





# Welcome

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

Can I start this month by wishing all our readers a very Happy New Year. As we commence another year, there is always the looking forward to the lighter nights, warmer weather and the inevitable holiday destinations to be planned.

As always, for myself anyway, eastern Europe seems to have the best loco haulage, and there is the prospect of seeing some former UK residents in both Bulgaria and Hungary. The rundown of classic diesel traction on passenger services in both Germany and France continues, and elsewhere in Europe, diesel loco hauled passenger services are on the decline. In fact as far as I know, the only country to have increased the number of diesel hauled services in western Europe in recent years is the UK (but please let me know if otherwise).

Of surprise this month is that OBB has ordered an initial build of 21 Talent 3 multiple-units from Bombardier Transportation. Austria has normally favoured Siemens who were expecting further orders for their Cityjet platform.

Also in the news this month is that SNCF, to promote the architectural and natural heritage of the region they serve, is decorating the interiors of five trainsets deployed on Line N of the Transilien suburban network, running from

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## Submissions & Contributions

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

**Photographic Contributions**  
All Photographic contributions should to be sent to us via email, post or via the members section page on our website. Contact addresses are provided to the right or on the next page.  
  
All images ideally should be provided at a resolution of at least 2048px x 1536px at 150dpi.

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### Front Cover

Train No. IC118 from Innsbruck to Munster arrives at Goppingen on November 22nd behind DB Class 218.434 and 218.495.  
*Tim Farmer*

### This Page

A line up of JungfrauBahn rolling stock at Kleine Scheidegg featuring an unidentified BDhe 2/4, BDhe 4/8s Nos. 216 & 218 with BDhe 2/4 No. 208 between them.  
*Stearnsounds*

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A pair of STIB MIVB BN T2000 Brussels trams Nos. 2012 and 2024 pass near Park Metro station in Brussels. *Mark Bearton*





Paris Montparnasse to Mantes-la-Jolie, Dreux and Rambouillet. Keep a look out for those if you are in the area.

And bizarre news this month that Porterbrook Leasing and Northern franchise operator Arriva announced that they are to develop an electro-diesel multiple unit by converting former Thameslink dual-system EMUs of Class 319. The 'Class 319 Flex' would have an automotive diesel alternator power pack installed under each of the driving trailer cars. This would feed the existing traction motors via the train's DC bus to minimise any changes to the equipment. The unit would be able to operate on diesel, 25 kV 50 Hz overhead or 750 V DC third rail supplies. We await to see about this, but apparently will be in traffic by early 2018.

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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## With Thanks

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These issues wouldn't be possible without: Brian Battersby, Mark Bearton, Mark Bennett, 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, Michael Lynam, Peter Marsden, Phil Martin, Denzil Morgan, Peter Norrell, Chris Perkins, Mark Pichowicz, David Pollock, Andy Pratt, Railwaymedia, Alan Rigby,

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





## Bombardier and Austrian Federal Railways Sign Framework Agreement for up to 300 TALENT 3 Trains

Rail technology leader Bombardier Transportation and the Austrian Federal Railways (ÖBB) have signed on December 27 a framework agreement covering the delivery of up to 300 BOMBARDIER TALENT 3 trains. The total amount of the framework contract is valued at a list price of approximately 1.8 billion euro (\$1.9 billion US) and it gives ÖBB the opportunity to make several call-offs for trainsets used for regional and suburban rail transport.

The first call-off order under the framework contract, also signed on December 27 is for 21 TALENT 3 trains and is valued at a list price of approximately 150 million euro (\$156 million US). These new regional trains are to be delivered in 2019 and are expected to enhance local passenger transport capacity for both daily commute and leisure passengers, strengthening the essential link between rural and urban areas in Austria's Vorarlberg region and neighbouring countries.

"This framework agreement represents a huge success for Bombardier," said Christian Diewald, Managing Director of Bombardier Transportation Austria GmbH. "ÖBB is one of Europe's most renowned and punctual

railways. With the TALENT 3 train they have chosen a product with high acceleration power and an exceptional reliability, which will help them maintaining their ambitious train schedules in geographically demanding regions." The new generation of TALENT 3 electric multiple units offer modern operational flexibility, low energy consumption and significantly reduced life cycle costs. With the widest carbody in class, the TALENT 3 train allows for up to 50% more seating capacity compared to its predecessor generation and enables fastest passenger exchange as well as maximum travelling comfort. In total, about 1.400 trains of the TALENT family are already in service in Europe and Canada, of which 187 vehicles are operated by ÖBB in Austria. With the broadest portfolio in the industry, Bombardier Transportation has a strong and

growing footprint in Austria, reaching from tram vehicles in major cities as Linz, Innsbruck and Graz and light rail transit trainsets for Vienna's metro line U6 to commuter trains for ÖBB and locomotives for several private cargo companies operating throughout the entire country. Bombardier Transportation employs 550 people at its site in Vienna.



Innsbruck Bombardier 'Flexity Outlook' tram No. 353 is seen heading through the city.  
*Brian Battersby*







▶ A pair of Railion Nederland locos, Nos. 6513 and 6517 head a freight train through Melle, south of Ghent. *Mark Bearton*

▶ De Lijn tram No. 6206 is seen in Ghent at the Sint-Denijslaan tram stop. *Mark Bearton*



# Vectron ČD Cargo for the first time in Austria

On Tuesday, December 20th, just before midnight, Vectron loco No. 383.003 crossed the Czech-Austrian border Vectron hauling a rake of Innofreight container wagons, loaded with bulk wood chips from the sawmill at Stora Enso Wood Products in Ždírec nad Doubravou.

The train was heading to the station at Gratwein-Gratkorn in Styria, for a local paper mill of the company Sappi. To travel the 470 km route from Brod's Gratwein the Vectron took 9 hours. On Wednesday morning December 21st the wood chips were unloaded and by 15:00 the Vectron started the back to the Czech Republic. After nearly five hours the train was back in Breclav.

ČD Cargo displayed the unloading of wood chips and the Vectron locomotive to major ČD Cargo customers, which currently use wood and paper products as well as displaying modern transportation technology using Innofreight and in the Implementation of ČD Cargo shipments abroad.

Photo: ©CD Cargo



## The new car in ČD Cargo fleet

ČD Cargo has introduced its new series Sggrrs within its freight car fleet. It is an eight 80 foot module car, which can be used to transport bodies of all kinds of substrates. The car is composed of two 40 foot vehicles connected by push-pull rods. The car project is the result of several years of development by the Innofreight company from Austria, which is the European market leader in this field.

This is the first of the cars in this series, which will be supplemented in the coming years. It is operated in test mode for now, and is equipped with six special Innofreight pallets with low stakes INTENDED for the transportation of metallurgical products. It is intended to be used for the presentation of new transportation technologies to our customers.

The first car was officially taken over on November 25th, 2016 at the Tatravagónka factory in Poprad. After the execution of necessary formalities with registration at the Railway Authority, where it was given the number 31 54 4854 001-5 E-CDC, it was then moved to the Czech Republic to the siding at Třinecké železářny (Třinec Ironworks). This took place on December 14th, when the first trial loading of the wagon occurred. The wagon was loaded of 128 tons of continuous casts from Trinec and headed for Kladno.



Photos: ©CD Cargo



# Bombardier to Supply 52 additional Commuter Trains to STIF and SNCF

Bombardier Francilien trains are the best performing fleet in Île-de-France

Rail technology leader Bombardier Transportation have announced that French National Railway Company, Société Nationale des Chemins de fer Français (SNCF), has placed an order for 52 additional Francilien Electric Multiple Unit (EMU) commuter trains. The order, financed by Île-de-France's transport authority Syndicat des transports d'Île-de-France (STIF), is valued at approximately 348 million euro (\$370 million US) and is a call off from a contract signed in 2006 with SNCF for a maximum of 372 trains. The first trains of this order will be delivered in early 2018 and will operate from the Paris Saint Lazare Station as part of the STIF transportation modernisation plan.

