 110.491 heads through Nürnberg on an ECS move.
Keith Hookham

DB Class 147.008 stands at Stuttgart Hbf on November 14th working train No. RE19020 17:29 Stuttgart - Vaihingen (Enz).
Keith Hookham

DB Class 147.016 waits departure from Stuttgart Hbf on November 15th working train No. IRE19020 17:29 Stuttgart - Vaihingen (Enz).
Keith Hookham

Germany

Railpool hired to DB Regio Bayern Vectron Class 193.806 departs Nürnberg with train No. RE4804 09:10 Nürnberg Hbf - Sonneberg (Thür) Hbf. *Keith Hookham*

SSB engineering tram No. 2011 passes Stuttgart Bad Cannstatt on November 14th.
Keith Hookham

Railpool hire-in Class 193.802 arrives at Nürnberg with train No. RE4802 07:05 Sonneberg (Thür) Hbf - Nürnberg Hbf. *Keith Hookham*

HSB dampflok No. 99.7232-4 takes water at Eisfelder Talmuehle before working the 14:51 Brocken - Nordhausen Nord.
John Balaam

Germany

HSB dampflok No. 99.7235-7 arrives at Gernrode with stock for the 13:57 departure to Eisfelder Talmuehler. *John Balaam*

Six additional metro trains from Siemens Mobility for Nuremberg

VAG Verkehrs-Aktiengesellschaft Nürnberg exercises first option
A total of 27 metro trains to be delivered
Greater passenger comfort and optimized passenger flows

VAG Verkehrs-Aktiengesellschaft, Nuremberg's public transport operator, has ordered six additional type G1 metro trains from Siemens Mobility, exercising one of two options in the contract signed in December 2015. All in all, Siemens Mobility will now be supplying 27 new metro trains for Nuremberg. The new four-car G1 trains in the first option are planned for use on the U1 metro line as of 2021 and will replace twelve type DT2 two-car trains. The metro trains will be built at the Siemens Mobility plant in Vienna, Austria. Various vehicle components, such as drive converters, motors, auxiliary converters and control systems, will be manufactured in Nuremberg. Project management, development and service support will be handled in Erlangen.

"With the G1 train, we'll clearly be launching a new era of underground operation. The trains not only look sleekly modern inside and out, but also meet all our expectations. We can carry more passengers, offer them greater comfort and also improve usability for people with reduced mobility. With this train running on the U1 line, we can tackle the next 40 years of metro operation," said VAG Executive Board Member responsible for Technology and Marketing Tim Dahlmann-Resing.

"The G1 is a highly advanced train that's been designed specifically to meet the needs of Nuremberg. All trains can also be converted later to automated operation, making them future-proof over their entire lifecycle," said Sabrina Soussan, CEO Siemens Mobility.
While the train was being developed, attention focused on passenger comfort and optimized passenger flows. Wider doors and full-length passenger access improve passenger access and distribution. The bright and friendly interior with generous multi-functional areas gives passengers a feeling of security and ensures a pleasant sense of space. Passengers are continually provided with the latest travel information via a comprehensive passenger information system. A compact air-conditioning system ensures pleasant interior temperatures. LED light bars above the door inside and on the door panel outside indicate whether the door is opening or closing: Similar to a traffic light, green signals "board now" and red signals "stop" as the door moves. When the doors are moving, the light bars blink accordingly and warn against boarding. Automatic gap-bridging at all doors increases passenger safety, improves passenger flows and allows barrier-free access for all passengers.

The trains are designed for manual operation. To enable their automated operation in the future, necessary installation spaces and interfaces for later retrofitting will be provided and the driver's cab can be removed.

Germany

Erfurt trams No. 636 and 704 head along Bahnhofstrasse with a service to Europaplatz. *John Balaam*

Hannover tram No. 2585 departs the Hauptbahnhof with a line No. 10 service. *John Balaam*

Braunschweig tram No. 758 passes Kennedy Platz working a line No. 2 service. *John Balaam*

Germany

DB Class 265.029 hauling a short consist approaches Koln Gremburg. *John Sloane*

ICE 4 receives ETCS approval in Germany

ETCS Baseline 3 train equipment for cross-border operation
Commissioning approved for 12-car train
Service on the Berlin – Munich route planned for timetable change in December 2018

Germany's Federal Railway Authority (EBA) has approved the ICE 4 for operation with the European Train Control System (ETCS) in Germany. With this approval, the passenger service can begin as planned on the Berlin – Munich route, which is equipped with the system. The ICE 4 is scheduled to operate on this line when German train operator Deutsche Bahn (DB) changes its timetable on December 9, 2018.

The ICE 4 trains are equipped with an ETCS Level 2 Baseline 3 system for cross-border operation. Approval for the German rail network also includes the route to Basel-Bad, Switzerland. The trains may use the border crossing at Basel for entering Switzerland. Type approval for the trains, including the ETCS system, has already been successfully completed for the Swiss rail network, paving the way for the pending operating certification of the ICE 4 trains in Switzerland.

The standardized ETCS system enables the harmonization of the numerous national train control systems in Europe and provides the basis for interoperability between trains and trackside equipment. Since being developed, ETCS has become the global standard. ETCS enables continuous communication between trains and their route. With it, train drivers receive their driving commands – such as the permitted speed, target speed and distance to destination – displayed directly on their cab console and not, as in the past, on signals along the track.
All data required for operation is continuously transmitted via the GSM-R digital railway radio system from the Radio Block Center (RBC) to the train and monitored. The exact position and direction of the train are determined by the train's computer and continuously reported to the RBC.

Deutsche Bahn has ordered a total of 137 ICE 4 trains. All of the trains will be equipped with ETCS and thus be able to operate not only in Germany but across national borders. Of the 137 ordered trains, one hundred 12- and 13-car trains are intended for use in Germany, Austria and Switzerland. The remaining 37 seven-car trains will operate in Germany and Austria.

Germany

DB Regio Class 111.127 arrives at Hagen Hbf with an RE4 service to Aachen Hbf. *Steamsounds*

Stadler wins an order for 64 FLIRTs for the Hanover suburban railway

Transdev contracted Stadler to design, build and deliver 64 electrical trains of the FLIRT type for use on the suburban railway lines in Hanover. The company Transdev GmbH won a Europe-wide public tender to operate the suburban railway in Hanover. From the end of 2021, the Transdev subsidiary Nordwestbahn will be operating the ten suburban railway lines in and around the capital of Lower Saxony. In addition to the 13 existing vehicles, it will also be deploying 64 new electrical trains of the FLIRT type by Stadler. The contract is valued at approximately 320 million Euros. Transdev now operates a fleet of 100 FLIRT of varying configurations and equipment in Germany.

The three-part trains for the suburban railway in Hanover have a total vehicle length of 68 metres with eight passenger doors on each side that allow fast passenger exchange. There is space for 397 passengers in the video-monitored passenger areas, of this number 180 on seats.
The multiple units are equipped with a universal toilet equipped for the disabled in accordance with TSI PRM and, like all FLIRT trains, have bright, friendly passenger areas, are barrier-free and continuously stepless. The very large multi-purpose areas offer space for the transport of up to twelve bicycles, bulky luggage and pushchairs. They are equipped with sockets for charging e-bikes and spaces for wheelchairs acc. to TSI PRM. The modern passenger information system with monitors in each entrance area and also the on-board WiFi equipment allow the passengers to keep up-to-date in real-time during their journey. The vehicles achieve a maximum speed of 160km/h.

