Railtalk Magazine Xtra

Issue 139x | April 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.

I will start with an apology this month if you have been trying to access the magazine from our railtalk.net website as there have been some issues brought about by the hosting company who have decided that they would block our connection and then deny it, great service and thanks to 'Free Virtual Servers' for doing so!

News from Germany this month and after National Express started running services over there, now another British company has arrived as the first of 45 Flirt3 electric multiple units ordered by UK-based transport group Go-Ahead as part of its entry into the German passenger market has been completed at Stadler's Pankow factory in Berlin. In November 2015 the Land of Baden-Württemberg selected Go-Ahead for the Stuttgart Netz Lot 1b (Rems–Fils) contract covering the operation of 3·7 million train-km/year on routes from Stuttgart to Crailsheim and Ulm from June 2019 until 2032, and the Lot 1c (Franken-Enz) contract covering 4·4 million train-km/year on routes from Stuttgart to Aalen, Karlsruhe and Würzburg. In May 2016 Go-Ahead awarded Stadler a contract to 11 three-car and 15 five-car Flirt3 EMUs for the Lot 1b services and nine four-car and 10 six-car units for Lot 1c. Stadler will maintain the units under a separate contract awarded in May 2017.

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
Sri Lankan GM M2 No. 626 heads a Badulla - Colombo train on February 19th. *Mark Enderby*

This Page
Trenitalia's Class 412.006 and 412.020 pass Auer whilst working train No. TEC42153 from Brennero to Verona Quadrante Europa on February 7th. *Laurence Sly*

Next Page
On March 4th, Railexperts returned the Alps Express from Austria with Traxx Class 186.456 at the helm passing the 'Lageveensemolen' windmill, near Keukenhof in Lisse. *Erik De Zeeuw*

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Meanwhile in France, Finance Minister Bruno Le Maire has said that the government is to place a firm order with Alstom 'by the end of June' for 100 TGV trainsets. These would be the first build of a next generation of high speed trainset being developed under the 'TGV of the future' programme launched by Alstom and SNCF in September 2016. Due to enter service in 2022-23, the design is intended to reduce acquisition and operating costs by at least 20%, with the 'material recyclability rate' increased to over 90% and energy consumption reduced by at least 25%. The next-generation TGV would have a more modular interior and is expected to offer a 20% increase in capacity, carrying around 700 passengers compared to approximately 500 in existing TGVs. Of interest is that these TGV's have also been proposed for the HS2 line in the UK.

An interesting destination in years to come (if it happens) will be Lebanon and the long-standing proposals to rehabilitate the out-of-use railway which once ran 80 km along the coast from Beirut to Tripoli. The standard gauge line linking Haifa, Beirut and Tripoli was built by Allied forces during World War II. Along with the rest of the Lebanese rail network it is currently derelict, with the last trains having run around 1997.

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

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

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Railtalk Magazine Xtra

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, Railwaymedia, Alan Rigby, Bryan Roberts, Neil Scarlett, John Sloane, Stephen Simpson, Laurence Sly, Stewart Smith, Steamsounds, Steve Stepney, Mark Torkington, Andrew Wilson and Erik de Zeeuw.

Class 189.912 and 189.930 pass Sankt Jodok whilst hauling Lokomotion/RTC freight train No. 48861 to Verona Porta Vescovo on February 5th. *Laurence Sly*

Wiener Linien and Siemens present design for new metro

Vienna's Environment Councilor Ulli Sima, Wiener Linien GmbH & Co KG, the mass transit operator of Austria's capital, and Siemens recently presented the design for the new Vienna metro. The six-car trains, called "X cars," carry on the design elements of the city's existing trains and at the same time fulfill the most modern international safety standards. The trains can be walked through from end to end and feature an open and bright interior. The newly arranged seating layout offers an improved sense of spaciousness, optimizes passenger flows and provides barrier-free access to wheelchair and multiple-purpose spaces. A transparent partition behind the driver's cab offers passengers a new perspective of the metro line.

Wiener Linien commissioned Siemens at the end of 2017 with the delivery of 34 fully automated metro trains. The contract also includes the maintenance of the trains for a period of 24 years and an option for an additional eleven trains. The "X cars" will be operated fully automated on the new U5 line in Vienna beginning in 2024. The trains can also operate semi-automated or manually on previously existing lines. Delivery of the trains is scheduled to begin in mid-2020 and to be completed by 2030. The trains will be manufactured at the Siemens factory in Vienna.

"We'll be getting a state-of-the-art train that fits our existing infrastructure and offers very good value for the money. The proven partnership with Siemens together with the maintenance contract assure us the highest care with the conception and quality of the trains, which will benefit our passengers over a long period," noted Günter Steinbauer, Director of Wiener Linien.

"We've enjoyed a long and close partnership with Wiener Linien over the years. Following the 'Silver Arrow' in 1972 and the 'V cars' in 2000, it's a great success for us to now be able to build the third metro generation for our home location – in Vienna for Vienna," said Sabrina Soussan, CEO of the Mobility Division at Siemens.

The trains designed for Vienna are the world's first metro trains that will be equipped with the new FGI Plus passenger information system. The system offers passengers routing directions including connection information even before they arrive at the station. Directions are displayed above each door.

Passengers know before they arrive at the station how they should proceed when they get there: this optimises passenger flows and travel convenience.

The trains have a lightweight construction and over 90 percent of the materials used can be recycled. The use of LED lighting and highly efficient heating and air conditioning systems ensure low energy consumption for the trains. During operation, the train's braking energy is optimally fed back into the power rail.

Austria

A pair of TX Logistik Vectrons round the horseshoe curve at St. Jodok whilst working train No. 43156, Verona QE - Köln Eifeltor on February 9th. *Laurence Sly*

Born in Pilsen At home throughout the world

The logistics chain for consumer goods, until foods and beverages for the retail trade end up on supermarket shelves, is a long one. Because responsibility counts, golden Pilsner Urquell travels by rail.

Leading international food and beverage manufacturers, as well as retail chains, have relied on the logistics expertise of Rail Cargo Group for decades. Quality-monitored trains and high-quality freight cars not only ensure supplies between production sites but also guarantee that goods are delivered to the trader on demand. The Pilsner Urquell brewery, for example, places great importance on responsibility. Responsibility towards the environment, consumers and society. “Enjoy beer sensibly” is the guiding principle of the brewery. Sensible and responsible enjoyment, however, requires at least as sensible and ecological logistics. That’s why the long-established company Pilsner Urquell relies on the railway for its logistics.

Changeover

What used to be transported by road until recently now rolls the rails. At the birthplace of the beer, the Pilsen Brewery in the Czech Republic, the bottled beer in crates is packed on pallets and loaded into freight cars of the Habillnss series. The railway even comes directly into the Pilsen Brewery thanks to a separate siding. In order to ensure efficient loading, the brewery recently renovated the siding from the ground up. That was the only way the beer could be brought from road to ecological rail. After loading onto the freight cars, the beer bottles begin a long journey. The delicate product travels 500 kilometres through the Czech Republic before reaching the Radegast Brewery in Nošovice, Czech Republic. It is also delivered directly to a siding in the brewery. The faultless handling of the entire logistics chain under the responsibility of Rail Cargo Group proves again that the railway is a reliable logistics partner and an attractive alternative to road freight transport. In the future, Pilsner Urquell will undoubtedly make more use of the railway as the logistics of the entire transport process went off without a hitch and to the full satisfaction of the customer.

Austria

Triple Vectron power as Class 193.671, 193.558 and 193.668 pass Matrei am Brenner whilst hauling TXL train No. 43101 from Wanne Eickel to Verona Quadrante Europa on February 5th. *Laurence Sly*

Three times a week is a intermodal train service of the company Wenzel Logistics from Neuss to Kalsdorf via Wels. From Wels to Kalsdorf near Graz the train takes the route via the Pyhrnbahn. From Neuss to Wels this train is hauled by DB Cargo. From Wels to Kalsdorf it is hauled by EVU Grampet Cargo. They use always different heritage electric engines either Class 1010 or 1110 owned by Club 1018, ÖGEG, Zeller Transporttechnik and 1. ÖSEK (Strasshof).
On March 4th, Class 1010.15 (Zeller) and 1010.003 (Club 1018) are seen on the way to Kalsdorf near the station at Rohr-Bad Hall on the Pyhrnbahn. *Thomas Niederl*

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On March 25th, the Pyhrnbahn was closed due to engineering work and the train was diverted via St. Valentin and Kleinreifling. The train is seen here passing the station at Ternberg.
Thomas Niederl

Austria

On February 6th, OBB Class 1216.027 and 1116.098 pass Salfaun whilst hauling freight train No. 44201 from Hall in Tirol to Verona Porta Nuova Scalo. *Laurence Sly*

Austria

OBB Class 1116.159 passes Sankt Jodok whilst working RoLa train No. 57332 from Brennero to Worgl on February 9th. Just visible behind the loco is a service heading up to Brennero.
Laurence Sly

Austria

OBB Class 1142.668 and 1142.688 run light engine through Selzthal on February 16th. *Class47*

OBB Class 1144.230 departs Salzburg Hbf on February 16th with a service to Bischofshofen. *Class47*

MRCE Vectron Class 193.659 pauses at Salzburg on February 16th for a driver change. *Class47*

Top and tailed with Taurus locomotives, RoLa train No. 53446 passes Sankt Jodok whilst making its way from Brennero to Worgl on February 9th. *Laurence Sly*

Austria

On February 16th, Class 1116.125 hauls a RoLa service through Selzthal, heading towards Wels. *Class47*

Czechia

A nocturnal view of the very busy freight yard at Praha Liben with several CD Cargo Class 363s awaiting departure. *Class47*

On February 17th, elderly CD EMU Class 460.027 stands at Hranice na Moravě. *Class47*

The first containers of coal are unloaded

In Chvaletice, on March 13th, the first set of XXL wagons were unloaded, in which coal from Trebušice in North Bohemia was transported to Chvaletice. In the 14 cars of the Sggrrs series, 1914 tons of fuel were unloaded.