"The Francilien, specially designed and manufactured for the Ile-de-France at our site in Crespin, Hauts-de-France, is a reliable, high performing train that meets ongoing challenges experienced in such densely populated areas", stated Laurent Bouyer, President, Bombardier Transportation France. "These modern trains offer room for up to 1,000 people with wide doors for easy accessibility and open gangways that increase passenger flow. All these features are contributing greatly to the punctuality of the service."

To date there are almost 200 Francilien trains in service, testimony to the confidence in Bombardier to deliver reliable products as part of its ongoing long term partnership with the French Railways and the STIF. The Francilien fleet boasts the highest performance rates on SNCF's Transilien network. As an innovation driver, from the start of the project, Bombardier focused on passenger needs and designed a modern spacious commuter train with a high capacity. It is equipped with modern security systems and the latest energy efficient and intelligent technologies that decrease the footprint on the environment.

Bombardier's site in Crespin, France's largest industrial rail site, designs, builds and operates innovative trains, meeting daily transport needs. The site built its reputation on the AGC regional trains and is now delivering two major projects: the Francilien commuter train for the Ile de France Region and the BOMBARDIER OMNEO double deck platform which includes the Regio 2N and the OMNEO Premium intercity train.

Nearly 1,000 "made in Hauts-de-France" Bombardier trains operate daily, offering reliable and comfortable journeys to passengers. In 2015, Bombardier trains travelled 150 million kilometres throughout France, which is equivalent to 550 000 private cars on the roads to ensure these journeys.





## Alstom has supplied the Citadis trams to the Bordeaux Metropole for the inauguration of the extension of line C

Alstom has supplied the 26 Citadis trams for the inauguration of the new branch of line C which took place on Saturday December 17th. The new 7 kilometre line includes six stations in Blanquefort, Bruges, Le Bouscat and Bordeaux, thereby providing access to the centre of Bordeaux by tram for the residents of the Porte du Médoc. In the second half of 2018, 15 new trams will be added to the fleet of trams already in circulation on the 79 kilometres of track that make up the network. With a total of 115 Citadis ordered since 2000, the Bordeaux Metropole has one of the largest tram fleets in France.

The trams have been approved for the particularities of the Médoc line whose stations are over 500 metres apart. The trams will be able to run at speeds of up to 70 km/h. All the Citadis trams (33 and 44 metres) of the Bordeaux Metropole are equipped with the ground-based power supply system APS and can accommodate between 218 and 300 passengers each, equivalent to more than 3 buses. Citadis trams offer optimum on-board journey quality with a fully low floor, air conditioning, a video surveillance system

and audiovisual information. Up to 98% recyclable, Citadis helps to preserve the environment.

“We are very pleased to contribute to this new improvement to public transport in the Bordeaux Metropole, linking up the city centre to the Porte du Médoc in 30 minutes,” said François d’Hulst, French local authorities account director, Alstom France.

Citadis trams are designed and manufactured in Alstom’s plants in France: La Rochelle for the design and assembly, Ormans for the engines, Le Creusot for the bogies, Tarbes for the traction drive equipment, Villeurbanne for the

onboard electronics and Saint-Ouen for the design. To date, over 2,300 Citadis trams have been sold to 55 cities worldwide, including 23 in France.



SNCF Akiem No. 36007 calls at Menton with a Milan - Nice Thello service. *John Sloane*



▶ SNCF BB No. 22256 propels a stopping service towards Monte Carlo past Cap Martin.

*John Sloane*

▶ SNCF Akiem No. 36012 passes through Roquebrune station with a Nice to Milan Thello service.

*John Sloane*

▶ SNCF BB No. 22282 is seen propelling a Riviera stopping service heading for Nice and beyond out of Ventimiglia.

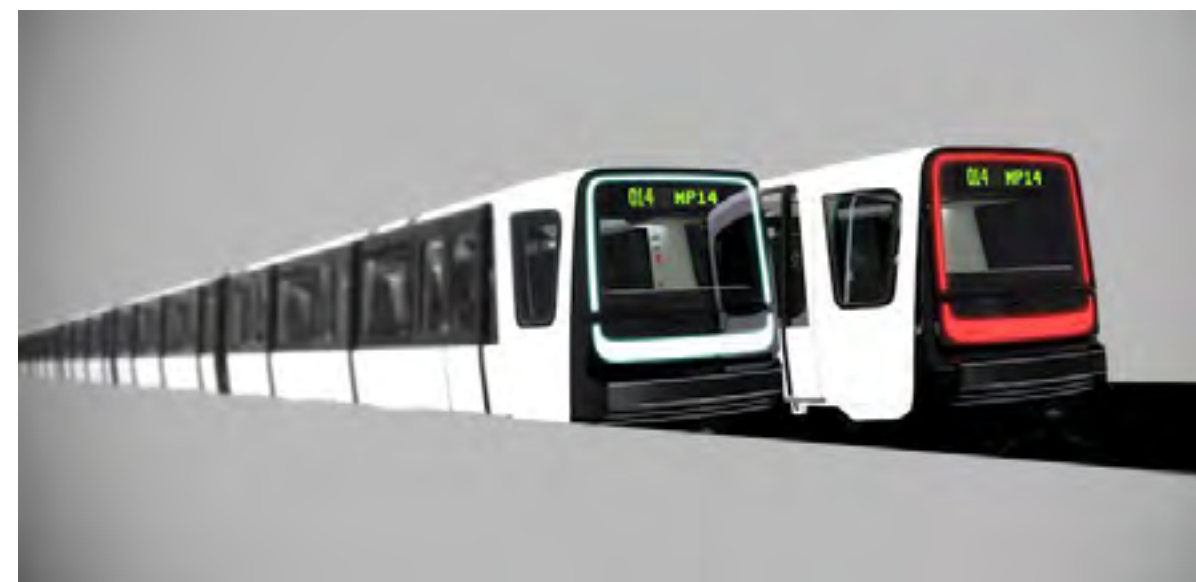
*John Sloane*



## Alstom to supply 20 extra metros to the STIF and the RATP

Alstom is to supply 20 MP14 metros consisting of 6 cars each to the STIF and the RATP for an amount of 163 million euros as part of the automation and modernisation of line 4, the second most frequented line of the Paris metro. This option exercise is part of the MP14 framework contract signed in January 2015 between the RATP (mandated by the STIF and the SGP) and Alstom concerning the delivery of up to 217 MP14 trains over 15 years for a total amount of over 2 billion euros.

“Alstom is delighted to receive an additional order for this material, which will mobilise the entire French railway industry. This metro contains numerous innovations, in particular related to reductions in energy consumption and total cost of ownership,” says Jean-Baptiste Eyméoud, Alstom France General Director.



Due to circulate on line 4, the MP14 trains will help to increase the capacity and quality of transport on the line, with a targeted global service equivalent to that of line 1. The MP14 trains,

whose design and passenger comfort levels have been completely revised, enable full passenger circulation without separations between the cars and have been fitted with air conditioning and audio-visual information for passengers. The material represents a 20% reduction in energy consumption compared to the previous generation. It offers unprecedented levels of comfort and security thanks to new ergonomic seats, LED lighting, fluidity of exchanges, information on board, video protection. Its 100% electric braking system recovers energy and reinjects it into the grid in the form of electricity, thus limiting the emission of fine particles emitted by the brake pads.