“We are very pleased to have received the order in the Lower Saxony region and that we can consolidate our pleasant and constructive cooperation with Transdev on the Hanover suburban railway,” says Thomas Ahlburg, CEO of Stadler. “This order reiterates the fact that the FLIRT, as a customizable vehicle with comfortable equipment, state-of-the-art technology and smooth running properties, is ideal for meeting all requirements of regional rail passenger systems.”
“Winning this order is an outstanding success for our Group, and the largest rail order in our history. We will do everything in our power to complete this project successfully. Procuring the new FLIRT vehicles is part of this - they will clearly improve the quality of the suburban railway for the customers,” says Dr Tobias Heinemann, management spokesman of Transdev GmbH.

Trenitalia Class E464.515 and E464.315 are seen at Sestri Levante.
John Sloane

Trenitalia Class E464.421 arrives at Camogli with a Savona service.
John Sloane

A Frecciabianca ETR 470 set is seen approaching Santa Margherita
John Sloane

Former Rail Traction Company's Class E483.003 heads through Pisa hauling a rake of tanks towards Livorno. *John Sloane*

Italy

Trenitalia Bombardier-Hitachi ETR1000 set No. 27 sits next to a ETR500 set at Milano Centrale. *Peter Marsden*

SBB Alstom Pendolino Class 610.006 waits to depart Milano Centrale with a service to Venezia Santa Lucia. *Peter Marsden*

At Venezia Santa Lucia, OBB Taurus Class 1216.004 has just arrived from Wien Hbf with Nightjet train No. NJ237. *Peter Marsden*

New trains for TILO service, FNM and Stadler sign a Framework Agreement

FNM S.p.A. and Stadlerhave recently signed in Milano a framework agreement for the supply of interoperable electric trains, approved for circulation in Italy and Switzerland. At the same time as the signing of the framework agreement two implementation contracts for nine trains were also signed. Total contract value is nearly 115 million euros. Together with the recently signed contract for the supply of 30 FLIRT DMU, the Stadler train fleet in Italy grows to over 200 trains. FNM S.p.A. and Stadler today signed a Framework Agreement for the supply of interoperable electric trains, approved for circulation in Italy and Switzerland, dedicated to the TILO (Ticino Lombardy) cross-border service. This will boost the service with a timetable change in December 2020. The trains will be leased to Trenord in order to reinforce the TILO service, starting with the timetable change in December 2020. Today's signing follows the awarding to Stadler of the call for tenders announced by FNM last year.

Framework agreement and implementation contracts

The Framework Agreement, which lasts for eight years, envisages a minimum guaranteed quantity of five trains with an option for another four trains. The Framework Agreement also envisages the "full service" of first and second level maintenance. The overall amount of the Framework Agreement is 114,417,200 euros. Two implementation contracts, for five and four trains respectively, were also signed at the same time as the Framework Agreement. The delivery of the first five trains is envisaged by November 2020, the delivery of the remaining four will start from July 2021.

Main specifications

These are bidirectional, six-car fixed composition trains with dual power voltage (3 kV DC for Italy, 15 kV AC for Switzerland) authorised for circulation in the two countries. The trains are 104.9 Meters long, consist of six carriages and offer space for a total of 655 people, 244 of whom seated. They are designed for a maximum speed of 160 km/h and will be compatible with the existing TILO fleet.

Technologies and safety

With regard to technologies and safety, attention is drawn to the following: LED lighting, electrical sockets for recharging electronic devices, passenger information system, energy meter, people counter, remote diagnostics and two toilets. The trains will also be equipped with the most modern and advanced ERTMS/ETCS safety system which, as well as ensuring very high safety standards, will enable the traffic capacity on the railway lines to be increased.
"Today's signing" said FNM's Chairman, Andrea Gibelli "is a further element of a broader plan to renew the fleet of trains launched in 2017. The availability of new trains is an essential aspect in order to offer a servicethat more adequately meets the mobility needs of people who live and work in or visit Lombardy or, as in this case, who travel across the border".
"We are proud," added Peter Jenelten, Executive Vice President Sales & Marketing at Stadler, "to be able to support FNM in continuously improving the cross border service with easy accessible, comfortable and highly energy efficient trains."

A rack tram on the Granarolo line is seen ascending away from Genoa Piazza Principe. *John Sloane*

Italy

FS Class E656.607 heads through Zoagi with a northbound rake of ballast wagons.
John Sloane

0-6-0 shunter No. 445.626 (Class 245.6026) is seen at work in Genoa Brignole station.
John Sloane

Infrastructure locos Nos. 270.156 and 270.157 are seen in the P. W. Yard at Genoa Brignole.
John Sloane

Trenitalia Class E464.515 pushes a southbound service into the tunnel at Zoagli. *John Sloane*

Luxembourg CAF Luxtram No. 109 has terminated at its temporary terminus of Stareplaz Etolie. *Peter Marsden*

Mongolia

On October 21st, No. 2ZAGAL 008 A+B stands at Ulaan Baatar with train No. 276 to Zamyn Uud. These locos are former 2M62s rebuilt with GE engines. *Mark Torkington*

No. 2TE116UM 008 A+B blasts through Ulaan Baatar with a freight working on October 21st. *Mark Torkington*

On October 21st, No. M62UMM 005 waits departure time with a train to Erlian on the Chinese border. *Mark Torkington*

Netherlands

On November 17th, Keolis Lint DMU No. 36 passes Almen working train No. 31239, a service from Zutphen to Oldenzaal. These units were built by Alstom in Salzgitter (Germany) and have a diesel hydraulic drive. *Erik de Zeeuw*

Netherlands

NS EMUs Nos. 2619 and 2432 working train No. R3335 09:24 Hoorn Kersenboogerd - Leiden Centraal arrives at Amsterdam Sloterdijk on November 30th. *Keith Hookham*

NS Traxx Class 186.212 is seen on the rear of train No. ICD959 20:15 Breda - Amsterdam Centraal which started at Rotterdam Centraal at 20:41 due to a defective windscreen wiper which can been seen hanging off the left hand side on this photo on November 28th. *Keith Hookham*

Amsterdam tram No. 821 working on Line 24 is seen outside Amsterdam Centraal Station on November 30th. *Keith Hookham*

Netherlands

Infrabel BN/ACE Class 62 No. 6254 drops ballast on newly laid track at Brugge on November 14th. *Stephen Stepney*

DB Class E186.328-1 passes through Brugge on November 14th hauling a loaded car transporter, heading towards Zeebrugge Port. *Stephen Stepney*

SNCB Class 28 No. 2828 (E186.220) working an intermodal, heads through Brugge on November 14th. *Stephen Stepney*

Netherlands

SNCB Traxx No. 2810 waits departure time at Amsterdam Centraal on November 28th working train No. IC9256 17:22 Amsterdam Centraal - Brussels Midi. *Keith Hookham*

Netherlands

On October 11th, preserved EMU No. 766 from 'Stichting Hondekop' (Foundation Dog's Head) passes Schalkwijk on the way to Breda for a private run to Flushing. *Erik de Zeeuw*

On October 3rd, DB ICE trainset No. 4654 is seen ready for departure from Amsterdam with train No. ICE221 to Frankfurt (Main) Hbf.
Erik de Zeeuw

Netherlands

Amsterdam Metro units Nos. 119 and 120 arrive at Amsterdam Nooderpark working on line M52 on November 30th.
Keith Hookham

NS Class 17 No. 1731 arrives into Haarlem. *Steamsounds*

Netherlands

DB Schenker No. 6461 runs through the station at Naarden-Bussum. *Erik de Zeeuw*

Arriva delivers world's first zero emission train for partially electrified tracks

Arriva to provide 18 of the world's first zero emission train on line that isn't fully electrified
Remainder of the Northern Lines fleet in the Netherlands will be converted into hybrid trains

Arriva – a leading pan-European passenger transport company – has announced that it has signed a contract with train manufacturer Stadler for the construction of 18, world-first zero emission trains suitable for use on partially electrified tracks. The total contract value amounts to 170m euros for trains in the north of the Netherlands.