In the next few weeks, the more train s will start using the new wagons which should replace the previously used high-volume Eas wagons, which were unloaded on a rotary hopper.

ČD Cargo, in cooperation with Innofreight, offered the customer a modern solution for transportation of brown coal, including its unloading. Also interesting is the use of a robot for handling vehicles at unloading (pictured right).

The commencement of regular traffic is expected on April 16.

Photo: © CD Cargo

CD Cargo Vectron Class 383.008 hauls a lengthy LK Walter intermodal service through Česká Třebová on February 17th.
Class47

On February 17th, Class 714.204 stands awaiting departure time at Breclav with a local train to Znojmo. *Class47*

ŠKODA TRANSPORTATION TO SUPPLY ELECTRIC UNITS TO SLOVAKIA

Škoda Transportation in consortium with ŽOS Trnava has won the tender to supply up to 25 electric units for Slovak Railways (ZSSK). The Slovak company will receive state-of-the-art single-deck RegioPanter units. The value of the option contract is up to 160 million Euro, i.e. more than 4 billion crowns.

“Slovakia is our traditional and important business partner. For several years our double-deck electric units have been successfully operating on Slovakian railroads along with push-pull units and modern locomotives. Moreover, our trolleybuses and trams are also transporting passengers in Slovak cities, which is why we’re very pleased that we were able to succeed in this very challenging competition and that we can follow our previous deliveries,” says Tomáš Ignačák, Chairman of the Board of Directors of Škoda Transportation.

“Modern electric units are truly essential for regional services in the area of Žilina and for our passengers. I’m therefore very pleased that we have successfully completed this important competition. We believe that the units will be of high quality and will operate reliably. We also already have a positive experience with similar units such as those that are to be supplied, and we can therefore expect a smooth delivery process and also for the units to maintain their quality,” said Philip Hlubocký, Chairman of the Board of Directors and CEO of ZSSK.

“Our consortium won the tender not only by price, but above all by quality and the technical solution of the already well-proven modern carriage RegioPanter. In the Škoda factory we will test and approve the first two units, including all the latest changes following the customer’s wishes. For the other ordered vehicles, we’ll subsequently manufacture their rough bodies, chassis and traction sets, which we’ll transport to the assembly of vehicles in Slovakia. I’m glad that we will be assembling the carriages in Slovakia in cooperation with ŽOS Trnava, where they have many years of experience. I believe that our cooperation will be fruitful and that together we will provide modern and high-quality vehicles for regional transport to the Slovak national carrier ZSSK,” adds Jaromír Jelínek, Sales Director of Škoda Transportation.

The new RegioPanter electric units will be supplied for regional operation on all electrified lines in Slovakia for a speed of 160 km/h and voltages of 3 kV and 25 kV. Two versions of the electric unit will be provided. The first one with a length of 80 m and a capacity of 247 seats, and the second one with 106 m and a capacity of 343 seats. Each carriage of the unit will have a classic setup with two chassis and each electric unit will have three driving bogies. This will give the units excellent driving properties on all electrified Slovakian lines, allowing them to keep a reliable train schedule in demanding winter conditions.

A wide entrance door along with a fully walk-through modern interior without internal doors will enable the quick and smooth movement of passengers. Boarding the carriage will be possible directly without stairs from most standard platforms with the height of 550 mm. For other platforms, boarding will be provided using retractable stairs. “The passengers will particularly appreciate the comfortable seating, electrical outlets, air-conditioning, stylish LED interior lighting and fitting of the carriage with a spacious modern toilet that is also accessible to disabled persons. The sets will also offer a comprehensive information system with monitors, high-performance Wi-Fi, sufficient space for the transport of disabled persons, prams, bicycles and easy barrier-free boarding for all passengers,” adds Jaromír Jelínek.

There are currently already 28 modern single-deck RegioPanter electric units in operation in regional transport in the Czech Republic and they are very popular. Another nine units for the Pilsen region will be supplied during this year. There are also fourteen state-of-the-art single-deck InterPanter trains for interregional and long-distance transport in operation in the Czech Republic. However, low-floor electric units from the Škoda factory operating in the Czech Republic and Slovakia as well as Lithuania and Ukraine, and personal carriages from the subsidiary company Transtech carry passengers in Finland.

Czechia

In 2018 the CD 'City Frog' EMUs continue to operate a regular service out of Praha Liben, normally heading to Roztoky U Prahy as seen here on February 19th. With only a few sets left serviceable can they last much longer?? *Class47*

ŠKODA AUTO takes over two locomotives EffiShunter 500 from CZ LOKO

The largest Czech carmaker changed its locomotive park when two new locomotives of the type EffiShunter 500 were delivered from CZ LOKO. The handover took place on Tuesday, March 13, at a production plant in Mladá Boleslav, where both locomotives will serve to sort the complete trains with new cars.

Part of the delivery of both locomotives is also providing comprehensive vehicle maintenance for ten years in the form of full service.

" Our goal in this project was not only to deliver vehicles, but to deliver a complete, turnkey, long-term service to the client. In fact, this project only confirms the long-term trend where the customer prefers to buy locomotives, including regular maintenance, emergency services and other services related to the operation of vehicles. The biggest advantage for the customer is that he is not responsible for the reliability of the vehicles, we have to guarantee ourselves after 10 years and, in the event of a problem, guarantee the reaction time of 1 hour. Due to such challenging project conditions, we also opened a separate service center directly on ŠKODA AUTO's premises, where we will take care of both vehicles." says Ing. Jan Kutálek, Sales Director of CZ LOKO.

The four-axle locomotives of the EffiShunter 500 are primarily designed for shunting service and belong to the latest generation of shunting locomotives from the EffiShunter family. These CZ LOKO locomotives have been supplied to Třinecké železárny, Serbian companies Nafta Industrija Srbije and RailCargo Carrier in recent years. Locomotives for Škoda Auto as drive the 563 kW CAT C18 combustion engine meeting the Stage IIIB emission class and are equipped with semi-automatic couplings. The production of both locomotives took place at the CZ LOKO Jihlava production plant.

For CZ LOKO, as, this project is another very important reference. Since January 2018, CZ Logistics subsidiary has been providing the paint shop of the Mladá Boleslav car factory in the form of a long-term lease of locomotive 704,703, not only including full service, but also providing personnel for the operation of this vehicle. Photo: © CZ LOKO

SNCF BB No. 807606 departs from Montparnasse on a service along the Rambouillet line. *John Sloane*

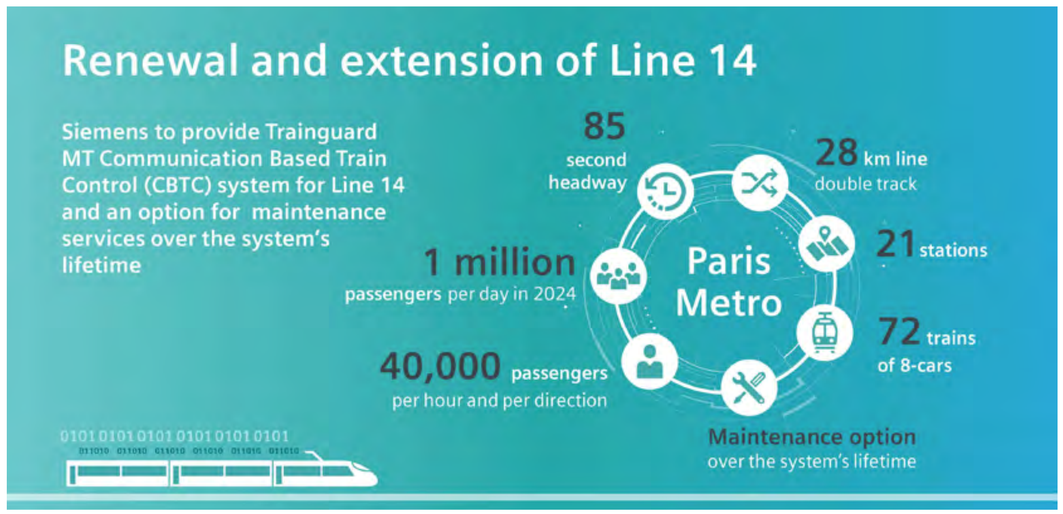
Stif branded Z8800 class EMU No. 35B calls at Juvisy. *John Sloane*

RATP awards Siemens with train control system for extension of metro line 14 on Grand Paris Express

Régie autonome des transports parisiens (RATP), the operator of the Paris metro in France, has placed an order with Siemens for the Communications-Based Train Control (CBTC) system of line 14. This line is the backbone of the Grand Paris Express, the planned new fully automated transit network for the French capital. It is the largest transport project in Europe and will support the development of the Greater Paris into a sustainable metropolitan area. The contract comprises the Grade of Automation 4 (GoA4) Trainguard MT CBTC and an option for maintenance services over the system's lifetime.