## Alstom and Colas Rail to provide the power supply equipment for the east-west line of the Citadis tramway of Nice

Alstom and Colas Rail have won a contract worth nearly 11 million euros to provide power supply equipment for the future east-west tramway line of the Nice Côte d'Azur Metropole. The commissioning of the 11-kilometre line is planned for 2018. “This project is a true technological showcase for Alstom, which will also supply 19 new-generation Citadis trams to the east-west line, as well as its new ground-based charging solution SRS. We are honoured by the renewed confidence of the Nice Metropole, which thereby benefits from Alstom’s extensive range of solutions and expertise. With more than 15 years of experience, Alstom offers reliable and proven power supply solutions. In total, Alstom’s electrification solutions provide power to approximately 600 kilometres of lines around the world,” said Jean-Baptiste

Eyméoud, President of Alstom France. The contract includes the studies, supply, assembly and testing of power supply equipment for traction, low and high voltage. The firm part of the order covers the delivery of 7 electrical substations, 10 Lighting Power Station and 2 Intake Power Station. The optional part of the order relates to the supply of two additional substations. Alstom, the principal contractor and project manager, and Colas Rail, will ensure all services as an integrated team. Alstom’s Infrastructure teams, based in Saint-Ouen, Villeurbanne and Nice, will lead and carry out the project.

The teams of Colas Rail based in Louveciennes, Cergy Pontoise and Nice will carry out the studies, installations and tests for the project.

## Alstom inaugurates the first Regiolis for the Auvergne Rhône-Alpes region

Alstom, the Auvergne Rhône-Alpes region and SNCF inaugurated the first Regiolis trainset destined for the outskirts of Clermont-Ferrand in the presence of Laurent Wauquiez, President of the Regional Council of Auvergne Rhône-Alpes, Jean-Christophe Archambault, SNCF regional director for Auvergne Rhône-Alpes and Jean-Baptiste Eyméoud, President of Alstom France.

The region of Auvergne Rhône-Alpes ordered 29 Regiolis trains, including 12 dual mode, dual voltage trains destined for lines on the periphery of Clermont-Ferrand and the Clermont-Lyon line. 72 metres long, the trains consist of 4 cars with a total capacity of 220 seats. They offer increased comfort thanks to seats equipped with individual reading lights, electric sockets and raisable footrests, spaces

comfortable, and very reliable. 173 Regiolis are already in circulation in 8 French regions and have travelled over 18 thousand kilometres, attesting to the reliability of our train and the excellent cooperation between the teams of SNCF and Alstom,” said Jean-Baptiste Eyméoud.

Regiolis belongs to Alstom’s Coradia range of trains. Thanks to its modular design, it can be adapted to the needs of each organising authority as well as to different types of use: suburban, regional and intercity. Equipped with ERTMS technology, Regiolis is the first French regional train to comply with all European standards. 17 Regiolis are also scheduled to run between France and Switzerland on the Lemman Express line by 2019.



dedicated to bicycles and luggage, large bay windows and reduced noise levels.

The integral low floor ensures accessibility for all; Regiolis is the first train to conform to the PRM-TSI standard. The Regiolis trains for the periphery of Clermont-Ferrand also have an automatic passenger counting system to enable better monitoring of the number of passengers and train occupancy for optimised operation. An economic and ecological driving assistance system is also incorporated.

“The inhabitants of Clermont-Ferrand will benefit from new trains that are accessible,

The manufacture of Coradia Polyvalent mobilises over 4,000 jobs in France with Alstom and its suppliers. Six of Alstom’s twelve sites in France design and manufacture these trains: Reichshoffen for the design and assembly, Ormans for the motors, Le Creusot for the bogies, Tarbes for the traction, Villeurbanne for the onboard electronics and Saint-Ouen for the design.



▶ Newer Class 112s and 114s are beginning to displace older Class 143s from the Stuttgart area. Here Class 114.002 and 143.965 stand at Stuttgart Hbf working RE services. *Tim Farmer*

▶ Leipzig trams Nos. 931, 1151 and Bombardier FLEXITY Classic No. 1202 are seen at the Hauptbahnhof. *Stearnsounds*

▶ TX Logistik's Class 185.538, hauling a Siemens ES64 U2, arrives light engine into Regensburg. *Brian Battersby*







 Germany

AVG Augsburg tram No. 607 is seen at Augsburg Hochschule on November 30th. *Mark Bearton*



EVB's Class 223.034 hauls a rake of tanks through Regensburg Hbf. *Brian Battersby*

On November 21st, DB Class 182.506 stands at Munich Hbf with a test train. *Tim Farmer*





 Germany

MVG München U-bahn line U7 No. 7101 is seen at Gern station on November 30th. *Mark Bearton*



HGK operated Class 185.582 passes through Kreiensen with a rake of tanks. *Stearmsounds*

DB Class 218.456 stands at Augsburg having worked in on train No. IC2084 from Oberstdorf. *Tim Farmer*





DB Regio Class 245.001 arrives into Memmingen on November 20th with a service from München.  
*Mark Bearton*

## Hector Rail to transport more than 125 000 cars annually

Hector Rail and ARS Altmann have agreed that Hector Rail will transport cars from the south of Germany. In total Hector Rail will run approximately 600 000 train kms per year for ARS Altmann. The agreement is for three years.

ARS Altmann is a provider of vehicle logistics solutions founded in 1975. The annual turnover is some 300 MEUR.

Wagons are provided from ARS Altmann.

“We are proud of the trust ARS Altmann has given us through this deal. This is our first contract for car transportation and an important step in our strategy to become an important player in the German rail market”, says Mats Nyblom MD at Hector Rail AB.

The traffic will start on January 9. The annual production will exceed 125 000 cars which means during the three-year contract period it is expected that approximately 400 000 cars will be transported.



▶ On November 23rd, Class 143.870 arrives at Nuremberg Dürrenhof working an S2 service to Roth. *Tim Farmer*

▶ OBB's Class 1116.039 approaches Regensburg Hbf hauling a mixed rake of wagons, heading for Linz. *Brian Battersby*



▶ HHLA/SBB Cargo Class 482.029 hauls a container train through Bremen Hbf. *Class47*

## CAF IS AWARDED THE SUPPLY OF UNITS INCLUDING MAINTENANCE FOR THE ZWECKVERBAND SCHÖNBUCHBAHN

Zweckverband Schönbuchbahn (ZVS), public transport authority in Germany, has notified CAF of the award for a contract which comprises the supply of 9 three-car Light Rail Vehicle units for the Schönbuchbahn and the integral maintenance over 19 years with the option to request up to an additional 19 trains. The contract consists of cutting edge trains equipped with state of the art technology for this new type of vehicle. The base contract for the supply of rolling stock is €51.3 million. The new electrical LRVs will be operated on the network of ZVS between Böblingen – Holzgerlingen – Dettenhausen. The trains will be delivered in 2020 with start of operation end of 2020.

Nowadays DMUs are operated on the Schönbuchbahn but recently the work on the expansion and electrification of the Schönbuchbahn to Dettenhausen has been started and is supposed to be finished until 2020. ZVS will build a new workshop in Böblingen with 3 tracks and modern equipment for the light maintenance of the new vehicles by CAF and for the future operator of the trains who will still be called for tender.

Each three-car unit will provide a capacity to transport a large number of passengers and will also be fitted out with spacious gangways, as well as areas allotted specifically for persons

with reduced mobility. The vehicles are easily accessible in its entirety from one end to the other, making it easy to move between modules during the journey. In terms of their external visual appearance, the vehicle will follow the corporate design concept, dynamic shaped and featuring fluid lines. The vehicles will be equipped with the latest innovations on these types of vehicles incl. air conditioning system.