The Flirtino is a flexible train that - once partial electrification is finished - can be transformed from a HVO (Hydrotreated Vegetable Oil) hybrid diesel train into a zero-emissions train that uses partial electrification to charge batteries that keep the train running on the parts of the tracks without electrification. This train is the first of its kind in the world that combines regenerative technology with an HVO engine that can be replaced with an extra big battery for non-electrified parts of the track.

Partial electrification is a cost effective option to reach zero emissions operation for railway lines where it is not possible or the business case cannot be made to deliver full electrification. This is often the case on railway lines where there is a high number of bridges and viaducts. The Flirtino is the first Zero-Emissions train to run in the world that runs on only partially electrified railway lines and the first train that runs on HVO until partial electrification is finished. The Flirtino train formed part of Arriva's successful bid for the Northern Lines contract in the Netherlands in July 2017, and the first trains on HVO will be introduced in 2020. It is expected that construction of partial electrification can be finished in 2025 after which the trains will be transformed into Zero-Emissions trains. In addition to the 18 brand new zero emissions trains, the existing 51-train fleet is being completely renovated and also equipped with advanced battery packs. This creates a complete fleet of 69 hybrid trains.

Arriva first presented its plan for the future of sustainable public transport during the Climate Conference North NL at Groningen in the Netherlands on 9th November.

Commenting on the announcement, Arriva Group CEO Manfred Rudhart said:"As one of Europe's largest transport operators, we are proud to be delivering into service world-first Flirtino trains for our Dutch customers. This is a major step towards creating a future where transport across Europe is cleaner, greener and more sustainable. Our investment in these new green technologies shows our commitment to ensuring that the environment remains top of the transport agenda across our operations in mainland Europe - an area which is an important growth engine for Arriva."

North Korea

On October 17th, No. 5206 is seen at Kilchu. Sadly we are unaware of what the writing on the side of the loco says! *Mark Torkington*

No. 5223 a Red Flag locomotive painted in some form of heritage / celebratory livery drops down onto its train at Pyongyang station on October 16th. *Mark Torkington*

On October 16th, electric station pilot No. 2043 positions Red Flag locomotive No. 5163 onto its train; International train No. 55 to Vladivostok in Russia. This train runs as load 16 to Tumagen where the last coach only is taken across the border into Russia. This through coach is an RZD kupeny coach which runs every few days, and with the Pyongyang- Beijing train these are the only trains foreigners are permitted to travel on in North Korea. *Mark Torkington*

North Korea

The domestically built Red Flag locomotives dominated both passenger and freight workings on the line north east from Pyongyang to Hamhung and Chongjin and here No. 5007 is seen on a freight at Kimchaek whilst passengers from our train (many in military clothes) enjoy the fresh air and a cigarette. *Mark Torkington*

Locomotive No. 163 detaches coaches from an express train (presumably from Pyongyang) for a portion at Tanchon. *Mark Torkington*

On October 17th, No. 5287 is seen on a passing freight at Yangdok. *Mark Torkington*

The Corgo line closed on March 25th 2009 for 'urgent track repairs' and formally closed in 2011. The three dumped metre gauge ex-Corgo Line Mallets are seen around the turntable at Regua. The brass chimney & cabside number plates are missing but they have stencilled numbers 079201-2, 079208-7 and 079210-3 with no chimney. It is believed that these engines are CP Nos. E201, E208 & E210. *Martin Miller*

Portugal

CP Bo-Bo No. 1415 stands with the stock of the days MiraDouro tourist train which operates daily in the summer between Porto Sao Bento and Regua with premium fares. *Martin Miller*

CP DMU No. 253M stands at Pocinho, having arrived from Porto. *Martin Miller*

Henschel 2-8-4 No. CP0186 is seen being prepared for that days Douro tourist train. *Martin Miller*

Russia

The ČKD ČME3 is six axle diesel locomotive with electric transmission built by ČKD, here No. ChME3-7117 shunts in the yard at Belorechensk on October 6th. *Mark Enderby*

Russia

VL10 electric two-unit mainline DC freight locomotive No. VL10-814 passes Voskresensk on October 1st. *Mark Enderby*

CKD built No. ChME3-6843 stands at Tikhoretsk depot. *Mark Enderby*

Another ChM3, this time No. ChM3-6049 hauling a water train, passes Aksaraiskaya on October 3rd. *Mark Enderby*

Russia

SZD 2-10-0 No. L-0073 and RZD 2-10-0 No. L-5259 hauling their Caucasian VI railtour, pause at Novy Afon in the Republic of Abkahzia. *Mark Enderby*

Soviet built electric AC mainline freight locomotive No. VL80-898 stands at Gryazi Voronezhskie on October 12th. *Mark Enderby*

NEVZ, Adtranz/Bombardier Transportation built dual voltage six axle electric locomotive No. EP1P-030 passes Mamaev Kurgan, Volgograd on October 11th. *Mark Enderby*

SZD 2-10-0 No. L-0073 and RZD 2-10-0 No. L-5259 hauling the Caucasian VI railtour cross a bridge near Agaraki in the Republic of Abkahzia on October 8th. *Mark Enderby*

Russia

Soviet-Ukrainian diesel-electric locomotive No. 2TE10M-K3027 with collision damage, stabled on Tikhoretsk depot on October 9th. *Mark Enderby*

The EP2K electric locomotive was designed to haul passenger trains on 1520mm gauge railways powered by 3kV DC, here No.EP2K-326 arrives at Moscow Paveletski on October 13th. *Mark Enderby*

Twin engined Soviet built electric AC mainline freight locomotive No. VL80-1425 hauls a rake of tanks at Gryazi Voronezhskie. *Mark Enderby*

Russia

SZD 2-6-2 Nos. SU252-20 and SU250-64 from the West Railway Museum at Rostov-on-Don, Rostov, are seen operating the Caucasian VI railtour in North Ossetia on October 5th. *Mark Enderby*

On October 9th, Russian Class FD locomotive No. FD20-2865 and No. 9P-22518 are seen in steam on Tikhoretsk depot. *Mark Enderby*

Russia

A late night service speeds past Komsomolskaya Square in Moscow. *Mark Enderby*

CKD built No. ChME3-4051 shunts at Voskresensk, south of Moscow. *Mark Enderby*

Serbia

Former Swedish DMU No. 710.006 waits departure time at Majdanpek with train No. PT2751 to Zajecar. *Thomas Niederl*

On November 3rd, Class 661.321 stands at Negotin with a fuel tank train. *Thomas Niederl*

On November 4th, Flirt Class 413.002 departs Nis with train No. Re2906 to Belgrade. *Thomas Niederl*

ZSR Class 350.012 departs Bratislava Vinohrady with a Kosice service. *Paul Godding*

A lineup of InterCity services await departure from Zurich Hauptbahnhof. *Peter Marsden*

MGB Stadler Comet departs Brig with the 10:27 Regio train to Zermatt on September 24th.
Peter Marsden

Switzerland

Launch of Stadler's new automatic train protection system in the latest BLS trains

SBB Re4/4 No. 11130 arrives at Zurich Hauptbahnhof. *Peter Marsden*

The ETCS automatic train protection system GUARDIA developed by Stadler and the joint venture ANGELSTAR is being rolled out in the new FLIRT trains for BLS – a key milestone for Stadler's new Signalling business unit.