"RATP's continued trust in our CBTC solution demonstrates their commitment to meet the demands of Paris' and the Ile-de-France region's constant urban expansion through infrastructure refurbishments and extensions, helping retain the region's development in a sustainable way. It also ensures continued optimal operational performances, with an eight-car train every 85 seconds. With this new contract, Siemens will extend the backbone of the Grand Paris Express, enabling RATP to provide easier and more efficient connections for passengers more safely and comfortably" said Michael Peter, CEO of Siemens Mobility Division.

Thanks to its proven technology, Siemens is ensuring guaranteed availability, maximum throughput and enhanced passenger experience. The system is expected to go into operation in 2024. By then, the capacity of line 14 will benefit 40,000 passengers per hour and per direction, up from 30,000 today, making it the most frequented line of the Paris metro. It will allow passengers to travel directly between the Orly airport and the Paris city center and will serve the north of Paris through to the Saint-Denis Pleyel station. The extended line 14 route will be 28 kilometres long with 21 stations. The work comprises replacing the existing CBTC system with a new one on the existing line sections and the existing 35 trains on-board. Furthermore, Siemens will install the CBTC system on the line extensions and on the whole fleet, which will increase to 72 trains in 2024. The contract also includes an operations control center and the implementation of a shared backup operations control center, with a training resource for the operators.



The driving trailer of a Paris bound TER train (with No. 7247 on the rear) passes unit No. 20746 at Villeneuve St. Georges. *John Sloane*

France

SNCF single car DMUs Nos. X73521 and X73519 await their next duty at Chartres. *John Sloane*

Germany

Alstom to supply 25 Coradia Lint regional trains in southern Germany

Alstom has received two orders for the supply of a total of 25 Coradia Lint regional trains in southern Germany. DB Regio Bayern has ordered 20 trains, totalling €93 million, while Hohenzollerische Landesbahn AG (HzL) has ordered five additional trains, worth €23 million. All the Coradia Lint DMUs (diesel multiple units) will be manufactured in Salzgitter, Germany, at Alstom's biggest production site worldwide.

"We are very pleased about the confidence once again placed in us regarding our proven Coradia Lint. Starting in 2019, the trains will be operating in Baden-Württemberg and from 2020 in Bavaria, improving railway transport in the regions and bringing passenger comfort to a new level," said Joerg Nikutta, Managing Director of Alstom in Germany & Austria.

The vehicles ordered by DB Regio will operate on the "Dieselnetz Ulm" network along the routes Ulm-Memmingen(-Buxheim), Ulm-Weissenhorn and (Ulm-)-Günzburg-Mindelheim. 15 trains will be delivered in autumn 2020, while the five remaining will follow in autumn 2022. DB Regio has ordered two different types of trains that can easily be coupled for enhanced operational flexibility. Consisting of eight Coradia Lint 41 seating 125 passengers and 12 Coradia Lint 54 seating 150 people, the fleet can be quickly and easily adapted to the volume of passengers and to the different routes.

The five Coradia Lint 54 ordered by HzL for the Bodenseegürtelbahn network in Baden-Württemberg are identical to the fleet ordered by HzL last year for the "Ulmer Stern" network and will be delivered together with the main fleet in June 2019.

The low-consumption vehicles reach a maximum operating speed of 140 km/h with high acceleration. The two-part trains feature an entry height of around 620mm, a seating capacity of 150 passengers and 18 bicycle parking spaces. They are characterized by a comfortable, spacious seating arrangement in which almost every fixed seat is equipped with a table for laptops. The trains are all equipped with WLAN, an entertainment and passenger information system with static and dynamic information monitors and video surveillance to ensure high passenger safety.

Nordbahn EMU Class 429.507 departs Hamburg Hbf. *John Sloane*

Germany

Lineas Class 186.293 heads south alongside the Rhine near Lorch.
John Sloane

Dampflok No. 99.1761 stands outside the shed at Radeburg.
Steamsounds

Germany

DB Class 185.082 hauls a mixed rake of wagons including some loaded car transporters near Kaub. *John Sloane*

DB Class 294.886 hauls a rake of ballast wagons through Hamburg Harburg. *John Sloane*

Box Xpress Class 193.851 approaches Hamburg Harburg with a loaded container train. *John Sloane*

Germany

DB Class 101.103 and 111.118 await departure time at Dortmund Hbf. *Steamsounds*

DB shunter Class 323.852 is seen on display at Koblenz-Lutzel museum. This class of locomotives started use from 1932 with the German Reichsbahn and were used at small stations for shunting. *John Sloane*

Built originally for the RLM - Ministry of Aviation for Anklam / Vorpommern Airpark in the early 1940s, 0-6-0 shunter No. V36.107 now enjoys retirement at the Koblenz-Lutzel museum. *John Sloane*

Germany

DB Class 101.042 in advertising livery, heads south on the west side of the Rhine opposite the Lore-ley Rock. *John Sloane*

Chemnitz tram No. 414 calls at the Hbf working a service to Stollberg. *Steamsounds*

Deutsche Bahn: revenues and profit up

"We achieved our financial targets in 2017 but still have work to do to improve quality and punctuality," says DB AG CEO Richard Lutz – DB Schenker posts record numbers
With record revenues, higher profit and even more passengers on its long distance trains, Deutsche Bahn achieved its financial targets in 2017. "We kept our word and we delivered. But this good showing cannot hide the fact that we still have work to do to improve quality and punctuality," said Chairman of the Management Board and CEO of Deutsche Bahn, Dr. Richard Lutz, today in Berlin at the Group's Annual Results Press Conference for 2017.

Passenger numbers for long distance rail service were up by 3.2 million compared with the previous year. Over 142 million passengers took DB's long distance trains, a 2.3% increase year on year (up from 139 million in 2016). Not only did the third passenger record in a row set a new benchmark, it was also "good news for climate protection," said Lutz. The number of passengers who took DB trains and buses throughout Europe also rose significantly, by 5.3%, to nearly 4.7 billion.

DB's rail passenger transport volume increased as a whole. Transport volume at DB Regio was up 2.6%, to 41.9 billion passenger kilometres. DB Regio performed well against its competitors in 2017, winning 74% of the transport volume awarded in new regional transport contracts. DB Long Distance saw its passenger kilometers rise 2.6% to 40.5 billion. The DB Group's adjusted revenues climbed 5.2% to EUR 42.7 billion. Adjusted EBIT rose 10.6% to EUR 2.15 billion. In 2018, DB expects to generate revenues of some EUR 44 billion and an adjusted EBIT of at least EUR 2.2 billion. DB Long Distance and DB's international business units were the primary drivers of the Group's financial growth in 2017. DB Schenker generated record revenues of EUR 16.4 billion, while revenues at DB Arriva totaled EUR 5.3 billion.DB increased its gross capital expenditure by EUR 954 million, or 10.0%, to EUR 10.4 billion last year. At EUR 18.6 billion, net financial debt as of December 31, 2017 was around EUR 1.0 billion higher than at the end of 2016. This increase in net financial debt was due to an increase in the funds needed for investments in vehicles, including the ICE 4.

Punctuality situation center

DB remains committed to its punctuality targets for 2018 and will continue to aim for an 82% on-time rate in long distance transport. It will be stepping up its efforts for better quality and service, with measures that include enhancing "Zukunft Bahn," its multi-year quality improvement program. After DB's positive experience with the construction situation center it established to improve construction management, the company will be setting up an additional situation center to make similar improvements to punctuality.

Operating performance on the German rail network rose slightly, by 0.5%. Never before had so many trains travelled on Germany's rail network. Non-Group rail companies increased their share to 30.9%. DB is working with the sector to continue to expand rail network capacity, and its Digital Rail for Germany program will play a key role here.