This second project in Germany marks CAF's clear aspiration to be also successful in the German market, where they have already supplied tramway vehicles for the city of Freiburg.









▶ Bombardier Flexity Outlook AVG Augsburg tram No. 894 is pictured in the centre of Augsburg at Konigsplatz on November 30th. *Mark Bearton*



▶ DB Class 112.164 stands at Magdeburg Hbf with an RE13 service to Leipzig Hbf. *Stearnsounds*

▶ MRCE Dispolok No. ES 64 U2-014 is seen stabled at Freilassing. *Brian Battersby*



## Alstom and NTV unveil the first car of Pendolino Italo

Alstom and NTV revealed the front car of Pendolino Italo, a year after the signature of the contract and the presentation of the design. The train is manufactured at the production site of Alstom in Savignano (Italy), a centre of excellence for high-speed trains.

With the twelve Pendolino ordered last year plus the existing fleet of 25 AGV, the Italo fleet will reach a total of 37 Alstom Avelia trains. This will allow the private Italian operator to expand its current network and to respond to a demand for new routes and increased frequencies for travellers. The trains are scheduled to be delivered by December 2017 and to enter service in March 2018. The other Alstom sites involved in the production are Sesto San Giovanni, Bologna and Nola depot which will handle maintenance for 30 years, as it already does for AGV Italo trains.

Ruby red with the characteristic golden hare, the Pendolino Italo is an evolution of the Pendolino family. The train is an example of high performance and reliability as well as great elegance. The futurist front end is designed



to provide crash protection. The train is environmentally friendly, thanks to its high recyclability and reduced CO2 emissions. Moreover, its optimized distributed traction system enhances efficiency and acceleration and regenerates energy while braking. These trains can reach a maximum speed of 250 km/h, are 187-metre-long, composed of 7 cars and can accommodate around 480 passengers. The train features full compatibility with the very latest 2014 TSI regulations established by the European Union. This EU standard contributes to guaranteeing high levels of safety and efficiency. "Today is a great day for us. We are very proud to present these

new trains that will enable us to grow", said the President of NTV, Andrea Faragalli Zenobi "With this investment we will increase our fleet by 50%, we are ready to face this new challenge with enthusiasm. Special thanks today to those Italian entrepreneurs who in 2006 had this intuition called Italo, on which few would have bet initially and which is now a well-established Company. " "The Pendolino is a versatile, high performance train. We sold more than 500 Pendolino trains worldwide, which exceeded one billion kilometre in operation. The realization of this new generation of trains for NTV has given us the opportunity to adapt the Pendolino to the latest safety standards and interoperability in Europe, opening up new opportunities worldwide for this product made in Italy ", said Michele Viale, Managing Director of Alstom in Italy. Pendolino is part of Alstom's Avelia range of high-speed trains. The Avelia range is based on 4 current flagship products – Pendolino, Euroduplex, Liberty and AGV – representing the culmination of 35 years of expertise and more than 1,050 trains in service around the world.

▶ OBB Railjet Class 1216.018, uncoupled after its arrival on a service from Wien, awaits the departure signal at Verona. *Brian Battersby*



▶ TFT Class 626.006 is seen stabled at Bibbiena station. *John Sloane*

▶ Dinazzano Po (formerly DB Class 220.045) is seen at Ravenna. *John Sloane*

▶ FS Trenitalia Class 444.033 passes through Santa Margherita on a southbound express to Rome. *John Sloane*



FS Class E633.234 passes through Pisa hauling a container service. *John Sloane*

Ferrovie Emilia-Romagna Class 464.903 departs Ravenna with a service to Ferrara. *John Sloane*



▶ NS Class 17 No. 1824 heads a line of interesting locos and rolling stock including ACTS Nos. 6701 and 6705 at Amersfoort. *Class47*

▶ Bombardier Traxx Nos. E186.225 and E186.239 are seen working services to/from Bruxelles at Amsterdam Centraal. *Class47*









- ▶ Traxx Class 186.018 is photographed on the Netherlands high speed line at Lage Zwaluwe with a Breda to Amsterdam service. *Mark Bearton*
- ▶ A trio of Amsterdam metro vehicles, GVB Amsterdam Nos. 98, 102 and 95, depart Rai station. *Mark Bearton*
- ▶ NS Class 17 No. 1737 departs Eindhoven with a service to Nijmegen. *Mark Bearton*







 Netherlands



▶ A trio of Koplopers, Nos. 4239, 4084 and 4018 pass Amsterdam Rai with a Schiphol to Heerlen service. *Mark Bearton*

▶ RET Rotterdam tram No. 2054 crosses the Erasmus bridge in the city. *Mark Bearton*







▶ Preserved RhB Ge 6/6I 'Krokodil' No. 407 stands outside the Bahn Museum at Bergün station. *Steamsounds*

▶ At Chur RhB Ge 4/4II No. 611 with train No. RE 1725 to Disentis/Mustér stands alongside Ge 4/4III No. 651 with train No. RE1125 to St. Moritz. *Steamsounds*

▶ RhB Ge 4/4III No. 651 crosses the Schmittentobel Viaduct approaching Filisur with train No. RE1129 to St. Moritz. *Steamsounds*







▶ SBB RABe No. 514.024 calls at Pfäffikon SZ with an S-Bahn service to Weinfelden. *Steamsounds*

▶ Schynige Platte Bahn He 2/2 No. 62 is seen at the summit station. *Steamsounds*

▶ SBB Re 4/4II No. 420.225 stands at Zürich HB having arrived at the head of train No. EC164 from Graz. *Steamsounds*











 Switzerland

▶ SBB Class 420.265 and 420.289 round Wattinger Kurve whilst working freight train No. 69751 from Basel to Cadenazzo. *Laurence Sly*

▶ SBB Re4/II No. 11261 approaches Lavorgo whilst working postal train No. 50921 from Harkingen Poste to Cadenazzo. *Laurence Sly*

▶ SBB Class 11191 and 11247 pass the top tier at Wassen whilst hauling train No. 13467, the VSOE from Basel to Venezia Santa Lucia. *Laurence Sly*







▶ JungfrauBahn Bhe 4/8 No. 224 stands at Kleine Scheidegg. *Stearnsounds*



▶ RhB Ge 4/4III No. 650 arrives at Filisur with train No. RE1160 from St. Moritz to Chur. *Stearnsounds*

▶ SOB Re No. 456.096 with No. 456.091 at the rear, works the Voralpen Express train No. E2576 from St. Gallen to Luzern. *Stearnsounds*







## Cital delivers the first Citadis tram to Ouargla in Algeria

Cital, the joint venture held by Ferrovia, Enterprise Métro d'Alger (EMA) and Alstom, delivered the first Citadis tram to the city of Ouargla in the presence of Saad Agoudjil, Wali of the Wilaya of Ouargla. The official ceremony was held at the tram maintenance centre and depot.

This tram, along with the 22 others ordered by EMA for the city of Ouargla in 2014, will run on the new line (about 10km long, comprising 16 stations) which will connect the old city (El Ksar) to the new city (Hai Nasr) via the city centre of Ouargla. This new line - which includes a maintenance and depot centre - is expected to open at the end of 2017.

"We are delighted to be working with our partners on such an important project that will provide the residents of the city of Ouargla with comfortable, accessible and environmentally friendly transport that is perfectly integrated into the city. Through Cital, Alstom is better positioned to meet the mobility needs of Algerian cities," said Henri Bussery, Managing Director of Alstom Algeria. Nearly 44 metres long, the Citadis tram for the city of Ouargla is capable of transporting over 400 passengers. To adapt to the desert climate of the city of Ouargla,

traction and the braking have been modified for greater impermeability, and the exposed parts (joints, shock absorbers and pantograph) have been protected.