The new GUARDIA train protection system from Stadler will be used in the new FLIRT trains for the Swiss railway company BLS. This is the first time the innovation has been fitted in a larger series of multiple units in Switzerland. GUARDIA consists of both hardware and software installed in the train. It allows the train driver to visualise the train's position, speed and additional data, which is also transmitted to the control centre. Data such as track warrants can be collected at the same time. GUARDIA represents a key milestone in the history of the rail vehicle manufacturer from Eastern Switzerland.

"We are delighted to be able to equip BLS trains with our automatic train protection system. To ensure the company's independence, it is important for Stadler to be able to offer its own signalling solutions. This is also a significant step forwards into the digital future for Stadler," commented Alexandre Grêt, Head of Signalling, at Stadler.

"We welcome this competition in the field of automatic train protection systems and are convinced that GUARDIA will prove to be an innovative, reliable and flexible automatic train protection system for our BLS FLIRT trains. It will keep our annual system operating costs low, and vehicle availability high. Alongside the security aspect, it will also be of direct benefit to our customers," explained Stefan Maurer, project manager at BLS.

Stadler decided to invest in the field of signalling two years ago in order to develop a further important part of modern train technology within the company. It hopes to increase Stadler's independence as a result. The ANGELSTAR joint venture with the Italian automatic train protection system manufacturer Mermec came about as part of this expansion. Stadler has also set up its own engineering site in Wallisellen.

ETCS stands for European Train Control System and describes the European standard for automatic train control, which aims to allow harmonisation on all lines throughout Europe. As part of a joint venture with Mermec, a company which specialises in train protection, Stadler is offering its own ETCS on-board system, the high-performance GUARDIA solution. This completely new system is currently undergoing field tests and has started the approval process in Switzerland. It will be introduced simultaneously in several European countries. The FLIRT trains for BLS will be fitted with a state-of-the-art ETCS level-2 system (SRS 3.4.0). ETCS level-2 automatic train protection uses digital communication technology (GSM-R) to follow train movements in the Radio Block Centre (RBC), and meets the highest security standards thanks to tried and tested SIL-4 signalling hardware. The on-board European Vital Computer (EVC) monitors data exchange and ensures compliance with the maximum permitted speed. All trains regularly transmit their precise position and direction of travel to the RBC. Track warrants, speed limits and track data are constantly communicated to the train.
In January of this year, BLS placed an order for 52 latest-generation FLIRT trains, with an option for 90 additional vehicles. The comprehensive approval tests will start in mid-2019 and the trains will be put into operation gradually between 2021 and 2025.

Switzerland

SBB Siemens DOSTO Class 514.042 with the S24 service to Thayugen stands at Zurich Hauptbahnhof. *Peter Marsden*

At Zurich Hbf, SBB Re 4/4ii No. 11108 slows to couple to the carriages for the Interregio service to St. Gallen. *Peter Marsden*

At Zurich Hauptbahnhof, SBB Re 450.027 is ready to depart with the S25 service to Linthal, whilst Class 460.008 sits at the buffer stops for an Intercity to clear the platform. *Peter Marsden*

BAV issues operating licence to TWINDEXX double-deck trains

Switzerland's Federal Office of Transport (Bundesamt für Verkehr) has issued operating licences for SBB's new TWINDEXX double-deck trains for long-distance transport on intercity and inter-regional lines

Approval gives the green-light for SBB's upcoming timetable change

The Switzerland Federal Office of Transport (BAV) issued the operating licence for Swiss Federal Railways' (SBB) new BOMBARDIER TWINDEXX double-deck multiple unit trains for long-distance transport on intercity and inter-regional lines on November 14, 2018. This is an important step for the scheduling of the new trains in SBB's new timetable that will start on December 9, 2018. The operating licence granted is limited to two years. However, this does not have any impact on the operations of SBB or its passengers.

With the TWINDEXX Swiss Express, Bombardier is providing SBB and the Swiss people with a modern, comfortable, double-deck train for long-distance transport. The train offers up to 1,300 seats, plenty of space for luggage, easy boarding for all passengers, power sockets in all classes, a modern customer information system and electronic seat reservations. Depending on the version, trains can be equipped with a restaurant car, a family compartment and all configurations are arranged so every passenger can safely and comfortably use the train without assistance. All trains include fire alarm systems and video surveillance for increased security and safety and, thanks to higher energy efficiency, they are environmentally friendly, even at speeds of 200 km/h.

Switzerland

Ascending and Decending: VBZ Tram 2000 No. 2119 and Cobra No. 3083 pass the Captiol Kino at Weinbergstrasse, Zurich. *Peter Marsden*

MGB Deh 4/4 No. 52 waits departure time at Brig with a service for Andermatt. *Steamsounds*

SBB Re 4/4ii No. 11164 stands at Arth Goldau with the Gotthard Weekender to Zürich. *Steamsounds*

Switzerland

Ae 6/8 No. 205 stands at Brig ready to return to Burgdorf over the Lötschberg with the BLS Erlebniszug which ran on the second Sunday of each month from June to October this year. *Steamsounds*

ABe 4/4 IIIs Nos. 56 and 55 stand at Tirano with a service for St. Moritz. *Steamsounds*

BLS Class 420.501 stands at Interlaken Ost with a service from Zweisimmen. *Steamsounds*

A busy scene on the approach to Basel SBB seen from the 7th floor of the Ibis Budget Hotel. *Steamsounds*

Switzerland

Ge 4/4 III No. 641 approaches Filisur with a service to Chur. *Steamsounds*

RhB Allegra hauled trains meet at Alp Grüm. *Steamsounds*

Ge 4/4 II No. 630 arrives at Klosters Platz with a service to Scuol-Tarasp. *Steamsounds*

An aerial view of Andermatt with three trains in view (look carefully!)
Steamsounds

Switzerland

Ge 6/6 I No. 415 crosses the Wiesener Viadukt with the twice daily 'nostalgiezug' from Davos. *Steamsounds*

Die Zentralbahn Class 130.005 arrives at Stans with an S4 service to Luzern. *Steamsounds*

Ge 6/6 II No. 701 crosses Albulaviadukt III with a northbound freight. *Steamsounds*

Alstom and Nederlandse Spoorwegen unveil a new production line for Coradia Stream trains in Katowice, Poland

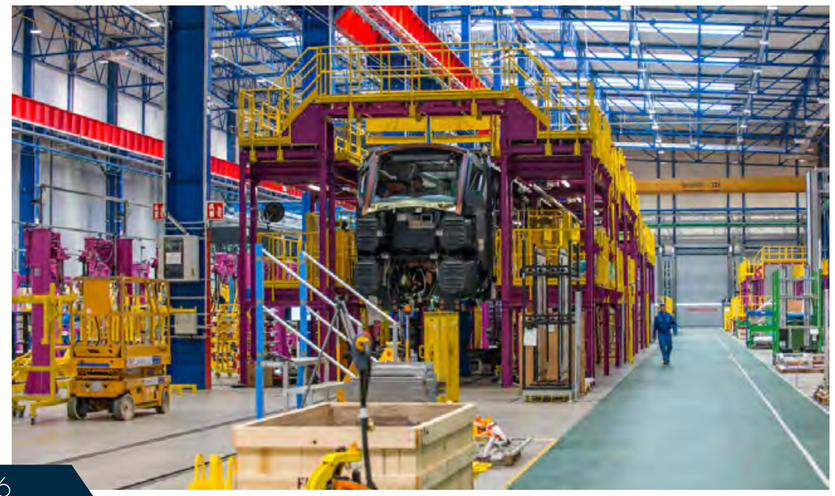
Alstom and Nederlandse Spoorwegen (NS), national railway operator in the Netherlands, have officially opened the new fitting line dedicated to the Intercity Next Generation (ICNG) trains to be produced in Alstom's Katowice facility – one of Alstom's largest sites worldwide.