Logistics and freight transport

DB Schenker experienced growth in all segments in the 2017 fiscal year. European land transport was up 0.8%, contract logistics grew 4.8%, and air and ocean freight saw the largest gains, at 10.3% and 8.1% respectively. Despite a 2.3% drop in transport performance in rail freight in 2017, the DB management team is confident that DB Cargo will be back on track to grow again in the future. DB intends to purchase up to 100 more new multi-system locomotives and some 4,000 additional modern freight cars by 2022. The German government's new Rail Freight Master Plan and the associated reduction in track access charges are important steps in making rail freight transport more competitive.

Berlin trams Nos. 4021 and 9015 are seen at the Hbf. *Steamsounds*

Digital revolution in Germany's rail network: First digital interlocking in Europe

Digital interlockings: Decentralized, networked, intelligent
Latest interlocking generation starts at Erzgebirgsbahn
Innovative technology ensures greater efficiency in rail operation

Deutsche Bahn AG has just inaugurated digital interlockings for trains. Europe's first digital interlocking (DSTW) has begun operation in Annaberg-Buchholz, on the Erzgebirgsbahn in southeastern Germany, ushering in a revolution for rail control and safety systems.

Characteristic for the new interlocking architecture is that the dispatcher's switching commands are transmitted to the points, signals and track contacts via network technology. As a result, previously required individual connections to the individual interlocking elements partly via kilometer-long cable bundles have been eliminated. Signals and points can now be controlled at much greater distances with the DSTW network contacts via a data line.

"Annaberg-Buchholz stands for one of the biggest technology projects in the history of Deutsche Bahn," emphasizes Klaus Müller, CTO of DB Netz AG. "Intelligent communication networks and their associated standardized and modularized technology are setting the trend for the coming years. They enable us to operate rail transport more economically, while saving resources and ensuring greater efficiency for our customers. The new interlocking technology is thus a milestone in the digitalization of rail infrastructure and will be the basis for higher capacity and improved punctuality in rail transport."

"The solution used in Annaberg-Buchholz is an important step toward interlockings in the cloud," relates Michael Peter, CEO of the Mobility Division at Siemens. "For the first time ever, an interlocking transmits its IP-based commands to the system's field elements such as points and signals. This allows completely new flexibility in planning, makes possible the use of intelligent field elements, and will generate positive cost effects over the longer term. And all this is achieved, of course, while meeting the strictest safety standards for operations."

The DSTW system in Annaberg-Buchholz marks the beginning of a country-wide implementation of the new and innovative interlocking generation. The technology can be used for operations on main lines with heavy traffic and major hub railway stations as well as for simpler applications in rural areas.

Germany

DB Regio Class 111.062 and 111.127 are seen working services out of Aachen Hbf on February 15th. *Class47*

Germany

DB Regio Class 146.010 is seen at Dresden Hbf on February 20th. *Class47*

New Siemens "Smartron" locomotive for Germany

Standard locomotive for freight transport in Germany
Smart concept: One version, one contract, one price
Already approved for operation

Siemens is offering a new locomotive for service in Germany: The Smartron is tailored for a specific transport function and utilizes all the advantages provided by standardization. As a preconfigured locomotive, the Smartron has been conceived for transporting freight in Germany and ensures customers cost-efficient operation and the highest safety standards. The Smartron has already received approval for operating in Germany. The locomotives can now be ordered and will be delivered beginning late in 2018. The first locomotive of the new series is immediately available to customers for test runs and demonstration.

"With the new Smartron, we're offering our customers a powerful and reliable locomotive that is configured for specific operations, making possible a simple purchase process. One standard version, one standard contract, one standard price – that's the idea behind the Smartron," says Sabrina Soussan, CEO of the Mobility Division at Siemens.

The Smartron is based on proven components of the Vectron, which has already demonstrated its reliability in over 100 million kilometres of operation.

The locomotive has a maximum output of 5.6 MW and a top speed of 140 km/h. It operates on the standard 1,435 mm gauge and weighs around 83 tons.

The Smartron is designed for the 15-kV AC power system and is equipped with the PZB/LZB train protection system. The locomotive will be delivered in the standard color "Capri Blue."

Germany

DB Regio's Class 442.647 stands under the marvellous roof at Dresden Hbf on February 20th with a terminating service. *Class47*

Innovative ECO tuning for existing vehicles

Old DB Cargo locomotives learn new fuel efficiency tricks.

With a simple adjustment to the engine control system of some 400 Class 290, 294 and 296 shunters, DB Cargo can save up to 800,000 litres of fuel a year and at the same time do more to protect the environment. This eco tuning focuses on optimizing engine control maps. Project manager Jörg Schneider explains: "Every locomotive has its own load profile and can be customised on an individual basis. We look at the current load data and use this to optimise engine characteristics such as the pressure, duration and timing of fuel injection in each separate locomotive." Across all operation bases, this can cut fuel consumption by 1.2% to 3.5%, without the need for shunting locomotive drivers to modify their driving style.

No trip to a depot required

Making the necessary change to the locomotives is so simple that it can be done during operation. "Competition on the logistics market is relentless, so we can't simply take a few locomotives out of circulation," says Schneider. To address this, a mobile "data flash" unit was developed specially for DB Cargo as part of the company's engine management project. Using this unit, it is possible to update the engine control maps in just 10-15 minutes. These maps are themselves the result of a joint undertaking with Eco-Rail, the University of Applied Sciences in Munich and the motorsports experts at MTO-Engineering, who developed computer simulations for all of the Class 294's technical characteristics to show the changes and their impact. After just seven months' work, the researchers identified the ideal settings to cut diesel consumption without negatively affecting the vehicles' performance. One such adjustment entails deactivating cylinders during empty running. Schneider says, "This means that an engine only runs on four cylinders – energy-saving mode, you could say. Only if it needs more power, for example when shunting, do the other four kick into action again."

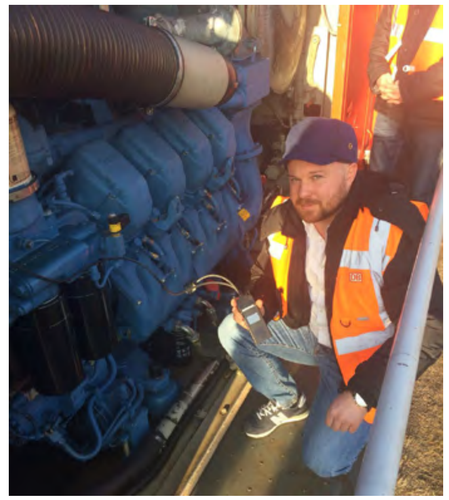


Photo: Head of Development & Best Practices Jörg Schneider

DB Class 146.025 departs Dresden Hbf on February 20th with a service to Bad Schandau. *Class47*

GYSEV's Class 471.004 and 430.320 are seen stabled at Sopron on February 16th. *Class47*

H-Start Class 630.009 and 480.001 stand with several others at Gyor on a dull and misty February 16th. *Class47*

Railpool's Class 186.281 and 186.287 pass Auer on February 7th whilst hauling freight train No. 49839 to Verona. *Laurence Sly*

Italy

On February 6th, Rail Traction Company's EU43.005 departs Brennero for Brescia with a train of scrap steel. *Laurence Sly*

Italy

FS Class E412.008 passes Campo di Trens whilst hauling freight train No. 42153 from Brennero to Verona Quadrante Europa on February 8th. *Laurence Sly*

Italy

Vectrons Class E193.556 and E193.555 pass Vipiteno whilst hauling a TXL Intermodal train to Verona Quadrante Europa on February 8th. *Laurence Sly*

OBB's Class 1216 No. 190.032 passes Vipiteno whilst working train No. EC85 from Munich to Bologna Centrale on February 8th. *Laurence Sly*

Alstom to supply 54 additional Coradia Stream "Pop" regional trains to Trenitalia

Alstom has been awarded four contracts totalling around €330 million by Trenitalia, the Italian national train operator, for the supply of 54 Coradia Stream regional trains. The trains are destined for the Italian regions of Abruzzo (4 trains), Liguria (15 trains), Marche (4 trains) and Veneto (31 trains) as part of the framework agreement signed in 2016 between Alstom and Trenitalia. The 54 additional trains add to the 47 trains already ordered by the Emilia Romagna region in 2016.

Alstom's Coradia Stream for Trenitalia, dubbed "Pop" by the customer, is the latest generation of trains designed for regional and intercity lines. Coradia Stream is an Electric Multiple Unit (EMU) with maximum speed of 160 km/h in the regional version. The train ordered by Trenitalia can transport more than 300 passengers seated, offering easy accessibility thanks to its low floor. Designed to be eco-friendly, the train is 95% recyclable.

"We are very pleased that Trenitalia and Abruzzo, Liguria, Marche, Veneto have renewed their confidence in Alstom's Coradia range of regional trains and we hope to get on board with other regions. The "Pop" is proving to be widely appreciated by local authorities and by passengers, who got a glimpse of it in full-scale mock-up form during a recent roadshow," said Michele Viale, Managing Director Alstom in Italy.