The design of the tram, created by Alstom's Design & Styling department, reflects the image of the city of Ouargla. For example, the outer livery is reminiscent of the colours of the sun and the desert, while the green interior is inspired by the softness and freshness of the palm groves.

The Ouargla tramway project was entrusted to Alstom and Cital. Alstom is responsible for the supply of the systems: energy, traction substations, telecommunications systems, signalling, operational assistance, maintenance equipment and ticketing. Among the Alstom sites involved in the project are: Saint-Ouen (France), Barcelona and Madrid (Spain), with project management carried out by the teams in Algeria. The Citadis trams are supplied by Cital and assembled at the Annaba site in Algeria.

Six other Algerian cities have adopted the Citadis tram: Algiers, Oran, Constantine, Sétif, Sidi Bel Abbès and



significant technical updates have been made to the tram. Several components have been modified to withstand maximum temperatures of up to 49 degrees, intense solar radiation, and high levels of dust and sand in the air. To this end, the air conditioning system has been reinforced, the windows have been equipped with a solar protection film, the

Mostaganem. 98 Citadis trams are already in circulation in Algiers, Constantine and Oran



## Alstom to supply 15 Coradia Polyvalent trains to Senegal

Alstom has been awarded a contract for the supply of 15 regional trains by APIX, acting on behalf of Senegal's Ministry of Infrastructure, Land Transport and Opening Up. The manufacture of the trains, entrusted to Alstom's site at Reichshoffen in France, will begin in 2017.

The trains aim to satisfy the increasing need for mobility in Dakar, a booming city with an expected five million inhabitants by 2030. The trains will run on the new line that will eventually connect the centre of Dakar to the new international airport Blaise Diagne (AIBD) in Diass, about 50 km from the city of Dakar, via the new town of Diamniadio. They will serve 14 stations over a distance of 57 km, which they will cover in 45 minutes. The number of daily passengers is estimated at 115,000.

"We are very proud to be part of such an important infrastructure project and to supply Coradia Polyvalent trains combining passenger comfort, reliability, performance and respect for the environment," said Gian Luca



Erbacci, Alstom's Senior Vice President Middle East and Africa. "We are also pleased to contribute to the development and modernisation of the African rail network, from Senegal to South Africa via Algeria, thanks to our proven mobility solutions that benefit from the very latest technological innovations."

The Coradia Polyvalent train for Senegal is dual-mode (diesel/electric) and is capable of running at speeds of 160 km/h. With a total length of 72 meters, the train has four cars, a capacity of 400 passengers and a first and second class. It is adapted to the climatic and environmental conditions of the country and has a highly efficient air conditioning system. Its low floor provides easier access and on-board movement in particular for people with reduced mobility.

Alstom's site in Reichshoffen will design, manufacture and validate the trains. Five other sites in France will be involved in the project: Saint-Ouen for the design, Le Creusot for the bogies, Ornans for the motors and alternators, Tarbes for the traction system and Villeurbanne for the on-board IT systems and passenger information.

Coradia Polyvalent, already adopted by SNCF and the French regions as well as by SNTF in Algeria, belongs to Alstom's Coradia range of modular trains, which benefits from over 30 years of expertise and proven technical solutions. More than 2,400 Coradia trains have already been sold worldwide and 1,900 trains are currently in circulation.



## Alstom supplied solutions to the newly opened Hong Kong's first driverless metro

The MTR South Island Line (SIL) in Hong Kong for which Alstom supplied the signalling system, track works, overhead line electrification, as well as traction and TCMS through three separate contracts, entered revenue service in December. SIL is the first urban metro line run by Fully Automatic Operation (FAO) in Hong Kong.

SIL will connect the densely populated district of Ap Lei Chau. 7km long, it will extend MTR services from Admiralty Station to the Southern District of Hong Kong Island in 11 minutes via four new stations: Ocean Park, Wong Chuk Hang, Lei Tung and South Horizons. Alstom supplied to SIL its proven CBTC signalling solution, Urbalis 400, which will enable FAO and

enhance rail service with a high level of reliability and more flexibility in train deployment. It also supplied track works and overhead contact systems. In addition, Alstom also supplied OpTONIX traction systems and TCMS for 30 metro cars.

Alstom Hong Kong was in charge of the overall management for the three contracts. Alstom Saint-Ouen site in France, Bangalore site in India and joint venture in China, CASCO, provided support for delivering the signaling system. Alstom Charleroi site in Belgium and Alstom joint venture in China, Shanghai Alstom Transport Electrical Equipment Co. Ltd, supplied traction and TCMS systems. "Alstom is proud to provide reliable, efficient and sustainable

transport solutions for South Island Line in Hong Kong. Being the global leader in sustainable mobility and with its 40 years presence there, Alstom is committed to supporting Hong Kong in becoming smarter and greener," said Ling Fang, Managing Director of China & East Asia, Alstom.

Alstom has been providing transport solutions in Hong Kong since 1976. It has supplied signalling solutions for six metro lines in Hong Kong. Currently, Alstom and its consortium partner, Thales, are renovating the signalling system of six MTR lines and the Airport Express over a period of 10 years. Other Hong Kong metro contracts executed by Alstom include Kwun Tong Line extension, which entered revenue service in October 2016 and Shatin Central Link phase one (ongoing).



## Alstom's South African JV Gibela successfully handed over to PRASA the first X'Trapolis Mega

Gibela - a joint venture led by Alstom - successfully obtained the Provisional Acceptance Certificate from PRASA - the Passenger Rail Agency of South Africa - which holds responsibility for rail transport in metropolitan areas - for the first X'Trapolis Mega train. This paves the way for PRASA to commence a test service, with no passengers, as required by the South African Rail Safety Regulator. In line with this test service, the train is scheduled to run between Pienaarspoort and Rissik Street in Hatfield from 1 December 2016 to 16 January 2017. The test will be completed with passengers on-board from 17 January 2017 to 28 February 2017. The commercial service will start shortly after, offering passengers the opportunity to experience PRASA's new world-class service.

"We are pleased to achieve this important milestone. Gibela and PRASA are well on track to deliver a successful modern passenger rail service to South African commuters" said Marc Granger, CEO of Gibela. In 2014, Gibela was awarded a contract by PRASA to manufacture and replace South Africa's outdated trains and deliver 600 passenger trains into the South African rail network over the next 10 years. This project also involves the construction of a manufacturing facility in South Africa. The Gibela manufacturing plant - where 580 trains (3,480 coaches) will be produced - is currently under construction. It is expected to be completed by the end of 2017. The facility is located at Dunnottar, Ekurhuleni, 50km east of Johannesburg. The 20 first trains are being produced at Alstom's factory of Lapa in Brazil and, as of today, 14 of them have been delivered.

Gibela's contract with PRASA encompasses more than just a train replacement programme - it is to be a catalyst for transformation in South Africa and includes stringent economic development commitments. Training and development are fundamental to these commitments as Gibela works to build and enhance rail technology skills amongst employees, suppliers and South African students. To date, close to 300 people have received training including specialised train engineering and manufacturing expertise from Alstom's worldwide centres of excellence.

For each train that has already been built in Brazil, 22% of procurement spent is on components sourced from South African suppliers. At full production locally, Gibela anticipates that a panel comprising 200 local suppliers will be manufacturing equipment and components for the 580 locally produced trains from 2018 onwards. Local suppliers have benefitted from the technical advice and assistance from Alstom, and Gibela, to ensure they become part of a sustainable South African supplier base. They have also benefitted from manufacturing know-how and design engineering from Alstom.