The new hall was inaugurated by Bert Groenewegen, CFO of NS and Roel Okhuijsen, Director new rolling stock NS, Gian-Luca Erbacci, Alstom Senior Vice President Europe and Radosław Banach, Managing Director of Alstom's Katowice site, in the presence of Alstom employees. This new fitting line features the latest technologies and processes applied to improve performance and reduce manufacturing time. Covering 6,500 square metres, the brand-new fitting hall includes 20 work stations representing the full process from pre-fitting to cabling and interior fitting. Car body shell welding and erection, painting and final testing are performed in separate halls. Over 500 employees are currently involved in the ICNG project in different Alstom units throughout Europe, with over 110 on this new fitting line in Katowice. It is designed to produce one train car every working day.

"We are very pleased to welcome NS management in Katowice to inaugurate the ICNG fitting line. This new line is part of an ambitious investment programme launched by the Alstom for the Katowice site, one of the company's flagship sites. Our teams in Poland are committed to making it a success," said Gian Luca Erbacci.
According to the terms of the contract awarded to Alstom in July 2016, Alstom will supply to NS 79 Coradia Stream trains in their intercity version with a maximum speed of 200 km/h and a total passenger capacity of the fleet of 25,000 seats. The complete trainset is based on three types of cars – driving, intermediate and end cars – offering optimised capacity to the operational requirements. This flexible design allows the train's length to vary from three to ten cars. For NS, Alstom will supply an 8-car as well as a 5-car version. The first trains will be delivered from January 2020 onwards. They will run on the Dutch national network on the Amsterdam-Rotterdam-Breda high-speed line in 2021 and on the Den Haag-Eindhoven corridor in 2022. The total contract is worth over €800 million, with options for more trains.

The new Intercity trains integrate the latest technologies offering an excellent on-board experience to passengers and NS staff. They feature spacious and well-lit multi-purpose areas for reading, resting, wheelchairs and bicycles, as well as dedicated restrooms for people with reduced mobility. The trains are equipped with WiFi, power sockets and LED lighting. They present wide access for a swift passenger flow and are equipped with a dynamic real-time passenger information system. All coaches are fitted with security cameras to increase passenger and crew safety. The trains meet the highest standards for interoperability and will be equipped with ATB and ERTMS systems. The trains are able to operate on 25KV AC (High Speed Line) and 1.5 KV DC (main railway network). Alstom's Coradia Stream is designed and developed in Saint-Ouen (France) and Salzgitter (Germany) and manufactured in Katowice (Poland).

"NS congratulates Alstom and the people working in the Alstom Katowice site with the opening of their new fitting hall, ready to produce not only the Coradia Stream trains for NS, but for many more future projects. After the mock-up presentation in 2017 Dutch railway customers can today see that their new Intercity is coming to life in this state-of-art production facility," said Roel Okhuijsen.
Alstom's Katowice site is a 250,000-square-metre engineering and manufacturing site for metros and regional trains. It is also a worldwide competency centre for metros, and part of Alstom's Global Engineering Network. Currently, the site employs over 2,000 highly skilled employees. Today, the site runs 19 projects for 10 countries around Europe, the Middle East, Africa, and Australia, and manufactures and exports high-tech products. 100% of its production is destined for the export market. Alstom cooperates with up to 468 Polish suppliers not only for its factories in Poland but also for projects being developed in 27 Alstom sites worldwide



Siemens Mobility enhances China's intelligent infrastructure with automated signalling systems

Awarded Suzhou Metro Line 5 and Nanjing Metro Line 7 fully automated signaling system projects

Trainguard MT is the state-of-the-art Communications Based Train Control (CBTC) system

Siemens Mobility was recently awarded the fully automated CBTC system for two key Chinese metro lines in Eastern China: Suzhou Metro Line 5 and Nanjing Metro Line 7. The cities, which collectively have more than 12 million residents, are two of the largest cities in the region. China's rapid urbanization in both cities requires fast and intelligent planning of transportation systems that will ease congestion and provide passengers a more reliable and efficient commute. Initial operations for both lines are planned for 2021.

"We're committed to delivering intelligent infrastructure projects that enhance passenger experience. Suzhou Metro Line 5 and Nanjing Metro Line 7 projects exemplify China's commitment to innovative transportation solutions. With Siemens Mobility's fully automated signaling system Trainguard MT, the country's mass transit systems will be able to handle the passenger demands of tomorrow," stated Michael Peter, CEO Siemens Mobility.

The Suzhou Metro Line 5 is 44.1km long and stretches across 34 stations connecting the east of the city to the west. The line will connect key industrial areas as well as the old town, Gusu District. The line is an important element of the city's urban planning, easing congestion and connecting new and historic urban areas. The metro currently has three metro lines in operation, serving more than 1.1 million riders a day, with a plan to add an additional four new lines, including Line 5.

With a daily ridership of more than four million, Nanjing Metro is the fourth largest metro system within China. Nanjing Metro Line 7 connects about 35km and 27 stations running parallel to the Yangtze River in a southwestern direction, across the Qixia District, Gulou District, Jianye District and Yuhuatai District. Upon completion, it will effectively ease the traffic pressure in the urban center, protect the ancient city's landscape and promote Nanjing's sustainable development.

Siemens Mobility has provided advanced CBTC systems for 26 lines in 17 cities of more than 13 countries, reaching a total mileage of more than 1,800 kilometers. For more than 30 years, Siemens Mobility's CBTC systems have guaranteed their smooth operation effectively. Apart from securing the train's automated operation and serving mass transit lines with large capacity, CBTC also makes the operation more efficient and sustainable.

Rail Cargo Group at the CIIE in Shanghai

By participating in the China International Import Expo (CIIE), which took place for the first time, the ÖBB Rail Cargo Group (RCG) is underlining its increasing commitment to China. In addition to 3,600 companies from 172 countries, RCG had its own stand at the National Exhibition and Convention Center in Shanghai for one week.

Political representatives from different countries visit the fair and take the opportunity to inform themselves about the cooperation efforts of regional companies. The Federal Minister for Digital and Economic Affairs Margarete Schramböck, the Austrian Ambassador in Beijing Friedrich Stift, the Hungarian Minister for Innovation and Technology Laszlo Palkovics, ÖBB CEO Andreas Matthä as well as RCG Board Director Thomas Kargl were present. In addition, every day around 100,000 visitors have the opportunity to obtain first-hand information about the Rail Cargo Group's service portfolio in the field of train connections and innovations. Potential customers and business partners were particularly interested in intermodal transports and RCG's end-to-end logistics network, as well as in the wagon innovation TransANT – the revolutionary lightweight platform wagon with flexible superstructures.