Coradia Stream can be easily customised to different services. Interior layouts and seating arrangements can be modified, to provide for example, more seats for longer journeys, or fewer seats and more standing room for shorter trips. The cars' interior layout can be adapted to seasons and specific needs: it is possible to add bicycle or ski racks, electric sockets, Wi-Fi connection, vending machines for drinks and snacks, multimedia areas, areas for working or relaxation. Aboard the Coradia Stream, comfort, space, and light are maximised by larger windows, while advanced services, such as infotainment, audio and video feeds and a live video surveillance system, ensure comfort and security.

The Coradia Stream "Pop" trains are manufactured by Alstom in Italy. Project development, most of the manufacturing and certification are performed at Alstom's site in Savigliano, Cuneo. Design and manufacturing of the traction systems and auxiliary switches takes place at the Sesto San Giovanni plant (Milan), and the on-board signalling systems are delivered by the Bologna site.

Italy

Museum San Donato

FS 2-8-0 No. 740.409 is seen at the Museum San Donato in Pistoia. *John Sloane*

The FS E626 class of Italian electric locomotives were produced for the Ferrovie dello Stato. They were introduced in the course of the 1920s and remained in service until the 1990s, the E626 was the first locomotive fed by 3,000 V DC overhead line in Italy. Preserved No. 626 194 is seen at Pistoia. *John Sloane*

The Class D445s were built by Fiat and 150 units were built between 1974 and 1988, divided into three series. At Pistoia, Class 445.078 is seen in the museum yard. *John Sloane*

Trenitalia's Class E402.171 departs Pisa with a Milan to Livorno service. *John Sloane*

FS Class E652.146 departs Pisa on a southbound container working. *John Sloane*

Italy

A 'Frecciabianca' set arrives at Pisa. *John Sloane*

Trenitalia Jazz EMU No. ETR 425 awaits departure from Pisa. *John Sloane*

Trenitalia's ALe 642 060 stands at Lucca with a service to Pisa. *John Sloane*

Netherlands

Thalys No. 9309 has just arrived in Amsterdam CS with a service from Paris on March 14th and on the left train No. IC2143 waits departure time with a service to The Hague. *Erik de Zeeuw*

On March 16th, Volker Rail's Cat powered Class V100.203-1 (Tom) passes Laag-Nieuwkoop (Kockengen) hauling a Gottwald crane.
Erik de Zeeuw

Mitsui Rail Capital Europe and Siemens to found joint venture

Siemens and Mitsui Rail Capital Europe (MRCE), a full-service locomotive leasing company, have agreed to found a joint venture for the servicing and maintenance of locomotives. The agreement stipulates that Siemens and MRCE each will hold a 50-percent stake in the joint venture and jointly manage the new company. Founding of the firm, pending approval of antitrust authorities, is expected to be completed in the first half of calendar year 2018.

The Dutch company will be headquartered in Rotterdam, the Netherlands, and be named Locomotive Workshop Rotterdam (LWR). Both partners are jointly investing in the joint venture, primarily to build a new workshop for locomotives. The groundbreaking ceremony is planned for the current calendar year. The new workshop is scheduled to open in the summer of 2019. "Siemens and MRCE have enjoyed a close supplier relationship for years. With the founding of the joint venture, we are raising our collaboration to a new level. Together, we will not only maintain the MRCE fleet, but also reliably service and guarantee the maximum availability of third-party fleets with our innovative maintenance technologies. With the new facility in the port of Rotterdam, we are expanding our existing international workshop network and can better support customers where they need us," said Johannes Emmelheinz, CEO of Customer Services at Siemens Division Mobility.

"MRCE has more than 10 years of experience in the Management of Full Services for Locomotives across Europe. And as a Full Service Leasing Company we know about the importance of innovative maintenance strategies in order to maximize the availability of provided traction. We'll bring in this experience into the Joint Venture with Siemens, creating an important Service Hub for European Rail Operators in Rotterdam, which is one of the crucial locations along the main corridors of the RailNetEurope Network, the Association for facilitating traffic on European rail infrastructure," said Junichi Kondo, CEO of Mitsui Rail Capital Europe. The location of the new workshop in the port of Rotterdam will enable rail operators to optimize their long-term planning of necessary service stops for locomotives on their routes. The port is an ideal location for servicing locomotives arriving from throughout Europe, and will eliminate long service transfer runs that cost time and money. As the biggest seaport in Europe, Rotterdam is a key logistics hub in the European rail network. Each week, there are more than 250 intermodal rail connections in the port. Operations and service stops can thus be combined and coordinated with one another. The workshop will handle inspections, preventive and corrective maintenance work, which also can include simple repairs and upgrades.

Poland

PKP No. EP07.389 approaches Zbaszynek with train No. TLK57100 from Gdynia to Zielona Gora on February 2nd. *Mark Torkington*

Steam loco No. Pt47-65 makes a bit of a show as it runs around its regular daily local train turn at Leszno on February 2nd. *Mark Torkington*

On February 1st, PKP's EP07.1047 stands at Poznan with train No. TLK38102 from Przemysl to Szczecin. *Mark Torkington*

Slovakia

OBB Class 2016.098 stands at Bratislava hlavná stanica on February 17th working one of the hourly services to Wien Hbf. *Class47*

Sri Lanka

Chinese-built S12 DMU No. 930 approaches Rambukkana on February 19th. *Mark Enderby*

B1d No. 340 working the 'Viceroy Special' is seen at Elephants Pass near Jaffna on February 26th. *Mark Enderby*

Hitachi M5 No. 771 and Montreal M4 No. 752 stand at Maradana station in Colombo on February 19th. *Mark Enderby*

Sri Lanka

Class W3 No. 636 shunts empty stock at Kandy on February 20th. *Mark Enderby*

Chinese-built S12 DMU No. 938 is seen at Talawakelle on February 20th. *Mark Enderby*

Class W3 No. 673 stabled on Kandy shed, February 20th. *Mark Enderby*

Sri Lanka

Montreal M4 Class No. 747 arrives at Kurunegala on February 28th. *Mark Enderby*

On February 26th, B1d No. 340 working the 'Viceroy Special' is seen at Killinochchi on the Jaffna line. *Mark Enderby*

Sri Lanka

Brush M7 Class No. 810 with a 'Baby Train' passes Maho Jct. on February 28th. *Mark Enderby*

Montreal M4 Class No. 743 arrives at Medawachchiya with a train from Taleimannar Pier on February 26th. *Mark Enderby*

Montreal M4 Class No. 745 shunts empty stock at Anuradhapura on February 26th. *Mark Enderby*

Sri Lanka

Ashok-Leyland railcar arrives at Maho Jct. on February 25th. *Mark Enderby*

Indian-built M8 Class No. 848 and Henschel M5 Class No. 771 work an oil train through Maho Jct. on February 28th. *Mark Enderby*

Indian-built S11 Class DMU No. 896 arrives at Maho Jct. on February 25th. *Mark Enderby*

Spring at Andermatt and MGB HGe 4/4II No. 5 has arrived with train No. R827 from Disentis/Müster. *Steamsounds*

Voith CargoFlex Type Scharfenberg automatic coupler optimized for freight service

The new Voith CargoFlex Type Scharfenberg automatic coupler for freight service increases the productivity and efficiency of the coupling operation. Screw couplers with drawhooks and side buffers – the same types of couplers as those used 150 years ago are still being used in European rail freight service. Every car must be coupled and uncoupled by hand. Each coupling operation takes 30 seconds, not including the time spent walking along the cars. Compounding this, there will be fewer workers in the future for the classification yards because of the harsh working conditions and demography. In this respect, automatic couplers used in passenger service are proving daily just how comfortable rail freight service might look in the future. Based on its proven Scharfenberg coupler Type 10, Voith has now developed the Voith CargoFlex Type Scharfenberg automatic freight coupler. This coupler simplifies and speeds the coupling of freight cars.

The new freight coupler is in trial operation for the first time by SBB Cargo, the freight subsidiary of the Swiss Federal Railroad (SBB). SBB Cargo is testing the Voith CargoFlex Type Scharfenberg on seven freight cars under the auspices of the 5L research project. With the five goals of lightweight, low-noise, lasting the course, logistics-capable and life cycle-cost-based, the freight cars are to undergo a complete technical renovation to make them competitive. Starting in January 2019, SBB Cargo will test the automatic coupler in mixed service in Switzerland for a pilot project.

Reliable components optimized for freight service

The new Voith CargoFlex Type Scharfenberg is equipped with a UIC vehicle interface and, in principle, functions just like every Scharfenberg coupler. However, modifications have adapted it to the high loads present in freight service. For this reason, Voith focused during the development effort on a very light and robust design as well as a modular strategy for semi-automatic to fully automatic coupler operation. The weight of the prototype undergoing testing was reduced by one third by the design. The coupler has been optimized for the European rail freight traffic. The integrated damping system of the coupler also satisfies the requirements of EN 12663-2 for freight cars of Category 1. In addition, the coupler was developed for optimal winter operation (without a heater).
Due to the long maintenance intervals for freight cars, a robust design is particularly important. “Voith made use of proven design principles in the freight coupler and made a conscious decision to avoid screw connections that are in the load path and require maintenance,” says Jessica Amberg, the 5L Train project manager at SBB Cargo. “The tests performed thus far promise reliable operation in our freight train over the four-year test phase.”