Alstom, through Gibela, is committed to local socio-economic development and has already launched several programmes and initiatives which demonstrate support of the South African Government's National Development Plan.





## Alstom starts delivery of 30 regional trains to Skånetrafiken

Alstom has started the delivery of the 30 additional Coradia regional trains ordered by Skånetrafiken beginning of 2015. As per the contract, Alstom will deliver 11 trains by May 2017, and the final batch of 19 trains between May 2018 and January 2019. This will expand the Skånetrafiken operating fleet of Coradia Nordic trains, better known as Pågatågen, to 99 units.

The regional train network in Skåne region has had a steadily growing number of travellers in recent years and is predicted to continue growing by 5-6% per year onwards.

“These additional deliveries highlight our customer’s appreciation of Coradia trains’ performance and the passengers’ satisfaction with the level of comfort we offer. From 2019, Skånetrafiken will own one of the largest fleet of Coradia Nordic trains in Sweden and become one of the largest regional operators in the country. Alstom will strengthen its position as the leading supplier of regional trains in Sweden,” says Rob Whyte, Managing Director for Alstom in the Nordics.

The Coradia Nordic train delivered to Skanetrafiken consists of four cars, is 74 meters long in total, and has a capacity for up to 510 passengers. The train will run at a maximum speed of 160 km/h. The Coradia family is characterized by modularity, safety and performance, 98% of the train is recyclable. The trains are built at Alstom’s site in Salzgitter, Germany.



Since 2002, over 270 regional Coradia EMU trains have been sold to train operators in the Nordic region, including SL, Norrtåg, Västtrafik and Östgötatrafiken. In total, more than 3,000 regional trains have been sold in Europe, and they are currently running in Denmark, France, Germany, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and the UK.



## Alstom delivers ahead of schedule the first Lucknow Metro trainset

Alstom has delivered ahead of schedule the first Metropolis trainset to Lucknow Metro Rail Corporation (LMRC). On 01 December, 2016, the metro trainset - which will now enter into a trial phase - was officially presented to the customer. The event was held in the presence of Mr. Akhilesh Yadav, Hon’ble Chief Minister of Uttar Pradesh, Mr. Kumar Keshav, Managing Director of LMRC, Jean-Francois Beaudoin, Senior Vice President, Alstom Asia Pacific, and Bharat Salhotra, Managing Director, Alstom India & South Asia at the Lucknow Metro Phase-1A project.

Earlier this year in May, Alstom and LMRC unveiled the design of the Metropolis trainset using a 3D technology in the presence of Mr. Akhilesh Yadav and senior government officials.

“The delivery of the first train set of Lucknow metro marks another major milestone for Alstom in India. The project re-affirms our strong commitment and endorsement to ‘design and make in India’ in line with the government’s vision. Manufacturing for the first Metropolis trainset has been completed in record time and ahead of schedule. We are proud to be contributing to the transition to sustainable transport systems by designing and delivering innovative, environmentally friendly, efficient and appealing rail solutions”, Bharat Salhotra, Managing Director, Alstom India & South Asia commented. Alstom was awarded a contract for about €156 million (INR 1069 crores) by LMRC to provide 20 metro trainsets each of four cars along with Computer Based Train Control (CBTC) based Signaling System for the city of Lucknow in the state of Uttar Pradesh.

The design of the train is a tribute to the city’s cultural richness, with the front end conceived in the spirit of the gates to some of the city’s most

important monuments, including the Bara Imambara congregation hall, Asifi mosque and Rumi Darwaza gateway. The V-shape of the lower section of the front symbolises ‘dynamism and rapidity’, while the livery is both highly modern and very much inspired by the traditional cashmere craftsmanship of Lucknow.

The Metropolis trainset for Lucknow has 186 seats arranged longitudinally, and includes two dedicated zones for passengers with reduced mobility. The cars are being produced at Alstom’s SriCity and Coimbatore plants in India. The Urbalis CBTC will be jointly supplied by Alstom’s sites in Bangalore and Saint-Ouen in France.





## Alstom's Citadis Spirit begins train dynamic testing in Ottawa

On December 5th, Alstom's Citadis Spirit, a 100% low-floor light rail vehicle designed for North America, began dynamic testing on the O-Train Confederation Line in Ottawa, Ontario. Witnessing the train's first tests were David McGuinty, Member of Parliament for Ottawa South, on behalf of the Honourable Amarjeet Sohi, Minister of Infrastructure and Communities, the Honourable Steven Del Duca, Provincial Minister of Transportation and Member of Provincial Parliament for Vaughan, City of Ottawa

rigorous testing of the trains will ensure smooth and safe operation for both the operators and passengers alike," said Angelo Guercioni, Managing Director for Alstom in Canada. Alstom is supplying 34 Citadis Spirit light rail vehicles for the O-Train Confederation Line, and will maintain both the vehicles and the line's infrastructure for a period of 30 years. This first phase of the O-Train Confederation Line comprises 13 stations along a 12.5 kilometre route, with 10 kilometres running at ground



level and 2.5 kilometres underground.

The O-Train Confederation Line is expected to begin full revenue service in 2018. Thanks to its modular design, the Citadis Spirit provides for a very flexible manufacturing

process. The Citadis Spirit is being assembled by a local workforce at Belfast Yard, creating over 100 jobs in the Ottawa area, with the support of an established supply chain of over 60 Canadian suppliers to meet the 25% Canadian content requirement. In addition to vehicle assembly in the Ottawa area, the Alstom manufacturing facility in Sorel-Tracy, Quebec is assembling the bogies for the Citadis Spirit.

The Citadis Spirit is based on Alstom's Citadis range of light rail vehicles and builds upon the experience of more than 2,300 Citadis sold to 55 cities around the world. Customised for the needs of the North American market, including operation in temperatures as low as -38°C, the Citadis Spirit's 100% low floor design offers easy accessibility from the street or the curb, and an interior layout that provides a safer and more enjoyable experience. Thanks to its modularity and full low floor, the vehicle can provide both light rail service, including urban service in cities running at grade and in mixed traffic, and suburban service on segregated rail infrastructure at speeds up to 100 km/h. The vehicle's highly customizable exterior and interior styling options reflect cities' unique identities, complimenting the urban environment with seamless integration.

Mayor Jim Watson, and Angelo Guercioni, Managing Director for Alstom in Canada, as well as other dignitaries. Ottawa's future light rail vehicles will be tested both at the Belfast Yard Storage and Maintenance Facility (Belfast Yard), as well as along 4 km of test track. During this phase of the project, the trains will undergo various tests, including dynamic testing at speeds of 80 km/h, and even up to 100 km/h. The dynamic tests that will take place on the test track will focus on traction and braking performance, train behaviour, as well as the comfort and performance of the bogies. Static testing will take place at Belfast Yard and will validate function performance, including HVAC, doors, lighting, passenger information and on board data systems. This phase of testing will run through to the end of March 2017, during which more than 50 test procedures will be completed. Upon completion of this first series of tests, more than a dozen tests will be conducted on a multiple unit train, i.e. two trains coupled together.

"The commencement of dynamic testing marks the first 100% low floor vehicle to enter validation testing in Ontario and brings the Citadis Spirit one step closer to the start of commercial service in the City of Ottawa. This



## Škoda Transportation will deliver the most modern ForCity Smart Artic trams to Finland

The subsidiary of Škoda Transportation, Finnish Transtech, will deliver a total of 49 new modern vehicles to the capital of Finland. Helsinki City Transport HKL exercised an option for twenty low-floor trams for Helsinki city traffic, and signed a Letter of Intent for purchasing further 29 trams for the new "Raide-Jokeri" line connecting the cities of Helsinki and Espoo. The total price for both contracts is over 150 million EUR.