Focus on China transports

In order to increase transport volumes in the long term, ÖBB's freight transport division is extending its logistics arm as far as China and is taking a further step towards further strengthening its presence in the Far East by participating in the trade fair in Shanghai. Meanwhile, transports from and to China are running according to plan: In November, RCG achieved its ambitious goal of handling a total of 400 trains between Asia and Europe by 2018.

More than 30,000 standard containers were transported by rail between Asia and Europe. RCG handles regular transports to China mainly on the Chongqing–Duisburg and Xian–Budapest routes. Goods are always transported "in both directions", i.e. from China to Europe, as well as from Europe to China. RCG plans to operate a total of 600 trains between neighbouring continents in 2019.

Bombardier-Alstom consortium to supply 153 additional AZUR metro cars for Montréal

The consortium comprising Bombardier Transportation and Alstom has signed an amendment to the initial acquisition contract of October 2010, concluded with Société de transport de Montréal (STM), for the supply of an additional 153 metro cars (17 nine-car trainsets). These cars will move more riders each day with greater reliability and comfort.

The value of this new order is approximately €299 million ($448 million CDN). Bombardier's share is valued at €188 million ($281 million CDN), and Alstom's share is valued at €112 million ($167 million CDN).

Most of the manufacturing and the total of the final assembly of these additional vehicles will be undertaken at Bombardier's facility in La Pocatière, in the Bas St-Laurent region of Québec, where the manufacturing of the last trainsets of STM is being completed, according to the agreed schedule. As with the first phase, Alstom's facility will supply the bogies and the motors, as well as the train control, communication, passenger information and video surveillance systems.

Nearly 170 Bombardier employees will be assigned to this new order, which will also involve 70 employees at the Alstom plant in Sorel-Tracy. With 60% Canadian content, this order will leverage a network of several hundred suppliers across Québec.

A premium mobility experience

"We are delighted by this announcement, which will maintain hundreds of jobs at our plant in La Pocatière, as well as at our North American headquarters in St. Bruno. This helps to sustain our leadership in the Québec rail ecosystem and to continue our nearly 45-year relationship with STM. The AZUR metro cars, offering a premium mobility experience, highly popular ever since they entered service in 2016. They also exceed world-class performance and reliability standards," said Benoit Brossoit, President, Americas Region, Bombardier Transportation. "Globally, Bombardier Transportation moves more than half a billion people every day, and we are particularly proud to share the benefit of our global expertise with Montréal's population."

"As part of Alstom's global center of excellence for bogies manufacturing, our Sorel-Tracy employees are among the most qualified employees in the province and maintaining their workload is a priority for us. We are happy to add another project to their current backlog. In addition to providing the bogies, our partnership with STM also extends to the Montréal metro control center. We are delighted to continue working with them on Montréal's iconic metro system, " said Angelo Guercioni, General Manager of Alstom Canada.

Benefits for the STM and its riders

Through this agreement, STM will benefit from the replacement of part of its fleet at a lower cost. Each trainset can accommodate 8% more passengers, which represents thousands of additional riders annually. In addition, the AZUR metro cars have breakthrough features that demonstrate their comfort, reliability and safety.

In addition to other elements these include:

- Open gangways allowing passengers to walk freely from one end of the train to the other;
- 27% wider doors for faster passenger entry and exit;
- An improved ventilation system;
- A state-of-the-art electronic passenger information system;
- Onboard cameras and a two-way intercom system connecting passengers with the driver.

Alstom delivers first Dubai metro trainset on time

Alstom, leader of the ExpoLink consortium, has delivered to the Roads and Transport Authority of Dubai (RTA) the first of the 50 Metropolis trainsets that will run on the city's Red and the Green lines. The train, produced at Alstom's site in Katowice in Poland, arrived in Dubai after being shipped from Bremerhaven Port in Germany. Alstom will conduct initial static and dynamic tests in the depot over the next few months.

In 2016, the Alstom-led ExpoLink consortium, also composed of ACCIONA and Gulermak, has signed a contract with RTA to design and build the extension of Dubai's Red metro line and upgrade the existing line. The project, also known as Route 2020, is worth a total of €2.6 billion, and is expected to start commercial service in 2020, in time for the World Expo.

"We are extremely proud to hand over, on time, the first Metropolis trainset to RTA. This is a significant milestone in a prestigious project that will provide Dubai residents and visitors to with a reliable, comfortable and environmentally-friendly metro system ahead of the World Expo. Alstom is committed to being a close, long-term partner of the UAE, addressing its mobility needs and supporting it in its upcoming transport projects," declared Didier Pfleger, Alstom Senior Vice President for Middle East & Africa.

Alstom's scope covers the provision of the entire metro system, including 50 Metropolis trainsets, power supply, driverless signalling, communication and security, automatic fare control, track works, platform screen doors and a three-year warranty on the whole system. Additionally, Alstom will enhance the existing metro line by upgrading power supply, signalling systems, communication and track works. The Metropolis trainsets for Dubai are 85,5 meters long and composed of five cars each. They will be able to carry up to 700 passengers each. The train offers an excellent level of passenger experience, thanks to wide gangways, large doors and windows,

three specific areas for Silver, Family and Gold Classes. Eco-friendly, the train is equipped with a full electrical braking system, LED lighting and other innovations to reduce energy consumption.

More than 5,500 Metropolis cars have been sold to 25 cities, including Riyadh, Panama, Singapore, Sydney, Sao Paulo, Shanghai, Barcelona, Amsterdam, Chennai and others.

Photo: © rta

Alstom at the heart of the Tangier-Casablanca high-speed line's inauguration in Morocco

Alstom has participated in the inauguration of the Tangier-Casablanca high speed line with its very high-speed trains supplied and delivered to the Office National des Chemins de Fer Marocain (ONCF). The line has been inaugurated by His Majesty, King Mohammed VI and French President Emmanuel Macron.

Alstom supplied ONCF with 12 very high-speed trains for the Tangier-Casablanca railway section. Alstom also supplied the level 1&2 on-board ERTMS for the trains.

"We are extremely proud to bring high speed rail for the first time to the African continent. This inauguration is a significant milestone for this prestigious project which will allow Moroccan people to benefit from an incredible passenger experience thanks to our reliable, safe and comfortable Avelia very high-speed trains. Alstom is committed to remaining a close and long-term partner for Morocco, addressing its mobility needs and supporting its upcoming transport projects," declared Henri Poupart-Lafarge, Alstom Chairman and CEO.

The trains will run at 320 km/h between Tangier and Kenitra, the first 180-km long section of the network. Between Kenitra and Casablanca (200 km), the trains will join the conventional network where they will run at 160 km/h. The service will connect these main economic regions of the country, in 2 hours and 10 minutes instead of 4hours and 45 minutes.