Additional safety from modular expansions

In the trial operation and in the commercial operation envisioned by SBB Cargo, a semi-automatic version is being used that, during automatic coupling, connects the air pipe connection for brake pipe automatically and can be opened again manually from the outside of the vehicle.

The Voith CargoFlex Type Scharfenberg, due to its zero-backlash principle, is the first coupler in freight service to offer the option of fully automatic procedures by being equipped with an automatic uncoupling system and a signal or electric power transmission system. This also makes it possible to supply electric power to loads or to relay signals.

For the interface to the locomotive, Voith supplies a mainline-compatible hybrid coupler. Locomotives equipped with this can be used without restriction for commercial operation with both automatic couplers and screw couplers.

Switzerland

RhB Ge 4/4III No. 651 approaches Bergün/Bravogn with train No. RE1149 for St. Moritz. *Steamsounds*

RhB Allegra EMU No. 3507 on train No. R1637 for Tirano crosses ABe 4/4s Nos. 55 and 52 on train No. R1660 to St. Moritz. *Steamsounds*

It's not a fine Spring day as RhB Ge 4/4III No. 651 arrives at Samedan with train No. RE1144 from St. Moritz to Chur alongside green liveried Ge 4/4II No. 621. *Steamsounds*

RhB Ge 6/6II No. 707 departs from Bergün/Bravogn with train No. RE1137 for St. Moritz. *Steamsounds*

Ukraine

On February 17th, M62M-1225 sits at Lyuboml with a local train from Kovel to Yagodin on the Polish border. *Mark Torkington*

2M62K-1136A (half of a twin unit) departs from Manevychi with a Kovel to Sarny local train on February 17th - what is believed to be a semi-permanent combination of unit and loco.
Mark Torkington

Tu7-0767 unloads passengers at the station of Borove on the small narrow gauge line from Antonivka to Zarichne on February 18th. It was thought that this line has just gone down to only running twice a week due to a failure of the regular Tu3 locomotive, although that's not been confirmed from anything official as yet.
Mark Torkington

Ukraine

No. M62-1473 is pictured upon arrival at Kovel on February 17th with a train from Sarny. *Mark Torkington*

On February 19th, No. VL80-1480 awaits departure from Lviv with train No. 81 to Uzhorod with a portion to Budapest. *Mark Torkington*

Bombardier Secures Rail Services Contract Extension with Maryland Transit Administration

Operations and maintenance contract with one of the largest multi-modal transit systems in the United States extended for five years
Latest agreement highlights Bombardier's strong position in the North American rail services market

Rail technology leader Bombardier Transportation has announced that it has signed a five-year extension to its current contract with the Maryland Transit Administration (MTA) to provide operations and maintenance services for the Brunswick and Camden Lines of the Maryland Area Regional Commuter (MARC) Rail System. The contract extension is valued at approximately $288 million US (233 million euro).

Benoit Brossoit, President, Americas Region, Bombardier Transportation said, "We look forward to continuing to fulfill the mission of MTA by providing safe, efficient, and reliable transportation with world-class customer service. Bombardier's strong services portfolio complements our innovative products and technologies, allowing us to form a genuine partnership with our customers throughout the entire product life cycle."

Bombardier has been providing operations and maintenance services for the MARC Train's Brunswick and Camden Linesunder a contract awarded in 2012. The scope of work includes operations, maintenance of a fleet of diesel locomotives and commuter rail cars including Bombardier-built multi-level vehicles, customer service, station and facility maintenance, and maintenance of rail infrastructure for the portion of the Brunswick Line owned by MTA. An established Bombardier customer, MTA is a division of the Maryland Department of Transportation and one of the largest multi-modal transit systems in the United States. In addition to providing operations and maintenance services for the MARC Train's Brunswick and Camden lines, Bombardier also is overhauling 63 MARC III bi-level commuter rail coaches. Previously, Bombardier manufactured 54 multi-level MARC IV coaches for the MTA and overhauled 34 single-level MARC IIB coaches.

Elsewhere in North America, Bombardier also provides operations and maintenance services for transit systems including the Central Florida Commuter Rail Transit project (SunRail), Metrolinx/GO Transit in Toronto, New Jersey Transit (RiverLINE), North County Transit District in California (COASTER and SPRINTER rail services), the Réseau de Transport Métropolitain in Montréal, the Southern California Regional Rail Authority (Metrolink), and TransLink (West Coast Express) in British Columbia. In addition, Bombardier will maintain the fleet for the new Toronto Eglinton Crosstown Line and will provide operations and maintenance services for the new Edmonton Valley Line in Alberta. Bombardier also operates and maintains automated transit systems at 14 airports in the United States and supports customers with overhaul and refurbishment programs as well as with material and technology solutions.

Closing the Nordic loop

DB Cargo is once again the sole owner of Danish rail freight company DB Cargo Scandinavia A/S.

With its buyback of the remaining 49% stake in DB Cargo Scandinavia A/S, DB Cargo has wound up the joint venture launched with Swedish logistics company Green Cargo in 2008. The effort was intended to help both companies outmanoeuvre competitors on the Scandinavian market. After roughly ten years, the partnership is ending, and DB Cargo is now in a position to offer its own end-to-end rail service between Germany and Sweden via

Denmark. Previously, most trains had to be transferred to Green Cargo in the Swedish port of Malmö. The change in tack also serves the interests of DB Cargo's customers, as they have specifically requested uninterrupted rail service from Germany to Sweden.

Vision for 2020

DB Cargo sees its full acquisition of the Danish FOC primarily as an investment in the Scandinavian network, which is critical to its own operations. The move sharpens the focus of DB Cargo's Swedish subsidiary on connecting the Swedish market and its rail network with Germany. According to a spokesperson for DB Cargo, "our vision for 2020 is to grow our business in Scandinavia and become the region's largest freight transport operator connecting northern and central Europe." Green Cargo and DB Cargo will maintain their cooperation on operational activities.

Alstom ships the first train for Metro of Panama Line 2

Alstom has shipped the first Metropolis trainset for Panama metro line 2 from its factory in Barcelona (Spain). All 20 metros ordered for Panama Line 2 will be manufactured at Alstom's plant in Barcelona, where the metro trainsets for line 1 were produced. Currently Alstom is also manufacturing and delivering 70 additional cars for Panama metro line 1 to expand the current fleet to 26 trains of 5 cars each.
The new line 2 of Panama metro is expected to enter in commercial operation in 2019. It will be 21-km long and include 16 stations. Elevated, the line will run from San Miguelito to Nuevo Tocumen and will be able to carry up to 40,000 passengers per hour and per direction. Line 2 will interconnect with line 1 which was also equipped by Alstom and inaugurated in April 2014. With the new line, Panama metro network will total 37 kilometres.
In 2015, Alstom, as leader of a consortium including CIM, Sofratesa, Thales and TSO, was awarded a contract to supply an integrated system to equip Panama metro line 2. Alstom will supply for this new line an integrated metro system which includes 21 Metropolis trainsets as well as traction substations including Hesop reversible substation, and Urbalis (Alstom Communication Based Train Control –CBTC- solution which controls the movement of the trains and enables trains to run at higher frequencies and speeds in total safety). In the case of Panama Metro line 2, the headway between two trains will be 90 seconds.

Siemens delivers 26 locomotives for Danish State Railways

DSB orders Vectron locomotives in AC configuration
Option for 18 additional locomotives
Delivery beginning at the end of 2020

Danish State Railways (DSB) and Siemens signed a contract for the delivery of 26 alternating-current (AC) Vectron locomotives. The locomotives will operate in Denmark and Germany. Delivery of the units is scheduled to begin at the end of 2020. The contract with DSB also includes maintenance of the locomotives for ten years and options for the delivery of an additional 18 units and an extension of the maintenance contract for a further five years. The locomotives will be built at the Siemens factory in Munich-Allach.

"This order marks a further chapter in the success story of our Vectron locomotive. Danish State Railways is investing in a proven product that stands for quality and exceptional reliability. The Vectron also fulfills the requirements for cross-border operations," says Sabrina Soussan, CEO of the Mobility Division at Siemens. The new locomotives will primarily operate in regional transport as traction units for DSB's 113 double-decker passenger coaches. The locomotives have a maximum output of 6,400 KW and a top speed of 200 km/h. The Vectron ACs are designed for 15 kV / 16.7 Hz and 25 kV / 50 Hz AC voltage systems and are equipped with the European Train Control System (ETCS) as well as the PZB/LZB and DK-STM.
Siemens has already sold the Vectron more than 670 times, to 37 customers in 15 countries. The Vectron fleet has accumulated more than 110 million kilometers of service so far. The locomotives are currently certified for operation in Austria, Bulgaria, Croatia, the Czech Republic, Finland, Germany, Hungary, Italy, the Netherlands, Norway, Poland, Romania, Serbia, Slovakia, Slovenia, Sweden, Switzerland and Turkey.