"These are two more important contracts that our Finnish subsidiary Transtech has acquired in recent months. Back in October we were named the preferred



bidder of a tender for the third largest Finnish city of Tampere, for 15 - 20 modern ForCity Smart Artic trams. There could therefore be more than 100 trams with the Škoda logo in Finland in the near future. Thanks to these major accomplishments, Škoda is becoming a very strong player in the demanding Scandinavian market," says Zdeněk Majer, vice president of Škoda Transportation and chairman of Transtech.

"We are very pleased that Helsinki City Transport has a positive service experience with ForCity Smart Artic trams. The public itself also has a positive opinion of our vehicles. They especially appreciate the high comfort and design of the trams. Our vehicles were proven to be efficient in the severe northern conditions, which is also why we have been very successful in this market in the past year," adds Lasse Orre, CEO of Transtech Oy.

"Helsinki City Transport appreciates the customer oriented approach that

Transtech has had. The needs of the city of Helsinki and its citizens have seriously been taken into account in the product development. The experiences of ForCity Smart Artic trams have been very positive," says Ville Lehmuskoski, CEO of Helsinki City Transport.

Of the sixty ordered uni-directional trams for Helsinki City traffic, there are currently fourteen ForCity Smart Artic trams in service. The first two trams were delivered back in 2013, and they were subjected to rigorous tests in operation. Other vehicles bear since 2015 the logo of Škoda Transportation, which purchased a

controlling interest in Transtech. The one-direction three-section ForCity Smart Artic tram with a gauge of 1,000 mm has a low floor and can accommodate 125 standing passengers (5 passengers/m<sup>2</sup>). In addition, the tram has 74 seats and 14 folding seats. The vehicle also offers easy barrier-free access for passengers in wheelchairs and prams.

"The ForCity Smart Artic Helsinki tram is the world's first mass-produced narrow-gauge 100% low-floor tram with a fully pivoting bogies. The all-wheel drive and robust bogies with axles allow trouble-free operation in the harsh climatic conditions of the capital of Finland," says Lasse Orre. The demanding track conditions were taken into account during the production of the ForCity Smart Artic tram. Efficient heating including thorough insulation and innovative use of brake energy for heating the vehicle were designed for the northern conditions.

The new "Raide-Jokeri" line will be 25 kilometers long and it will connect the eastern part of Helsinki and Espoo. The route will have 33 stops and will replace the existing trunk bus route. The new bi-directional vehicles for this route will be 34 meters long. The first prototype shall be delivered in summer 2019.



## Hector Rail extends cooperation with Samskip

Hector Rail and Samskip have agreed to develop their partnership on Sweden and the continent further. As of the 1st of January six round trips per week between Helsingborg in Sweden and Duisburg in the Ruhr area in Germany, via Copenhagen in Denmark, will be added to the existing operations. Hector Rail and Samskip do cooperate already between Duisburg and Malmö, Almhult, Nässjö, Katrineholm and Gothenburg. Both the old and the new operations are based on the same concept with through-going locomotives between Germany and Sweden via the fixed link through Denmark.

In January 2008, the co-operation between the companies started with the first direct trains ever between Scandinavia and the continent. Today, the Duisburg – Helsingborg train is an overnight service, allowing for quick door-to-door transit times. Collections can be done in a 300-kilometre radius around Duisburg and delivered in the area of Helsingborg the next day.

Samskip has developed a highly successful concept for door-to-door solutions based on intermodal loading equipment and its own

complete trains. The trains can carry all kinds of containers and trailers including Mega-trailers.

“We are pleased and proud about the extended confidence that Samskip is exhibiting in Hector,” says Mats Nyblom, MD of Hector Rail AB. “Samskip’s forward-looking environmentally friendly concept focuses on quick and reliable rail services.

“Our offer to the market which combines cost efficiency and low environmental impact has proven successful and our operations continue to expand,” says Johan Logtenberg, MD of Samskip Van Dieren Multimodal. “We are happy to take this step with Hector Rail and together develop our intermodal concept further.”

Like all contemporary electric locomotives, those used by Hector Rail have electric brakes that generate power that can be re-fed into the railway’s system and used by its other vehicles. Using this type of locomotive is the most environmentally friendly alternative to providing land-based transport.



## Hector Rail will manage SCA’s railway transports of round wood

Hector Rail AB has entered into an agreement with SCA Skog AB to for ten years provide transports of round wood to SCA’s mills and sawmills in northern Sweden, from Sundsvall in the south to Piteå in the north. In general, the new agreement will lead to increased train sizes. This means increased efficiency on SCA terminals in the railway operation and for the rail infrastructure.

Hector Rail will as a consequence of the new operational set-up invest in new locomotives, which can haul heavier trains, regenerate electricity when braking and the new locomotives can shunt in and out of terminals without need for a catenary. The wagon fleet will also be replaced to a new generation of wagons with more loading capacity.

Contract duration will be ten years and replace the current contract which expires at the yearend 2017/2018 and be valid until December 2027.

“We are extremely proud and happy to receive renewed confidence from SCA Skog. We have worked with innovation and with an extensive work we have been able to modernise the entire transport offer and really offer something new, says Mats Nyblom MD at Hector Rail. Additionally, the confidence we have after ten years of cooperation has also been an important factor. Here, a big thanks goes to all those who during these years contributed to a good delivery.

Hector Rail is already providing the rail services for round wood to SCA in central Norrland. Additional volumes are SCA round wood transport in northern Sweden as well as new additions of volumes as a result of SCA’s extensive investments in the pulp mill in Östrand. In total the agreement of rail transport is of about 3.5 million cubic meters per year when the expanded Östrand mill is in full operation.



## AWT has received a grant from the European Union for modernizing the Paskov terminal

Signing the grant agreement with the Innovation and Networks Executive Agency (INEA) of the European commission was the culmination of efforts by AWT, a member of the PKP CARGO group, to acquire the biggest grant ever in the history of the company. AWT is paying great attention to the development of the terminal, which in the future should play a major role in the logistics triangle of the Adriatic-Baltic-North Sea, where it will be the main hub for its southern end.

AWT has made use of the potential of its parent company PKP CARGO to establish long-term focus on developing intermodal



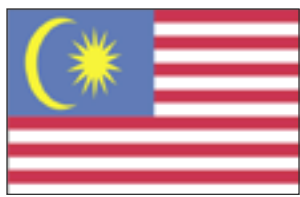
transport and has likewise expended great effort in modernizing and expanding the Paskov terminal, which is one of the main transshipment depots in central Europe. “AWT has had long-term experience with intermodal transport, we see potential for our growth in this segment, and we are devoting a lot of attention to the terminal in Paskov. This transshipment depot has a strategic and prospective position within Europe. Today it joins 25 terminals and depots in Poland and is linked up to major European ports. Together with PKP CARGO, we hope to get it more involved in the logistics triangle of the Adriatic-Baltic-North Sea or as an operator on the Silk Road. For the entire PKP CARGO group, it represents primarily a gateway to southern Europe,” says Arkadiusz Olewnik, the CEO of AWT group.

CEF (Connecting Europe Facility) was used to support the preparation and construction of phase III of the multimodal container terminal in Paskov, of which

AWT contributed 5,871,360 EUR. This amount (approximately 158,500,000 CZK) represents 66% of the eligible costs of the project, which in addition to new rail links, handling areas, lighting and other equipment at the terminal, also includes the study, project and reconstruction of siding in Paskov. “The goal of the project is to maximize the use of the 700 m long rail yard, allowing us to offer a new standard of shipping and handling for our customers while saving costs on siding operations,” says Viktor Bystrian, the sales manager of AWT.