Avelia Euroduplex trainsets for Morocco are articulated double-deck trains adapted to specific climate and environment conditions. With a capacity of 533 passengers, each trainset is composed of 8 cars including two first-class cars, a dining car and five second class cars. Trains integrate the latest developments in terms of comfort and accessibility. One part of the train is fully dedicated for people with reduced mobility. Trains are also equipped with digital passenger information systems, bilingual in Arabic and French. They benefit from the proven Avelia range of high speed trains, which boasts more than 1,100 trains in commercial service. Avelia Euroduplex very high speed trains for this project were manufactured in Alstom sites in France: La Rochelle, Belfort, Ornans, Tarbes, Le Creusot, Petit Quevilly, Villeurbanne, Saint-Ouen, Reichshoffen.
Alstom, present in Morocco for over 40 years, supports the country in its most important mobility projects, from urban to main lines, and has always been at the service of its customers and partners in the development of the country's rail infrastructure.

Alstom hits halfway point in repainting iconic train fleet

Alstom has hit the halfway mark in the huge job of re-painting and overhauling the UK's fleet of iconic Pendolino trains, as the 28th train rolls out of Alstom's rail facility in Widnes. The remainder of the fleet, operated by Virgin Trains and owned by Angel Trains, is due to be completed by December 2019.
The high speed Class 390 Pendolino tilting trains are used by Virgin Trains to provide a fast and frequent service between London, Glasgow, Manchester, Birmingham, Liverpool and points in between. In 2003, Virgin Trains introduced the Alstom built trains and they have reduced journey times on the line and transformed connectivity. Along the 1,265-kilometre route, the last year (2017/18) saw 38.3 million passenger journeys made totalling 7,582.3 million passenger kilometres.

The fleet is receiving a complete re-paint to protect them and ensure they have a successful future on the route. Each train takes two weeks to complete. The work involves stripping back the cars, including exterior fittings, undertaking minor repairs and restoration and comprehensively re-painting, a layer at a time, to prevent corrosion and rust. This protects against wear and tear and will enable the trains to operate as successfully for the second half of their life, as they have done for the first. With advances in paint technology the newly painted trains are finished as well, or better, than when they were first introduced.
The repaint is being completed in Alstom's Widnes modernisation facility, the most advanced in the country. It was built to be able to accommodate the full length of the 9 and 11 car trains end-to-end and is the only facility in the UK that can do this. The main modernisation hall in Widnes is so large that it rivals the size of the deck of the UK's flagship new Queen Elizabeth II aircraft carrier. Piers Wood, Managing Director Fleet Services, Alstom UK & Ireland, said: "We are very proud of the job we're doing with this repaint. These iconic Pendolinos are the backbone of Britain's railways, and this will allow them to continue serving the millions of passengers they carry every year. A repaint of this scale has never been undertaken by the industry before and it is particularly special for us as it is the first piece of major work we are doing at our state-of-the-art Widnes facility. We are also pleased that this programme has allowed us to bring on some brilliant apprentices, who are now a key part of our team at Widnes. With our partners at Virgin Trains and Angel Trains we want this programme and this iconic train to continue to be a real showcase of what we can achieve in the industry."

Peter Broadley, Executive Director for Customer, Operations and Safety at Virgin Trains, said: "The new look Pendolino is certainly catching the eye and its of great credit to all involved that will we have a fully repainted fleet by December 2019."
David Jordan, Chief Operating Officer, Angel Trains, said: "We are delighted with the progress of the Pendolino repainting project. We know that this transformative work, led by our partners at Alstom, will both improve the longevity of this Class 390 fleet and benefit British rail passengers for years to come."

Alstom's Widnes facility is located right at the heart of the Manchester and Liverpool rail cluster. It includes Alstom's training academy, delivered in partnership with the National College for High Speed Rail. Eight local apprentices have been taken on as part of the 85 strong workforce for the paint programme and Alstom are also working with the National College of High Speed Rail to offer higher level qualifications to former apprentices and increase skill levels amongst the local workforce. Widnes is also the home for the technical and engineering talent in Alstom's Centre of Excellence for Modernisation. It is set to become Alstom's hydrogen train centre in the UK and it will be the site where Class 321 trains are converted to hydrogen traction under Alstom's plans with Eversholt rail.

PKP CARGO S.A. buys Dragon 2 locomotives

The net value of these locomotives is nearly PLN 44 million 970 thousand, and it is roughly PLN 45.3 million when spare parts and subassemblies for quick emergency repairs are factored in. These locomotives have already been manufactured and are just waiting for their usage permit with full homologation from the Office of Rail Transport, which will be in place by yearend at the latest. Two locomotives will be painted with the colours of PKP CARGO while the other locomotive will be painted white and red in conjunction with the centennial of Poland regaining its independence. Minister of Infrastructure Andrzej Adamczyk who participated in the contract's signing ceremony said that he is elated with robust collaboration between two Polish companies: a rail operator and a rolling stock manufacturer. Minister Adamczyk stated: "Polish engineering and Polish engineers are engaged in the highest quality projects in the world". He added that Polish rolling stock is outfitted with Polish control and electrical power equipment and that the top tier quality of rail car manufacturing in Poland portends that this industry will continue to develop as it innovates.

Czesław Warsewicz, CEO of PKP CARGO S.A. pointed out that investing in rolling stock is a very important part of building the strength of the overall PKP CARGO Group. "We are bolstering our leadership position on the rail freight market. In August and September we reported growth in the freight volume of our cargo while the overall market observed a decline. This shows that the strategy of enhancing the competitiveness of PKP CARGO and the level of its services while rolling out innovative solutions in rail transport is effective. This is also why we have decided to purchase Dragon 2 locomotives. They will raise the quality of our offering, improve our competitiveness and extend our transport potential", emphasized Czesław Warsewicz, CEO.
Zbigniew Konieczek, CEO of Newag pointed out the landmark nature of the signed contract. "This is the first Polish six-axle locomotive purchased in more than 30 years by the national rail operator PKP CARGO. I am very proud that Dragon 2 locomotives number 1, 2 and 3 will go to PKP CARGO", stated Zbigniew Konieczek.
The Dragon 2 locomotive is the only electrical six-axle locomotive holding a permit for operation in Poland. Dragon 2 is fully compliant with the Technical Interoperability Specifications and it also has a factory-built, level 2 ETCS safety system. This locomotive has excellent traction parameters for pulling heavy cargo trains. The maximum pulling strength at start of some 410 kN enables it to pull unit trains on its own with a gross mass of more than 4 thousand tons.
Dragon 2 has been designed in a modular system. This locomotive is outfitted with a combustion module - a diesel engine with 520 kW of power enabling it to cover short trips along unelectrified lines and on rail sidings. Moreover, Dragon 2 will be less expensive in operation than older locomotives. That is also one of the reasons why this locomotive has inbuilt converters based on silicon carbide (SiC) supporting fault-free operation at high temperatures, a reduced noise level, a 50% reduction in energy losses and a 60% reduction in the size and weight of plant and machinery. In pursuing its ambitious rolling stock program PKP CARGO S.A. plans to purchase more locomotives. In October we published a market reconnaissance announcement to procure new four and six-axle locomotives. This market review pertains to single, double and multiple-system locomotives with and without combustion modules. Analysis of manufacturers' proposals will show us which locomotives with which technical and traction capabilities we can purchase, thereby enabling us to prepare future tenders better.
The contract to purchase three Dragons is not an isolated example of business collaboration between PKP CARGO and Newag. In May we signed a contract for a net value of PLN 388 million to upgrade 60 SM 44 diesel locomotives to ST 48. Newag has already handed over the first rejuvenated locomotives and more locomotives will steadily bolster PKP CARGO's rolling stock fleet.