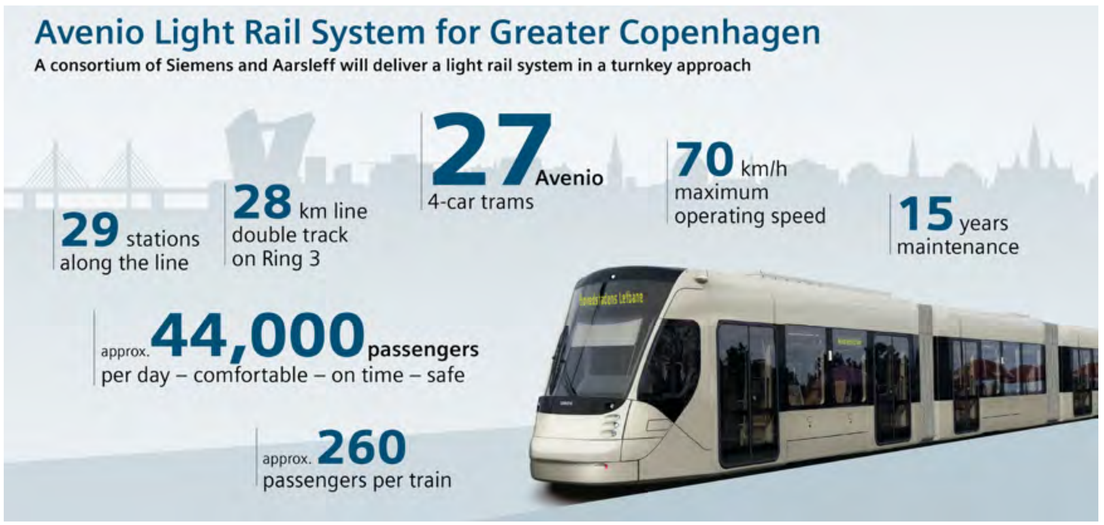
BARCELONA'S METRO AWARDS 10 UNIT CONTRACT

The standing committee for contracts of the Board of Directors of Transportes Metropolitanos de Barcelona (TMB) has designated CAF for the supply of 10 trains for the City's metro network. The units will run on Lines 1, 3 and 5 to increase the number of existing units and respond to the growing passenger demand in these lines. This operation will earn CAF an aggregate in excess of €75m. The new ten units manufactured by CAF are scheduled for delivery starting from the second half of 2019. More specifically, the order includes four trains of Series 6000 for Line 1, two trains of Series 5000 for Line 3 and a further four more trains of the latter model for Line 5. These units build on more than 100 units already supplied by CAF in the past for the metropolitan network of the Catalan capital.

According to the announcement of Transports Metropolitans de Barcelona (TMB), this rolling stock procurement aims at the improvement of the metro services with the 2020 time horizon, for a 20% capacity increase in peak hours Monday through Friday.
This will enable the company to meet the growing demand for public transport in the metropolitan area of Barcelona (with record numbers both for the underground and the whole transit system in 2017). This trend is expected to persist in the mid term as a result of public policies on mobility and the environment. The objective for year 2020 is to reach the figure of 144 simultaneously running trains, 17 more than the current number and 24 more relative to January 2017 (20% increase).
Furthermore and significantly, this new project reinforces the trust placed on CAF by some of the main transit operators in cities such as Washington, Mexico City, Rome, Brussels, Hong Kong, Algiers, Sao Paulo, Santiago de Chile, Medellin, Istanbul, Bucharest or Helsinki. Besides, the operation strengthens CAF's current backlog which, as of the close of 2017, amounted to €6.27bn, the Company's historical record.

Siemens to build light rail system for Greater Copenhagen

In a consortium with the general infrastructure contractor Per Aarsleff A/S, Siemens has received an order to build a light rail system in Copenhagen, Denmark, from urban transport development company Greater Copenhagen Light Rail I/S. The contract includes 27 four-car Avenio trams, rail electrification, signalling, communication, workshop equipment, overall project management and system integration. The contract will be implemented as a turnkey project. The contract also includes maintenance services for 15 years. Commissioning of the system is planned for 2024.
The tram line will consist of 28 kilometres of double track with 29 stations, and will run between Lyngby, a northern suburb of Copenhagen, and and Ishøj, a suburb south of the city. Each Avenio tram has a seating capacity of 64 and space for 199 standees. The line will run along the Ring 3 highway and replace bus service in an effort to decarbonize public transport as part of the urban development plan developed in 1947, known as the Finger Plan.



"With more than 130 years of experience in building electric trams, Siemens offers turnkey projects to its customers featuring an integrated overall solution that fits the needs of any town or city, making them a reliable community partner. Siemens' light rails help cities to make mobility more sustainable and economical. As an attractive mode of transport they also have a positive effect on the development of city districts and thus make a positive contribution to social development," says Michael Peter, CEO of Siemens Mobility Division.

The purpose behind building a light rail system in Greater Copenhagen is to develop the city's suburbs and connect the "fingers" to the capital and the 11 municipalities between them. This project will strengthen green transportation in Copenhagen and will mark a significant improvement in the city's infrastructure. It will play an important role in improving air quality and reducing traffic jams and congestion in the capital. Furthermore, it will support Copenhagen's goal to become the world's first carbon-neutral capital city by 2025.

Alstom and the SNTF celebrate the commercial entry into service of Coradia Polyvalent for Algeria

Algeria's SNTF (Société Nationale des Transports Ferroviaires d'Algérie) awarded a contract to Alstom on 29 July 2015 for the delivery of 17 Coradia Polyvalent trains. After the successful completion of static tests at Alstom's site in Reichshoffen and dynamic tests at the Vélim railway test centre in the Czech Republic on 28 January 2018, the first train was received at the port of Algiers in the presence of Mr. Salim Djala, the representative of the Minister of Public Works and Transport and Mr. Bendjaballah, Managing Director of the SNTF. The train then successfully underwent a new series of static and dynamic tests on the SNTF rail network in preparation for the commercial entry into service of the line.

Deliveries of the following trains will be made over the course of the year 2018. These trains will serve Algeria's major cities and are designed and manufactured at the Alstom site in Reichshoffen, France.

"The first Coradia Polyvalent train for Algeria now enters commercial service. This is, for us, a confirmation of the trust of our customer and of our partners in Algeria. Our ambition is to perpetuate this partnership and contribute to the development of the railway sector in Algeria," says Didier Pfleger.

The train is Alstom's first Coradia in Africa. Several innovations have been made to Coradia Polyvalent for Algeria, placing the passenger at the heart of its design. The train provides optimal brightness and is adapted to the country's climatic conditions (sand, high temperatures) and equipped with a very efficient air conditioning system. Coradia Polyvalent's fully low floor facilitates access and circulation on board the train. It also comprises tried and tested equipment and powerful motorisation resulting from established, reliable technology that guarantees the availability of the trains.

Alstom's Coradia range of trains benefits from 30 years of experience, with more than 4 billion kilometres covered by 3,000 trains.

Alstom and EMA inaugurate the tramway system of the city of Ouargla in Algeria

On March 20th, Mr Abdelghani Zaalane, Algerian Minister of Public Works and Transport, inaugurated the first tramway system of the city of Ouargla. The event was attended by Mr Kouraba Mostafa, Managing Director of EMA (Entreprise Métro d'Alger) and Henri Bussery, Managing Director of Alstom Algeria.

Alstom and CITAL, its joint venture in Algeria, won a contract in September 2013 for the supply of a tramway system including 23 Citadis trams, signalling, traction substations, telecommunication systems, operational support, maintenance equipment and ticketing. The new line connects the city of Ouargla and its new areas, via the city centre and Ouargla's universities, on a route 9.7 kilometres long and comprising 16 passenger stations.

"Alstom is proud to celebrate the entry into commercial service of Ouargla's tramway line with its customer EMA. Algeria's first desert tramway system illustrates Alstom's strategy of offering complete solutions tailored to local requirements, while demonstrating the best in technical performance," said Henri Bussery, Managing Director of Alstom Algeria.

Nearly 44 metres long, the Citadis tram for Ouargla is capable of transporting over 400 passengers. To accommodate the climatic conditions of the region, in particular sandstorms and high temperatures, significant technical modifications were made to the tram. The air conditioning system was reinforced, the windows equipped with a solar protection film, the traction and braking systems were modified for greater impermeability, and exposed parts (joints, shock absorbers and pantograph) were protected.
The Citadis trams are assembled by CITAL at the Annaba plant in Algeria.

Alstom's sites in France involved in the project are: Saint-Ouen (maintenance and ticketing equipment), La Rochelle (design and validation), Le Creusot (bogie design and manufacture), Tarbes (design and manufacture of the traction equipment) and Villeurbanne (design and manufacture of on-board electronic equipment and the passenger information system). The Alstom sites of Barcelona and Madrid in Spain are also involved. The teams in Algeria are responsible for the project management.