The construction and technological completion phase follows for the thoroughly modernized Paskov terminal. By the end of 2020, a new rail link should be built, the siding station reconstructed, and the depot expanded to more than double its size, with the shipping and handling areas encompassing 71,000 m<sup>2</sup> and the transport output growing to nearly 5,000 TEUs. The modifications carried out will speed up transit through stations on branches running to the terminal.

The Paskov terminal currently covers 31,000 m<sup>2</sup> and has a capacity of 2,400 TEUs with 3 x 270 m tracks. It lies in vicinity of industrial zones on the border with Poland and Slovakia. Its strategic position in the heart of Europe makes it fast and easy to connect it to key European ports and terminals. It is located close to the highway and is connected to the nationwide railway network. The terminal is used for both AWT and external entities and takes care of all activities associated with handling, collection, distribution, and light repair of containers, clearing trains and storage containers on site, and customs services for local customs situated on the premises of the terminal. AWT has container equipment at this terminal that can stack containers up to five layers high and handle not only ordinary ISO containers, but also truck trailers and exchangeable boxes. It also has tractors for moving around containers and trailers.



## Bombardier's INNOVIA Metro 300 Enters Service in Kuala Lumpur

New fleet of driverless BOMBARDIER INNOVIA Metro 300 trains will increase capacity on Kelana Jaya Line in Malaysia by 30%

Latest generation medium-capacity metro is the urban solution for rapidly growing Asian cities



Rail technology leader Bombardier Transportation and partner Hartasuma have announced the launch of the latest INNOVIA Metro 300 train in the Asia Pacific region. The new train enters service on the extended Kelana Jaya Light Rail Transit (LRT) Line and will provide comfortable, fast and eco-friendly travel for passengers in the vibrant metropolis of Kuala Lumpur, Malaysia. "This new train is the first of 14 INNOVIA Metro 300 trains ordered by Prasarana to expand the fleets on the Kelana Jaya Line. The vehicles will boost the rail network's capacity by 30% once fully delivered," said Jayaram Naidu, Head of Sales and Marketing for South East Asia at Bombardier Transportation. "This will greatly enhance public transport connectivity in the growing city of Kuala Lumpur, supporting the government's vision of an integrated urban mass rapid transit system. Bombardier's INNOVIA Metro

300 platform is built on a proven track record of safe operation, service dependability and low operating costs, an ideal modern solution to any urban transportation network in Asia." Designed for driverless operation, the vehicles are equipped with state-of-the-art Linear Induction Motor (LIM) propulsion technology which allows for operation on tighter curves, with less noise and greatly reduced wheel and track wear. Low energy consumption is achieved thanks to the combination of lightweight aluminium carshells

and LIM propulsion system and in addition, highly effective regenerative braking enables the reuse of energy released during braking. All INNOVIA Metro 300 cars are equipped with onboard camera systems, infotainment LCD screens and dynamic route maps to provide accurate travel information. The four-car trains have wide aisles and walk-through gangways which allow passengers to move freely throughout the train. Bombardier continues to be innovative in its approach to advanced rapid transit technology which has proven to be an effective solution moving 150 million passengers every year in dynamic and progressive cities. In addition to Asia, Bombardier also has contracts to provide INNOVIA Metro 300 trains for the Vancouver Sky Train system in Canada and for the Riyadh Metro's Orange Line in the Kingdom of Saudi Arabia.



## Alstom supplied the interlocking system to newly opened high-speed line in South Korea

The South Korea Sudokwon high-speed line - for which Alstom supplied the interlocking system as well as the associated engineering services - started revenue service in December. Sudokwon high-speed line includes three stations, is 61.1km long, 52.3km of which are in tunnels, and directly links to the existing Seoul-Busan high-speed line.

After Seoul-Busan line, this is the second high-speed project in the country for which Alstom is involved. It is South Korea's third high-speed line. The entire journey will take around 20 minutes, rapidly linking southern Seoul to the south-east of the Gyeonggi Province.

continue supporting its customers and partners in South Korea to further develop its rail transport network" said Ling Fang, Managing Director of China & East Asia, Alstom. This project is executed by Alstom Transport S.A. (France) with support from Alstom UK, Alstom Belgium and Alstom Korea.

Alstom has been in Korea for transport activities for more than 40 years. The group has supplied locomotives, high-speed integrated system to equip KTX Seoul-Busan line[2] with 46 high speed trains[3], core-system engineering, catenary and traffic control system



Alstom, as part of a consortium led by LSIS, was awarded the contract by KRNA (Korea Rail Network Authority) in December 2014. The interlocking technology deployed on Sudokwon is the same as on the Seoul-Busan line, highlighting once again the confidence of the customer in Alstom's technology that has allowed for safe and reliable routing of trains since 2004.

"Alstom is proud to have participated in Sudokwon high speed line, which will provide seamless transport solution to commuters in Seoul and Gyeonggi Province. With its excellent execution of KTX Seoul-Busan high speed line and Incheon Airport Link from 1994 to 2010 and their efficient, reliable and sustainable performance until today, Alstom will

manufacturing. This was the first high speed train project for Alstom in Asia. Alstom has also supplied rail solutions for metro and suburban lines.

This option exercise will make it possible to maintain jobs in France for several years, concerning the seven Alstom sites that design and produce the metro (Valenciennes, Le Creusot, Ornans, Villeurbanne, Tarbes, Saint-Ouen and Aix en Provence) as well as its suppliers.



## From the UK

### Look back at 2016

Our annual look back at some of the highlights from 2016 and what a year it has been. Plenty of new EMUs into service, additional loco-hauled workings and the commencement of IEP deliveries. Oh and all that fuss regarding the return to service of a certain steam loco.

- ▶ 2016 was the planned final year for the Network Rail Class 31s on the main line, with only Class 31 233 serviceable. Will this loco return in 2017? Here the veteran passes Hasland with 05:30 Slateford Depot - Derby RTC. *Nick Clemson*
- ▶ One loco that grabbed all the headlines in 2016 was LNER A3 Class 4-6-2 No. 60103 'Flying Scotsman', seen here approaching Townsend Fold during test runs on the ELR with Stanier Class 5 4-6-0 No. 45407 on January 10th. *Gerald Nicholl*
- ▶ Still giving good service throughout 2016, Class 86 101, stands on the blocks at London Kings Cross station on February 15th, having arrived with the ECS for the Caledonian Sleeper which was diverted via the East Coast main line due to engineering work on the west coast main line. *Class47*







## From the UK



DB reliveried one of its Class 90s into Malcolm liveried in 2016, here Class 90 024 leads Class 90 019 'Multimodal' past Heamies on July 18th working the 4M25 06:07 Mossend Yard - Daventry Int. RFT. *Keith Davies*

Having won the Royal Scotsman contract, GBRf reliveried Class 66 743 into maroon, seen here passing Saltney Ferry on July 10th with the Royal Scotsman's 'Grand Tour of Great Britain', heading along the North Wales coast. *Brian Battersby*

Throughout 2016, DRS has provided traction for Scotrail, Northern and Anglia services. This is Class 68 019 working the 5K19 Edinburgh - Motherwell TMD, passes Heatherbell Crossing, Coatbridge on April 20th. *Michael J Alderdice*

## From the UK



▶ The final Class 66 ever to be built, GBRf's No. 66 779 'Evening Star', is seen on display outside the NRM on June 4th. No more can be built due to new EU emission regulations.

*Brian Battersby*

▶ The first of many new orders for Siemens Desiro City EMUs commenced service in 2016 for Thameslink. This is Class 700 113 working the 2W30 10:59 Three Bridges - Bedford approaches Crystal Palace on August 11th. These units have also been ordered by South West Trains and Great Northern. *Jonathan McGurk*