Siemens Mobility secures major order to manufacture a new generation of Tube trains in London

94 metro trains for London based on the Inspiro platform
Delivery beginning in 2023
Digital services based on Siemens Mobility's Railigent
New trains will be more spacious, air-conditioned, have walk-through carriages and improve accessibility
Additional capacity, maximized throughput and improved passenger experience for millions of passengers

Siemens Mobility has been awarded a major contract in the United Kingdom. London Underground (LUL), a subsidiary of Transport for London (TfL), responsible for the urban rail system in Britain's capital, signed a contract with Siemens Mobility to design and build 94 new generation Tube trains worth around 1.5 billion GBP (1.54 billion Euro) to replace the existing 1970s fleet. The trains will serve the Piccadilly line and delivery will begin in 2023.

"Our new metro trains for London will significantly increase capacity and frequency on the Piccadilly line. At the same time, they will offer tube users substantially improved passenger experience. Our services will support London Underground over the trains' full lifecycle to ensure that they serve the London public with the highest reliability and availability," said Sabrina Soussan, CEO of Siemens Mobility.

Nigel Holness, Managing Director of London Underground, said: "The introduction of new trains on the Piccadilly line will significantly improve the journeys of millions of our customers, providing more frequent and more reliable trains for decades to come. This order will mean the replacement of the 1970s Piccadilly line fleet, with delivery of the new trains starting in 2023, and will help address crowding on the line as London's population continues to rise."
The new spacious Piccadilly line trains are based on Siemens Mobility's Inspiro family of metro trains and offer passengers substantially improved comfort and convenience. The state-of-the-art Tube trains will significantly improve the experience of millions of customers, with wider doors and longer, walk-through, fully air-conditioned carriages. In addition, in-train information systems will help all customers plan their onward journey more easily.

As part of a fleet services contract, Siemens Mobility will be responsible for covering the supply of spares for a period of five years beginning with the commissioning of the first trains. Siemens Mobility will also provide whole life technical support for the trains when they are out of their general warranty. Additionally, LUL has ordered digital services based on Siemens' Railigent. TfL and Siemens Mobility will work closely together to consider options for local manufacture in the United Kingdom in partnership with Siemens Mobility's global centre of excellence for metros in Vienna, Austria. In March 2018 Siemens Mobility announced plans for a local rail manufacturing facility in Goole, East Yorkshire, where Siemens Mobility is planning to create up to 700 jobs (and a further 250 during the construction phase), with an additional 1,700 potential UK supply chain roles.

LUL has ordered the trains as part of its Deep Tube Upgrade Programme which includes the Piccadilly, Bakerloo, Central and Waterloo & City lines. By 2026, there will be increased frequencies during peak times on the Piccadilly line (up from 24 to 27 trains-per-hour), which is used by 700,000 passengers daily. This service provides a train every 135 seconds at the busiest times. The formal contract for the supply of new Piccadilly line trains is between Siemens Mobility and London Underground (a subsidiary of Transport for London). Of the 1.5bn GBP (approximate) total contract value, around 1.54bn euro is immediately bookable by Siemens Mobility, the remainder will be booked over the course of the contract (in accordance with accounting principles) as it is related to the 40 year Fleet Services Agreement.

Photo: © Transport for London

Bombardier and ST Engineering sign framework agreement to build Singapore Service Centre

Bombardier Transportation and ST Engineering's Land Systems arm are proud to announce a new strategic partnership to build a Singapore Service Centre. As part of the partnership agreement, Bombardier and ST Engineering will combine their respective strengths in transportation design, manufacturing, engineering knowledge, maintenance, repair and overhaul expertise to drive cost-effective localized component repair capabilities for customers in Singapore, as well as regionally. These measures will improve the overall Service offering for Bombardier customers while strengthening its portfolio and providing customers greater options in support of their operations.

Mr. Tan Peng Kuan, President of Commercial Business, ST Engineering's Land Systems arm, said "The Singapore Service Centre is a step towards strengthening Singapore's capability in rail maintenance and support services, and is testament to ST Engineering's deep engineering capabilities. ST Engineering's advanced diagnostics and maintenance, repair and operations (MRO) expertise not only ensures that there is reliable in-country support for transport operators in Singapore, our complementary capabilities in robotics and simulation systems also offer innovation engineering applications for improving efficiency and reliability to rail operations."
Commenting on the partnership, Jayaram Naidu, Vice President of Southeast Asia, Bombardier Transportation, said, "We are pleased to expand our presence and deepen our investment in Singapore with this state-of-the-art center which will help us to develop and deliver our services capabilities. This new service centre reflects our commitment to developing local talent and technical skills, key to constantly innovating and improving the solutions we provide. We understand the importance that our customers place on passenger safety and system performance, and we will further add value by improving total train performance for operators moving millions of passengers safely."

Over the last 20 years in Singapore, Bombardier has made significant contributions to improving mobility in Singapore. To date, it has delivered 276 driverless BOMBARDIER MOVIA metro cars for Singapore's Downtown Line and 13 BOBMARDIER INNOVIA APM 100 automated people mover cars for the Bukit Panjang Light Rail Transit (LRT) system. Earlier this year, a new asset replacement contract was awarded to supply 19 new BOMBARDIER INNOVIA APM 300 cars, to retrofit 13 existing APM 100 cars, as well as to deliver a signalling system upgrade for 13 stops on the Bukit Panjang LRT Line. In addition, a new contract was recently awarded to supply 396 MOVIA metro cars for the high-capacity North-South (NSL) and East-West (EWL) Mass Rapid Transit (MRT) lines. The new order brings the number of MOVIA vehicles in Singapore to 672, making it one of Bombardier's largest metro fleets in the world

From the UK

ECML Lincoln Diversions

During several weekends in November, the east coast mainline was closed between Newark and Peterborough for engineering work. This gave the opportunity for the normal East Coast traffic to be seen using a diversionary route through Lincoln, making this normally quiet line exceptionally busy.

Just a little further north of Lincoln station the line crosses the River Witham, here in glorious autumn sunshine LNER power car No. 43307 leads a service northwards. *Richard Hargreaves*

One of four Class 67s working on November 10th, sees Class 67 005 leading DVT No. 82225 south through the station at Lincoln. The Class 91 loco is on the rear. *Richard Hargreaves*

Looking down onto the station from a footbridge, power car No. 43299 heads south through Lincoln station on November 10th with a service to London Kings Cross.
Richard Hargreaves

From the UK

Class 67 028 drags 91 101 northwards through Lincoln on November 17th, with a London Kings Cross - Edinburgh service. The Class 67s are attached at Peterborough and work as far as either Newark or Doncaster. *Richard Hargreaves*

From the UK

East Coast Lincoln Diversions

The view from the footbridge at the north end of the station sees Class 91 131 being dragged through by Class 67 028, with Class 37 612 waiting departure time with a Network Rail test train to Doncaster. *Richard Hargreaves*

Class 67 022 heads through Lincoln station on November 10th dragging DVT No. 82222 and an East Coast set. *Class47*

On November 17th, the view from the road bridge sees power car No. 43320 heading south through Lincoln station working a Leeds - London Kings Cross service. *Richard Hargreaves*

Henschel built No. 1405 (ex Sierra Menera railway) runs light through Turon prior to departing with a northbound coal train from the colliery on April 14th 1976. *John Sloane*

SNCF stainless steel EMU set No. Z5165 stands at the old station at Paris Montparnasse on October 24th 1981 *John Sloane*