Alstom has been present in Algeria for more than 30 years, with over 300 employees in the country. Alstom has already provided integrated tramway systems to the cities of Algiers, Oran and Constantine, as well as the infrastructure for the tramway systems of Mostaganem and Sétif.

Alstom delivers first fully automated metro trains to Sydney, Australia

Alstom has delivered Sydney's first metro trains as part of the Sydney Metro Northwest project – which is Stage 1 of Sydney Metro, Australia's biggest public transport project. Sydney is the first city in Australia to implement a fully-automated metro system, providing a world-class, modern transport solution to meet the needs of the growing city when services start in the first half of 2019.

The first three of 22 six-car trains have been delivered to the Sydney Metro Trains Facility at Rouse Hill and are being tested over the coming months. The €5.2 billion Sydney Metro Northwest project is Stage 1 of the Sydney Metro project. The new system will provide a high level of service, with a train every four minutes in the peak in each direction. Services will extend into the city in 2024 and will have an ultimate capacity of a metro train every two minutes in each direction under the city.

"We are extremely proud to be able to deliver another first for Sydney with our latest and most innovative automated metro technology," said Mark Coxon, Managing Director for Alstom in Australia and New Zealand. "This train and associated technologies will transform Sydney and provide a step change in the city's public transport capability and reliability," said Mr. Coxon.

Designed uniquely for Sydney by Alstom teams globally, the trains demonstrate Alstom's leadership in urban mobility. Customers have been placed at the heart of the development of this new train with the emphasis towards greater on-board mobility and comfort.

The trains include three double-doors per side in each car for improved access and passenger flows, large windows and ambient LED lighting. The trains will offer the highest levels of customer safety including constant CCTV monitoring, emergency intercoms and the latest way-finding aids for customer information and real time travel information.

The system will operate Alstom's world leading computer based train control system (CBTC), Urbalis 400, which minimises the time stopping at stations and the times between each service – ensuring a comfortable and reliable journey for all customers.

Alstom completes most powerful all-electric "Make-In-India" locomotive from Madhepura and announces contract wins worth €75 million in India

Alstom has announced the completion of its first all-electric locomotive from its state-of-the-art locomotive facility at Madhepura in the State of Bihar, on schedule. In line with the Government's and Indian Railways' target towards 100% electrification and towards sustainable mobility, these new locomotives will not only bring down operating costs for the Railways but will significantly cut down greenhouse gas emissions as well.

This first locomotive is part of a €3.5 billion order comprising 800 electric double-section locomotives signed in 2015 which contributes to the Ministry of Railways' public-private partnership programme to modernise the country's rail infrastructure. This agreement remains the largest Foreign Direct Investment in the railways sector to date and has a strategic role in creating a multiplier effect on the economy. This contract is also one of the biggest contracts in the history of Alstom.

"Our operations in India are paramount to our business globally and we continue to stay committed to developing India's infrastructure needs, improving the quality of services to citizens and investing in the nation's economy," said Henri-Poupart Lafarge, Chairman and CEO, Alstom.

Further commenting on the completion of the first electric locomotive, he added, "This project stands as a shining example of Alstom's commitment to 'Make in India'. Apart from creating thousands of jobs directly and indirectly, we have created a strong localised supply chain for this project, with 90% of the components sourced locally."

Thanks to its 12,000 horsepower, each double section locomotive, part of Alstom's Prima locomotives family, has a hauling capacity of 6,000 tonnes and speed of 120km/hr, allowing faster and safer movement of heavier freight trains across the country, thereby reducing congestion for passenger train services and freight. Equipped with IGBT based propulsion technology, these locomotives will be compliant with Indian standards of freight transport and will have the ability to endure tough Indian climate and conditions. The locomotives were developed with the support of 6 Alstom sites in France: Belfort for the 6 first car bodyshells, and Ornans for the motors, Tarbes for the traction, Le Creusot for bogies, Villeurbanne for the train control monitoring systems and Saint-Ouen for the design.

In another significant development, Alstom announced three new contracts worth approximately €75 million - power supply contract from the Mumbai Metro Rail Corporation Ltd (MMRCL), contract for new train sets from Chennai Metro Rail Corporation and another power supply contract from Jaipur Metro Rail Corporation. This development shows Alstom's growing footprint in the country, in both the urban space as well as the mainline space.
Additionally, phase 1 in the construction of the electric locomotive facility at Madhepura and the depot at Saharanpur is complete and work is progressing as per the contractual timelines. To give skilling and local hiring an impetus, focused efforts towards nurturing young minds in communities in and around Madhepura have been initiated. With the help of local NGOs, Alstom Foundation is working to foster better health care, education and dignified livelihood in the area.

Stadler wins contract to manufacture 12 trams for the Metropolitan Train Project of Cochabamba, Bolivia

For the first time electric trams will be operating in Bolivia. The METELITSA type model will have a capacity of up to 200 passengers and will be in commercial service by 2020.

The Swiss rail vehicle manufacturer Stadler has been awarded the contract to manufacture and deliver 12 trams for the Cochabamba Metropolitan Train project. The order has been granted by The "Asociación Accidental Tunari" formed by the Spanish construction company JOCA, a company of the ICADI Group, and the Swiss Molinari Rail AG. The contract has been signed on 26 February, 2018. The delivery of the METELITSA vehicle is planned for August of next year. According to the contract Stadler will also support the Asociación Accidental Tunari with the technical maintenance of the trams for three years. The vehicle will link the municipalities of Sacaba, Cercado, Colcapirua, Quillacollo, Vinto and Sipe Sipe in the Department of Cochabamba, providing transport services to more than 1 million people.

The trams will be assembled in a European factory and, once verified, disassembled by modules and shipped to Cochabamba. The shipment of the tram modules is estimated to last one and a half month.

Characteristics of the METELITSA type tram

The 3-car low floor trams are of modular buildup with a track gauge of 1,435 mm, a total length of 33 meters, width of 2.50 meters, height of 3.60 meters (pantograph not including), a capacity for up to 200 passengers and space for four wheelchairs, which can be increased.
A special feature of this lightweight tram is its designed maximum speed of 80 kilometres per hour. The vehicles will have doors on both sides of the car.

Tram of the future

JOCA, the Spanish construction company belonging to the ICADI Group, and the Swiss MOLINARI RAIL AG, started to work on the metropolitan train for Cochabamba (third largest city in Bolivia) in August of last year. The project commencement was preceded by the provision of all guarantees and compliance conditions of the competent authorities required in the bidding process, as well as the formalization of the aforementioned contract. It is a three-year contract granted within an international tendering procedure. It will be financed by the General Treasury of the State of Bolivia and executed by JOCA and the Swiss company Molinari Rail AG.

From the UK

Severn Valley Railway

The Severn Valley Railway is a heritage railway which spans Shropshire and Worcestershire and their first major gala of 2018 was the Spring Steam Gala with plenty of visiting locos in action.

Main line giant, LNER A1 No. 60163 'Tornado' eases out of Kidderminster with a service to Bridgnorth. *Richard Hargreaves*

Somerset and Dorset Joint Railway (S&DJR) Class 7F No. 53808 simmers on shed at Bridgnorth on March 16th, preparing for the days work ahead. *Richard Hargreaves*

Haydock Foundry's 'Bellerophon', visiting from the Foxfield Railway, storms out of Kidderminster on March 17th with the 'local' service to Bewdley. *Richard Hargreaves*

GWR King No. 6023 'King Edward II' departs Bewdley with a service to Bridgnorth on March 16th. *Richard Hargreaves*

From the UK

On March 17th, LNER B12 No. 8572, visiting from the North Norfolk Railway, departs Kidderminster during a light snow flurry.
Richard Hargreaves

Egyptian Railway's new 2250hp Henschel A1A-A1A No. 3071 at Luxor station awaits departure on the overnight air conditioned express to Cairo on April 10th 1982. *John Sloane*

Cairo main station on April 6th 1982 with, on the left, No. 3863 (GM 1500hp Bo-Bo of 1980), on the right No. 3313 (GM EMD 1800hp Co-Co of 1960) and in the distance No. 3036 (Hens 2250hp A1A-A1A of 1978). *John Sloane*

British Army 0-6-0 diesel locomotive No. 630, built by Andrew Barclay Sons & Co. Ltd., is seen at Dülmen Barracks, Germany in January 1996. One of six 600hp 0-6-0DH locomotives fitted with Rolls Royce CV12TCE engines and built by Andrew Barclay Ltd, Kilmarnock for use by the British Army in mainland Europe.
Keith Chapman

Another British Army 0-6-0 diesel locomotive, built by Andrew Barclay Sons & Co. Ltd., No. 631, stands at Dülmen Barracks, Germany in January 1996. With the thawing of the cold war, some returned to the UK in 1999. *Keith Chapman*